Environmental Impact Statement: Non-Technical Summary

Proposal by Mr. Kieran O'Regan for an agricultural development consisting of 4 no. broiler Houses to house 50,000 broilers per house, waste storage shed incorporating biomass burner, office & changing facilities, service yard & storage shed, staff accommodation with waste water treatment system & all associated site works at Knockbrown, Bandon, Co. Cork.

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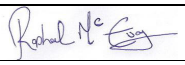
3	FINAL	D.O	RME		17/12/13

Abstract

This Environmental Impact Statement was compiled in response to a requirement by Kieran O Regan for Planning Permission for Agricultural development consisting of 4 no. broiler Houses to house 50,000 broilers per house, waste storage shed incorporating biomass burner, office & changing facilities, service yard & storage shed, staff accommodation with waste water treatment system & all associated site works at Knockbrown, Bandon, Co. Cork. Shannon Vale Foods Ltd have been looking to ensure a stable supply of chickens to its processing plant at Gullane, Clonakilty, Co. Cork, for the last number of years. They have looked at numerous options to achieve this and following consultation and assessment of different sites and alternatives, chose to site the development on a 4.86Ha site adjoining the R602, Bandon to Timoleague road in the Townland of Knockbrown. This site was assessed for environmental impacts that would result if this development were to proceed. This study of all of the impacts of the proposed development has been conducted and the result is that there will be no significant impacts on the environment from the development during its construction or operation. The proposal as outlined will make a significant positive contribution to the rural economy of Co. Cork and will serve to increase employment and secure the viability and competitiveness of the applicant's existing poultry processing facility.

This Environmental Impacts Statement is compiled in response to planning permission sought by Mr. Kieran O'Regan for an agricultural development consisting of 4 no. broiler Houses to house 50,000 broilers per house, waste storage shed incorporating biomass burner, office & changing facilities, service yard & storage shed, staff accommodation with waste water treatment system & all associated site works at Knockbrown, Bandon, Co. Cork is likely to have an environmental impact and hence this environmental impacts assessment was carried out in conjunction with National and European legislative requirements.

The proposed development is to be located in the Townland of Knockbrown, with the site adjoining the R602, Bandon to Timoleague road. The site will consists of approximately 4.86 Ha, part of a larger land holding c. 12.68 ha. The site is located within Landscape Character area number:" 53 Argideen & Owenkeagh Rivers "Which is designated Rolling Patchwork Farmland.

The Environmental Impact Assessment and subsequent environmental Impacts statement strives to identify fully and provide the following:
Description of the proposed development, Planning and development context of the proposed development, scoping and consultation, assessment of alternatives, assessment of environmental impacts and those relative to material assets and human beings.

In relation to planning and policy context the proposed development is in line with all national, Regional and local planning and policy objectives. The development has been reviewed relative to National and Regional Planning Policies and Objectives (1.7.2) including "Sustainable Development and Agenda 21" (1.7.2.1), National Development Plan 2007-2013 (1.7.2.2), National Spatial Strategy 2002 – 2020 (1.7.2.3) and Regional Planning Guidelines for the South West Area 2004-2010 (1.7.2.4). The development has been found to be in line with the requirements of

these objectives and has been found to be a nationally and local important development suited to the area in which it is proposed.

Proper Planning and Development

The proposed development accords with the relevant national, regional and local planning policies and objectives including the statutory Development Plan for the area, the Cork County Development Plan 2009 - 2015. This is the case for the following reasons:

1. The proposed development accords with the sustainability issues as set out in Agenda 21 and the main thrust as set out in the National Development Plan by ensuring that the rural parts of County Cork can compete effectively with the Metropolitan area.

2. In accordance with the principles of the National Development Plan 2007 and National Spatial Strategy 2002, the economic off-set of such a facility will be significant within the rural parts of the Country particularly given its links with the agricultural sector, with the facility being capable of providing jobs within the area and directly supporting jobs locally through supply of produce to the processing plant in nearby Clonakilty.

3. The proposed development, being located within the hinterland of the metropolitan area, is located within a prime location to take advantage of surrounding infrastructure.

4. The proposed development seeks to ensure the future of existing and potential employment at the facility thus ensuring the future sustainable development of operations on site and ensuring the protection of this valuable asset within the local economy.

5. The proposed development and that as existing will in part promote Innishannon as a key economic and employment centre within the region and thereby making a contribution to balanced regional development in accordance with principles as set out in the Regional Planning Guidelines for the CASP area.

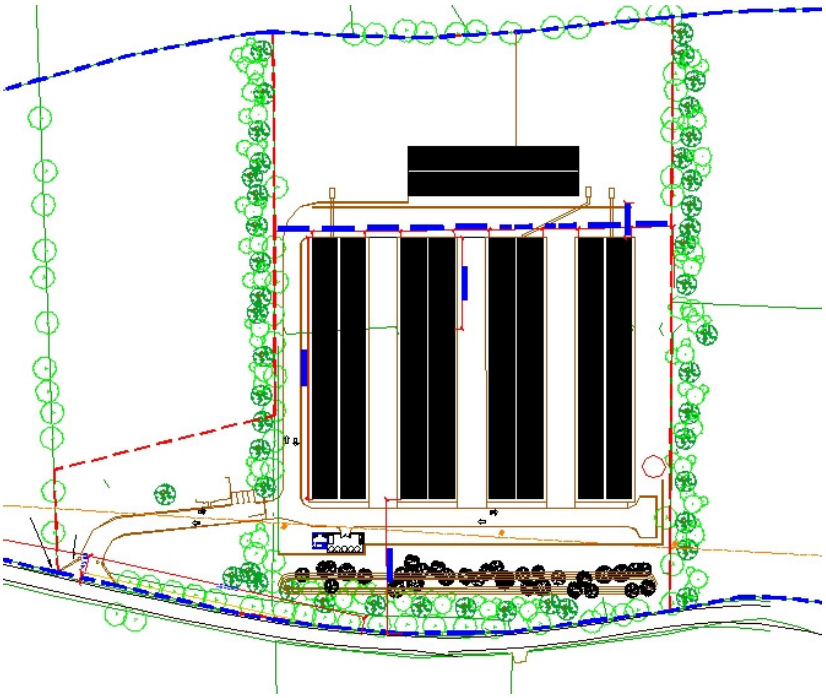
6. The proposed development is consistent with the policies of the Cork County Development Plan 2009 - 2015, in that it will involve the expansion of an existing and established rural enterprise.

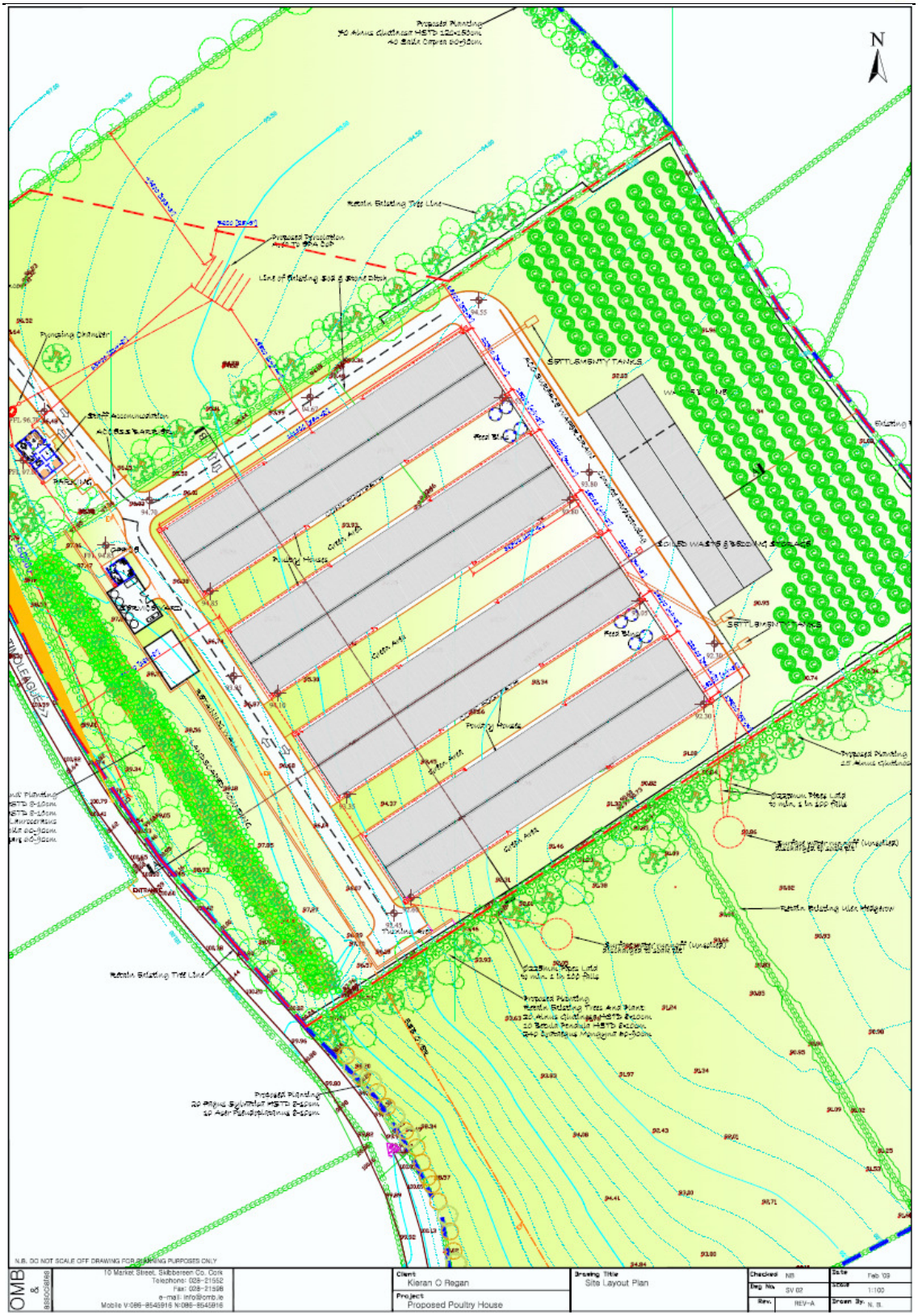
7. The proposed development, is it is submitted, an acceptable form of development for a rural area and is directly related to the surrounding agricultural uses within the area. Indeed the buildings themselves when viewed from the entrance are consistent with other agricultural buildings found in the countryside.

8. The proposal is consistent with the development control management standards as set out in the Cork County development Plan 2009 – 2015 thus ensuring the development is consistent with the proper planning and future sustainable development of the area.

Non-technical Description of the proposed Development:

The proposed development is to be located in the Townland of Knockbrown, with the site adjoining the R602, Bandon to Timoleague road. The site will consists of approximately 4.86 Ha, part of a larger land holding c. 12.68 ha. The development will consist of four broiler Houses to house 50,000 broilers per house, waste storage shed incorporating biomass burner, office & changing facilities, service yard & storage shed, staff accommodation with waste water treatment system & all associated site works at Knockbrown, Bandon, Co. Cork. The layout of the site can be seen below on the following page;




N
SETTLEMENT TANKS
Kieran O Regan
Proposed Poultry House
Site Layout Plan
N.B. DO NOT SCALE OFF DRAWING FOR PLANNING PURPOSES ONLY

The Need for the Development

Kieran O'Regan "the applicant" is currently a director of Shannonvale Foods and the Shannonvale poultry growers group. Shannon Vale Foods Ltd, have been looking to working to ensure a stable supply of chickens to its processing plant at Gullane, Clonakilty, Co. Cork, for the last number of years. They have looked at numerous options to achieve this, including expanding existing growing facilities which currently supply the plant along with the possibility of developing a new site for the production of broilers.

Shannon Vale Foods existing suppliers are generally small scale farms located around the west Cork region. While there has been a trend in the industry to source its raw materials (chickens) from cheaper sources from abroad, typically from lower cost locations such as Thailand, Shannon Vale are committed to the growing of its produce in Ireland. To continue Shannon Vale's commitment to Ireland it needs to secure its future through a reliable Irish source of raw material. With this in mind the Management of Shannon Vale has been working on locating a site which would be capable of supporting a Growing facility to cater for this need. The site at Knockbrown has been selected after years of searching for a suitable location for this facility and ruling out numerous options which were deemed unsuitable.

In relation to the issue of the Company's Environmental obligations under the Waste Management Act and the EPA Acts the Company must obtain an Integrated Pollution Prevention and Control Licence and with this requirement all aspects of the Company's Planning compliance must be up-to-date. This application will address all of the outstanding planning issues to facilitate the achievement of the IPPC Licence.

The Company also needs to bring this development forward to protect the local jobs economy and the financial bearing the Company has on the surrounding area. Shannonvale Foods poultry operations are regarded as a valuable addition to the

local economy and its existence is vital to supporting commercial entities, families and services locally.

Scoping and Consultation:

In relation to this proposed development guidance was sought in particular from the Planning Department of Cork County Council whereby representatives of OMB Associates (Project Planning Consultants) engaged with planning officers of Cork County Council to discuss the scope of the project and the perceived requirements of the project.

Alternative Addressed

As part of the initial planning stages for the proposed development, a number of alternatives were evaluated for the proposed development at Knockbrown, Bandon, Co. Cork. These alternatives included other sites, other uses for the site chosen and process changes taking account of environmental impacts.

To be able to successfully compete with cheap foreign imports Shannon Vale need a growing facility with a large annual capacity, (up to 200,000 broilers) which will project the ongoing successfully of its business.

A number of existing growing sites have been examined with a view to expanding the existing growing capacity on these sites these included:

- The site at Maulatanvally, Glanbrack, Reenascreenagh Co. Cork planning reference number 97/3726. This existing production site was carefully examined but deemed unsuitable due to the lack of suitable ground adjoining the facility to enable the expansion.
- A proposed green field site was examined at Castlebernard, Bandon Co. Cork, but numerous planning issues remain to be resolved & the site would be unable to sustain large scale development as required (planning Ref number 01/6005).

- An industrial site at Clonakilty Rd. Dunmanway was briefly considered but zoning issues & proximity to the town would have been issues preventing any development.

Numerous other green field sites in the west cork area have been examined but ruled out due to one or a combination of the following issues:

- Road network.
- Adjoining Houses/proximity to town village.
- Scenic area.
- Distance from processing facility in Clonakilty.
- Lack of ESB network (10KVA line).
- Land unsuitable/lack of buffer space around proposed development.
- Available land for waste spreading.
- Lack of natural Screening.

The site at Knockbrown in Bandon Was selected after a rigorous search for a suitable development site. It has a suitable road network within reasonable distance from the processing plant in Clonakilty, there is suitable separation distances from the few dwelling houses that adjoin the site, it has no specific restriction from a planning perspective and is located in an agricultural area, a 10 KVA line traverses the site, there is suitable land around the development site to facilitate landscaping & waste spreading and the proposed site sits in a low-lying area that can be readily screened by augmenting the existing boundary hedgerows.

"Do Nothing" Alternative

The "do-nothing" alternative consists of retaining the current site at Knockbrown, Bandon, Co. Cork and avoiding development of proposed poultry facility. If Mr O'Regan adopted this approach there would have been a negative impact on local economics, on the local farming community on the local workforce and on locally generated revenues.

Shannonvale Foods will not have created the operation which is essential for the Company to develop. The specific demands of the poultry processing facility in Clonakilty and the general demands for poultry products nationally will not be met. The requirement for the facility reflects demand and a requirement through economic, legislative and sustainability measures to expand production. The "do-nothing" alternative would also negate the promotion of environmentally sustainable practices at the site and would mean that the Company would not expand.

The "do-nothing" alternative would also lead to the abolishing of plans to incorporate on-site utilization of poultry manure as an alternative fuel source for the production of the birds which is a project that is beneficial to the Carbon footprint of the industry in the future.

Study of Environmental Impacts Non-Technical Summary:

Human Beings:

Ultimately all of the effects of the development on the environment impinge on human beings directly or indirectly. The overall effect of the proposed and existing development on the socio-economic environment can be registered as positive.

During the construction Phase up to 15 temporary jobs will be created. The new proposed development will create 2 new jobs in the local area (a manager for the plant who lives on-site and a general operative) and contribute up to millions to the local economy on an annual basis. The development will also lead to another 2 -3 service jobs also. The successful development will also create 5 new processing jobs and ensure sustained supply to the processing plant in Clonakilty which supports an existing employee base of 90 - 100 people and contributes up to €5 million to the local economy on an annual basis.

The National economy will benefit too as a result as the company will increase its taxation contributions and through its activities will assist in bolstering the National Export volume and inter-European trade figures.

Land-Use: The proposed development will cover approx 4.86ha, part of a larger land holding c. 12.68ha.

Employment: 15 of construction jobs will occur as a direct result of the proposed development, 2 permanent jobs at the site and 5 jobs at the processing plant with 2 - 3 extra service jobs anticipated in the areas of stock provision, feed supply and maintenance as a result of the development.

Flora and Fauna:

The basic result of the assessment and site walkover is that the proposed development will not in any significant way compromise the ecological standing of the areas proximate to the site. The screening process for appropriate assessment identified no special areas of conservation or natural heritage areas in close proximity to the site however the Courtmacsherry Estuary is approx 4km from the site and thus the focus will be to protect the Baurleigh River which flows into the Kilbrittain River and eventually to the Courtmacsherry Estuary. The screening assessment concluded that there is No potential for the proposed development to impact this SAC.

Impact of the Development on Flora and Fauna

A flora and fauna survey of the environs of the Shannonvale Foods
foods site at Knockbrown, Bandon, County Cork was carried out in part fulfilment of the requirements of the Environmental Impact Statement so as to determine the impacts that the development on the existing flora and fauna.

- The primary habitat lost by the development proposed in classified as GA1 (improved agricultural grassland) or tillage land under intensive agriculture

(Maize planted in main site field) meaning native or rare species are not present due to the nature of activities on the land. The land at the site is therefore of low ecological importance owing to low species diversity. There are no protected and/or rare species of flora in this habitat. It is therefore unlikely that the proposed development will lead to any loss of any protected and/or rare species of flora.

- The primary concern with regard to this development is the potential for contamination of the Baurleigh River with waste material from the processes taking place on site – primarily waste management and poultry house wash down. The proximity of the site to the Baurleigh River would result in the River becoming the ultimate destination of any discharges from the plant.

- Removal of tree line will at the Northern Boundary of the site to make way for the entrance road the development as a whole will maintain a hedgerow that make up the boundary of the site. The removal of the treelines would however possibly impact negatively on local fauna where the treelike could serve a function as a shelter or corridor for wildlife. It is noted however that there is a relative abundance of this type of habitat on-site and adjacent to the site to which the displaced fauna can retreat.

- The potential presence of large quantities of dead birds. This can most likely result in a high population of scavengers and has the potential for increasing the spread of bacteria and disease through animals scavenging on blood and other waste products. In addition to this, other scavengers, such as various species of crow, foxes and feral cats may be attracted to the site. This may be a source of bacteria and disease, which could be spread into the greater environment.

- In the Construction and Operational phases of this installation will be associated with an increase in the traffic burden on the approach roads to the installation. The survey of impacts of increased traffic in the area will be

minimal and hence will not impact the flora and fauna in the vicinity of the site.

Mitigation Measures and Recommendations

The primary concern is the potential impact that any discharge may have on the Baurleigh River and its pathway to the Courtmacsherry Estuary via the Kilbrittain River – the ultimate destination of any discharge from the facility. In order to alleviate any concerns, it is recommended that all discharge drains be sampled randomly throughout the year, by an independent body, to ensure that the discharge complies with EPA requirements. This will be addressed in the subsequent licensing of the facility by the Environmental Protection Agency. It is important also that all on-site chemicals and oils, diesels or other hydrocarbon based products are stored in adequate bunds and bunded storage facilities in association with the BAT described in the Environmental Protection Agency document 010607-22-RP-001 B 2004 Guidance Note on Storage and Transfer of Materials for Scheduled Activities.

As much of the existing treelines onsite will be retained as possible. Mitigation is also recommended in the form of the replacement of any of the tree-line removed on the boundary of the site with a selection of tree species of a similar number and area on the southern side of the site. The hedgerow will be replanted with a low hedge to improve road visibility at the entrance and it is unlikely that any species of flora would have been impacted by this removal and replanting with all additional planting on the site supporting the existing biodiversity.

Predators and Rodents at the site during the operational phase will be mitigated against with a large number of bait traps and standard operating procedures. This is in-line with the requirements of the Bord Bia Quality Assurance scheme which the facility will aim to comply and is viewed positively as management of a potential situation. Also in order to mitigate this problem/potential problem, all dead birds must be stored safely in closed containers and removed regularly. A vermin

management and control plan should be activated for the site and should be inspected and updated regularly.

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

Soils, Sediment and Geology

The site is located on a locally important aquifer (not source protected) on bedrock of Dinantian mudstones and sandstones of the Kinsale Formation beside old head sandstone. The aquifer is rated as High (highly vulnerable) vulnerability (www.gsi.ie). The predominant Soil type in the area is AminDW- Deep well-drained mineral soil, Derived from mainly acidic parent materials with subsoils TDC SsS being predominantly made up of sandstone and shale tills from the Devonian and carboniferous periods. There will be no significant impacts on soil, sediment and geology via the proposed development at the site. Impacts in general will proliferate at two junctures in any development namely the construction phase and the operational phase of the development.

The proposed development construction phases comprise the development of a greenfield/intensive agriculture site. Site works will involve minimal filling to provide level surfaces for the existing and future developments. Blasting or excavation into the bedrock surface will not be required.

Therefore no impacts are estimated to occur on the underlying geology nor are any anticipated to occur during the proposed construction phase.
The plant in operation can potentially result in impacts on soils and subsoils as a result of emergency scenarios such as spillages, firewater retention etc.

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

Mitigation Measures

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

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

Groundwater and Surface Water

An assessment of the proposed development and its impacts on the local ground water and surface water quality was carried out by RME Environmental on behalf of Kieran O'Regan. The assessment involved a review of the site location and its relevance to the local groundwater and surface water infrastructure. A list of the potential impacts that the new development will have (both in its construction and operation phases) is discussed. Mitigation measures are suggested for the proposed development and the proposed modus operandi for carrying out the operation.

Existing Site Conditions

The site is located in the South Western River Basin District and as per section 5.33 above the site is located on an aquifer which is locally important with bedrock moderately productive only on local zones.

Water that will be utilised onsite for washing and for stock will be gathered from 2 proposed wells (3rd depending on direction of flow). The estimated total onsite water consumption based on 200,000 birds annually is anticipated to be approximately 3582m3. There is No evidence to suggest that this will place any undue stress on the water source as the national recharge around the site is 201 - 250 and at an added abstraction rate any stress on the combined wellheads will be minimal.

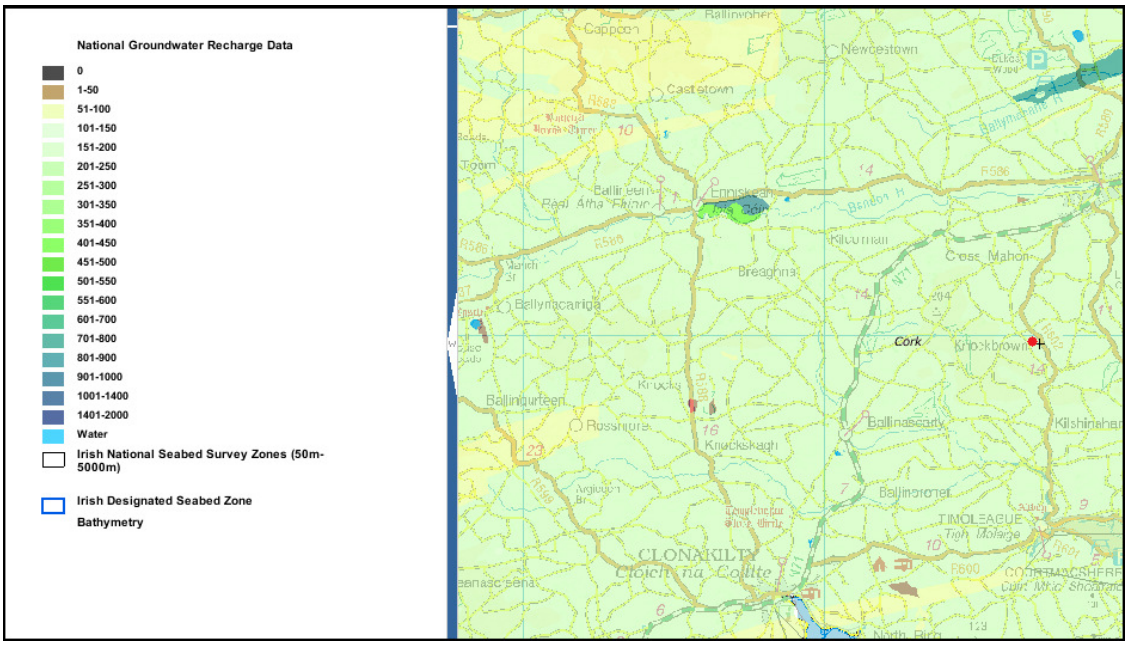


Figure 5.4.2 National Groundwater Recharge Data Map for Knockbrown (site marked by red dot)

In relation to the generated impacts at the site the following processes have been identified as potentially having impacts on the surrounding environment:

(i) Free surface water drainage from the site into local groundwater

(ii) Direct or accidental discharge of waste or washings

Mitigation Measures

It is imperative that impermeable hard standing and adequate drainage is provided throughout the site to enable the full collection of surface water to the surface water collection network.

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

All drains, guttering and other collection apparatus must be inspected at regular intervals.

All tank and storage vessels must be tested and a programme for tank and pipeline inspection should be initiated to mitigate against the risk of leakage.

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

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

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

Air

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

There are no direct atmospheric emissions from the site to air and with the exception of fugitive emissions from the facility emissions to air are not considered significant. A biomass boiler will/may be installed on-site after completion of construction works or further down the line when the facility is up and running. This biomass boiler will burn chicken litter as a fuel to generate heat for the site. It is understood that the operation of the biomass boiler will come under the licensing control of the Dept. of Agriculture and all emissions relative to the process will be monitored accordingly. It is also likely that the EPA will require additional monitoring.

It is not the immediate intention of Mr. Kieran O'Regan (Shannonvale Foods) to install the biomass burner on day 1 of the operation of the facility however; reference is made to same in cognisance of emerging technology and growing trends in the industry in Ireland and abroad.

Baseline Air Quality

On the 16/12/13 RME Environmental Consulted the EPA Air Quality Health Index on www.epa.ie and deemed that the live air quality index for the local area was good: score 1. This would suggest that there are no underlying atmospheric issues on-site.

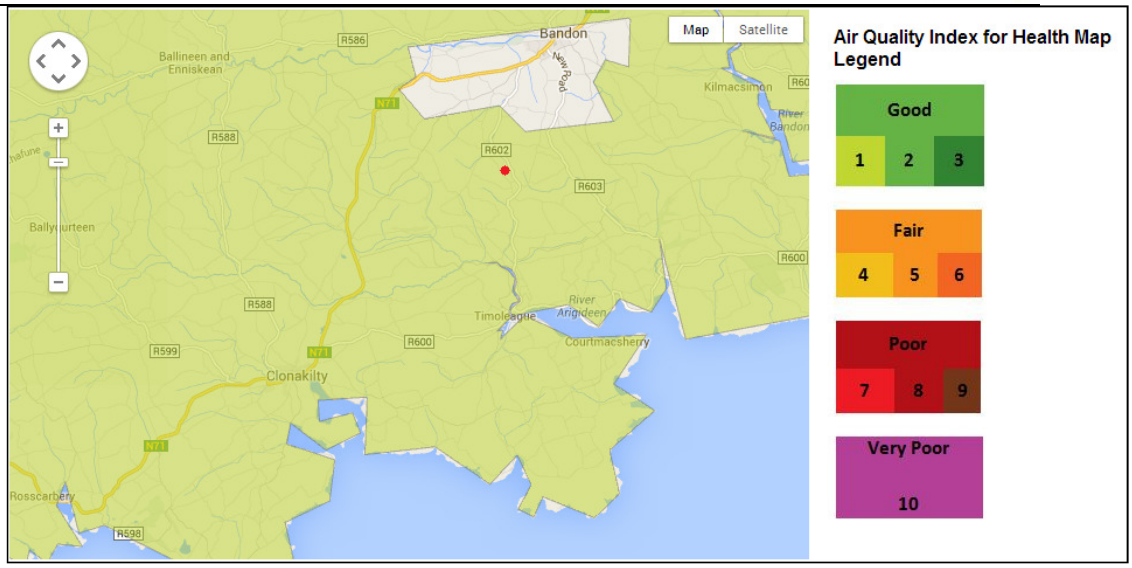


Figure 5.5.1 EPA Air Quality Health Index (site location marked by red dot)

Construction impacts are likely to have the most significant impact on air arising from this proposed development, but by their nature will be short-lived. Construction impacts may potentially arise from the short term presence of contractor's compounds, construction activities and the working areas. Features are likely to include plant activity, parking of contractors' vehicles, storage of materials and fuel, movement of excavated materials, delivery of materials and plant. The presence of these construction phase requirements will give rise to dust, fumes, noise and increased traffic.

Regarding operations at the proposed development, the only scheduled emissions will be from space heating, ventilation and a back-up generator. In future years there may also be a potential impact from the proposed biomass burner. The impact on air quality from the ventilation systems and space heating is regarded as negligible and a fugitive emission. The existing back-up generator is only test run once every week for a period of 15 minutes and therefore it is negligible in impact. The impact of the operating site on odour air quality is a significant factor in relation to poultry operations in general and is location sensitive in all cases. It is assumed that as a result of the management practices (SOP & Mitigation measures) carried

on at the site during operation and the manure and other waste management procedures there will not be any significant odour issues arising from site operations. This statement is backed up by the operational pedigree of the proposed developer. In their other operations which are on-going for over 15 years they have not received any odour complaints to date.

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

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

There will be a residual impact on atmospheric emissions from the facility as a result of the fact that there will be a requirement for extra feed, extra waste movements and extra stock movements to and from the site as result of the proposed development.

Owing to the fact that there will be increased waste volumes on site there will be an increased potential for the generation of odour on site. However it is not anticipated that this will be an issue for the site. Recommendations are made however for the correct management of potential odour pollutants on site.
There is potential for increased impacts from the facility with regard to ammonia levels from the facility. Correct mitigation will be required to ensure that these levels do not become problematic.

All space heating and energy requirements for the proposed development should be designed in accordance with best practice. The Building Regulations 2002 “Technical

Guidance Document Part L – Conservation of Fuel an Energy Dwellings" should be used as a reference for best practice in order to reduce the impact of the proposed development on greenhouse gas emissions.

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

Construction impacts may potentially arise from the short term presence of contractor's compounds, construction activities and the working areas. Features are likely to include plant activity, parking of contractors' vehicles, storage of materials and fuel, movement of excavated materials, delivery of materials and plant. In order to mitigate against any impact on the local air quality any construction will be taking place during daytime hours to lessen the impact of nuisance noise. A dust mitigation measure will be implemented if construction takes place in summer months where by a yard wash will water the site to eliminate dust impacting on local air quality. Fume emissions from the machinery onsite will be minimal except during the excavation stage.

If the levels of dust become problematic from the site, dust monitoring will be carried out during the operation phase of the development if deemed necessary by the EPA. If the level of dust is found to exceed 350mg/m2day in the vicinity of the site, further mitigation measures will be incorporated into the operation of the proposed site.

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

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

Odour

Owing to the fact that there will potentially be large waste volumes on site there will be an increased potential for the generation of odour on site. However it is not anticipated that this will be an issue for the site. Recommendations are made however for the correct management of potential odour pollutants on site.

Site specific odour assessments were not deemed necessary for the proposed site A worst-case odour emission scenario was considered. It was concluded that:

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

Recommendations

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

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

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

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

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

Control Measures to Minimise and Abate Odour on site

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

• Litter management kept to a high standard.

• Adequate use of litter bedding material.

• Stocking density maintained at design level.

• Quality ventilation due to computerised/automated control.

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

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

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

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

Proposed Measures to further Minimise and Abate Odour on site

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

Noise

Noise is not considered a significant environmental emission from this facility. The site is located in a very rural area and with the nearest property approx 160m residence to the East and south of the facility there are no sensitive noise receptors evident within 300m or more. To the North West there are residences at approx 360m from the site. Background noise from main Bandon to Timoleague the road ensure that there is no noise carryover to the nearby houses

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

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

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

There will be construction phase noise as there will be construction works as a result of this proposed development. However the valley like drop to the site will mitigate against much of the noise to the closest residence on the opposite site of the road 160m to the east.

The operational noise sources i.e. fans and motors on site when kept in working order (which is essential to the facility) do not generate noise levels that could be detected at the site boundary, similar to most poultry farms in the country. An issue where a possible negative impact may occur is in the delivery of feed to the installation. It is suggested that low noise delivery pumps are specified solely for this site. It is also suggested that this activity is monitored for noise impacts in the initial operational phase at the facility and suitable measures implemented to mitigate any possible negative impacts.

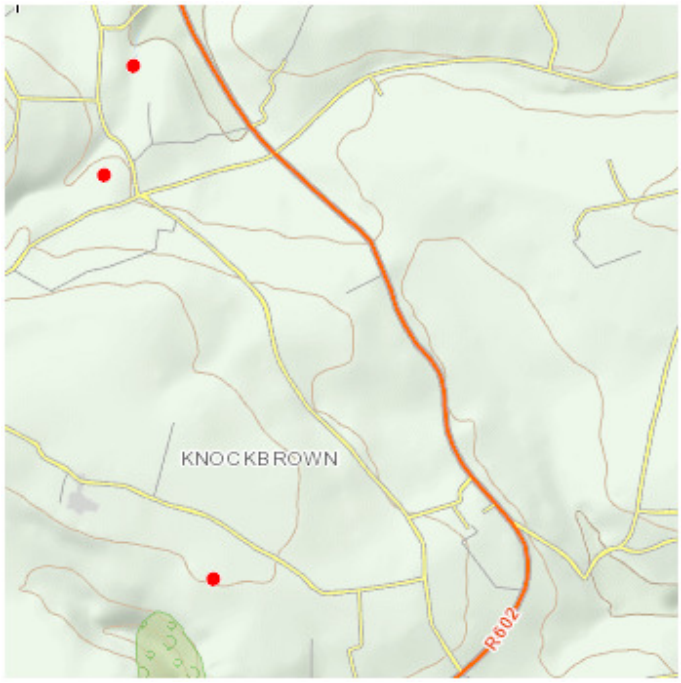
However this facility is not anticipated to result in audible noise outside of acceptable limits at or beyond the site boundary. The proactive maintenance regime that will be in place on fans and motors ensures that no excessive noise will be experienced at the site.

Material Assets and Cultural Heritage

A desktop report on a basic archaeological assessment of the site at Knockbrown was carried out in August 2013. The importance weighting with regard to the archaeological significance of the proposed development is considered low as there are no historical / archaeological sites within 1km which have been recorded in the historical records for the area. As can be seen below in relation to the proposed development there is no considerable archaeological presence proximate to the site. The study identified 3 recorded sites proximate to the proposed development site.

As can be seen in the figure below in relation to the proposed development there is no considerable archaeological presence proximate to the site. The study identified 3 recorded sites proximate to the proposed development site. These are as follows:

Ringfort – Rath CO123-011 Knockbrown (Bottom marker approx 1.5km from proposed site)
Moated Site – Dangan More CO110-070 (Middle marker approx 1.2km from proposed site)
Moated Site – Dangan More CO110-071 (Top marker approx 1.4km from proposed site)



Having reviewed the potential changes to landuse from this proposed development no effects will occur in relation to areas or structures of archaeological significance in relation to this development.

Agriculture

The site is currently located in an existing agricultural hinterland surrounded on all sides by agricultural activity namely crop production and grassland management. The proposed development being agriculturally derived does not pose any cultural

impacts on the area. In actual fact the location of the facility in its present position is providing a service to the farmers in the surrounding area and would be regarded as a beneficial development.

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

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

Property

The proposed development at Knockbrown will impact positively on the existing site property and also the development will serve to have a positive impact on the surrounding properties also.

Social Impact

The material social impact will be very positive in that it will secure permanent posts at the site of which there is 1 to 1.5. It will ensure a sustained requirement for service jobs at the site of which there may be up to 10 different services servicing the site but this has been estimated to represent possibly 2 -3 fulltime job equivalence and finally the proposed development will result in a sustained volume of produce for supply to the main processing facility in Clonakilty Co. Cork thus contributing to the sustainability of the 90 – 100 jobs at that facility. Overall the social impact of the proposed development is seen as greatly positive.

Landscape and Visual Impact

In relation to visual impact OMB & Associates commissioned Pederson Focus Ltd to prepare a photomontage of the proposed developments visual impact on the landscape. The photo montages were taken on the 25/01/13 and assess the impact of the site visually from areas outside of the site from where it can be seen.

The visual impact if the development is minimal due to the low lying nature of the site adding that the green colour of the houses allows the facility to blend into the agricultural surroundings that the site is enclosed by.

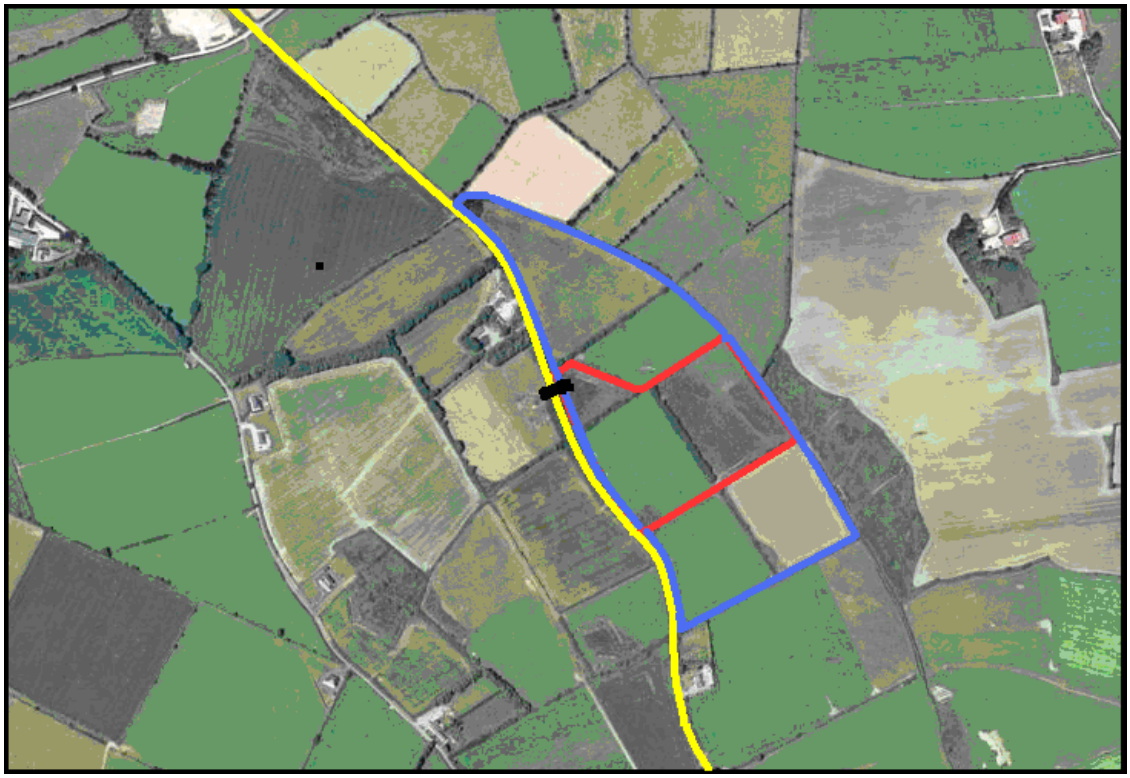
The visual impact of the development is minimal due to the low lying nature of the site adding that the design palette to be used in the houses allows the facility to blend into the agricultural surroundings that the site is enclosed by.

Recommendations

No specific recommendation are directed towards the facility however it may be recommended that screening cover be enhanced to the South, South eastern and Western boundaries of the site which would exclude the site from vision on all sides to the public. It must be stressed that this report does not recognise the sight of the site as a negative impact rather the recommendation serves to screen the built environment from the surrounding rural area.

Traffic

The poultry facility will be located on the R602, Bandon to Timoleague road on a lowered level from the Regional Road route R602 approximately 5km south of Bandon town. The road is a well maintained regional road suitable for all types of traffic.



The location of site entrance can be seen above marked in black.

The results suggest that there will be an increase in trips to or from the site annually of 267 vehicles. This represents 267 trips in 365 days which is 0.73 trips per day. There will therefore be No significant traffic impact from the proposed development on traffic in the vicinity of the site.

Due to the levels of traffic and restricted view from the entrance to the proposed site a Stage 1/2 Road Safety Audit was carried out on the proposed development.

The report recommends the following:

- Set-back the proposed entrance walls and roadside boundary to the rear of the visibility splays and ensure that any remaining vegetation within the visibility splays is reduced to a level below 0.26m above the existing road level.
- Provide roadside delineators along the road edge.
- Provide a "Factory Entrance Ahead" sign on both approaches to the development access.

Solid Waste Infrastructure

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

Construction Phase Solid Waste Arisings

During the construction phase, quantities of excavated materials and other wastes will be generated which will require disposal in an appropriate and environmentally acceptable manner.

Wastes generated during the construction phase will be minimised by the design of the development. The following specific measures were adopted during the detailed design and will be adopted construction stages of the project to minimise waste generation:

- Minimising excavation requirements as far as possible.
- Balancing cut and fill requirements.
- Evaluating the potential for maximising the re-use of excavated materials for example, within landscape mounds.
- Considering treatments for unsuitable excavated materials e.g. upgrading of subsoil to top soil by mixing with compost.

• Providing an area within the construction site to allow for sorting and segregation of materials.

The proposed construction activities associated with the proposed works will generate a number of waste materials. These include:

• Vegetation, soil and top soil wastes from site clearance

• Excavated materials

• Construction waste

• Chemical waste

• Municipal waste

The following table details the treatment and disposal of wastes that will take place during the construction phase;

Sample Waste	Control Measures	Disposal
Vegetation & Top Soil from preparatory works	- Segregation of materials to facilitate disposal - Possible on site reuse within - Landscaping areas	Re-use/landfill
Excavated materials	- Segregation of materials to facilitate disposal / reuse - appropriate stockpile management - re-use of excavated material on or off site (where possible)	Re-use on site for suitable material. Disposal to public fill Areas for unsuitable materials.
Construction waste	- segregation of materials to facilitate recycling/reuse (within designated area and in appropriate containers/stockpiles) - appropriate stockpile management -planning and design considerations to reduce over ordering and waste generation - recycling and re-use of materials where possible - for material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal	Public fill for inert wastes. Disposal to landfill for materials unsuitable for public filling
Chemical waste	- Storage within bunded area - The storage area should not be located adjacent to sensitive receivers e.g. drains	Re-use/Disposal by appropriate licensed contractor

	- minimise waste production and recycle oils/solvents where possible - a spill response procedure should be in place and absorption material available for minor spillages - use appropriate and labelled containers - collection by a licensed chemical waste collector	
Municipal waste	- waste should be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal - regular collections are required by an approved waste collector	Landfill

Operational Phase Solid Waste Arisings

The following solid wastes will arise regularly from the daily operation of a poultry facility housing approx 200,000 broilers:

Sample Waste	**Total Volume Annual (~200,000 Birds)**
Poultry Litter	1385 (T/annum)
Soiled Water	489.2 (m3/ annum)
Dead Birds	9.2 (T/annum)
Veterinary Waste	<150 (kg/annum)
General Rubbish	3.7 (T/annum)
Fluorescent Tubes	16 - 20 (units/annum)

Poultry litter is collected mechanically from the houses by bobcat type machine or other and loaded into collection HGV's. The material is brought to an approved compost facility where it is recovered. This activity will be monitored and licensed by the EPA.

Soiled water is taken from the site by vacuum tanker and land spread on lands nominated locally by the operator. The management or this operation in carried out in strict accordance with the requirements of SI610 of 2012. It will be a requirement

of the EPA that the nominated lands for spreading of soiled water be accompanied by a Record 3 nutrient verification form as issued to the landholder by the Dept. Of Agriculture.

Waste Burner

If a waste burner is in place on the site poultry litter will be loaded into the biomass boiler and converted to heat and ash. The ash will be collected in bins and transported offsite for disposal in licensed and proper landfill for waste ash in accordance with the regulation that will be set out by EPA IPPC license and Dept. of Agriculture.

Handling of other wastes

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

Dead Birds - Wards Collection service to premier Proteins Ballyhaunis Co. Mayo

Fluorescent tubes	ENVA Portlaoise
Waste Oils	ENVA (Atlas Oils)
Cardboard / Packaging Wastes	Panda Waste
General Canteen / Household Wastes	to local recycling facility
Veterinary waste	returned to supplier.

Land Spreading of Organic Wastes (Soiled Water)

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

- There is potential of spillage of material in transit where vehicles are inadequately sealed or maintained
- The loading and unloading of the vehicles can potentially lead to spillages of material
- There is a risk that the receptor tanks for the material may be inadequate to hold the material

- In the spreading of the material there is a risk that the material will be over applied leading to potential run-off to local water courses
- In the spreading of the material there is the risk that the material will be spread proximate to sensitive local amenity causing nuisance.

Handling of other generated wastes

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

Mitigation measures for the handling of Waste Materials at the Poultry Farm of Knockbrown.

Organic Waste for Land Spreading

- It is imperative that adequate storage is provided on-site for the storage and containment of organic waste.
- High-level alarms should be fitted on all on-site storage tanks to avoid overflow and possible contamination of proximate surface water locations.
- Adequate transfer zones, filling points should be provided for the clean transfer of materials to the transfer vehicles.
- Adequate covering should be provided where waste is store to prevent scavenging by vermin.
- Fully trained operators should only be permitted to affect the transfer of waste to the transfer vehicles.
- All vehicles utilized for the purpose of transfer of waste should be fit for use and not leaking.

- All spread lands should be assessed by suitably qualified professionals and Nutrient calculations assigned in accordance with relevant National legislative requirements.
- All land spreading should be carried out in accordance with relevant National Legislative requirements and with the codes of good spreading practice for organic waste.
- All land spreading should be carried out by fully trained operatives and training should be focused on the code of good spreading practice and the environmental requirements of the Company's Environmental Management Plan.
- A register of all wastes leaving the site should be kept incorporating as a minimum the time, date, type of waste, Carrier of the waste, vehicle registration and proposed destination of the waste.

Other wastes generated at the facility

- It is imperative that adequate storage is provided on-site for the storage and containment of all waste.
- High-level alarms should be fitted on all on-site storage tanks where possible to avoid overflow and possible contamination of proximate surface water locations.
- Adequate transfer zones, filling points should be provided for the clean transfer of materials to the transfer vehicles.
- Adequate covering should be provided where waste is store to prevent scavenging by vermin.
- Only registered waste contractors should be utilized for the collection of waste
- All external operatives should be inducted into plant operating procedures and should be familiar with the site environmental management plan and the general workings of the site to avoid accidental spillages

- A register of all wastes leaving the site should be kept incorporating as a minimum the time, date, type of waste, Carrier of the waste, vehicle registration and proposed destination of the waste.

Water Infrastructure

Shannonvale Foods proposed poultry farm at Knockbrown will maintain 2 (3 depending on direction of flow) wells on site.

Chlorine is dosed prior to use in the factory to facilitate department of agriculture treatment regulations

Environmental Impacts Associated with the provision of on-site water

As stated above the water for the site is provided by two proprietary on-site wells detailed as GW1 and GW2. The water is pumped to the above ground storage tank and distributed to the facility. Chlorine is dosed to the line to facilitate bacterial kill prior to distribution. The handling of chemical chlorine in this instance poses the largest potential environmental impact. The protection of the wellheads from surface related contamination is also viewed as a major priority in relation to this development.

It is essential that the chlorine is stored in a bunded area and that adequate protection is afforded to surface water drainage systems

Wellheads GW1 and GW2 must be protected from the possibility of contamination from run-off or accidental spillage from on-site storage tanks.

Wellheads must be sealed and locked to avoid deliberate contamination.

In line with this the following is suggested:

- All chemicals must be stored in bunded areas

- All storage and holding tanks and underground piping must be tested to ensure no leaks are occurring.
- The tank structures must comprising the main effluent treatment plant must be bunded to ensure that 110% of the capacity of the largest tank is contained within the bunded area in the event of the collapse of a tank wall.
- All tank structures external to the treatment plant, namely the yard storage tanks must be fitted with high level alarms to indicate that structures require emptying.

Conclusion:

A study of all of the environmental impacts of the operations of this site has been conducted and the result is that whilst there will be impacts on the environment from the construction and operation of the proposed development they will be minimal and not significant. Interactions between the above assessed environmental factors show the potential effect of the development on the community and its environs. Surface Water is the main potential impact receptor. The proposed poultry farm development and its production processes will minimally impact upon the Human Beings, flora and fauna, landscape, archaeology, terrestrial, and climate described above. Traffic, air quality, noise and material assets are the factors that affect the community directly and this development will have no significant impact on the rural community. The proposal as outlined will make a significant positive contribution to the rural economy of Co. Cork and will serve to increase employment and secure the viability and competitiveness of the applicant's existing poultry production facility.

Environmental Impact Statement

Proposal by Mr. Kieran O'Regan for an agricultural development consisting of 4 no. broiler Houses to house 50,000 broilers per house, waste storage shed incorporating biomass burner, office & changing facilities, service yard & storage shed, staff accommodation with waste water treatment system & all associated site works at Knockbrown, Bandon, Co. Cork.

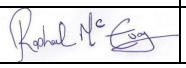
Rev.	Status	Author	Reviewed by	Approved by	Issue Date
1	Draft	D.O	D.O	D.O	01/12/13
2	Draft	D.O	D.O	RME	09/12/13
3	Final	D.O	RME		17/12/13

TABLE OF CONTENTS

Abstract

This Environmental Impact Statement was compiled in response to a requirement by Kieran O Regan for Planning Permission for Agricultural development consisting of 4 no. broiler Houses to house 50,000 broilers per house, waste storage shed incorporating biomass burner, office & changing facilities, service yard & storage shed, staff accommodation with waste water treatment system & all associated site works at Knockbrown, Bandon, Co. Cork. Shannon Vale Foods Ltd, have been looking to ensure a stable supply of chickens to its processing plant at Gullane, Clonakilty, Co. Cork, for the last number of years. They have looked at numerous options to achieve this and following consultation and assessment of different sites and alternatives, chose to site the development on a 4.86Ha site adjoining the R602, Bandon to Timoleague road in the townland of Knockbrown. This site was assessed for environmental impacts that would result if this development were to proceed. This study of all of the impacts of the proposed development has been conducted and the result is that there will be no significant impacts on the environment from the development during its construction or operation. The proposal as outlined will make a significant positive contribution to the rural economy of Co. Cork and will serve to increase employment and secure the viability and competitiveness of the applicant's existing poultry processing facility.

1.0 Introduction

1.1 Background to the development

Kieran O'Regan "the applicant" is currently a director of Shannonvale Foods and the Shannonvale poultry growers group. "Shannon Vale Foods is a wholly owned Irish family business dedicated to the production and manufacture of quality poultry and meat products. The family origin in the poultry business can be traced back to the last century. The current management team are the fourth generation in the business."

Shannon Vale Foods Ltd, have been looking to working to ensure a stable supply of chickens to its processing plant at Gullane, Clonakilty, Co. Cork, for the last number of years. They have looked at numerous options to achieve this, including expanding existing growing facilities which currently supply the plant along with the possibility of developing a new site for the production of broilers.

Shannon Vale Foods existing suppliers are generally small scale farms located around the west Cork region. While there has been a trend in the industry to source its raw materials (chickens) from cheaper sources from abroad, typically from lower cost locations such as Thailand, Shannon Vale are committed to the growing of its produce in Ireland. To continue Shannon Vale's commitment to Ireland it needs to secure its future through a reliable Irish source of raw material. With this in mind the Management of Shannon Vale has been working on locating a site which would be capable of supporting a Growing facility to cater for this need. The site at Knockbrown has been selected after years of searching for a suitable location for this facility and ruling out numerous options which were deemed unsuitable.

The project involves the completion of an Environmental Impact Statement clarifying the nature of all proposed impacts that the poultry operation will have on its surrounding environment.

1.2 Proposed Development - Location

The proposed development is to be located in the townland of Knockbrown, with the site adjoining the R602, Bandon to Timoleague road. The site will consists of approximately 4.86 Ha, part of a larger land holding c. 12.68 ha. The site is located within Landscape Character area number:" 53 Argideen & Owenkeagh Rivers "Which is designated Rolling Patchwork Farmland".

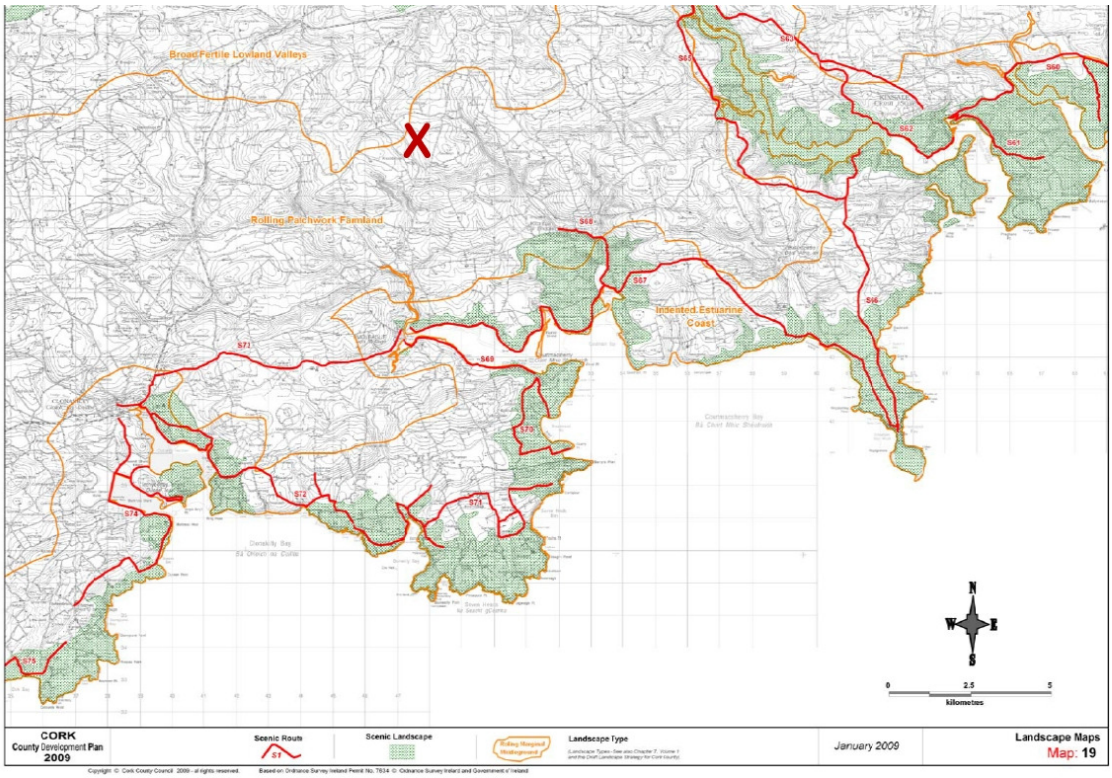


Figure1.2.1 Extract from Volume 3 Cork County Development Plan, 2009 (Landscape Map 19)

Figure 1.2.2 Location of the Proposed Development

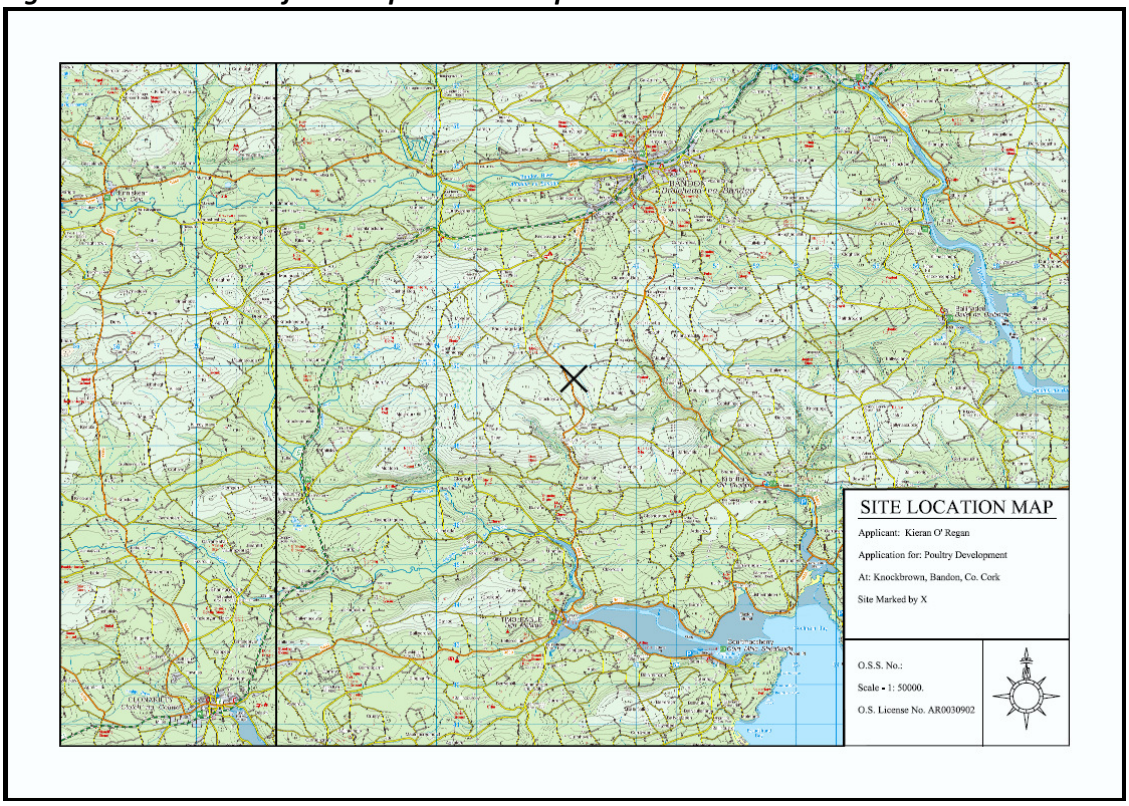
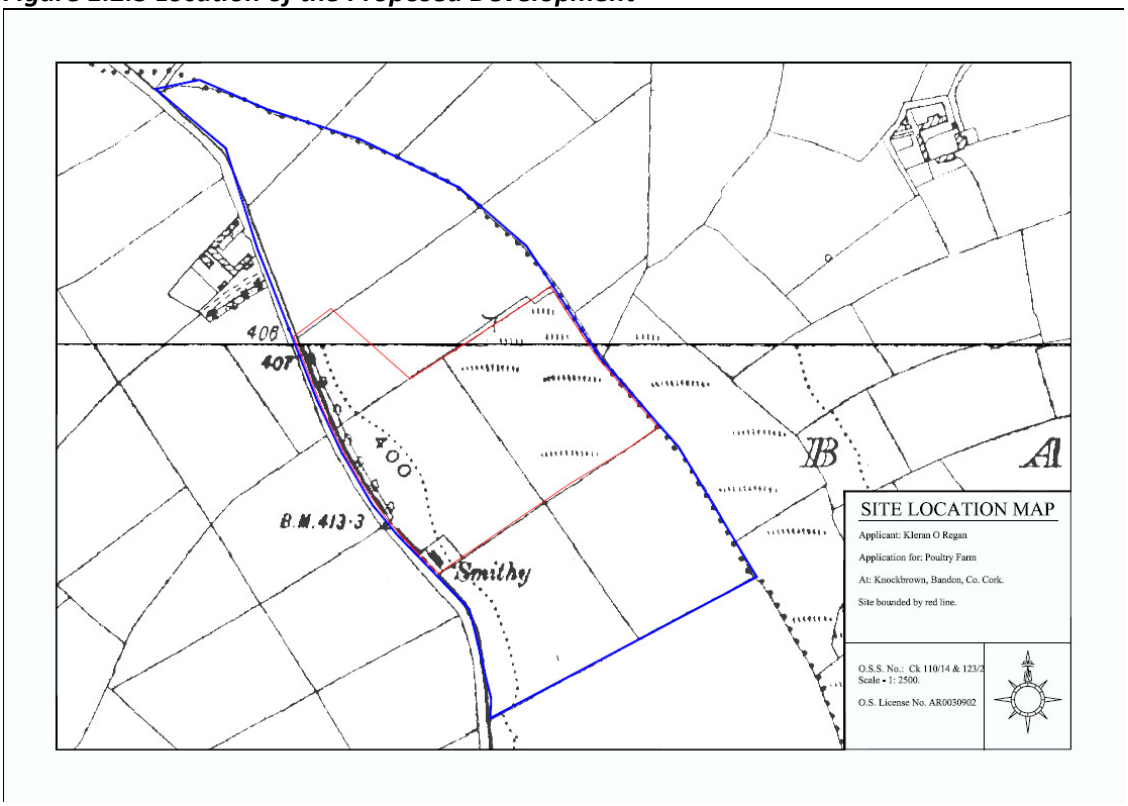


Figure 1.2.3 Location of the Proposed Development



1.2 Proposed Development

The proposed development will involve the construction of 4 Poultry houses, of 2435 meter square floor area each. Each of these houses is proposed to house a maximum of 50,000 birds. These Poultry houses are have an extremely low profile, not exceeding 5m in height. The waste from the development is to be stored on site in a 1434 square meter waste storage house. As part of this storage house a biomass burner is proposed to be installed, which will convert the soiled waste from the houses to heat energy for the growing houses.

Figure 1.2.4 Site Layout Map

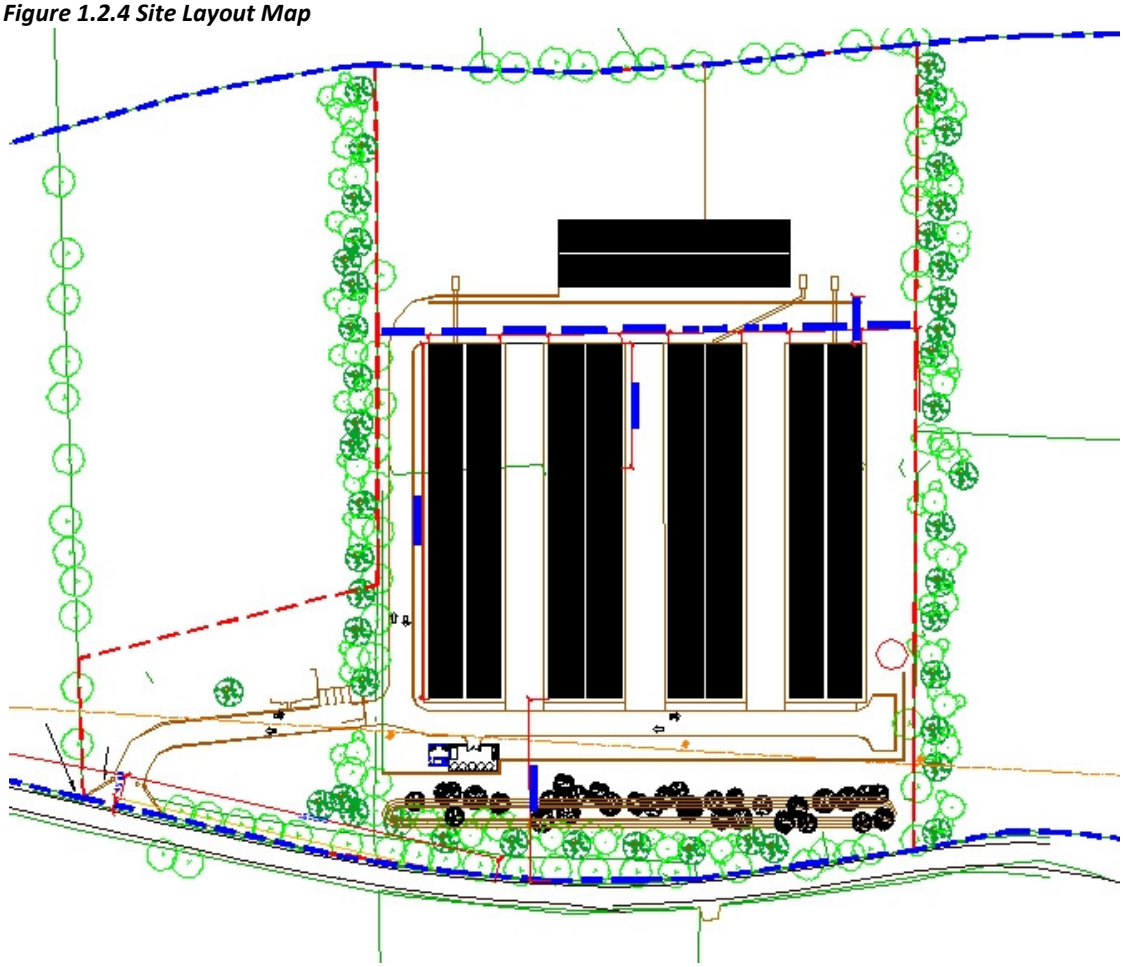


Figure Site Layout Plan

The development will include accommodation for staff, of which there will be 2 staff on duty at all times. This accommodation will consist of a small single storey dwelling house designed in accordance with the Cork County Council rural design guide.

1.3 Environmental Impact Assessment Regulations

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

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

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

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

THE Irish EIA system implements the EU Directive through the integration of its requirements into the land-use planning consent system and several other development consent systems covering for example offshore development, roads /

motorway construction, light rail systems and the laying of oil and gas pipelines. Requirements on development which may arise from the provisions of legislation such as the European Communities (Natural Habitats) Regulations 1997, the National Monuments Acts 1930 to 1994 and Wildlife Acts 1976 to 2000 are also significant.

1.4 Role of the Government and Statutory Bodies

As explained in section 1.3 above the European Communities Directive 85/337/EEC (as amended by Directive 97/11/EC) establishes the core legislation and the responsibility for its implementation falls to each individual government. In the context of this development there are two primary significant competent authorities relevant. These are Cork County Council who have responsibility under the Planning and land use legislation to grant permission for the development to proceed and the Environmental Protection Agency who under relevant environmental legislation must licence the proposed facility and supervise the operation of the facility environmentally.

1.5 Content of the Environmental Impact Statement

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

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

1.6 The Project Team

Mr Raphael Mc Evoy	RME Environmental	Project Management
Mr David Olwell	RME Environmental	EIS undertaking
Mr Noel Brown	OMB & Associates	Planning Consultants
Pedersen Focus Ltd	Pedersen Focus Ltd	Photomantages
George Frisby	RoadPlan Consulting Ltd	Road Safety Assessment
Bratislav Dimitrijevic	RoadPlan Consulting Ltd	Road Safety Assessment
Mr Raphael McEvoy	RME Environmental	Appropriate Assessment

Newspaper Notice

We OMB & Associates, 10 Market St., Skibbereen, 028 21552 (ombassociates@eircom.net) hereby apply on behalf of Kieran O Regan for Permission for Agricultural development consisting of 4 no. broiler Houses to house 50,000 broilers per house, waste storage shed incorporating biomass burner, office & changing facilities, service yard & storage shed, staff accommodation with waste water treatment system & all associated site works at Knockbrown, Bandon, Co. Cork. An Environmental Impact Statement accompanies this application. Both the Planning Application and the Environmental Impact Statement may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the office of the Planning Authority, County Hall, Carrigrohane Road, Cork during its public opening hours, Monday to Friday (excluding public holidays) AND a submission or observation in relation to the application may be made to the Authority in writing on a payment of €20 within the period of 5 weeks beginning on the date of receipt by the Authority of the application.

1.7 PLANNING AND DEVELOPMENT CONTEXT

1.7.1 Planning and Development Context

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

1.7.2 National and Regional Planning Policies and Objectives

The following are the national and regional planning policies and objectives, which are relevant to the proposed development of Mr. Kieran O Regan at Knockbrown, Bandon, Co. Cork.

Sustainable Development and Agenda 21

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

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

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

Some key objectives are:

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

The UN Rio Conference 1992, Agenda 21, the Treaty of Amsterdam 1997 and the 2002 Johannesburg Summit commit the Irish Government, government agencies and the local authorities to the concept of sustainable development.
The first Local Agenda 21 guidelines were published in 1995; a further document "Local Agenda 21 – Toward Sustainable Communities" was launched in 2001. The primary aims of Local Agenda 21 are to:

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

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

In terms of sustainable development, the development as proposed will create in the region of 10 jobs at this facility within the County Cork area while also sustaining a further number of service jobs within the local economy. The production of the poultry product at this site will ensure future product supply for the receiving poultry plant which employs 90 - 100 people. Furthermore, the very nature of the proposal is agricultural based, with poultry production being an

acceptable form of development within a rural area. Given that such a use is directly related to surrounding agricultural activity, the provision of the proposed development at this location is therefore consistent with the proper planning and future sustainable development of the area.

National Development Plan 2007-2013

The National Development Plan is designed to strengthen and improve on Ireland's international competitiveness so as to support continued, but more balanced, economic and social development.

The objectives of the National Development Plan are to:

- Continue sustainable national economic and employment growth.
- Consolidate and improve Ireland's international competitiveness.
- Foster balanced regional development.

Promote social inclusion.

With particular regard to promoting enterprise and employment, the Plan notes that *"the development of diversified employment and enterprise opportunities will be vital to sustaining the economy and maximising its future economic potential."* (Pg 86)

In relation to economic and employment based development within the rural parts of the Country the Plan notes that *"the development of enterprise and employment opportunities will be vital to sustaining the rural economy"* and that "*despite the decline in agriculture-based rural employment, there has been a significant and widespread increase in rural employment in recent years."* The Plan also notes that *"the long term sustainability of the present growth in employment in rural areas needs to be underpinned by job creation initiatives."* (Pg 86)

The Plan goes on to further state that *"given that rural areas have a significantly higher dependence on the more vulnerable manufacturing, natural resources and construction sectors, the long term sustainability of the present growth in employment in rural areas needs to be underpinned by job creation initiatives in a*

wider range of sectors" and that *"agriculture, forestry and the marine sector will nonetheless continue to play a major role in the economy and the social fabric of rural areas, both in terms of the significant numbers of people who will continue to earn their livelihood in these areas and in term of their contribution to maintaining indigenously- based exports and economic activity."* (Pg 83)

The proposed development will therefore create up to 10 sustainable jobs at the facility and ensure future employment in this rural location. It therefore accords with the thrust of the National Development Plan which seeks to promote such development within the rural parts of the Country. The facility at Knockbrown will contribute to ensure the employment of approximately 90 – 100 jobs at the poultry processing plant in addition to further indirect employment off site. The facility will generates an economic positive in the local economy, and as such the economic off-set of such a facility will be significant within this rural part of the Country particularly given its links with the agricultural sector, by generating revenue not only within this sector but also within the wider County area.
The economic and social impacts of the restriction of such a facility would be detrimental to not only the micro- economy of Bandon but also to the economy of County Cork and also national economy through the various plant interdependencies.

It is as such submitted that given that the facility will be operated at such a sustainable an economically profitable level, that its development as proposed should be supported given that the development is consistent with proper planning and development and will ensure the provision of employment locally within the County with the facility ensuring rural based employment within a rural based sector.

National Spatial Strategy 2002-2020

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

Within the South West Region, the NSS designates the rural area around Bandon as a Diversifying Area and the towns of Bandon & Clonakilty as subsidiaries to the gate centre of Cork.

(Section 4.7 page 85, the south West Region).

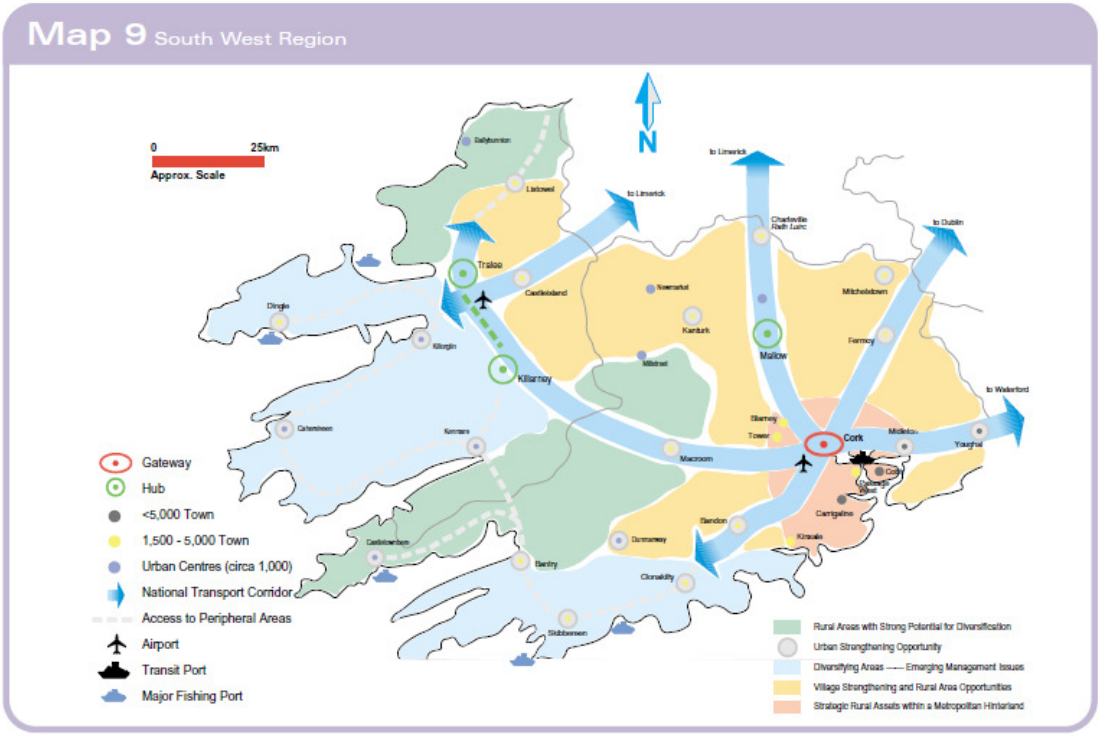


Figure 1.7.2.1 – Extract from the National Spatial Strategy indicating Site position within the South West.

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

It is submitted that given the strategic location of the application site which is within easy access of the National Transport Corridor and the towns of Bandon and Clonakilty there is an unique opportunity to develop a sustainable venture which is located in easy reach of the existing production facility in Clonakilty. This will help to maintain and develop the production facility and the jobs supported there. The proposed development will support the objectives as set out in on p19 of the Strategy: "*Agriculture will continue to be an important component of the economy. Advancing technology and farm consolidation will increase output and continue to reduce agriculturally based employment. The challenge will be to support agriculture and at the same time find alternative employment in or close to rural areas to sustain rural communities."* ***And the development will provide a partnership as envisioned on p36 where the proposed rural development and existing urban processing unit will work in tandem on the strengths of both locations:*** *"National and international evidence also demonstrates that rural areas have a vital contribution to make to the achievement of balanced regional development. This involves utilising and developing the economic resources of rural areas, particularly in agriculture and food, marine, tourism, forestry, renewable energy, enterprise and local services, while at the same time capitalising on and drawing strength from vibrant neighbouring urban areas. In this way rural and urban areas are seen as working in partnership, rather than competing with each other. This urban — rural partnership model is in line with the approach taken in the European Spatial Development Perspective (ESDP)."*

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

Regional Planning Guidelines for the South West Area 2010-2022

These guidelines are underpinned by the following key principles which underpin the vision statement for the region:

- "Prioritise sustainable economic growth and increased competitiveness within the Gateway and Hubs and encourage balanced growth in the key settlements of the rural areas.
- Promote, market and develop the region as an attractive area to live and work with an excellent quality of life and strong sense of place.
- Promote security of energy supply and develop renewable energy in the region in a sustainable manner
- Deliver an integrated and cost effective transportation and infrastructure system (including Broadband) throughout the region in a sustainable manner
- Protect and enhance the natural landscape and heritage assets of the region and
- Promote sustainable urban and rural tourism."

This development is supported by these guidelines as it will encourage sustainable economic growth in a rural area, the development is located where it will not have any adverse affects on the landscaper or heritage assets of the region. The development as proposed is consistent with key policies set out in the Guidelines and the proper planning and sustainable future development of the area.

This development is located in the Western area as described in the guidelines where *"the decline in the traditional employment sectors of agriculture and fisheries, and also the low density and dispersed nature of the population, the potential for employment opportunities are more limited than in the other planning areas."* This development offers diversification from the traditional agriculture sector in the area while providing valuable Jobs in an area where the guidelines recognise that opportunities are limited.

A key aspect of this development is to maintain the production of a quality West Cork food product in the West Cork region. If this is to continue a sustainable, large scale, economically viable facility is required for the Shannon Vale processing plant, the company has rigorously searched for a suitable location to enable it to maintain and develop its business in Clonakilty, and fears its brand will be irreparably damaged if it is forced to start importing foreign produce.

"Food produce from the South West is acclaimed internationally and the region has a very large internationally known food production sector. While the relative importance of agriculture to the regional economy has changed in terms of employment and value, the region has many areas of high quality productive capacity which have the potential to contribute to growth in the development of new food products with international demand resulting in the creation of new employment opportunities within the region." P. 39

This development will enhance an existing valuable food brand in the West Cork Region while creating new employment opportunities.

1.7.3 Local Planning Policies and Objectives

The following section shall set out the relevant plan policies, aims and objectives of the statutory local plan to affect the application site, the Cork County Development Plan 2009-2015.

Cork County Development Plan 2009- 2015

The purpose of the Cork County Development Plan is to provide for the future sustainable development of the County over a six year period thus ensuring appropriate growth in social, economic and physical growth. The following are the relevant sections of the Plan to affect the application site:

Economic Development

In formulating its policies to promote employment and industry, the Development Plan aims to exploit the County's strategic location and competitive advantages for industrial and commercial activities whilst also seeking to safeguard the environment from potential adverse environmental impacts. In this regard it is a specific policy of the Plan to:

"ECON 1-1 (a) It is an objective generally to encourage all forms of economic and employment development throughout the County in response to the policies and objectives contained within the National Spatial Strategy, the Regional Planning Guidelines, the North and West Cork Strategic Plan, the CASP Update 2008 and in accordance with the overall development strategy and objectives of this plan. "

The proposed development ensures that the rural area in which it is located can compete effectively with surrounding larger centres and urban areas by providing a sustainable economic base within the rural environment thus providing for the needs of the surrounding agricultural sector and adding to the overall economy of the area.

As such the facility assists in driving the development of the County forward in a balanced and sustainable way allowing the County and particularly the rural parts of the County to compete more effectively with the Metropolitan area of Cork and other competitive regions.

The facility has significant economic and social off-sets for the local rural economy and community, providing a much under estimated but valued asset within the Bandon area. The economic and social gains which the facility brings to the local area are significant not only through employment but also in service procurements and consumables procurement.

Rural Enterprise:

"ECON 2-1 (b) It is an objective to maintain and enhance the economy of Rural Areas in line with policies outlined in the National Spatial Strategy, the Ireland Rural Development National Strategy, 2007-2013 and the North and West Cork Strategic Plan, whilst safeguarding its environment."

"ECON 2-1 (d) It is an objective to promote rural economic development by adopting a policy framework that recognises the need to promote the long term sustainable social and environmental development of rural areas, and encourages economic diversification and facilitates the growth of rural enterprises."

"ECON 2-1 (e) It is an objective to recognise the value of agriculture to the economic development of the County and continue to protect agricultural farmland against inappropriate land-uses. "

The proposed development is, it is submitted, an acceptable form of development for a rural area and is directly related to the surrounding agricultural uses within the area. Indeed the building itself when viewed from the entrance is consistent with other agricultural buildings found in the countryside.

"ECON 2-4 (c) It is an objective to recognise the role played by the key villages and villages as local employment centres where investment can be focused in creating a critical mass of population and employment that will sustain a local rural hinterland. "

"ECON 2-6 (d) It is an objective to promote the key villages and villages as local employment centres where investment can be focused on creating additional employment opportunities that will sustain a local rural hinterland. "

"ECON 2-7 Rural Employment: It is an objective to recognise the contribution of rural employment to the growth of the economy in the strategic planning areas and to promote that growth by encouraging rural enterprise generally and promote certain kinds of rural enterprise, especially those activities that are resources dependant, including renewable energy production and small scale industry. "

The proposed development is consistent with policy ECON2-4 and ECON 2-6 and ECON2-7 of the Development Plan in that it will encourage rural enterprise while providing employment opportunities for those living in the villages in the surrounding areas. Furthermore the proposal will not be injurious to the amenity of the area, being located in an area which can assimilate the development into

the existing environment. Furthermore, the proposal is not located within or adjoining any sensitive landscape designations

"ECON 5-1 Rural Diversification (a) It is an objective to encourage diverse on and off-farm employment activities such as processing of agricultural produce, manufacturing of crafts and specialist farming (horticulture, organic, market gardening, flowers) "

The proposed development is consistent with policy ECON 5-1 in that it brings diversity to a region where the tradition of poultry farming is not prevalent. It also brings employment and sustainability as the food market in Ireland is flourishing at present.

Cork Area Strategic Plan – Strategy for Additional Economic and Population Growth

The Cork Area Strategic Plan (CASP) is a pioneering initiative jointly sponsored by Cork City Council and Cork County Council which provides a vision and strategy for the development of the Cork City-Region up to 2020. The Key economic objectives of the policy include: Economic growth; Social inclusion; balanced spatial development; & Environment;

The plan projects that in the Bandon Hinterland area employment numbers will grow by 100 in the period up to 2020 this development can help the area achieve these growth figures, with the additional 15 jobs that the development will sustain. This can be achieved while achieving Economic Growth in the area while protecting the environment.

Planning History

There have been no previous planning applications relating to this site at Knockbrown, Bandon, Co. Cork. Recent adjoining planning permissions include: 06/13503 for an agricultural development, 11/5015 for dwelling house and 034152 addition to dwelling house.

1.7.4 Proper Planning and Development

The proposed development accords with the relevant national, regional and local planning policies and objectives including the statutory Development Plan for the area, the Cork County Development Plan 2009 - 2015. This is the case for the following reasons:

1. The proposed development accords with the sustainability issues as set out in Agenda 21 and the main thrust as set out in the National Development Plan by ensuring that the rural parts of County Cork can compete effectively with the Metropolitan area.
2. In accordance with the principles of the National Development Plan 2007 and National Spatial Strategy 2002, the economic off-set of such a facility will be significant within the rural parts of the Country particularly given its links with the agricultural sector, with the facility being capable of providing jobs within the area and directly supporting jobs locally through supply of produce to the processing plant in nearby Clonakilty.
3. The proposed development seeks to ensure the future of existing and potential employment at the facility thus ensuring the future sustainable development of operations on site and developing of this valuable asset within the local economy.
4. The proposed development will in part promote Bandon as a key economic and employment centre within the region and thereby making a contribution to balanced regional development in accordance with principles as set out in the Regional Planning Guidelines for the CASP area.
5. The proposed development, is it is submitted, an acceptable form of development for a rural area and is directly related to the surrounding agricultural uses within the area. Indeed the buildings themselves will be consistent with other agricultural buildings found in the countryside.
6. The proposal is consistent with the development control management standards as set out in the Cork County development Plan 2009 – 2015 thus ensuring the

development is consistent with the proper planning and future sustainable development of the area.

2.0 PROJECT DESCRIPTION

2.1 Introduction

As described in the introductory section of this document the project proposed for planning permission at the site is the construction of 4 Poultry houses, of 2435 meter square floor area each. Each of these houses is proposed to house a maximum of 50,000 birds. These poultry houses are have an extremely low profile, not exceeding 5m in height. The waste from the development is to be stored on site in a 1434 square meter waste storage house. As part of this storage house a biomass burner is proposed to be installed, which will convert the soiled waste from the houses to heat energy for the growing houses. The proposed development is to be located in the townland of Knockbrown, with the site adjoining the R602, Bandon to Timoleague road. The site will consists of approximately 4.86 Ha, part of a larger land holding c. 12.68 ha. The site is located within Landscape Character area number:" 53 Argideen & Owenkeagh Rivers "Which is designated Rolling Patchwork Farmland.

The following are the key requirements of planning permission in the proposed development:

- Planning Permission is sought for an Agricultural development consisting of 4 no. broiler Houses to house 50,000 broilers per house, waste storage shed incorporating biomass burner, office & changing facilities, service yard & storage shed, staff accommodation with waste water treatment system & all associated site works at Knockbrown, Bandon, Co. Cork.

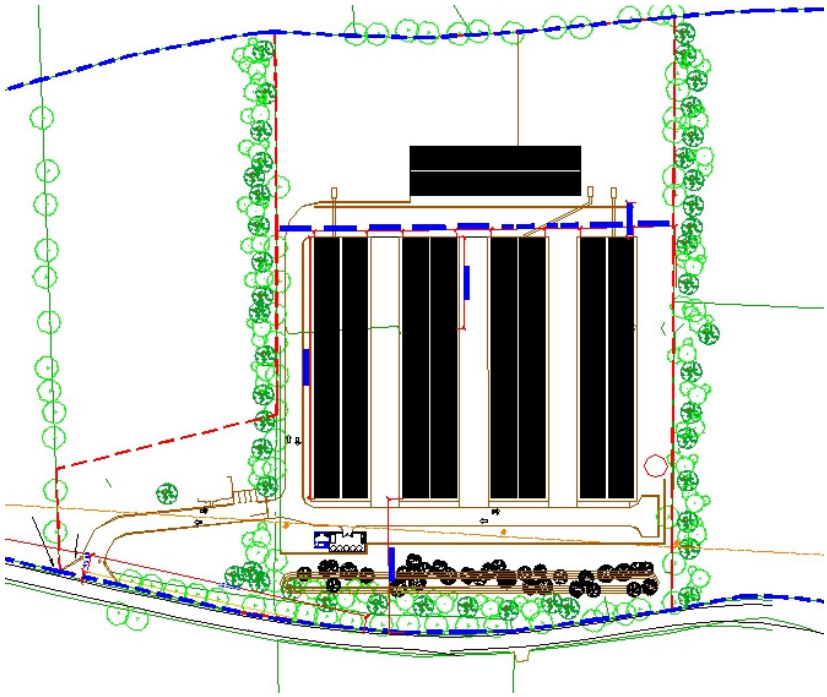
2.2 The Need for the Development

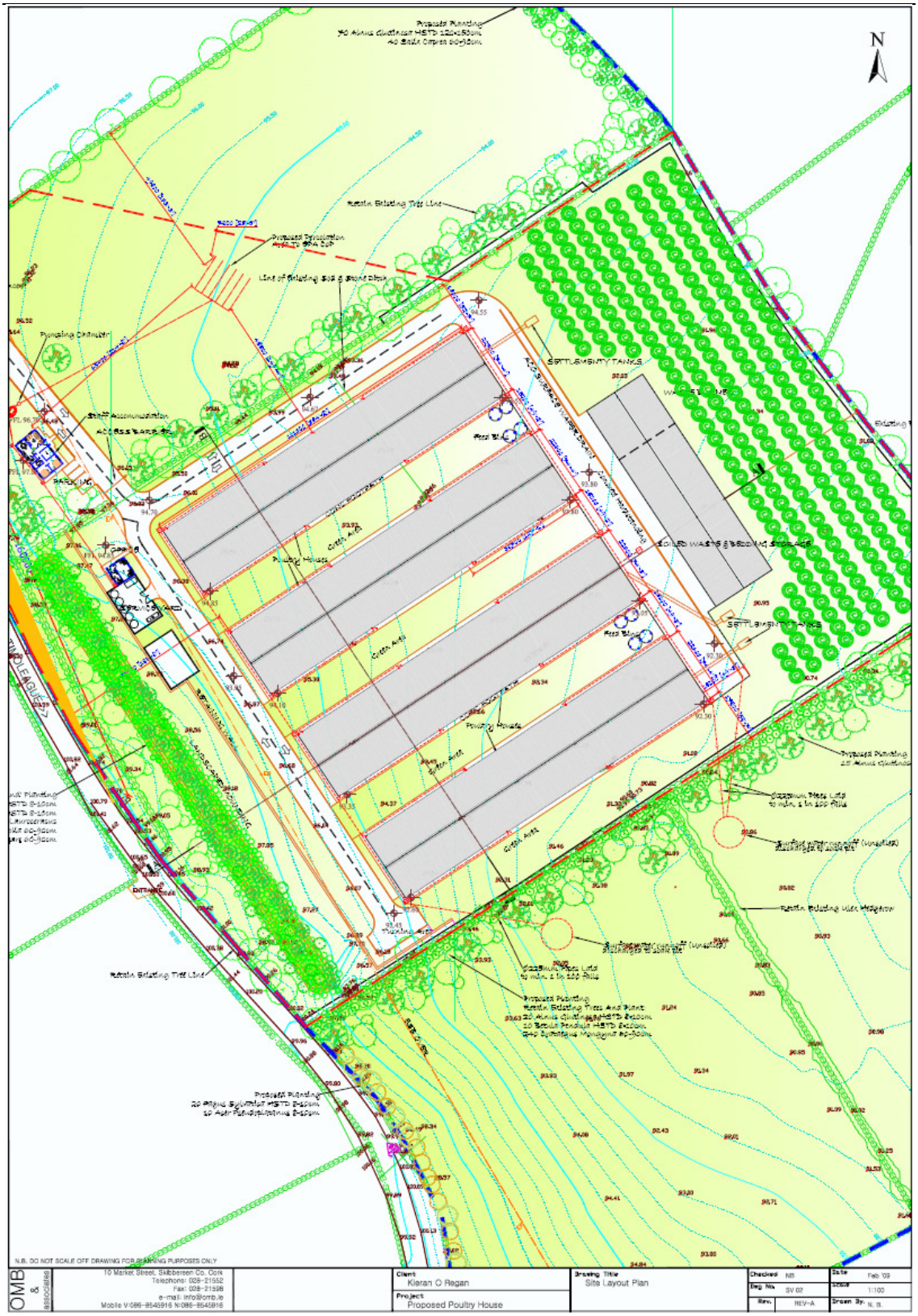
Shannon Vale Foods existing suppliers are generally small scale farms located around the west Cork region. While there has been a trend in the industry to source its raw materials (chickens) from cheaper sources from abroad, typically from lower cost locations such as Thailand, Shannon Vale are committed to the growing of its produce in Ireland. To continue Shannon Vale's commitment to Ireland it needs to

secure its future through a reliable Irish source of raw material. With this in mind the Management of Shannon Vale has been working on locating a site which would be capable of supporting a Growing facility to cater for this need. The site at Knockbrown has been selected after years of searching for a suitable location for this facility and ruling out numerous options which were deemed unsuitable.

2.3 Detailed Description of the Development

The proposed development is to be located in the townland of Knockbrown, with the site adjoining the R602, Bandon to Timoleague road. The site will consists of approximately 4.86 Ha, part of a larger land holding c. 12.68 ha. The site is located within Landscape Character area number:" 53 Argideen & Owenkeagh Rivers "Which is designated Rolling Patchwork Farmland. The development will consist of four broiler Houses to house 50,000 broilers per house, waste storage shed incorporating biomass burner, office & changing facilities, service yard & storage shed, staff accommodation with waste water treatment system & all associated site works at Knockbrown, Bandon, Co. Cork. The layout of the site can be seen below and in detail on the following pages;

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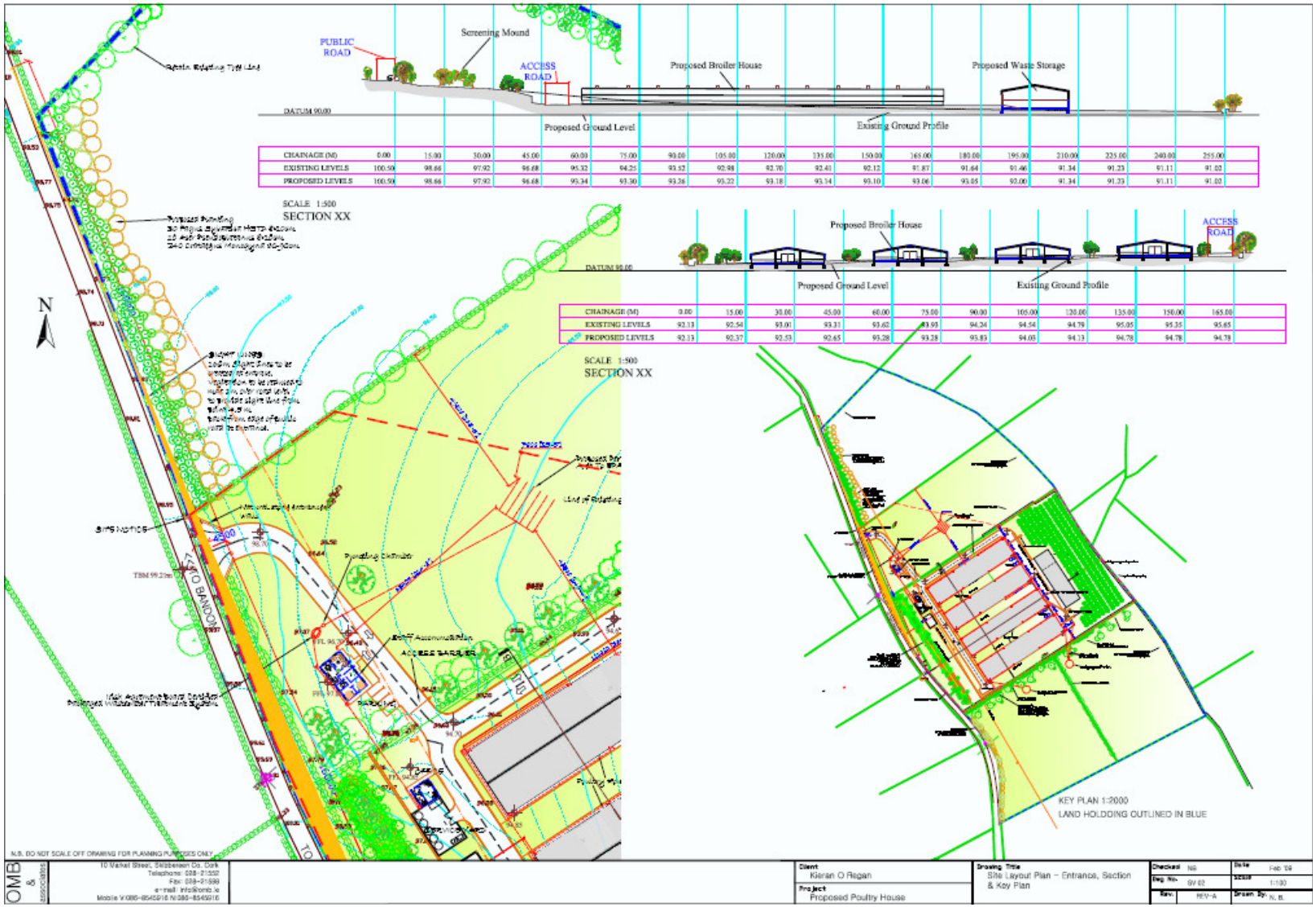
SETTLEMENT TANKS
Client
Kieran O Regan
Project
Proposed Poultry House
Drawing Title
Site Layout Plan
Checked
Dwg No.
SV 02
Rev.
REV-A
Date
Feb '09
Scale
1:100
Drawn By
N. B.
N.B. DO NOT SCALE OFF DRAWING FOR PLANNING PURPOSES ONLY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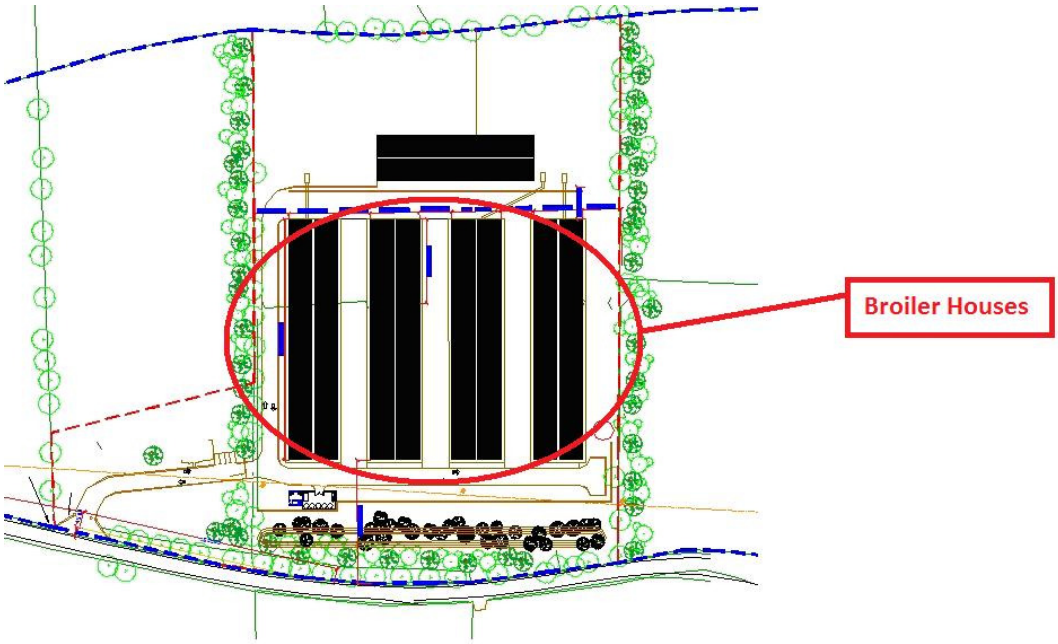
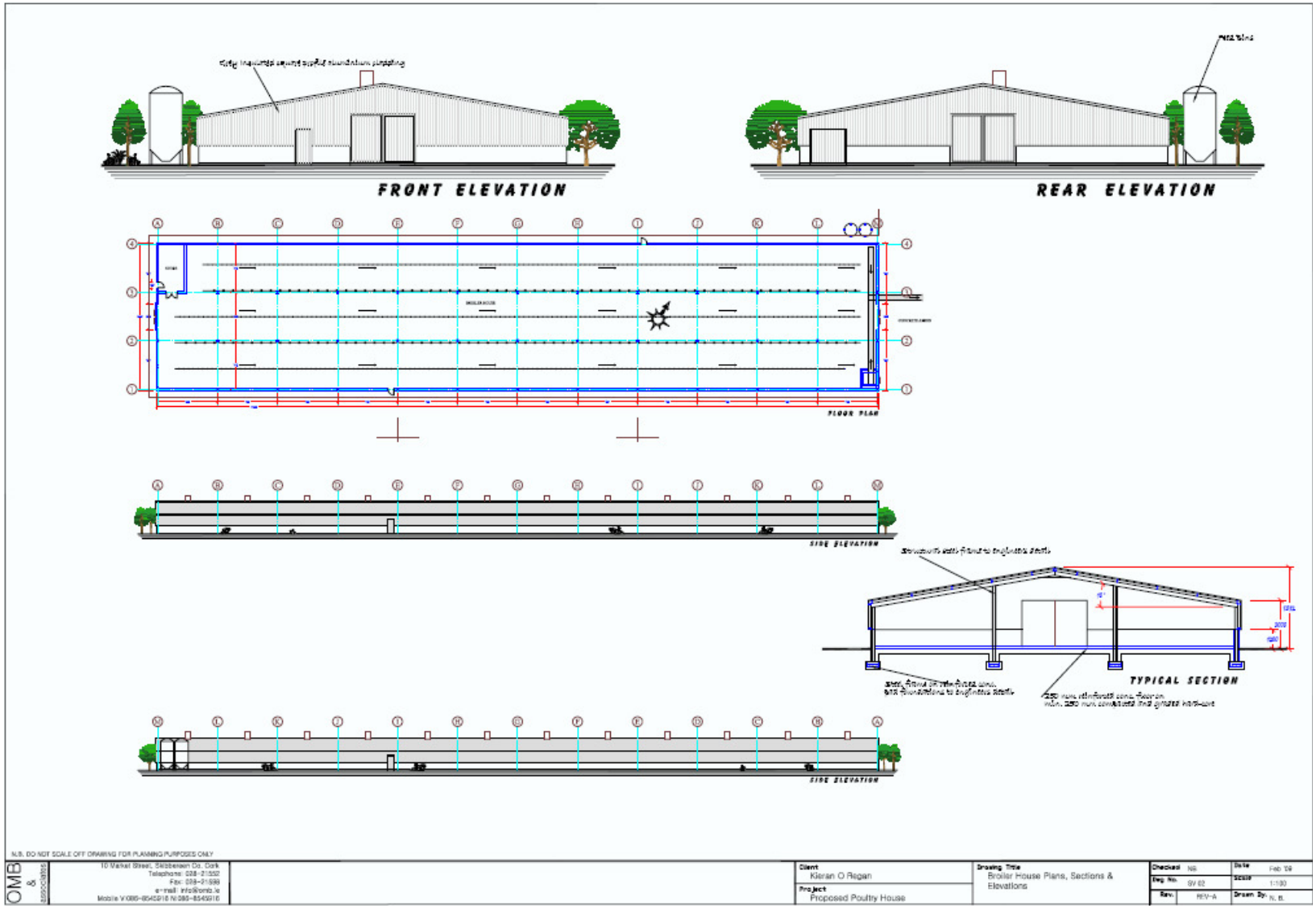
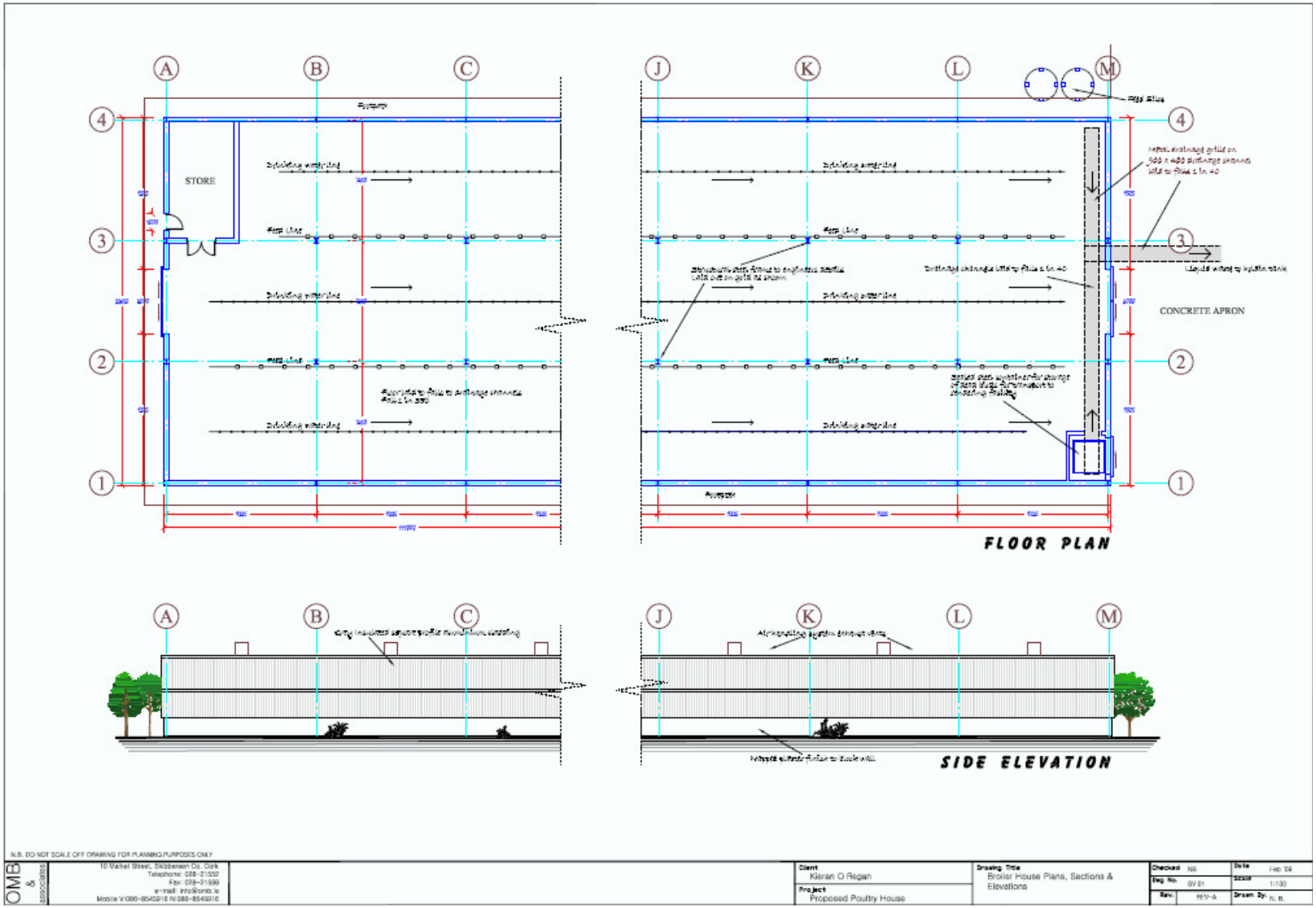
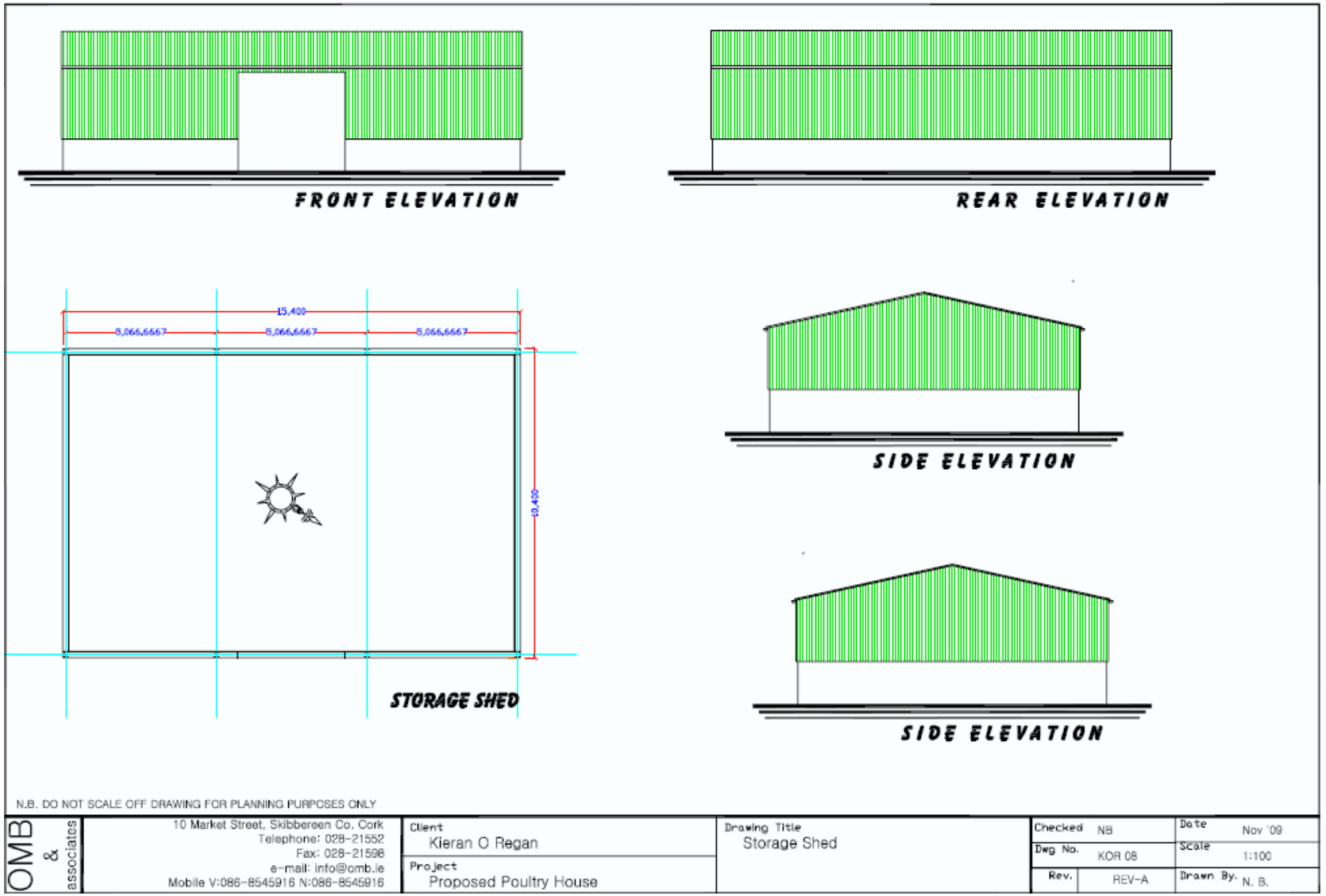
Screening Mound
ACCESS ROAD
Proposed Broiler House
Proposed Waste Storage
DATUM 90.00
Proposed Ground Level
Existing Ground Profile
CHAINAGE (M) 0.00 15.00 30.00 45.00 60.00 75.00 90.00 105.00 120.00 135.00 150.00 165.00 180.00 195.00 210.00 225.00 240.00 255.00
EXISTING LEVELS 100.50 98.66 97.92 96.68 95.32 94.25 93.52 92.98 92.70 92.41 92.12 91.87 91.64 91.46 91.34 91.23 91.11 91.02
PROPOSED LEVELS 100.50 98.66 97.92 96.68 95.34 93.30 93.26 93.22 93.18 93.14 93.10 93.06 93.05 93.00 91.34 91.23 91.11 91.02
SCALE 1:500
SECTION XX
Proposed Broiler House
ACCESS ROAD
DATUM 90.00
Proposed Ground Level
Existing Ground Profile
CHAINAGE (M) 0.00 15.00 30.00 45.00 60.00 75.00 90.00 105.00 120.00 135.00 150.00 165.00
EXISTING LEVELS 92.13 92.54 93.01 93.31 93.62 93.93 94.24 94.54 94.79 95.05 95.35 95.65
PROPOSED LEVELS 92.13 92.37 92.53 92.65 93.28 93.28 93.83 94.05 94.13 94.78 94.78 94.78
SCALE 1:500
SECTION XX
N
KEY PLAN 1:2000
LAND HOLDING OUTLINED IN BLUE
N.B. DO NOT SCALE OFF DRAWING FOR PLANNING PURPOSES ONLY
OMB & ASSOCIATES
Client
Kieran O Regan
Project
Proposed Poultry House
Drawing Title
Site Layout Plan – Entrance, Section & Key Plan
Checked NB
Dwg. No. SV 02
Rev. REV-A
Date Feb '09
Scale 1:100
Drawn By N. B.

The project proposed for planning permission at the site is the construction of 4 poultry houses, of 2435 meter square floor area each. Each of these houses is proposed to house a maximum of 50,000 birds. These poultry houses are have an extremely low profile, not exceeding 5m in height. The houses are constructed by Turkington Systems and made from steel. The main benefit of these proposed houses is their clear span which facilitates emptying and cleaning of the house, as there are no posts obstructing access at floor level, this lessens the time spent cleaning and therefore the time span for odours to escape. The waste will be stored in a waste storage shed which may incorporate a waste burner at a later date. The Layout of the broiler houses and storage house can be seen on the following layouts;




FRONT ELEVATION
REAR ELEVATION
FLOOR PLAN
SIDE ELEVATION
TYPICAL SECTION
SIDE ELEVATION
N.B. DO NOT SCALE OFF DRAWING FOR PLANNING PURPOSES ONLY
OMB & associates
10 Market Street, Skibbereen Co. Cork
Telephone: 028-21592
Fax: 028-21598
e-mail: info@omb.ie
Client
Kieran O Regan
Project
Proposed Poultry House
Drawing Title
Broiler House Plans, Sections & Elevations
Checked NB
Dwg. No. SV 02
Rev. REV-A
Date Feb '09
Scale 1:100
Drawn By N. B.


A
B
C
J
K
L
M
STORE
CONCRETE APRON
FLOOR PLAN
SIDE ELEVATION
N.B. DO NOT SCALE OFF DRAWING FOR PLANNING PURPOSES ONLY
OMB & ASSOCIATES
Client
Kieran O Regan
Project
Proposed Poultry House
Drawing Title
Broiler House Plans, Sections & Elevations


FRONT ELEVATION
REAR ELEVATION
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5,066.6667
5,066.6667
5,066.6667
10,400
STORAGE SHED
SIDE ELEVATION
SIDE ELEVATION
N.B. DO NOT SCALE OFF DRAWING FOR PLANNING PURPOSES ONLY
OMB & associates
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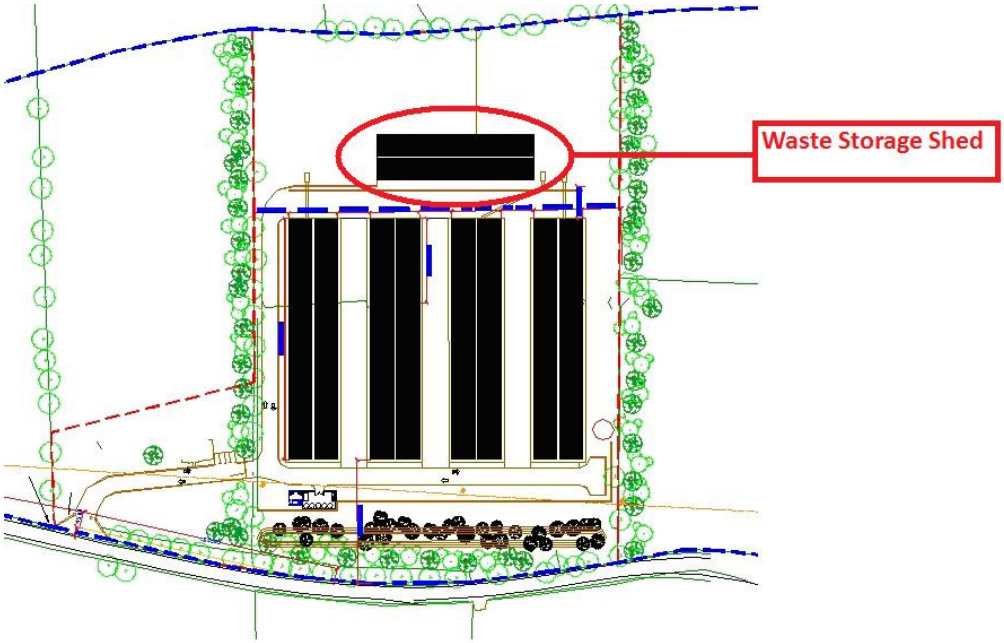
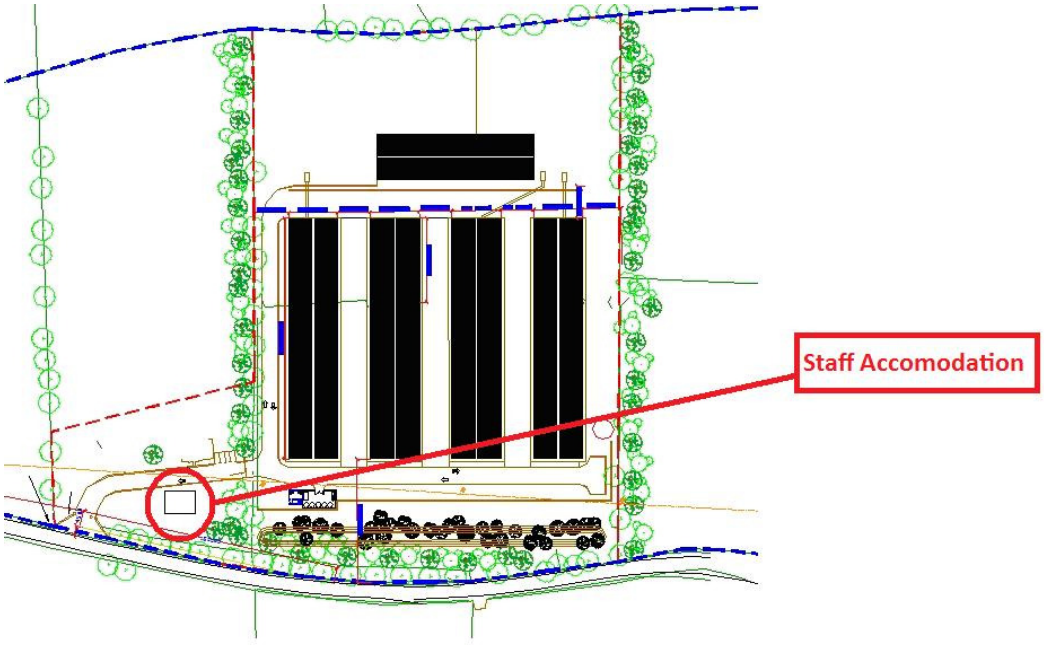
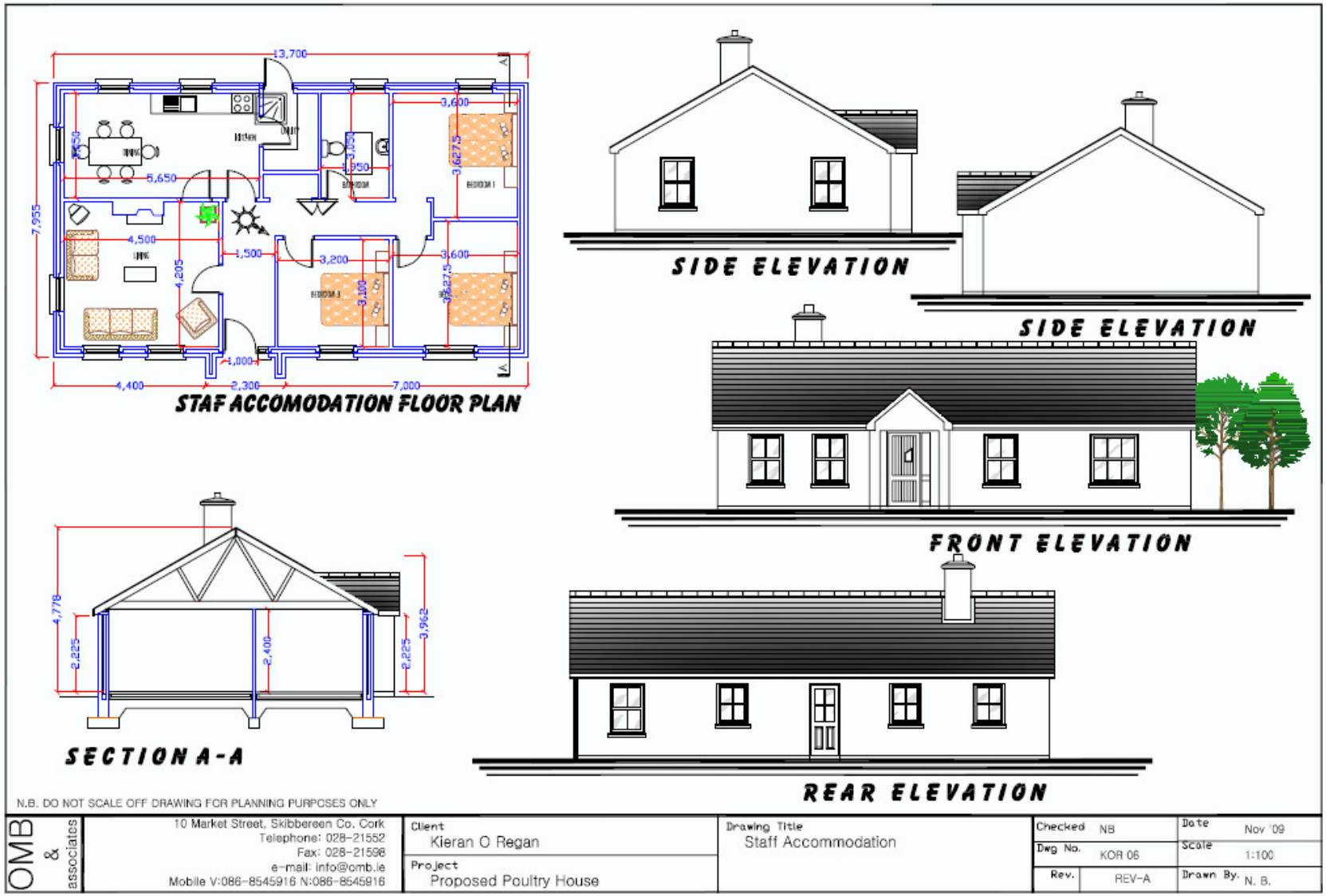
Fax: 028-21598
e-mail: info@omb.ie
Mobile V:086-8545916 N:086-8545916
Client
Kieran O Regan
Project
Proposed Poultry House
Drawing Title
Storage Shed
Checked NB
Dwg No. KOR 08
Rev. REV-A
Date Nov '09
Scale 1:100
Drawn By. N. B.



The site will also have an office & changing facilities, a service yard & storage shed, staff accommodation with waste water treatment system. The layout of these can be seen on the following pages:

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STAF ACCOMODATION FLOOR PLAN
SIDE ELEVATION
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FRONT ELEVATION
4,778
2,225
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SECTION A-A
REAR ELEVATION
N.B. DO NOT SCALE OFF DRAWING FOR PLANNING PURPOSES ONLY
OMB & associates
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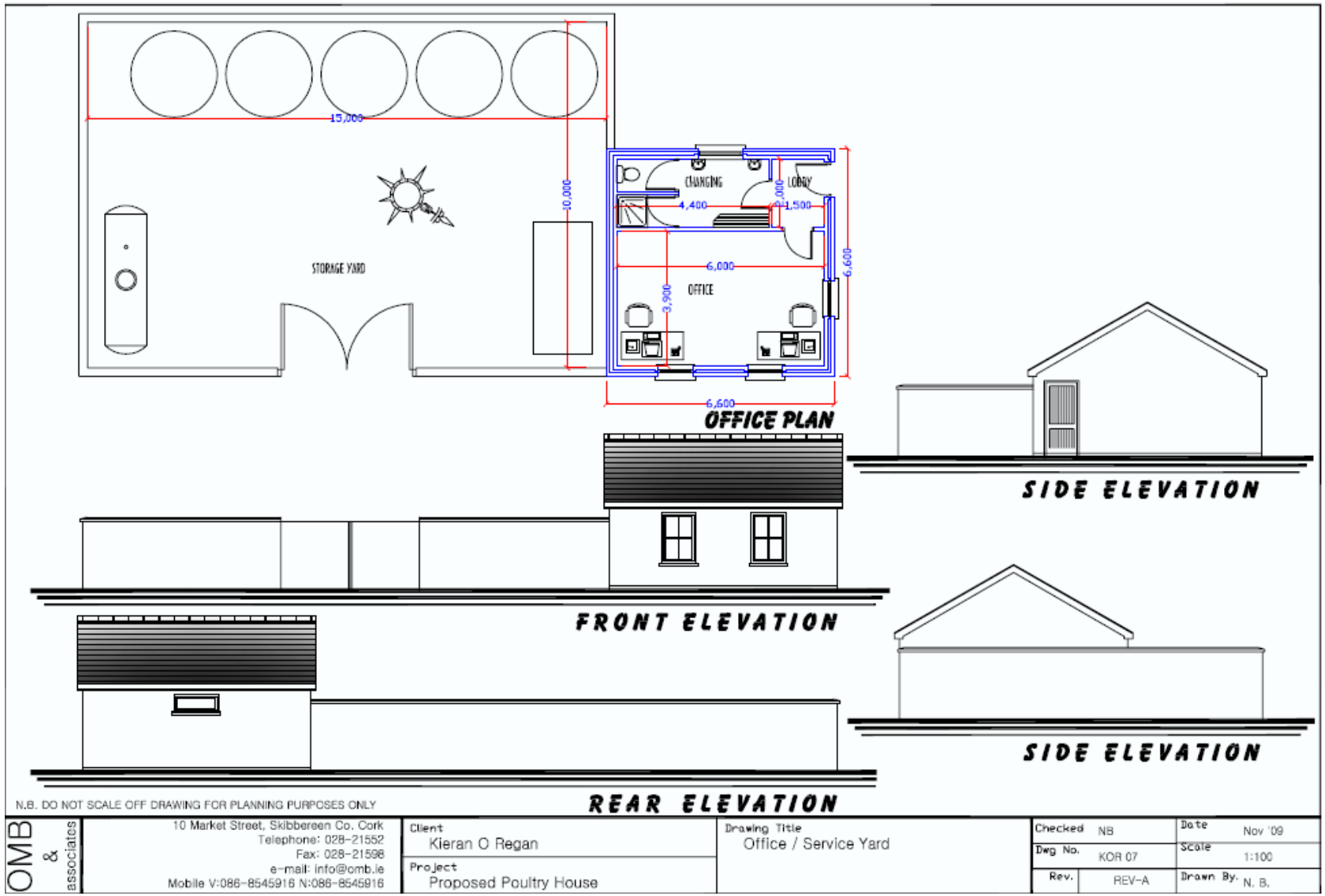
e-mail: info@omb.ie
Mobile V:086-8545916 N:086-8545916
Client
Kieran O Regan
Project
Proposed Poultry House
Drawing Title
Staff Accommodation
Checked NB
Dwg No. KOR 06
Rev. REV-A
Date Nov '09
Scale 1:100
Drawn By. N. B.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CHANGING
LOBBY
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1,500
6,000
OFFICE
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6,600
OFFICE PLAN
SIDE ELEVATION
FRONT ELEVATION
SIDE ELEVATION
REAR ELEVATION
N.B. DO NOT SCALE OFF DRAWING FOR PLANNING PURPOSES ONLY
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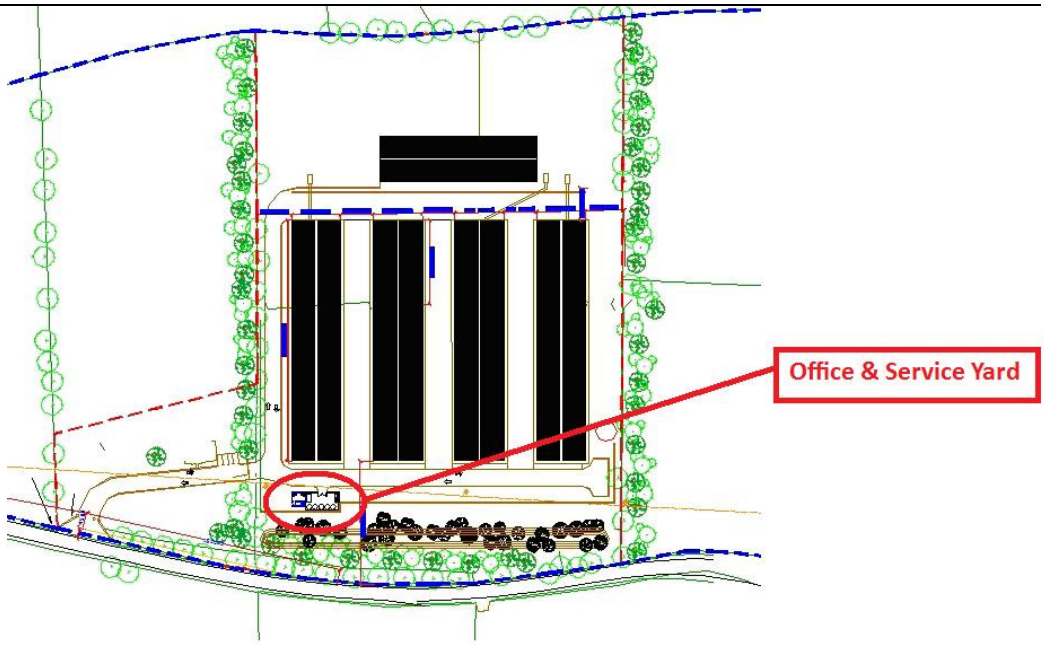
10 Market Street, Skibbereen Co. Cork
Telephone: 028-21552
Fax: 028-21598
e-mail: info@omb.ie
Mobile V:086-8545916 N:086-8545916
Client
Kieran O Regan
Project
Proposed Poultry House
Drawing Title
Office / Service Yard
Checked NB
Dwg No. KOR 07
Rev. REV-A
Date Nov '09
Scale 1:100
Drawn By. N. B.



The development will give Shannon Vale Foods the ability to source its produce in Ireland and continue their commitment to local economy by securing its future through a reliable Irish source of raw material.

3.0 SCOPING AND CONSULTATION

3.1 Introduction

This section deals with the process, which endeavoured to identify and emphasise the issues which are likely to be important in the EIA and to eliminate those which are not. In general the scope of the EIA relative to the project has been drawn up by the professionals on the project team however it was felt that there would be a requirement for some additional consultation with the granting Authorities regarding the extent to which certain assays should be conducted to avoid possible issues arising in the medium to long-term. In the case of this project the scooping was in general informal. Reference is made to the scoping within individual documents as prepared by each individual expert group.

3.2 Guidance

In relation to this proposed development guidance was sought in particular from the Planning Department of Cork County Council whereby representatives of OMB Associates (Project Planning Consultants) engaged with planning officers of Cork County Council to discuss the scope of the project and the perceived requirements of the project.

4.0 ALTERNATIVES ADDRESSED

4.1 Introduction

The Planning and Development Regulations 2001, specifies the information to be Contained within an EIS. Schedule 6 1(d) specifies that an EIS shall include *"An Outline of the main alternatives studied by the developer and an indication of the main reasons for his or her choice taking into account the effects on the environment."*

Therefore, as part of the initial planning stages for the proposed development, a number of alternatives were evaluated for the proposed development at Knockbrown, Bandon, Co. Cork. These alternatives included other sites, other uses for the site chosen and process changes taking account of environmental impacts.

4.2 "Do Nothing" Alternative

The "do-nothing" alternative consists of retaining the current site at Knockbrown, Bandon, Co. Cork and avoiding development of proposed poultry facility. If Mr O'Regan adopted this approach there would have been a negative impact on local economics, on the local farming community on the local workforce and on locally generated revenues.

Shannonvale Foods will not have created the operation which is essential for the Company to develop. The specific demands of the poultry processing facility in Clonakilty and the general demands for poultry products nationally will not be met. The requirement for the facility reflects demand and a requirement through economic, legislative and sustainability measures to expand production. The "do-nothing" alternative would also negate the promotion of environmentally sustainable practices at the site and would mean that the Company would not expand.

The "do-nothing" alternative would also lead to the abolishing of plans to incorporate on-site utilization of poultry manure as an alternative fuel source for the

production of the birds which is a project that is beneficial to the Carbon footprint of the industry in the future.

4.3 Alternative Sites

To be able to successfully compete with cheap foreign imports Shannon Vale need a growing facility with a large annual capacity which will protect the ongoing success of its business.

A number of existing growing sites have been examined with a view to expanding the existing growing capacity on these sites, these included:

- The site at Maulatanvally, Glanbrack, Reenascreena Co.Cork planning reference number 97/3726 . This existing production site was carefully examined but deemed unsuitable due to the lack of suitable ground adjoining the facility to enable the expansion.
- A proposed green field site was examined at Castlebernard, Bandon Co. Cork, but numerous planning issues remain to be resolved & the site would be unable to sustain large scale development as required (planning Ref number 01/6005).
- An industrial site at Clonakilty Rd. Dunmanway was briefly considered but zoning issues & proximity to the town would have been issues preventing any development.

Numerous other green field sites in the west cork area have been examined but ruled out due to one or a combination of the following issues:

- Road network.
- Adjoining Houses/proximity to town village.
- Scenic area.
- Distance from processing facility in Clonakilty.
- Lack of ESB network (10KVA line).
- Land unsuitable/lack of buffer space around proposed development.
- Available land for waste spreading.
- Lack of natural Screening.

The site at Knockbrown in Bandon was selected after a rigorous search for a suitable development site. It has a suitable road network within reasonable distance from the processing plant in Clonakilty, there is suitable separation distances from the few dwelling houses that adjoin the site, it has no specific restriction from a planning perspective and is located in an agricultural area, a 10 KVA line traverses the site, there is suitable land around the development site to facilitate landscaping & waste spreading and the proposed site sits in a low-lying area that can be readily screened by augmenting the existing boundary hedgerows.

4.4 Alternative Processes

There are no alternative processes for consideration.

5.0 ENVIRONMENTAL IMPACTS

5.1 Human Beings

Ultimately all of the effects of the development on the environment impinge on human beings directly or indirectly. The overall effect of the proposed and existing development on the socio-economic environment can be registered as positive.

During the construction Phase up to 15 temporary jobs will be created. The new proposed development will create 2 new jobs in the local area (a manager for the plant who lives on-site and a general operative) and contribute up to millions to the local economy on an annual basis. The development will also lead to another 2 -3 service jobs also. The successful development will also create 5 new processing jobs and ensure sustained supply to the processing plant in Clonakilty which supports an existing employee base of 90 - 100 people and contributes up to €5 million to the local economy on an annual basis.

The National economy will benefit too as a result as the company will increase its taxation contributions and through its activities will assist in bolstering the National Export volume and inter-European trade figures.

5.1.1 Land Use

The proposed development will cover approx 4.86ha, part of a larger land holding c. 12.68ha.

5.1.2 Employment

In order for this poultry processing plant to remain competitive and meet demand the company management have deemed this proposed development a necessity.

15 construction jobs will occur as a direct result of the proposed development, 2 permanent job at the site and 5 jobs at the processing plant with 2 - 3 extra service jobs anticipated in the areas of stock provision, feed supply and maintenance as a result of the development.

5.1.3 Settlement and Social Patterns

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

5.2 Flora and Fauna

5.2.1 Introduction

A walk over survey of the environs of the site at Knockbrown, Bandon, Co. Cork was carried out by RME Environmental at the site on the 17th July 2013. The aim of the survey was to determine the impacts that the proposed development will have on the existing flora and fauna.

5.2.2 Methodology Employed

A site walkover surveys were carried out in July 2013 in order to establish the current flora and fauna of the environs of the site and to establish whether there is a requirement for a full Flora and fauna (Ecological) study at the site with respect to this proposed development. In line with that a screening exercise was also conducted at the site with regard to the production of a screening statement for appropriate assessment of the site and proposed development in accordance with to Article 6 of the Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (hereafter referred to as the Habitats Directive). This is transposed in Ireland primarily by S.I. No. 477 of 2011, European Communities (Birds and Natural Habitats) Regulations 2011 (hereafter referred to as the Birds and Habitats Regulations) and by the Planning and

Development (Amendment) Act 2010, as amended (hereafter referred to as the Planning Acts).

This assessment concluded that "*Following an appraisal of all potential issues described above and by applying the precautionary principle, it was determined that it was possible to rule out significant impacts on the Courtmacsherry Estuary, Konakilty Bay and the pNHA Batemans Lough during the proposed construction and operation of the proposed development. Therefore, it was deemed unnecessary to undertake any further stages of the Appropriate Assessment process.*"

5.2.3 Results

The basic result of the assessment and site walkover is that the proposed development will not in any significant way compromise the ecological standing of the areas proximate to the site. The screening process for appropriate assessment identified no special areas of conservation or natural heritage areas in close proximity to the site however the Courtmacsherry Estuary is approx 4km from the site and thus the focus will be to protect the Baurleigh River which flows into the Kilbrittain River and eventually to the Courtmacsherry Estuary . The screening assessment concluded that there is No potential for the proposed development to impact this SAC.

5.2.4 Impact of the Development on Flora and Fauna

A flora and fauna survey of the environs of the Shannonvale Foods
foods site at Knockbrown, Bandon, County Cork was carried out in part fulfilment of the requirements of the Environmental Impact Statement so as to determine the impacts that the development on the existing flora and fauna.

- The primary habitat lost by the development proposed in classified as GA1 (improved agricultural grassland) or tillage land under intensive agriculture (Maize planted in main site field) meaning native or rare species are not

present due to the nature of activities on the land. The land at the site is therefore of low ecological importance owing to low species diversity. There are no protected and/or rare species of flora in this habitat. It is therefore unlikely that the proposed development will lead to any loss of any protected and/or rare species of flora.

- The primary concern with regard to this development is the potential for contamination of the Baurleigh River with waste material from the processes taking place on site – primarily waste management and poultry house washdown. The proximity of the site to the Baurleigh River would result in the River becoming the ultimate destination of any discharges from the plant.

- Removal of tree line will at the Northern Boundary of the site to make way for the entrance road the development as a whole will maintain a hedgerow that make up the boundary of the site. The removal of the treeline would however possibly impact negatively on local fauna where the treelike could serve a function as a shelter or corridor for wildlife. It is noted however that there is a relative abundance of this type of habitat on-site and adjacent to the site to which the displaced fauna can retreat.

- The potential presence of large quantities of dead birds. This can most likely result in a high population of scavengers and has the potential for increasing the spread of bacteria and disease through animals scavenging on blood and other waste products. In addition to this, other scavengers, such as various species of crow, foxes and feral cats may be attracted to the site. This may be a source of bacteria and disease, which could be spread into the greater environment.

- In the Construction and Operational phases of this installation will be associated with an increase in the traffic burden on the approach roads to the installation. The survey of impacts of increased traffic in the area will be

minimal and hence will not impact the flora and fauna in the vicinity of the site.

5.2.5 Mitigation Measures and Recommendations

The primary concern is the potential impact that any discharge may have on the Baurleigh River and its pathway to the Courtmacsherry Estuary via the Kilbrittany River – the ultimate destination of any discharge from the facility. In order to alleviate any concerns, it is recommended that all discharge drains be sampled randomly throughout the year, by an independent body, to ensure that the discharge complies with EPA requirements. This will be addressed in the subsequent licensing of the facility by the Environmental Protection Agency. It is important also that all on-site chemicals and oils, diesels or other hydrocarbon based products are stored in adequate bunds and bunded storage facilities in association with the BAT described in the Environmental Protection Agency document 010607-22-RP-001 B 2004 Guidance Note on Storage and Transfer of Materials for Scheduled Activities.

As much of the existing treelines onsite will be retained as possible. Mitigation is also recommended in the form of the replacement of any of the tree-line removed on the boundary of the site with a selection of tree species of a similar number and area on the southern side of the site. The hedgerow will be replanted with a low hedge to improve road visibility at the entrance and it is unlikely that any species of flora would have been impacted by this removal and replanting with all additional planting on the site supporting the existing biodiversity.

Predators and Rodents at the site during the operational phase will be mitigated against with a large number of bait traps and standard operating procedures. This is in-line with the requirements of the Bord Bia Quality Assurance scheme which the facility will aim to comply and is viewed positively as management of a potential situation. Also in order to mitigate this problem/potential problem, all dead birds

must be stored safely in closed containers and removed regularly. A vermin management and control plan should be activated for the site and should be inspected and updated regularly.

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

5.3 Soils, Sediment and Geology

5.3.1 Introduction

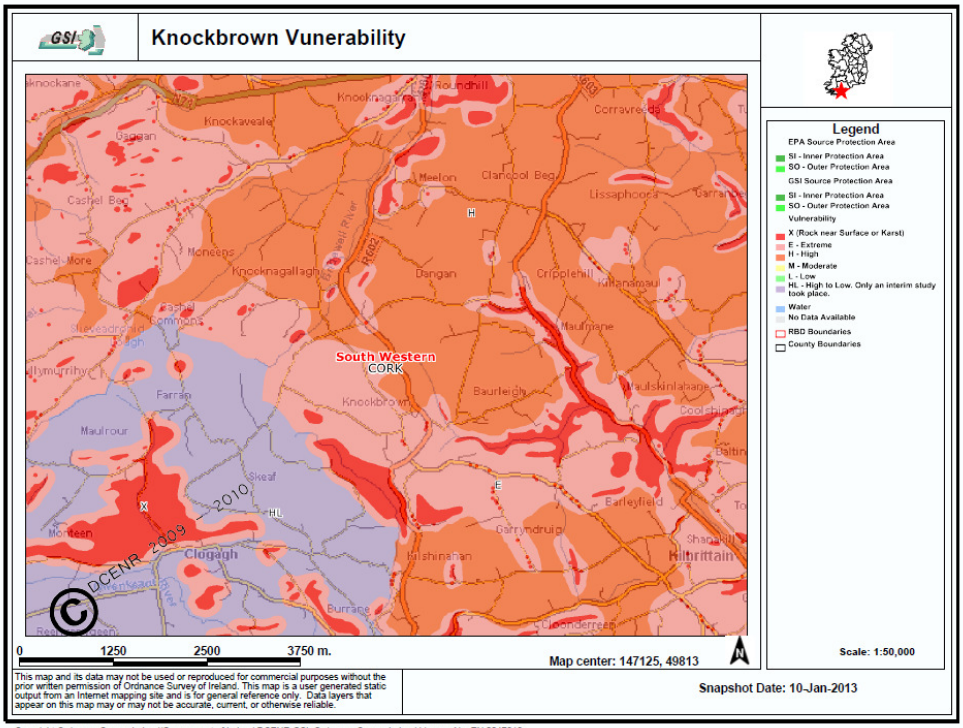
As a result of the fact that the site of the proposed development is existing tillage and intensive agricultural land the scoping study of the site by the professionals employed deemed the impact on soils sediment and geology to be generally minimal. It was decided to carryout a basic desktop assessment of the site soil sediment and geology and report on the associate impacts. This study was undertaken by RME Environmental on behalf of Mr Kieran O'Regan.

5.3.2 Methodology

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

5.3.3 Results

The site is located on a locally important aquifer (not source protected) on bedrock of Dinantian mudstones and sandstones of the Kinsale Formation beside old head sandstone. The aquifer is rated as High (highly vulnerable) vulnerability (www.gsi.ie).


Knockbrown Vunerability
Legend
EPA Source Protection Area
SI - Inner Protection Area
SO - Outer Protection Area
GSI Source Protection Area
SI - Inner Protection Area
SO - Outer Protection Area
Vulnerability
X (Rock near Surface or Karst)
E - Extreme
H - High
M - Moderate
L - Low
HL - High to Low. Only an interim study took place.
Water
No Data Available
RBD Boundaries
County Boundaries
South Western
CORK
DCENR 2009
2010
0
1250
2500
3750 m.
Map center: 147125, 49813
Scale: 1:50,000
Snapshot Date: 10-Jan-2013
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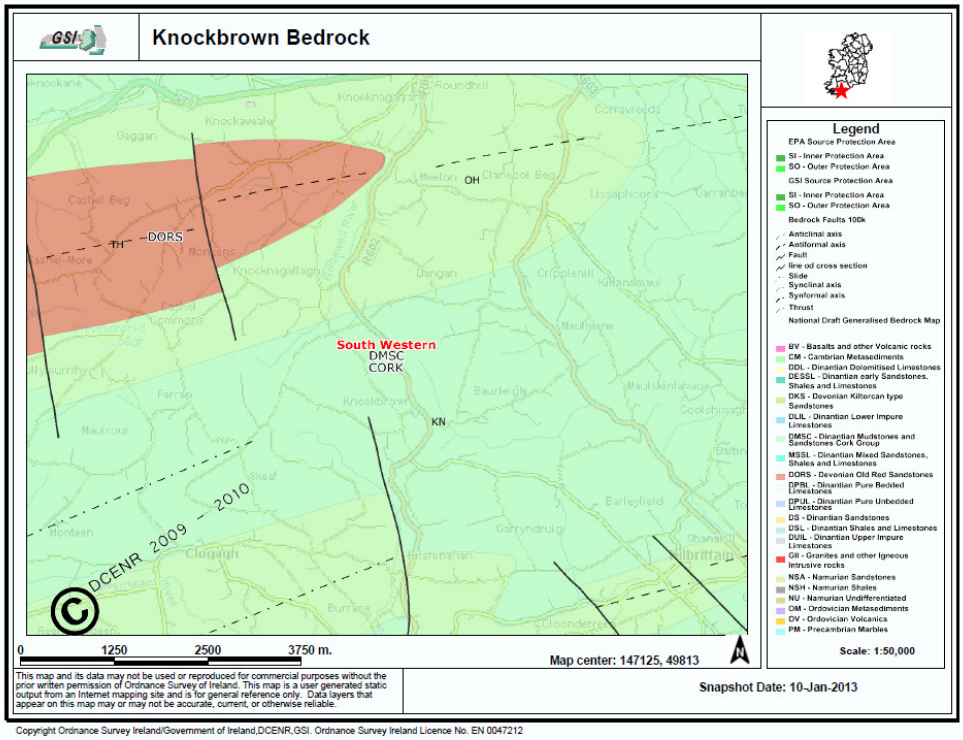
Knockbrown Bedrock
Legend
EPA Source Protection Area
SI - Inner Protection Area
SO - Outer Protection Area
GSI Source Protection Area
SI - Inner Protection Area
SO - Outer Protection Area
Bedrock Faults 100k
Anticlinal axis
Antiformal axis
Fault
line od cross section
Slide
Synclinal axis
Synformal axis
Thrust
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
South Western
DMSC
CORK
DORS
OH
KN
DCENR 2009
2010
0
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3750 m.
Map center: 147125, 49813
Scale: 1:50,000
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The predominant Soil type in the area is AminDW- Deep well-drained mineral soil, Derived from mainly acidic parent materials with subsoils TDC SsS being predominantly made up of sandstone and shale tills from the Devonian and carboniferous periods.

5.3.4 Impacts on Soils, Sediments and Geology

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

The proposed development construction phases comprise the development of a greenfield/intensive agriculture site. Site works will involve minimal filling to provide level surfaces for the existing and future developments. Blasting or excavation into the bedrock surface will not be required.

Therefore no impacts are estimated to occur on the underlying geology nor are any anticipated to occur during the proposed construction phase.
The plant in operation can potentially result in impacts on soils and subsoils as a result of emergency scenarios such as spillages, firewater retention etc.

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

5.3.5 Mitigation Measures

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

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

5.4 Groundwater and Surface Water

5.4.1 Introduction

An assessment of the proposed development and its impacts on the local ground water and surface water quality was carried out by RME Environmental on behalf of Kieran O'Regan. The assessment involved a review of the site location and its relevance to the local groundwater and surface water infrastructure. A list of the potential impacts that the new development will have (both in its construction and operation phases) is discussed. Mitigation measures are suggested for the proposed development and the proposed modus operandi for carrying out the operation.

5.4.2 Existing Site Conditions

The site is located in the South Western River Basin District and as per section 5.33 above the site is located on an aquifer which is locally important with bedrock moderately productive only on local zones.

Water that will be utilised onsite for washing and for stock will be gathered from 2 proposed wells (3rd depending on direction of flow). The estimated total onsite water consumption based on 200,000 birds annually is anticipated to be approximately 3582m3. There is No evidence to suggest that this will place any undue stress on the water source as the national recharge around the site is 201 - 250 and at an added abstraction rate any stress on the combined wellheads will be minimal.

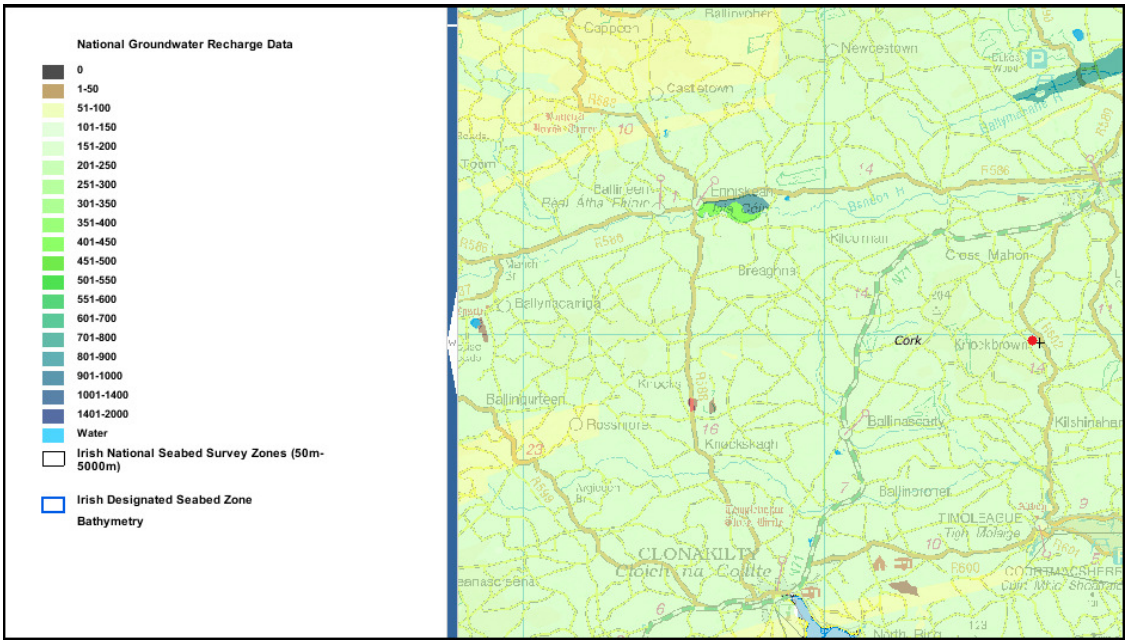


Figure 5.4.2 National Groundwater Recharge Data Map for Knockbrown (site marked by red dot)

In relation to the generated impacts at the site the following processes have been identified as potentially having impacts on the surrounding environment:

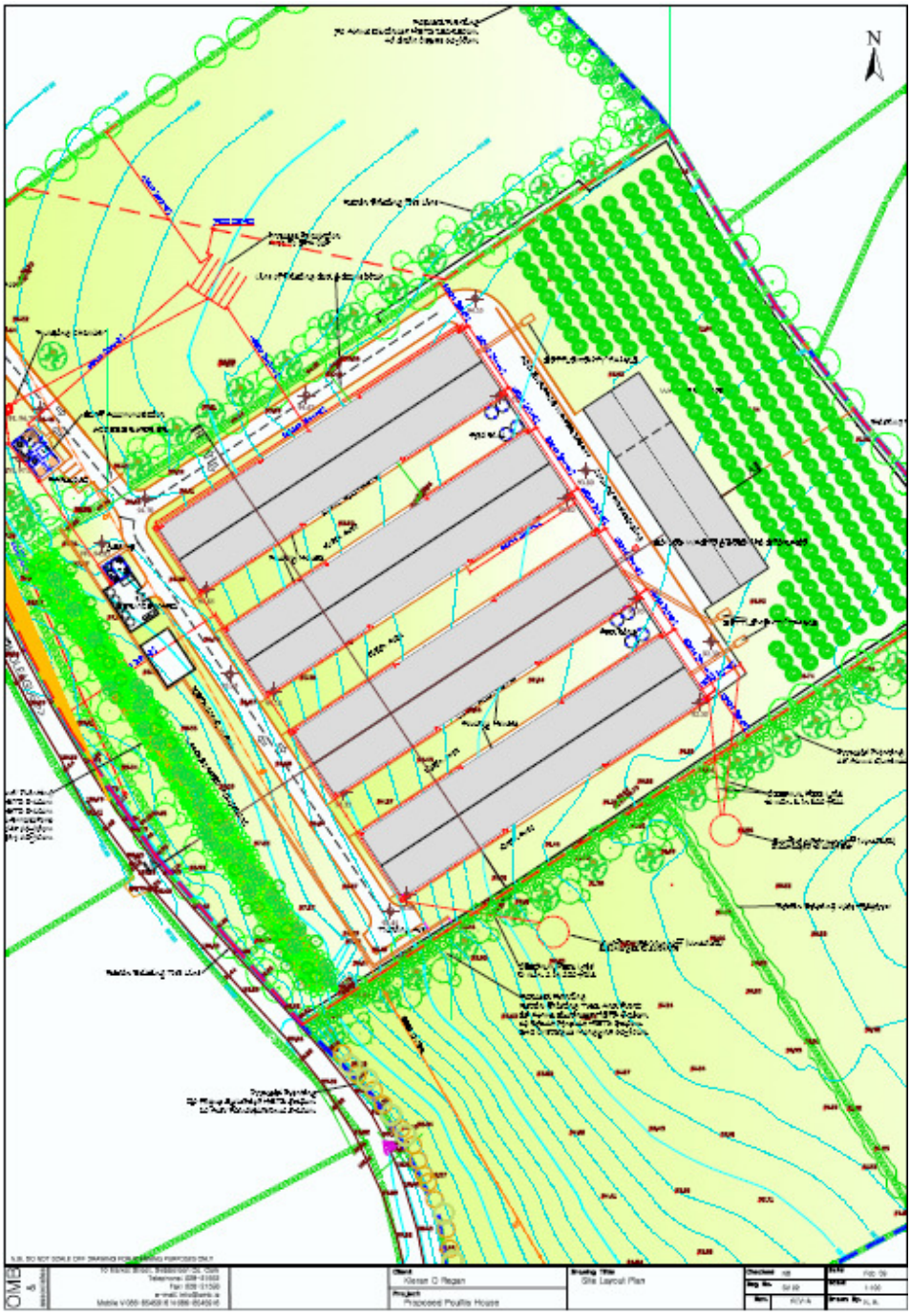
(i) Free surface water drainage from the site into local groundwater

(ii) Direct or accidental discharge of waste or washings

5.4.3 Free Surface Water Drainage from the Site

Clean and soiled water areas of the site from which storm water drains to surface water outlets or to the on-site Percolation area, respectively are shown below–

Figure 5.4.3 Site Layout Map



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

Receiving water for the surface water discharge is the Baurleigh River. To date no formal analysis has been carried out on the surface water runoff. It is suggested that an agreement with the Environmental Protection Agency regarding the licensing of the facility will provide for monitoring on these outfalls to ensure protection of the River.

5.4.4 Direct or Accidental Discharge of Waste or Washings

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

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

5.4.5 Mitigation Measures

It is imperative that impermeable hard standing and adequate drainage is provided throughout the site to enable the full collection of surface water to the surface water collection network.

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

All drains, guttering and other collection apparatus must be inspected at regular intervals.

All tank and storage vessels must be tested and a programme for tank and pipeline inspection should be initiated to mitigate against the risk of leakage.

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

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

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

5.5 Air

5.5.1 Introduction

Process emissions to the atmosphere from a conventional poultry farm include the expelling of warm air from the ventilation system in the buildings and odour and gas volatilisation from the organic manure. Increased emissions may at times be associated with loading of poultry and/or the loading of poultry manure. The potential impact of poultry manure is deemed to be a minor issue due to the fact

that it happens only once in every c.8-10 week cycle (6-8 weeks production plus 2 weeks empty). In any event it only takes c. 4 hours to completely empty the litter from the house and have it removed from the site.

There are no direct atmospheric emissions from the site to air and with the exception of fugitive emissions from the facility emissions to air are not considered significant. A biomass boiler will/may be installed on-site after completion of construction works or further down the line when the facility is up and running. This biomass boiler will burn chicken litter as a fuel to generate heat for the site. It is understood that the operation of the biomass boiler will come under the licensing control of the Dept. of Agriculture and all emissions relative to the process will be monitored accordingly. It is also likely that the EPA will require additional monitoring.

It is not the immediate intention of Mr. Kieran O'Regan (Shannonvale Foods) to install the biomass burner on day 1 of the operation of the facility however; reference is made to same in cognisance of emerging technology and growing trends in the industry in Ireland and abroad.

5.5.2 Receiving Environment - Air

5.5.2.1 General

The site for the proposed poultry facility is located along a regional road approximately 5km south of Bandon town Co. Cork. The site is currently agricultural land situated in an agricultural area with a small number of dwellings located to the East and West of the facility. The site is proximate to the River Baurleigh which is the nearest proximate surface water receptor for the site. The site is not located close to any sites of archaeological significance. The land use in the area is predominantly agricultural with traditional farming practices forming the primary land use.

5.5.2.2 Baseline Air Quality

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

On the 16/12/13 RME Environmental Consulted the EPA Air Quality Health Index on www.epa.ie and deemed that the live air quality index for the local area was Good: score 1. This would suggest that there are no underlying atmospheric issues on-site.

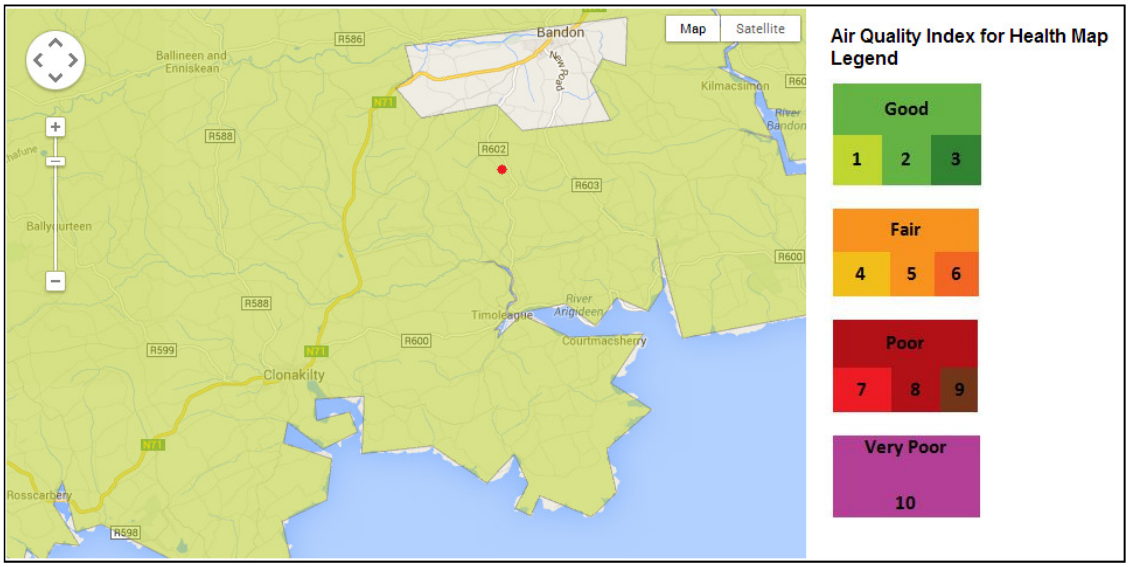


Figure 5.5.1 EPA Air Quality Health Index (site location marked by red dot)

5.5.3 Potential Impacts of the Proposal

5.5.3.1 Construction Phase

Construction impacts are likely to have the most significant impact on air arising from this proposed development, but by their nature will be short-lived. Construction impacts may potentially arise from the short term presence of contractor's compounds, construction activities and the working areas. Features are likely to include plant activity, parking of contractors' vehicles, storage of materials and fuel, movement of excavated materials, delivery of materials and plant. The

presence of these construction phase requirements will give rise to dust, fumes, noise and increased traffic.

5.5.3.2 Operation Phase

Operational impacts on Air may potentially arise from the presence of new structures in the environment. Odours, Noise, dust and increased traffic may all have an effect on the local air quality.

5.5.3.2.1 Scheduled Emissions

Regarding operations at the proposed development, the only scheduled emissions will be from space heating, ventilation and a back-up generator. In future years there may also be a potential impact from the proposed biomass burner. The impact on air quality from the ventilation systems and space heating is regarded as negligible and a fugitive emission. The existing back-up generator is only test run once every week for a period of 15 minutes and therefore it is negligible in impact. The impact of the operating site on odour air quality is a significant factor in relation to poultry operations in general and is location sensitive in all cases. It is assumed that as a result of the management practices (SOP & Mitigation measures) carried on at the site during operation and the manure and other waste management procedures there will not be any significant odour issues arising from site operations. This statement is backed up by the operational pedigree of the proposed developer. In their other operations which are on-going for over 15 years they have not received any odour complaints to date.

The Biomass boiler will have a schedule of emissions to be addressed in the sites IPPC licence and regulated by the EPA and the Dept. of Agriculture. Suggested parameters that will be monitored are: Particulate emissions, SOx, NOx, Temperature, Fuel usage and water usage.

5.5.3.2.2 Climate

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

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

- Significant increases in winter rainfall, of the order of 10% in the southeast, with a corresponding increase in the water levels in rivers, lakes and soils. Serious flooding more frequent than at present.
- Lower summer rainfall, of the order of 10% in the southern half of the country. Less recharge of reservoirs in the summer leading to more regular and prolonged water shortages than at present. Loss of bog land due to regular water deficits.
- Increased agricultural production, with new crops becoming more viable and potentially reduced agricultural costs. Grass growth could enjoy beneficial effects with an increase in 20% possible with higher temperatures and changes in rainfall patterns.

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

The development will not result in a more rapid run off of rainwater than occurs at the existing greenfield run-off rate prevalent at present. The run off will be drained

off site via bespoke drainage infrastructure. This is further discussed in the water section.

5.5.3.2.3 The “Do Nothing Scenario”

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

5.5.4 Remedial or Reductive measures

5.5.4.1 Construction Phase

Construction impacts may potentially arise from the short term presence of contractor’s compounds, construction activities and the working areas. Features are likely to include plant activity, parking of contractors’ vehicles, storage of materials and fuel, movement of excavated materials, delivery of materials and plant. In order to mitigate against any impact on the local air quality any construction will be taking place during daytime hours to lessen the impact of nuisance noise. A dust mitigation measure will be implemented if construction takes place in summer months where by a yard wash will water the site to eliminate dust impacting on local air quality. Fume emissions from the machinery onsite will be minimal except during the excavation stage.

5.5.4.2 Operation Phase

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

Emissions of pollutants from road traffic will increase for the facility again only slightly due to the amount of waste to be removed amount of feed deliveries to be brought to site. For the majority of vehicle-generated pollutants, emissions rise as speed drops. Emissions are also higher under stop-start conditions when compared with steady speed driving. The free flow of the traffic in the vicinity of the proposed development is essential in order to minimise the generation of traffic related pollutants. Again this is not an issue for the operation of this site. The Biomass boiler will have a schedule of emissions to be addressed in the sites IPPC licence and regulated by the EPA and the Dept. of Agriculture. Possible parameters that will be monitored are: Particulate emissions, SOx, NOx, Temperature, Fuel usage and water usage.

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

5.5.4.3 Climate

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

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

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

The Biomass boiler will have a schedule of emissions to be addressed in the sites IPPC licence and regulated by the EPA and the Dept. of Agriculture. Parameters that will be monitored are: Particulate emissions, SOx, NOx, Temperature, Fuel usage and water usage. When properly monitored this will not have a significant impact on the environment and as a green/low carbon technology for generating heat it will off set the use of fossil fuels on the site.

5.5.5 Predicted Residual Impacts of the Development

5.5.5.1 Construction Phase

There will be no residual impact on atmospheric emissions from the facility as any impacts on the environment from the construction phase by their nature will be short-lived and all care will be taken to avoid any incidents of environmental pollution during this phase.

5.5.5.2 Operation Phase

Traffic

There will be a residual impact on atmospheric emissions from the facility as a result of the fact that there will be a requirement for feed, waste movements and stock movements to and from the site as result of the proposed development. The impact will be as follows:

Odour

Owing to the fact that there will potentially be large waste volumes on site there will be an increased potential for the generation of odour on site. Given that the waste material will be moved off-site quickly for recovery or processed efficiently on-site it is not anticipated that this will be an issue for the site. Recommendations are made however for the correct management of potential odour pollutants on site.

Air quality emissions

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

5.5.5.3 Climate

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

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

Worst Case Scenario

For traffic-derived pollutants, the "worst-case" scenario consists of gridlock conditions with large volumes of traffic on the road simultaneously. This is not foreseen for this operation given that if all contributing service providers arrived simultaneously to the site there would only be approximately 10 vehicles present.

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

For odours from the operating process facility and waste water treatment facility, a number of key odour management strategies are suggested.

5.5.6 Monitoring

5.5.6.1 Construction Phase

It is not anticipated that there will be any odour issues during the construction phase of this development.

5.5.6.2 Operational Phase

If the levels of dust become problematic from the site, dust monitoring will be carried out during the operation phase of the development if deemed necessary by the EPA. If the level of dust is found to exceed 350mg/m2day in the vicinity of the site, further mitigation measures will be incorporated into the operation of the proposed site.

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

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

5.5.7 Reinstatement

Not Applicable

5.6 Odour

5.6.1 Introduction

Site specific odour assessment was not deemed necessary for the proposed site. Establishment of odour impact criterion for the proposed development is essential however to enable an understanding of impacts should they arise at the facility as a result of the increased animals housed at the facility.

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

- The surfaces of non-quiescence processes above the working height of the tank/channel, etc,
- Anaerobic decay of organic debris upon quiescence surfaces including organic matter
- Waste handling operations including collection, storage and transport of raw/processed waste offsite,
- Inefficient odour control/abatement equipment operation and design including loose fitting covers, inefficient extraction and odour control unit failure.
- Contaminated surfaces with Fat, grease and oil,
- Open dead bird storage containers and spillage.

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

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

Ranking of environmental odours according to like and dislike (i.e. similar odour hedonic tone).

Generic odours	*Hedonic score*[1] Dravnieks, 1994	Ranking[2]	Ranking[2]	Ranking[2]	Environmental odours	Ranking[2]	Ranking[2]	Ranking[2]
Descriptor	**USA**	**UK median**	**UK mean**	**NL mean**	**Descriptor**	**NL mean**	**UK mean**	**UK Median**
Roses	3.08	4	4.4	3.4	*Bread Factory*	**1.7**	**2.5**	**1**
Coffee	2.33	3	4.5	4.6	Coffee Roaster	4.6	3.9	2
Cinnamon	2.54	4	4.9	6	Chocolate Factory	5.1	4.6	3
Mowed lawn	2.14	4	4.9	6.4	Beer Brewery	8.1	7.7	6
Orange	2.86	4	5.2	5.8	Fragrance & Flavour Factory	9.8	8.5	8
Hay	1.31	7	6.9	7.5	Charcoal Production	9.4	9.2	8
Soap	0.96	8	7.8	7.3	**Green Fraction composting**	**14**	**10.3**	**9**
Brandy		9	8.8	7.8	Fish smoking	9.8	10.5	9
Raisins	1.56	8	8.8	7.9	Frozen Chips production	9.6	11	10
Beer	0.14	9	9.5	9.3	Sugar Factory	9.8	11.3	11
Cork	0.19	10	10	10.5	Car Paint Shop	9.8	11.7	12
Peanut Butter	1.99	10	10.4	11.1	**Livestock odours**	**12.8**	**12.6**	**12**
Vinegar	-1.26	14	13.3	14.8	Asphalt	11.2	12.7	13
Wet Wool	-2.28	14	14	14.1	*Livestock Feed Factory*	**13.2**	**14.2**	**15**
Paint	-0.75	15	14	14.4	**Oil Refinery**	**13.2**	**14.3**	**14**
Sauerkraut	**-0.6**	**15**	**14.6**	**12.8**	Car Park Bldg	8.3	14.4	15
Cleaning Agent	**-1.69**	**15**	**14.7**	**12.1**	**Wastewater Treatment**	**12.9**	**16.1**	**17**
Sweat	-2.53	18	16.6	17.2	Fat & Grease Processing	15.7	17.3	18
Sour Milk	-2.91	19	18	17.5	Creamery/milk products		17.7	10
Cat's Pee	-3.64	19	18.8	19.4	Pet Food Manufacture		17.7	19
Sewer odour	**-3.68**	-	-	-	Brickworks (burning rubber)		17.8	18
-	-	-	-	-	**Slaughter House**	**17**	**18.3**	**19**
-	-	-	-	-	**Landfill**	**14.1**	**18.5**	**20**

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

[1] The higher the positive "value", the more pleasant the odour descriptor and similarly below, the greater the negative value, the more unpleasant the odour descriptor

[2]Ranking in order of dislike ability.

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

Commonly used odour annoyance criteria utilised in dispersion models:

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

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

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

5.6.2 Conclusions

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

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

impact and best international practice should be maintain in the operation of the WWTP in terms of odour mitigation.

Recommendations

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

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

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

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

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

Control Measures to Minimise and Abate Odour on site

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

• Litter management kept to a high standard.
• Adequate use of litter bedding material.
• Stocking density maintained at design level.
• Quality ventilation due to computerised/automated control.
• Quality house design with state of the art insulation standards.
• Minimisation of carcasses by keeping the flock health to the highest possible standard. As a result of this, mortality rates will be kept to a minimum. Any dead

birds will be stored in covered leak proof containers awaiting collection by Wards Waste Collection services.

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

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

Proposed Measures to further Minimise and Abate Odour on site

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

5.7 Noise

5.7.1 Introduction

This component of the EIS deals with the actual and potential noise emission impacts from the current operation and the proposed development at Knockbrown.

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

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

5.7.2 Acoustic Terminology

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

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

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

5.7.3 The Receiving Environment

Noise is not considered a significant environmental emission from this facility. The site is located in a very rural area and with the nearest property approx 160m residence to the East, and south of the facility there are no sensitive noise receptors evident within 300m or more. To the North West there are residences at approx 360m from the site. Background noise from main Bandon to Timoleague the road ensure that there is no noise carryover to the nearby houses

It is not expected that there will any significant impact of noise emissions for this facility. The activities to take place on site do not generate noise levels that could be detected at the site boundary, similar to most poultry farms in the country. This facility will not result in audible noise outside of acceptable limits at or beyond the site boundary. The proactive maintenance regime that will be in place on fans and motors ensures that no excessive noise will be experienced at the site.

5.7.4 Impacts of Development Operational

5.7.4.1 Actual impact

The actual impact of the development is minimal for the site. No noise audible beyond the boundary of the site. The site is located in a very rural area and background noise from the minor road network ensure that there is no noise carryover to the nearby houses

5.7.4.2 Potential impact

The potential or proposed impact of the site is anticipated to be minimal. This facility will not result in audible noise outside of acceptable limits at or beyond the site boundary. The proactive maintenance regime on fans and motors ensures that

no excessive noise is experienced at the site. The actual impact of the development is minimal for the site. No noise audible beyond the boundary of the site. The potential or proposed impact of the site is anticipated to be minimal

5.7.5 Impacts of Development Construction

There will be construction phase noise as there will be construction works as a result of this proposed development. However drop from road level to the site will mitigate against much of the noise to the closest residence on the opposite site of the road 160m to the east. The negative impact for the construction phase of this development will be low to moderate, but will be short term in nature. During the constructive phase, there is potential for a temporary increase in noise levels from traffic transporting fill material to and from the site, in addition to plant equipment used during the construction phase.

5.7.6. Mitigation Measures

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

(i) Machinery with low potential for generation of noise will be used.

(ii) Noisy equipment will be located as far away from sensitive properties as permitted by site constraints.

(iii) Hours of construction will be limited so that noisy activities will be minimised during unsociable hours.

The operational noise sources i.e. fans and motors on site when kept in working order (which is essential to the facility) do not generate noise levels that could be detected at the site boundary, similar to most poultry farms in the country. An issue where a possible negative impact may occur is in the delivery of feed to the installation. It is suggested that low noise delivery pumps are specified solely for this site. It is also suggested that this activity is monitored for noise impacts in the initial

operational phase at the facility and suitable measures implemented to mitigate any possible negative impacts.

However this facility is not anticipated to result in audible noise outside of acceptable limits at or beyond the site boundary. The proactive maintenance regime that will be in place on fans and motors ensures that no excessive noise will be experienced at the site.

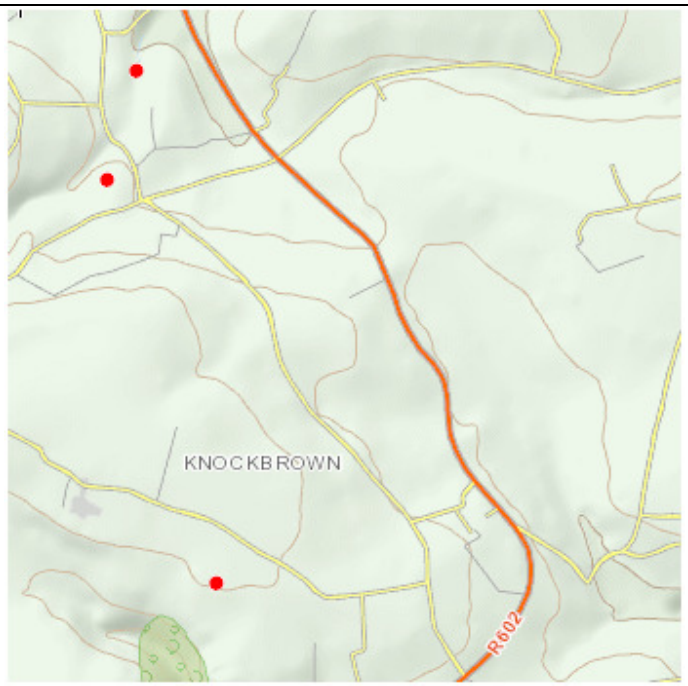
5.8 Material Assets and Cultural Heritage

5.8.1 Archaeological Assessment

A desktop report on a basic archaeological assessment of the site at Knockbrown was carried out in August 2013. The importance weighting with regard to the archaeological significance of the proposed development is considered low as there are no historical / archaeological sites within 1km which have been recorded in the historical records for the area. As can be seen below in relation to the proposed development there is no considerable archaeological presence proximate to the site. The study identified 3 recorded sites proximate to the proposed development site.

As can be seen in the figure below in relation to the proposed development there is no considerable archaeological presence proximate to the site. The study identified 3 recorded sites proximate to the proposed development site. These are as follows:

Ringfort – Rath CO123-011 knockbrown (Bottom marker approx 1.5km from proposed site)
Moated Site – Dangan More CO110-070 (Middle marker approx 1.2km from proposed site)
Moated Site – Dangan More CO110-071 (Top marker approx 1.4km from proposed site)



Having reviewed the potential changes to landuse from this proposed development no effects will occur in relation to areas or structures of archaeological significance in relation to this development.

5.8.2 Agriculture

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

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

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

5.8.3 Property

The proposed development at Knockbrown will impact positively on the existing site property and also the development will serve to have a positive impact on the surrounding properties also.

5.8.4 Social Impact

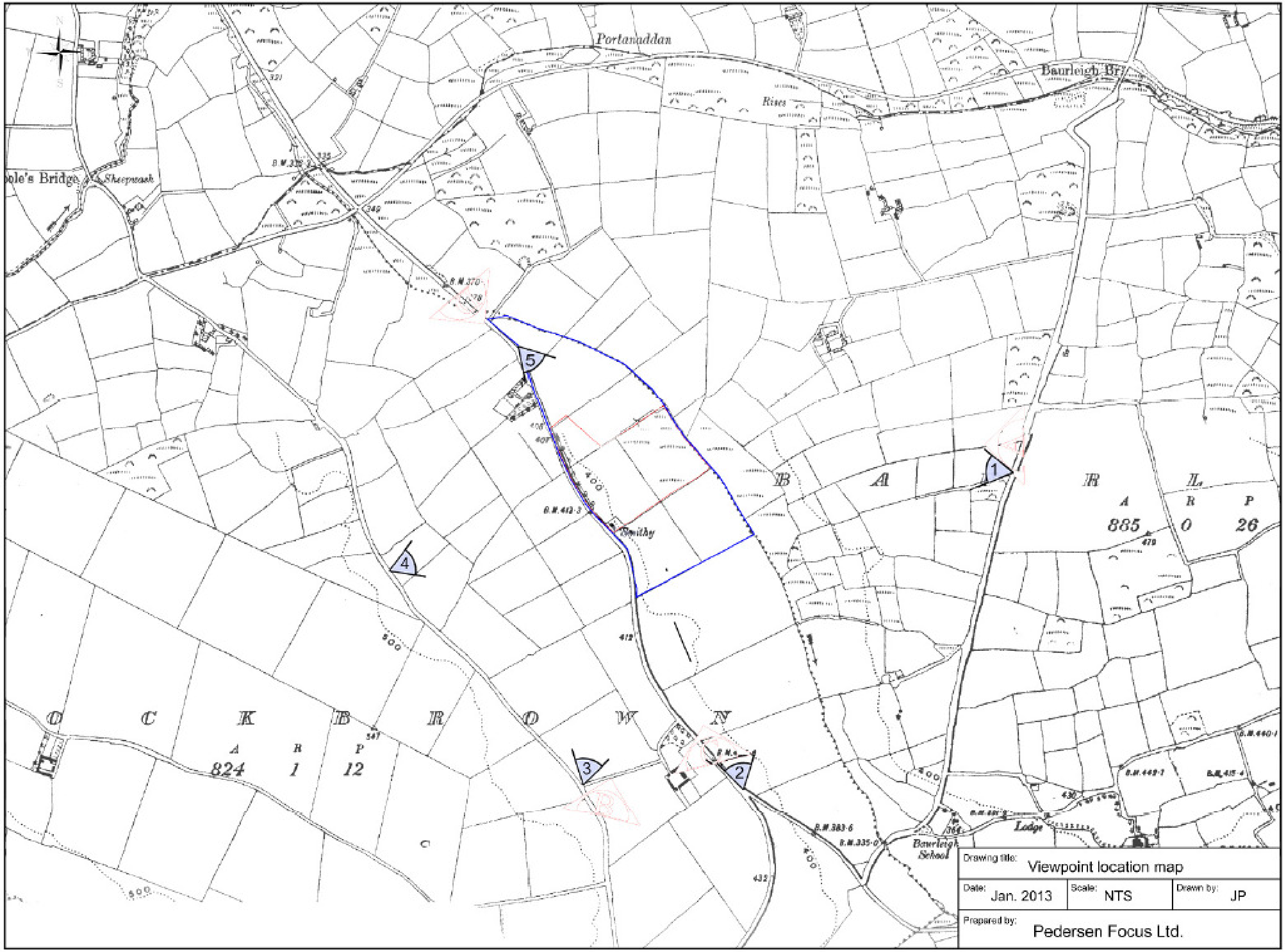
The material social impact will be very positive in that it will secure permanent posts at the site of which there are 2. It will ensure a sustained requirement for service jobs at the site of which there may be up to 10 different services servicing the site but this has been estimated to represent possibly 2 -3 fulltime job equivalence and finally the proposed development will result in a sustained volume of produce for supply to the main processing facility in Clonakilty Co. Cork thus contributing to the sustainability of the 90 – 100 jobs at that facility. Overall the social impact of the proposed development is seen as greatly positive.

5.9 Landscape and Visual Impact

5.9.1 Introduction

In relation to visual impact OMB & Associates commissioned Pederson Focus Ltd to prepare a photomontage of the proposed developments visual impact on the landscape. The photo montages were taken on the 25/01/13 and assess the impact of the site visually from areas outside of the site from where it can be seen.

The following map shows the locations and direction of the photograph views:


Portanaddan
Baurleigh Br.
Rises
ole's Bridge
Sheepwash
Smithy
Lodge
Baurleigh School
B A R L
A R P
885 0 26
O C K B R O W N
A R P
824 1 12
1
2
3
4
5
Drawing title: Viewpoint location map
Date: Jan. 2013
Scale: NTS
Drawn by: JP
Prepared by: Pedersen Focus Ltd.

Viewpoint 1 (to the east looking west at site) below shows the existing site without development.

View 1 - Existing

Viewpoint 1 (to the east looking west at site) below shows the existing site with proposed development.

View 1 - Proposed

Viewpoint 2 (to the south looking north at site) below shows the existing site without development.

View 2 - Existing

Viewpoint 2 (to the south looking north at site) below shows the existing site with proposed development.

View 2- Proposed

Viewpoint 3 (to the south looking north at site) below shows the existing site without development

View 3 - Existing

Viewpoint 3 (to the south looking north at site) below shows the existing site with proposed development.

View 3- Proposed

Viewpoint 4 (to the west looking east at site) below shows the existing site without development

View 4 - Existing

Viewpoint 4 (to the west looking east at site) below shows the existing site with proposed development.

View 4- Proposed

Viewpoint 5 (to the north looking south at site) below shows the existing site without development.

View 5 - Existing

Viewpoint 5 (to the north looking south at site) below shows the existing site with proposed development.

View 5- Proposed

5.9.2 Results

The visual impact of the development is minimal due to the low lying nature of the site adding that the design palette to be used in the houses allows the facility to blend into the agricultural surroundings that the site is enclosed by.

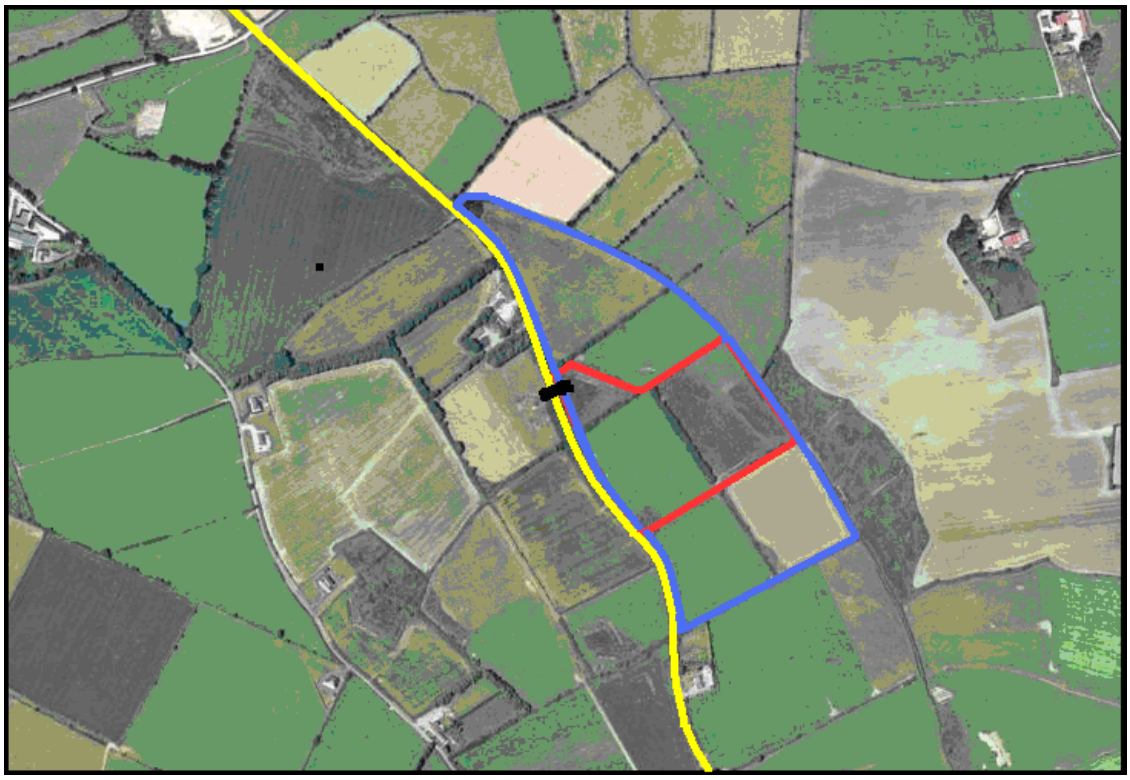
5.9.3 Recommendations

No specific recommendation are directed towards the facility however it may be recommended that screening cover be enhanced to the South, South eastern and Western boundaries of the site which would exclude the site from vision on all sides to the public. It must be stressed that this report does not recognise the sight of the site as a negative impact rather the recommendation serves to screen the built environment from the surrounding rural area.

5.10 Traffic

5.10.1 Introduction

The objective of this section is to assess the impact the proposed development will have on the existing road network. This report will assess the expected volume of traffic that will be generated by the existing and proposed development and assess the impact that this traffic will have on the operational capacity of the road network in the vicinity of the development.



The location of site entrance can be seen above marked in black.

5.10.2 Site Location

The poultry facility will be located on the R602, Bandon to Timoleague road on a lowered level from the Regional Road route R602 approximately 5km south of Bandon town. The road is a well maintained regional road suitable for all types of traffic.

5.10.3 Existing and Proposed Traffic Conditions

5.10.3.1 Traffic Survey

It was determined that due to the current traffic volumes existing and proposed at the site that a traffic survey of the R602 at site entrance would not be required at this time.

5.10.3.2 Existing Road Network

The poultry facility will be located at a lowered level beside the Regional route R602 approximately 5 km south of Bandon, Co. Cork. The facility will be located to the west of the road, which has a general width of approx. 7m. The speed limit is 100km/h in the vicinity of the site entrance. Due to the levels of traffic and restricted view from the entrance to the proposed site a Stage 1/2 Road Safety Audit was carried out on the proposed development.

5.10.3.3 Proposed Network Improvements and Committed Development

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

5.10.4 Trip Distribution and Generation

5.11.4.1 Trip Generation

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

Feed deliveries – Based on 200,000 birds as planned there would be a requirement for 1240 tonnes of feed on site. This represents 52 deliveries to site annually.

Gas Deliveries – Based on the size of the gas tanks it is estimated that there will be 26 gas deliveries in the year (1 per batch (6.5 batches) x 4 houses)

Bedding deliveries – Bedding is delivered to the site 7 times per annum.

Waste Removal – there is 1385T of chicken litter produced per annum over 26 batches. The average waste per batch is 53.25T and the capacity of the haulier's trailer is 30T. Therefore 2 truckloads per batch will be needed to remove the 1385 T/Annum of chicken litter. This gives the need for 52 loads annually.

Washings Soiled water – The houses will be washed out after every batch similar to the other facilities run by the applicant. These washings drain into settlement tanks and from there 3 loads of soiled water will be removed from the washing activities per batch giving approx 78 loads annually.

Bird Deliveries: there are 4 houses with 6.5 batches per house so therefore there are 26 bird deliveries per annum.

Bird Collections: There are 4 houses with 6.5 batches per house so therefore there are 26 bird collections per annum.

5.10.4.2 Trip Distribution

For the purposes of this report, it has been assumed that the distribution of traffic generated by the proposed development will be minor as the traffic generated by the development is low due to the nature of the industry, low delivery/collection frequency and existing traffic currently using the road.

5.10.5 Results

The results suggest that there will be an increase in trips to or from the site annually of 267 vehicles. This represents 267 trips in 365 days which is 0.73 trips per day. There will therefore be No significant traffic impact from the proposed development on traffic in the vicinity of the site.

5.10.6 Road Safety

5.10.6.1 Road safety

The NRA's DMRB TD 41/95 requirements were used as the standards against which site visibility was assessed. This document requires that visibility splays of 2.4 x 160m be provided for a road with a design speed of 85km/h. The site access junction at site access 1 off the R602 is situated along a national regional road with a speed limit of 100km/hr.

As Visibility splays of 2.4 x 160m are not available at each side of the site access junctions, a Stage 1/2 Road Safety Audit carried out by RoadPlan Consulting, Kilkenny.

5.10.7 Road Safety Audit

1. INTRODUCTION

1.1 This report describes a Stage 1/2 Road Safety Audit carried out on the proposed development at Baurleigh, Bandon, Co. Cork on behalf of Kieran O Regan. The audit was carried out on the 22nd of October 2013 in the offices of Roadplan Consulting, Kilkenny.

1.2 The audit team members were as follows:-George Frisby, BE CEng MIEI; Bratislav Dimitrijevic, MEng CEng MIEI

1.3 Both audit team members visited the site on 21st October 2013. The audit comprised an examination of the drawings relating to the scheme supplied by OMB & Associates and an examination of the site.

1.4 This Stage 1/2 Audit has been carried out in accordance with the relevant sections of NRA DMRB HD19 and HA42. The team has examined only those issues within the design relating to the road safety implications of the road access to the

scheme, and has therefore not examined or verified the compliance of the design to any other criteria.

STAGE 1/2 AUDIT

2.1 **Problem**

Sightlines at the proposed access may be restricted by the proposed entrance walls and existing roadside boundary which may lead to side impact collisions at the access.

Recommendation

Set-back the proposed entrance walls and roadside boundary to the rear of the visibility splays and ensure that any remaining vegetation within the visibility splays is reduced to a level below 0.26m above the existing road level.

2.2 **Problem**

The horizontal curvature and junction radii on the access road are tight and HGV's may find it difficult to stay in lane when entering and exiting development access.

Recommendation

Carry out a swept path analysis to ensure that HGV's can stay in lane when entering and exiting the access and modify the junction layout if necessary.

2.3 **Problem**

Road edge definition may be reduced by the removal of the existing roadside boundary on the inside of the curve which may result in drivers over running the road edge particularly at night time leading to loss of control collisions.

Recommendation

Provide roadside delineators along the road edge.

2.4 **Problem**

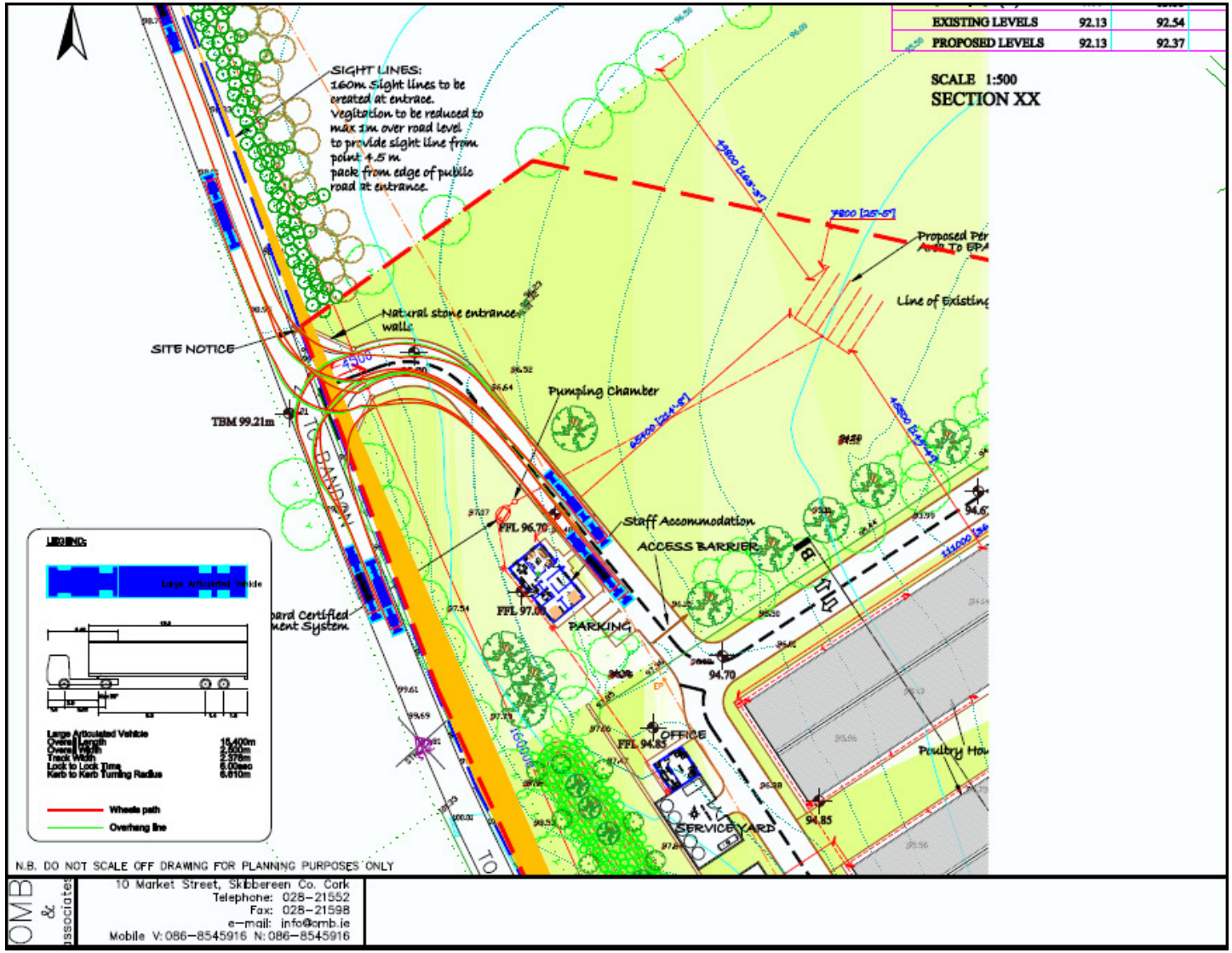
The development is proposed in the rural area where drivers may not expect vehicles, particularly HGV's, to be turning to and from a factory entrance.

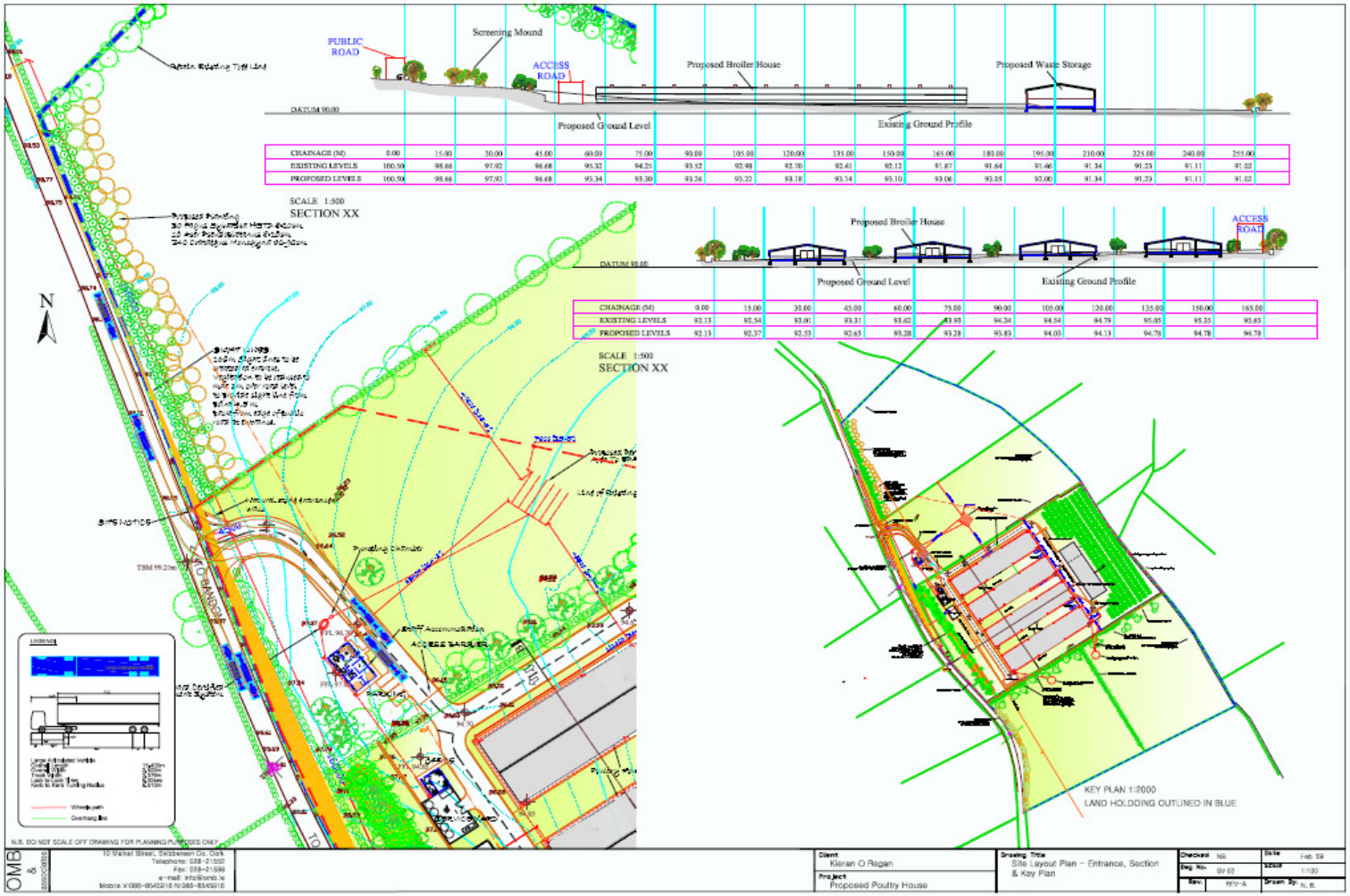
Recommendation

Provide a "Factory Entrance Ahead" sign on both approaches to the development access.

AUDIT TEAM STATEMENT

3.1 "We certify that we have examined the drawing listed in Appendix A and have inspected the site. This examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the safety of the scheme".


EXISTING LEVELS 92.13 92.54
PROPOSED LEVELS 92.13 92.37
SCALE 1:500
SECTION XX
SIGHT LINES:
160m sight lines to be created at entrance.
Vegitation to be reduced to max 1m over road level to provide sight line from point 4.5 m back from edge of public road at entrance.
SITE NOTICE
TBM 99.21m
Natural stone entrance walls
Pumping Chamber
Staff Accommodation
ACCESS BARRIER
PARKING
OFFICE
SERVICE YARD
FFL 96.70
FFL 97.00
FFL 94.85
94.70
94.85
Line of Existing
Proposed Per
LEGEND:
Large Articulated Vehicle
Large Articulated Vehicle
Overall Length 16.400m
Overall Width 2.500m
Track Width 2.375m
Lock to Lock Time 6.00secs
Kerb to Kerb Turning Radius 6.810m
Wheels path
Overhang line
N.B. DO NOT SCALE OFF DRAWING FOR PLANNING PURPOSES ONLY
OMB & Associates
10 Market Street, Skibbereen Co. Cork
Telephone: 028-21552
Fax: 028-21598
e-mail: info@omb.ie
Mobile V: 086-8545916 N: 086-8545916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ACCESS ROAD
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Proposed Waste Storage
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Proposed Ground Level
Existing Ground Profile
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EXISTING LEVELS 100.50 98.66 97.92 96.68 95.32 94.25 93.52 92.98 92.70 92.41 92.12 91.87 91.64 91.46 91.34 91.23 91.11 91.02
PROPOSED LEVELS 100.50 98.66 97.92 96.68 95.34 93.30 93.26 93.22 93.18 93.14 93.10 93.06 93.05 93.00 91.34 91.23 91.11 91.02
SCALE 1:500
SECTION XX
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ACCESS ROAD
DATUM 90.00
Proposed Ground Level
Existing Ground Profile
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SCALE 1:500
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KEY PLAN 1:2000
LAND HOLDING OUTLINED IN BLUE
N.B. DO NOT SCALE OFF DRAWING FOR PLANNING PURPOSES ONLY
OMB & ASSOCIATES
Client: Kieran O Regan
Project: Proposed Poultry House
Drawing Title: Site Layout Plan - Entrance, Section & Key Plan
Checked: NB
Dwg. No.: SV 02
Rev: REV-A
Date: Feb '09
Scale: 1:100
Drawn By: N. B.

5.10.8 Conclusions and recommendations

5.10.8.1 Conclusions

The conclusions to this report are as follows:

· No significant impact will occur on traffic from the proposed development.

5.10.8.2 Recommendations

The report recommends the following:

- Set-back the proposed entrance walls and roadside boundary to the rear of the visibility splays and ensure that any remaining vegetation within the visibility splays is reduced to a level below 0.26m above the existing road level.
- Provide roadside delineators along the road edge.
- Provide a “Factory Entrance Ahead” sign on both approaches to the development access.

5.11 Solid Waste Infrastructure

5.11.1 Introduction

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

5.11.2 Construction Phase Waste Arising

During the construction phase, quantities of excavated materials and other wastes will be generated which will require disposal in an appropriate and environmentally acceptable manner.

The potential environmental impacts from solid and construction waste streams generated by the proposed works will be designated an appropriate disposal strategy. The disposal strategy is based upon the waste management principle of reducing the amount of waste requiring final disposal through the development of outline plans for waste avoidance, material re-use, and recycling.

Excavated materials and residual wastes may give rise to impacts during their handling, temporary stockpiling or storage on site, transportation and final disposal. In order to determine the most appropriate methods of treatment, handling and disposal it is important to understand the nature and composition of the waste, in particular whether the waste materials are inert or contaminated.

Wastes generated during the construction phase will be minimised by the design of the development. The following specific measures were adopted during the detailed design and will be adopted construction stages of the project to minimise waste generation:

- Minimising excavation requirements as far as possible.
- Balancing cut and fill requirements.

• Evaluating the potential for maximising the re-use of excavated materials for example, within landscape mounds.
• Considering treatments for unsuitable excavated materials e.g. upgrading of subsoil to top soil by mixing with compost.
• Providing an area within the construction site to allow for sorting and segregation of materials.

Waste management procedures will be implemented to minimise potential impacts to the environment. This may be achieved by consideration and application of the following protocols:
(i) Avoiding and/or minimising waste generation where practical by improvements or changes in the project design or site procedures;
(ii) reusing/recycling/recovering materials where possible and thereby negating / minimising disposal requirements (e.g. by waste segregation according to type, separation of recyclable materials such as metal, reuse of wood from site Hoarding/concrete formwork, utilisation of excavated material for filling or landscaping)
(iii) Ensuring that all treatment and disposal options comply with best practice and all relevant guidelines and legislation.

The proposed construction activities associated with the proposed works will generate a number of waste materials. These include:
• vegetation, soil and top soil wastes from site clearance
• excavated materials
• construction waste
• chemical waste
• municipal waste

The following table details the treatment and disposal of wastes that will take place during the construction phase;

Sample Waste	Control Measures	Disposal
Vegetation & Top Soil from preparatory works	- Segregation of materials to facilitate disposal - Possible on site reuse within - Landscaping areas	Re-use/landfill
Excavated materials	- Segregation of materials to facilitate disposal / reuse - appropriate stockpile management - re-use of excavated material on or off site (where possible)	Re-use on site for suitable material. Disposal to public fill areas for unsuitable materials.
Construction waste	- segregation of materials to facilitate recycling/reuse (within designated area and in appropriate containers/stockpiles) - appropriate stockpile management -planning and design considerations to reduce over ordering and waste generation - recycling and re-use of materials where possible - for material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal	Public fill for inert wastes. Disposal to landfill for materials unsuitable for public filling
Chemical waste	- Storage within bunded area - The storage area should not be located adjacent to sensitive receivers e.g. drains - minimise waste production and recycle oils/solvents where possible - a spill response procedure should be in place and absorption material available for minor spillages - use appropriate and labelled containers - collection by a licensed chemical waste collector	Re-use/Disposal by appropriate licensed contractor
Municipal waste	- waste should be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal - regular collections are required by an approved waste collector	Landfill

5.11.3 Operational Phase Solid Waste Arisings

The following solid wastes will arise regularly from the daily operation of a poultry facility housing approx 200,000 broilers:

Sample Waste	Total Volume Annual (~200,000 Birds)
Poultry Litter	1385 (T/annum)
Soiled Water	489.2 (m3/ annum)
Dead Birds	9.2 (T/annum)
Veterinary Waste	<150 (kg/annum)
General Rubbish	3.7 (T/annum)
Fluorescent Tubes	16 - 20 (units/annum)

5.11.4 Waste Destinations

5.11.4.1 Organic Waste

Poultry litter is collected mechanically from the houses by bobcat type machine or other and loaded into collection HGV's. The material is brought to an approved compost facility where it is recovered. This activity will be monitored and licensed by the EPA.

Soiled water is taken from the site by vacuum tanker and land spread on lands nominated locally by the operator. The management or this operation in carried out in strict accordance with the requirements of SI610 of 2012. It will be a requirement of the EPA that the nominated lands for spreading of soiled water be accompanied by a Record 3 nutrient verification form as issued to the landholder by the Dept. Of Agriculture.

Waste Burner

If a waste burner is in place on the site poultry litter will be loaded into the biomass boiler and converted to heat and ash. The ash will be collected in bins and transported offsite for disposal in licensed and proper landfill for waste ash in accordance with the regulation that will be set out by EPA IPPC license and Dept. of Agriculture.

5.11.4.2 Disposal routes for other wastes

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

Dead Birds - Wards Collection service to premier Proteins Ballyhaunis Co. Mayo

Fluorescent tubes	ENVA Portlaoise
Waste Oils	ENVA (Atlas Oils)
Cardboard / Packaging Wastes	Panda Waste
General Canteen / Household Wastes	to local recycling facility
Veterinary waste	returned to supplier.

5.11.5 Environmental Impacts Associated with the handling of Solid Waste at the Proposed Shannonvale Foods Facility

5.11.5.1 Land Spreading of Organic Wastes (Soiled Water)

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

- There is potential of spillage of material in transit where vehicles are inadequately sealed or maintained
- The loading and unloading of the vehicles can potentially lead to spillages of material
- There is a risk that the receptor tanks for the material may be inadequate to hold the material

- In the spreading of the material there is a risk that the material will be over applied leading to potential run-off to local water courses
- In the spreading of the material there is the risk that the material will be spread proximate to sensitive local amenity causing nuisance.

Figure 23.0 – Code of Good Spreading Practice Guidelines Si 610 2010

Spreading shall not take place:
• On wet or waterlogged ground • On frozen of snow covered ground • On exposed bedrock • Where surface gradients are excessive • On fields that display cracks over pipe of mole drainage systems • During November to February inclusive • Outside daylight hours • Between the dates: 01 November and 12 January in County Cork
Loadings:
• Regardless of the dilution factor, the maximum hydraulic loadings per single application shall not exceed 25m3 per hectare on shallow limestone soils and in no case shall exceed 50m3 per hectare • Application of organic waste shall not be made on soil with a Morgan's P test in excess of 15mgP/litre sampled to a depth of 10cm
Organic Waste application shall be in accordance with the following guidelines:
• Landspreading on lands with extreme vulnerability ratings would be considered not generally acceptable • Application should not be made such that the rate of application of nitrogen from organic wastes does not exceed 250kg N/ha per annum • No application when the risk of causing odour nuisance to the public is greatest e.g. Sundays of public holidays • No application during meteorological conditions, which increased the risk of odour nuisance • No application where significant rain is forecast within 48 hours

5.11.5.2 Handling of other generated wastes

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

5.11.6 Mitigation measures for the handling of Waste Materials at the Poultry Farm of Knockbrown.

5.11.6.1 Organic Waste for Land Spreading

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

5.11.6.2 Other wastes generated at the facility

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

5.12 Water Infrastructure

5.12.1 Water Infrastructure

Shannonvale Foods proposed poultry farm at Knockbrown will maintain 2 (3 depending on direction of flow) wells on site.

Chlorine is dosed prior to use in the factory to facilitate department of agriculture treatment regulations

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

As stated above the water for the site is provided by two proprietary on-site wells detailed as GW1 and GW2. The water is pumped to the above ground storage tank and distributed to the facility. Chlorine is dosed to the line to facilitate bacterial kill prior to distribution. The handling of chemical chlorine in this instance poses the largest potential environmental impact. The protection of the wellheads from surface related contamination is also viewed as a major priority in relation to this development.

It is essential that the chlorine is stored in a bunded area and that adequate protection is afforded to surface water drainage systems

Wellheads GW1 and GW2 must be protected from the possibility of contamination from run-off or accidental spillage from on-site storage tanks.

Wellheads must be sealed and locked to avoid deliberate contamination.

In line with this the following is suggested:

- All chemicals must be stored in bunded areas
- All storage and holding tanks and underground piping must be tested to ensure no leaks are occurring.

- The tank structures must comprising the main effluent treatment plant must be bunded to ensure that 110% of the capacity of the largest tank is contained within the bunded area in the event of the collapse of a tank wall.
- All tank structures external to the treatment plant, namely the yard storage tanks must be fitted with high level alarms to indicate that structures require emptying.

6.0 Conclusion:

A study of all of the environmental impacts of the operations of this site has been conducted and the result is that whilst there will be impacts on the environment from the construction and operation of the proposed development they will be minimal and not significant. Interactions between the above assessed environmental factors show the potential effect of the development on the community and its environs. Surface Water is the main potential impact receptor. The proposed poultry farm development and its production processes will minimally impact upon the Human Beings, flora and fauna, landscape, archaeology, terrestrial, and climate described above. Traffic, air quality, noise and material assets are the factors that affect the community directly and this development will have no significant impact on the rural community. The proposal as outlined will make a significant positive contribution to the rural economy of Co. Cork and will serve to increase employment and secure the viability and competitiveness of the applicant's existing poultry production facility.

ATTACHMENT 1

Screening for Appropriate Assessment Document

SCREENING STATEMENT FOR APPROPRIATE ASSESSMENT

(PROVISION OF INFORMATION FOR SCREENING FOR APPROPRIATE ASSESSMENT)

Proposal by Mr. Kieran O'Regan for an agricultural development consisting of 4 no. broiler Houses to house 50,000 broilers per house, waste storage shed incorporating biomass burner, office & changing facilities, service yard & storage shed, staff accommodation with waste water treatment system & all associated site works at Knockbrown, Bandon, Co. Cork.

Rev.	Status	Author	Reviewed by	Approved by	Issue Date
1	Draft	D.O	D.O	D.O	11/09/13
2	Draft	D.O	D.O	RME	01/10/13
3	Final	D.O	RME		17/12/13

TABLE OF CONTENTS

1 Introduction

This report, which contains information required for the competent authority (in this instance Cork County Council) to screen the proposed amendment to the development for an Appropriate Assessment (AA), has been prepared by RME Environmental on behalf of Kieran O'Regan ('the applicant'). It provides information on and assesses the potential for the proposed amendments to the existing planning permission to impact on Natura 2000 sites[1].

It is necessary that the proposed development or project has regard to Article 6 of the Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (hereafter referred to as the Habitats Directive). This is transposed in Ireland primarily by S.I. No. 477 of 2011, European Communities (Birds and Natural Habitats) Regulations 2011 (hereafter referred to as the Birds and Habitats Regulations) and by the Planning and Development (Amendment) Act 2010, as amended (hereafter referred to as the Planning Acts).

The information in this report forms part of, and should be read in conjunction with the planning application documentation being submitted to Cork County Council in connection with the proposed scheme.

It is the responsibility of the competent authority to make a decision as to whether or not the proposed development is likely to have significant effects, either individually or in combination with other plans or projects, on Natura 2000 sites.

An AA is required if likely significant effects on some Natura 2000 sites arising from the proposed development, either alone or in combination with other plans or projects could not be ruled out at the screening stage.

2 Methodology

This Screening Statement for Appropriate Assessment has been prepared with regard to the following guidance documents where relevant:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision).
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities.* Circular NPW 1/10 & PSSP 2/10.
- *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 Environment Directorate-General, 2001); hereafter referred to as the EC Article 6 Guidance Document. The guidance within this document provides a non-mandatory methodology for carrying out assessments required under Article 6(3) and (4) of the Habitats Directive.
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (EC Environment Directorate-General, 2000); hereafter referred to as MN2000.
- *Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC. Clarification of the Concepts of Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence.* Opinion of the European Commission (European Commission, January 2007).

1 Natura 2000 sites are part of an EU-wide network of nature protection areas established under the EU Habitats Directive. The aim of the network is to aid the long-term survival of Europe's most valuable and threatened species and habitats. In Ireland it is comprised of Special Areas of Conservation (and candidate Special Areas of Conservation) designated as per the requirements of the Habitats Directive, and also incorporates Special Protection Areas designated as per the EU Birds Directive.

- *Guidelines for Good Practice Appropriate Assessment of Plans Under Article 6(3) Habitats Directive* (International Workshop on Assessment of Plans under the Habitats Directive, 2011)

This Appropriate Assessment Screening is based upon a desktop study and a site visit on the 17th July 2013. Sources of information relied upon are listed below.
Desktop Data / Information Sources:

- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie.
- Information on water quality in the area available from www.epa.ie
- Information on the South Western River Basin District from www.wfdireland.ie
- Information on soils, geology and hydrogeology in the area available from www.gsi.ie
- Information on the location, nature and design of the proposed development supplied by the applicant's Planning Team.
- *The Status of EU Protected Habitats in Ireland – Backing Documents Volumes 1 to 3.* (National Parks & Wildlife Service, 2007)

Other Key Information Sources:

- Cork County Development Plan (2009 - 2015).
- Cork County Heritage Plan (2005 -2010)
- Cork County Biodiversity Action Plan (2009 – 2014)
- Bandon Electoral Area Local Area Plan 2011 Vol. 1 & Vol. 2 (2011)
- South Western River Basin District Management Plan (2009 - 2015)

Guidance which has been followed in determining magnitude and significance of impacts as well as in proposing mitigation measures include:

- *Guidelines for Ecological Impact Assessment in the United Kingdom* (Institute of Ecology and Environmental Assessment, 2006)
- *Guidelines on the Information to be Contained in Environmental Impact Statements* (Environmental Protection Agency, 2002)
- *Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)* (EPA, 2003)
- *Environmental Construction Guidelines Series* (National Roads Authority 2005-2009);
- *Bat Mitigation Guidelines for Ireland* (National Parks and Wildlife Service, 2006)

3 Stage One- Screening

3.1 Background

The above referenced guidance documents set out a staged process for carrying out Appropriate Assessment, the first stage of which is referred to as screening. This stage identifies the likely impacts on a Natura 2000 site, if any, which would arise from a proposed development either alone or in combination with other plans and projects, and further considers whether these impacts are likely to adversely affect the integrity of any Natura 2000 sites.

If the conclusions at the end of the screening exercise are that significant impacts on any Natura 2000 sites, as a result of the proposed development, either alone or in combination with other plans and projects, are likely, uncertain or unknown, then there is a requirement to proceed to subsequent stages of Appropriate Assessment. The findings of the AA must be clearly documented in order to provide transparency of decision-making, and to ensure the application of the 'precautionary principle'2.

This screening exercise was undertaken as the first stage of the Appropriate Assessment process. The information within Section 3 below provides a summary of the information gathered for the screening exercise with Section 4 providing a summary of the main findings of the report.

3.2 Consultation

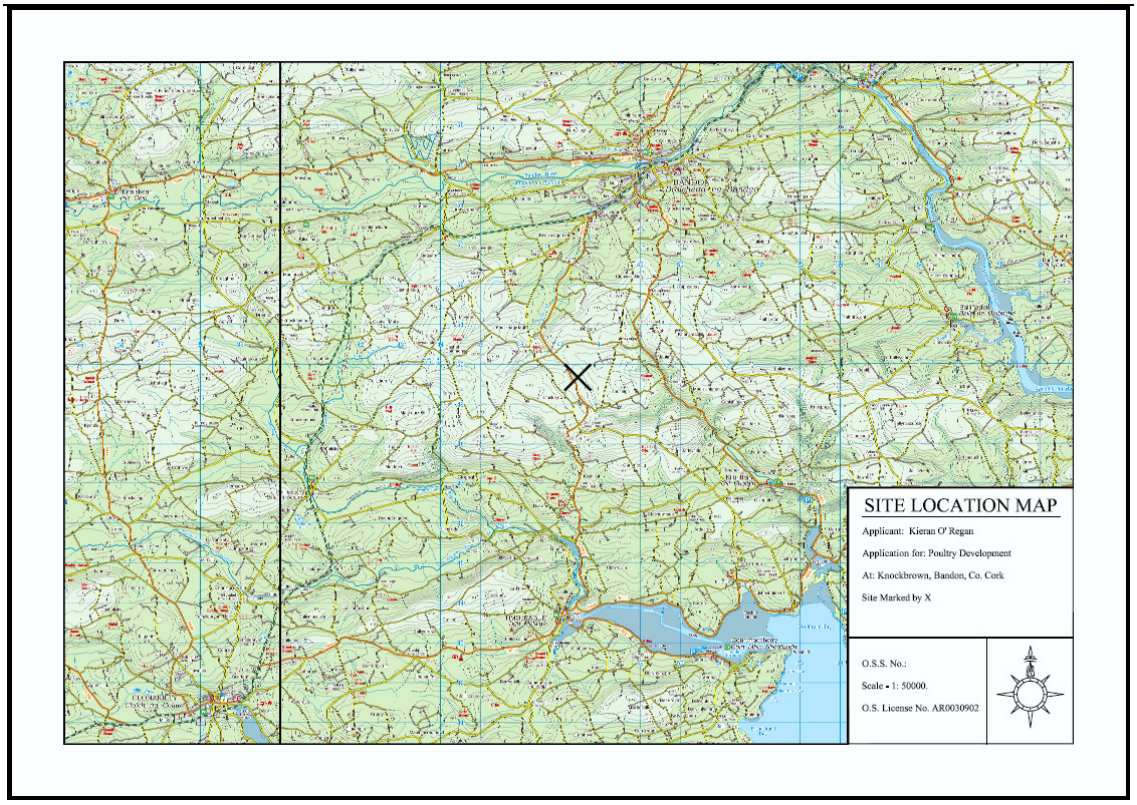
No formal consultation was undertaken for this project.

3.3 Overview of Proposed Development and Receiving Environment

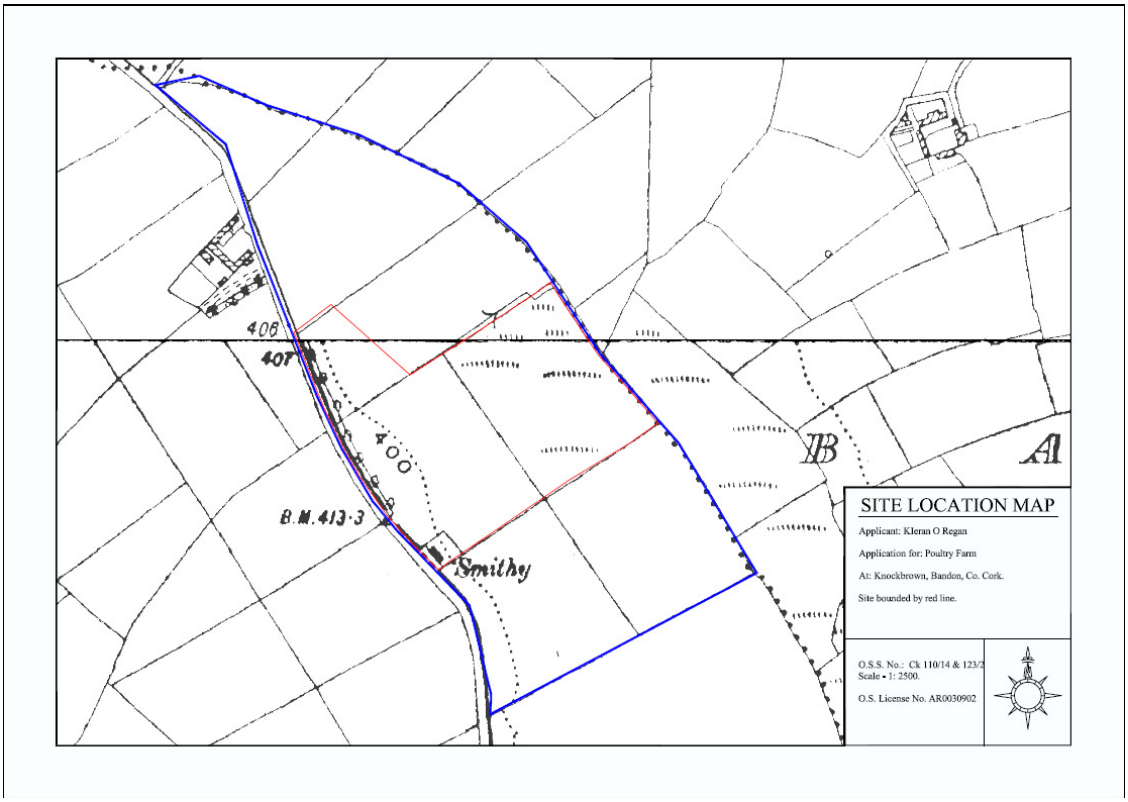
3.3.1 Brief Site Description

The proposed development is located within the town land of Knockbrown, Bandon Co. Cork, approximately 5km to the south of Bandon town on the R602 Bandon to Timoleague road.

2 One of the primary foundations of the precautionary principle, and globally accepted definitions, results from the work of the Rio Declaration. Principle #15 declaration notes:
"In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."



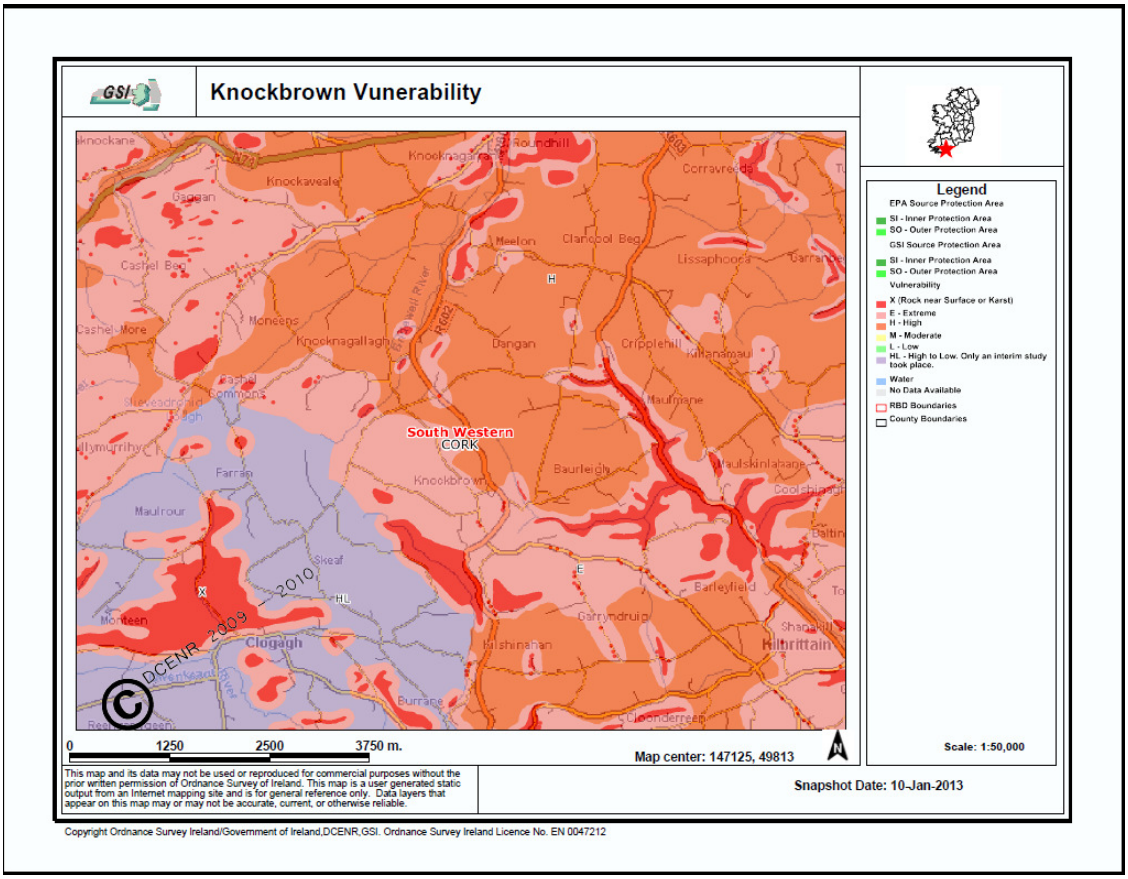
The site in marked X on above site location map



The site area is bounded by the blue line; the site itself is bounded by the red line.

The surrounding area is predominantly agricultural with rural housing. The site drains to an unnamed drain which flows from the west of the site along the northern boundary and into the Baurleigh River which flows into the Kilbrittain River which is part of the Bandon 1 Water District SRBD Southwestern and is monitored by the EPA. Water quality for the main stretch of the Kilbrittain River is monitored and is rated as being of Q4– Good status in 2010 (www.epa.ie). Ground water status in the area is recorded as 'Good' (www.epa.ie).

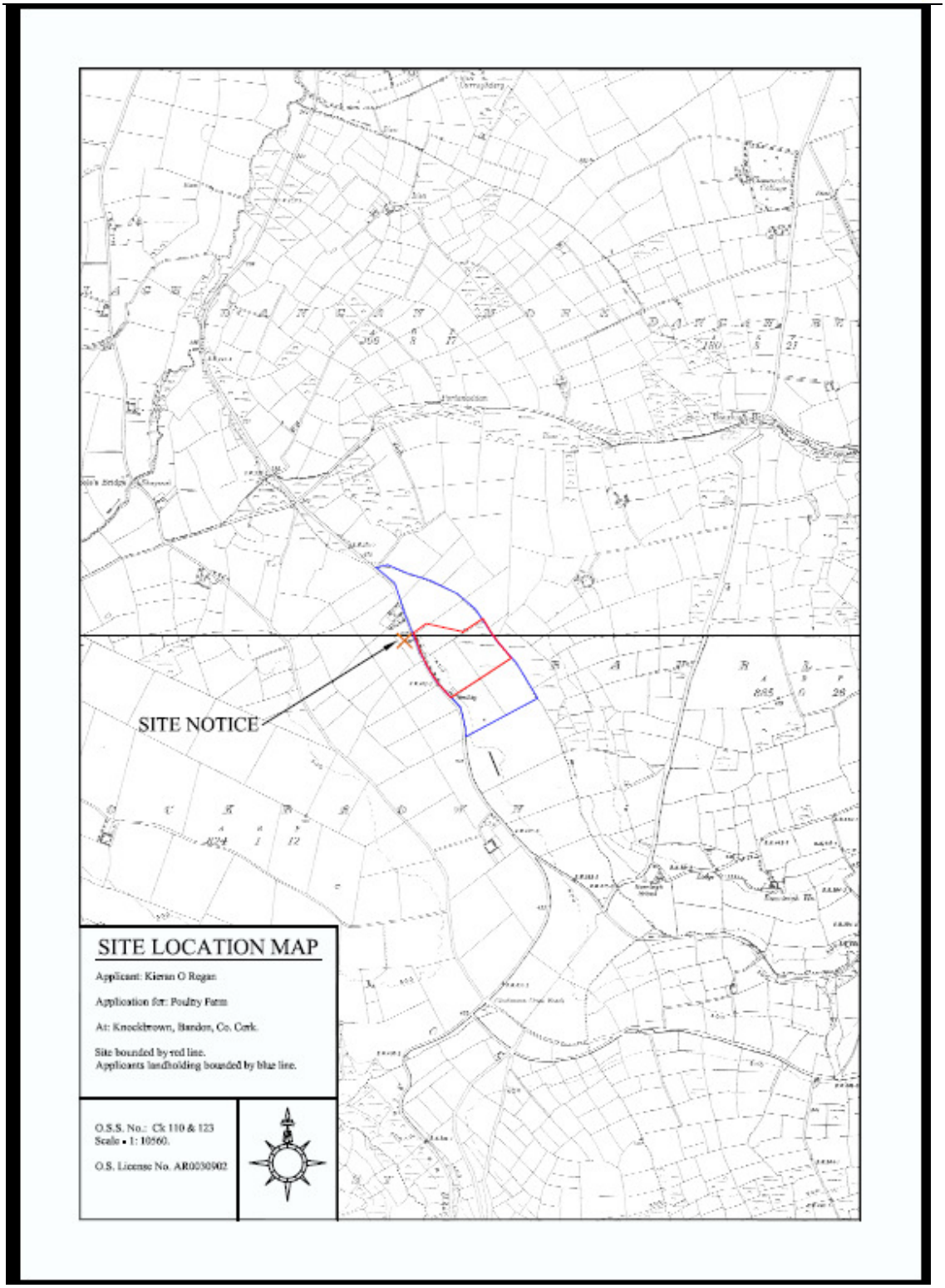
The site is located on a locally important aquifer (not a source protected aquifer) on bedrock of Dinantian mudstones and sandstones of the Kinsale Formation beside old head sandstone. The aquifer is rated as High (highly vulnerable) vulnerability (www.gsi.ie).



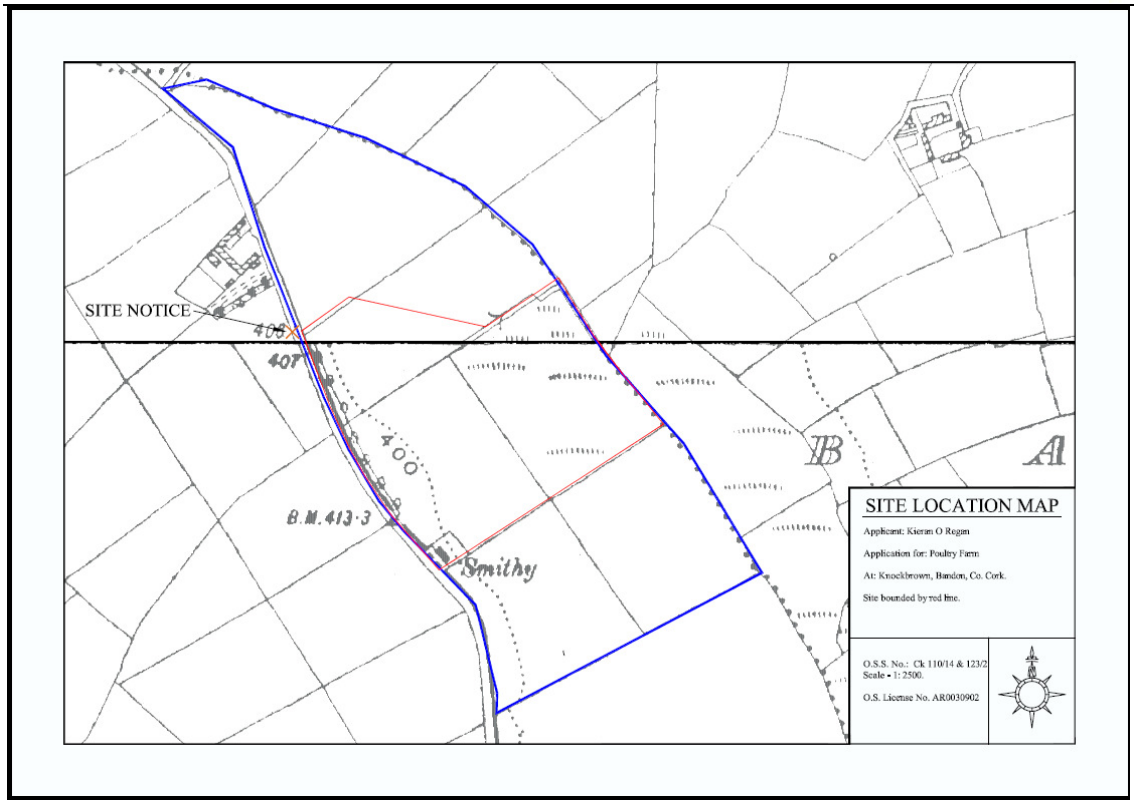
The predominant Soil type in the area is AminDW- Deep well-drained mineral soil, Derived from mainly acidic parent materials with subsoils TDC SsS being predominantly made up of sandstone and shale tills from the Devonian and carboniferous periods.

3.3.2 Description of the Proposed Development

Permission is being sought by Kieran O'Regan of Shannonvale foods for 4 Poultry houses, staff accommodation, storage shed and buildings for a biomass burner to allow a maximum number of 200,000 broilers to be accommodated in the said poultry houses. The site is located at Knockbrown to the south of Bandon in County Cork at Gris Reference E147348.520 N49646.874.



Site Notice Location Map 1-10560

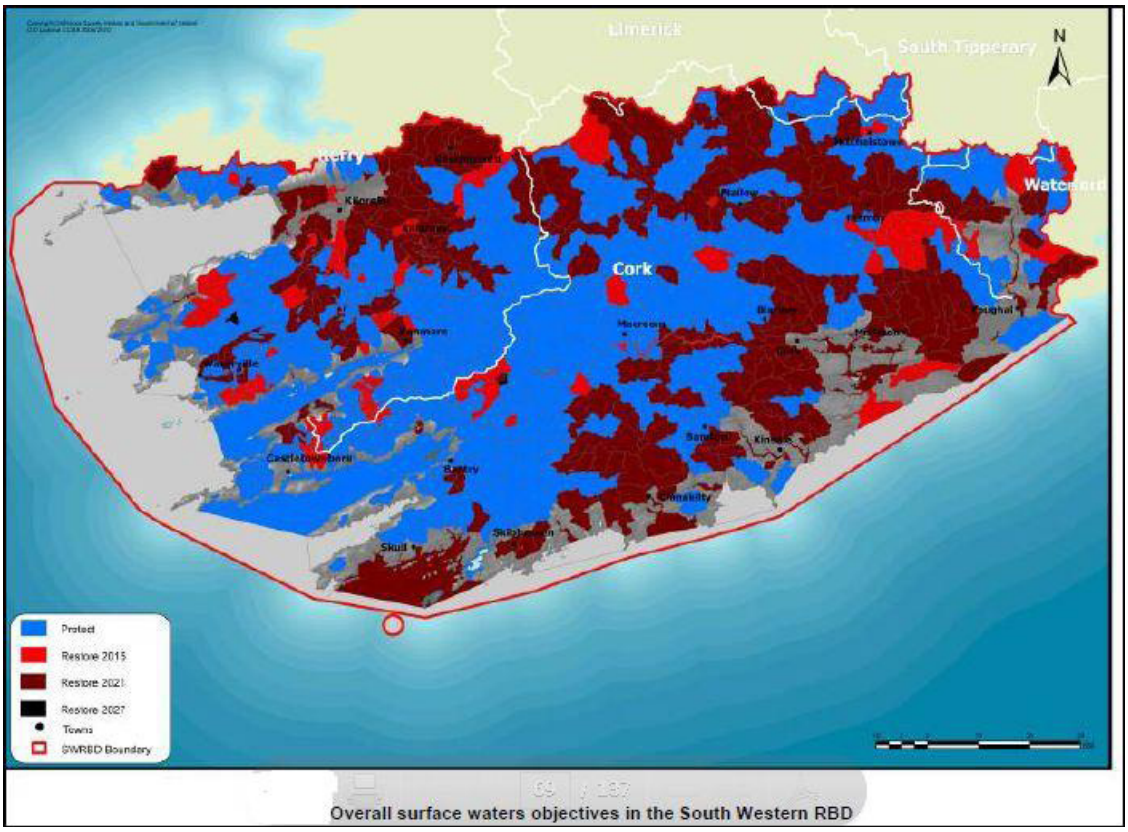


Site Notice Location Map 1-2500

The grant of planning permission will involve the construction of 4 Poultry houses, staff accommodation, storage shed and buildings for a biomass burner to allow a maximum number of 200,000 broilers to be accommodated in the said poultry houses at this site. This will bring certain environmental variables to the site which will be dealt with in the submission of an Environmental Impact Statement to accompany the planning permission variation application however at this juncture none are thought to be significant.

3.3.3 Other development nearby which may lead to cumulative impacts upon local ecology

The development site is also located proximate to Baurleigh River which flows into the Kilbrittain River ultimately making its way to the Courmacsherry Estuary 4km south of the proposed site. With that come the pressures of runoff from surface water collection systems predominantly. It is a general plan of the water framework that by 2030 the Rivers of the SWRBD quality status is protected and the overall aim of the Southwestern River Basin Management Plan is to protect and restore the good quality status of them.



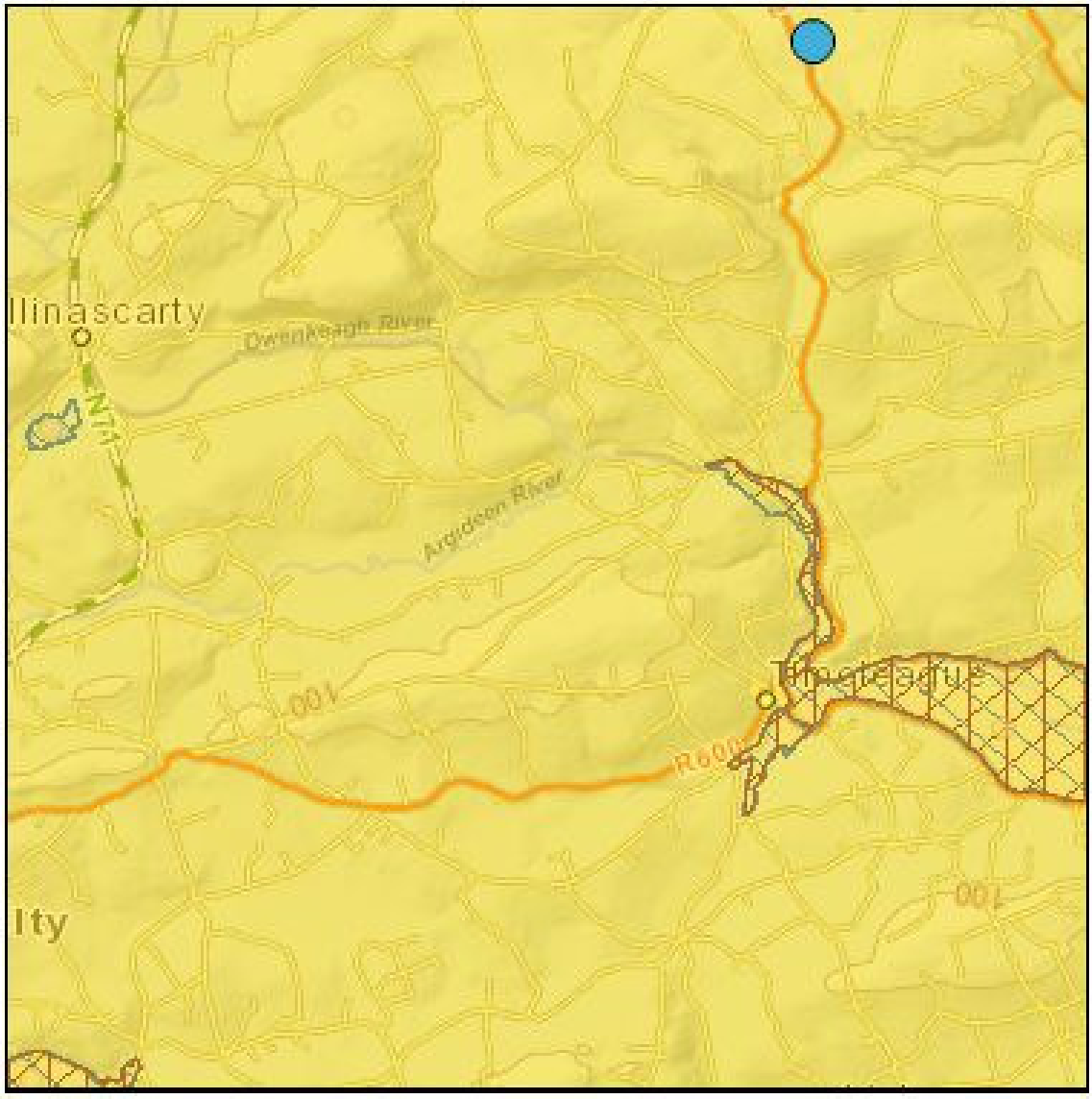
Overall surface waters objectives in the South Western RBD

Management of surface water from the site and management of dirty yard washings provide the greatest site risk and potential threat to the nearby Baurleigh River. The site will have adequate storage tanks and impermeable concrete yardage to capture all potential runoff and ensure sustainable management of the "soiled water" generated on site.
The major issue posed in regard to the site is whether the site will exert any environmental pressure on the surrounding environment.

There is potential for in-combination effects with the River Baurleigh. No significant adverse 'in-combination' effects were identified at the strategic level; however potential exists for such impacts at a local/site level depending on the nature/design of actions implemented through local area policy plans and through the execution of the development itself.

3.3.4 Designated sites in the surrounding area

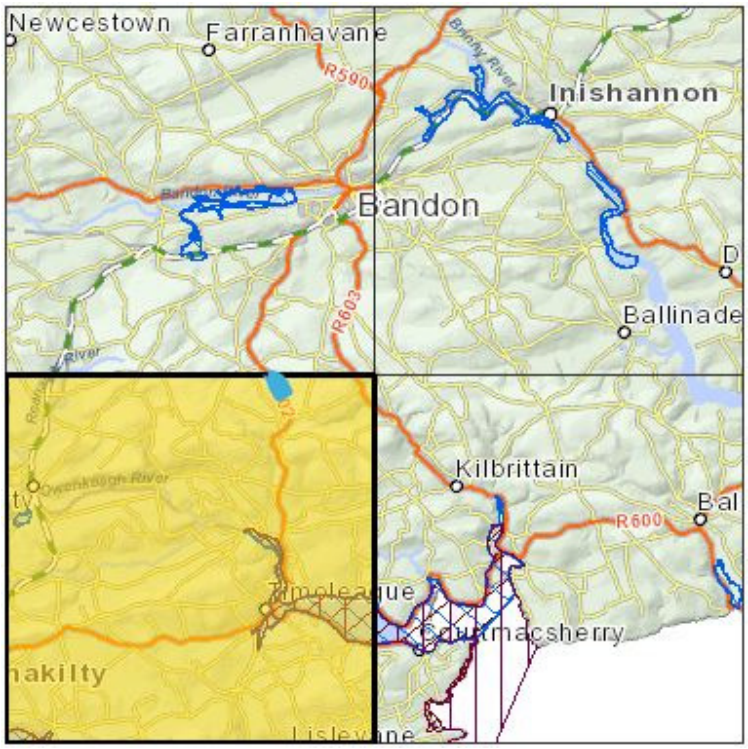
There are no Special Areas of Conservation (SAC's) or Natural Heritage Areas (NHA's) or Special Protected Areas (SPA's) within 1km of the proposed development site. According to the NPWS the site is located approximately 4km north of the SAC (001230), SPA (004219) and pNHA (001230) of the Courmacsherry estuary and approximately 10km North East from the SAC (000091), SPA (004081) and pNHA (000091) of Klonakilty Bay.
There is also one Proposed Natural Heritage Areas (pNHA) within the 10km square area (W44) of the site. This is pNHA (001037) Batemans Lough approx 7km west from site. The proposed Natural Heritage Areas (pNHAs) cover nationally important semi-natural and natural habitats, landforms or geomorphilogical features, wild plant and animal species or a diversity of these natural attributes. It is important that the conservation value of these areas, which are proposed for designation from time to time by the Department of the Environment, Heritage and Local Government, be maintained.



Site Location (blue dot) relative to outlined SAC, SPA & pNHA in NPWS 10km grid (W44)

Within the realms of these the SACs, SPAs and proposed natural Heritage areas located within the 10km grid (W44) there no protected species. Within the surrounding 10km square areas (W54, W45 & W55) there are 5 protected species proximate to each site. Site Codes 001740 "Bandon Valley above Inishannon" and 001515 Bandon Valley below Inishannon" in W55 have 2 protected species within their 10km squares. *Misopates Orontium* (lesser snap dragon – proximate to Inishannon) and *Mentha pulegium* (Penny Royal – Proximate to Ballinadee). In W45 West of Bandon and north of the proposed site there is a protected species *Saxifraga granulata* (meadow saxifrage – found west of Bandon town). The Penny Royal is also found proximate to the proposed NHA at James Fort near Kinsale. W54 contains 2 protected species; *Lathyrus japonicus* (Sea Pea) at Bantry Bay and *Mustela erminea* (Stoat) at Lisslee, Barryroe.

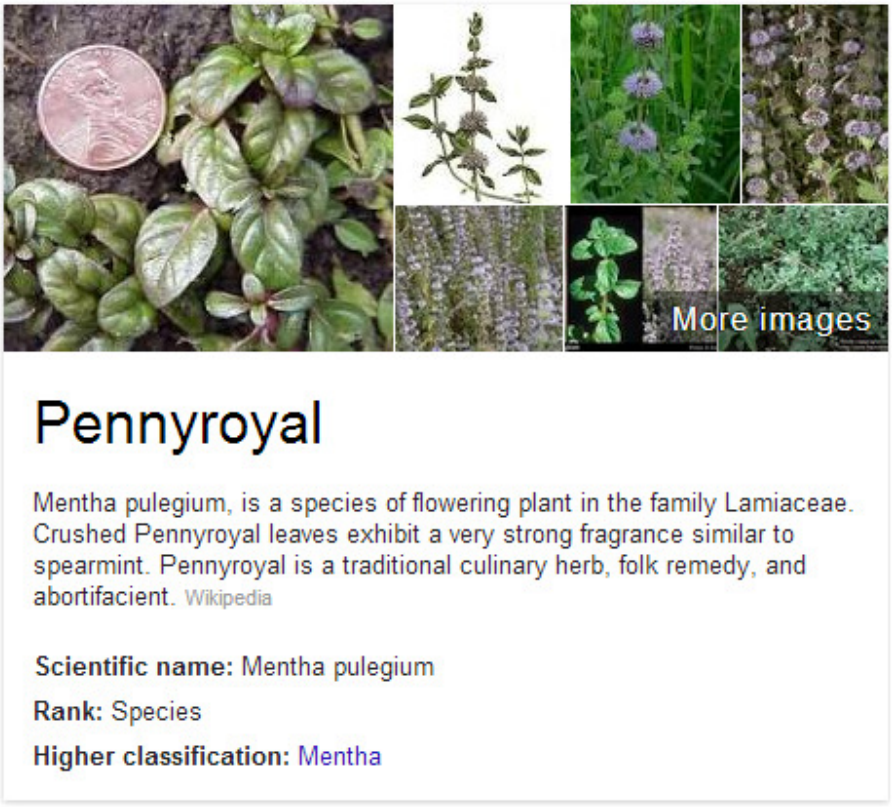
The site inspection and inspection proximate to the site did not reveal any presence of these species of animal or plant.



4grids (W44 (highlighted with site marked blue) surrounded by W45,W55 & W54

Misopates Orontium (lesser snap dragon)

Mentha pulegium (Penny Royal)



Saxifraga granulata (meadow saxifrage)

Saxifraga granulata

Saxifraga granulata is a flowering plant of the genus Saxifraga in the family Saxifragaceae. Wikipedia

Scientific name: Saxifraga granulata

Lathyrus japonicus (Sea Pea)

Beach Pea

Plant

Lathyrus japonicus is a legume native to temperate coastal areas of Asia, Europe, North and South America. It is a herbaceous perennial plant growing trailing stems to 50–80 cm long, typically on sand and gravel storm beaches. Wikipedia

Scientific name: Lathyrus japonicus

Rank: Species

Higher classification: Lathyrus

Mustela erminea (Stoat)

Stoat

Animal

The stoat, also known as the ermine or short-tailed weasel, is a species of Mustelidae native to Eurasia and North America, distinguished from the least weasel by its larger size and longer tail with a prominent black tip.
Wikipedia

Scientific name: Mustela erminea

Rank: Species

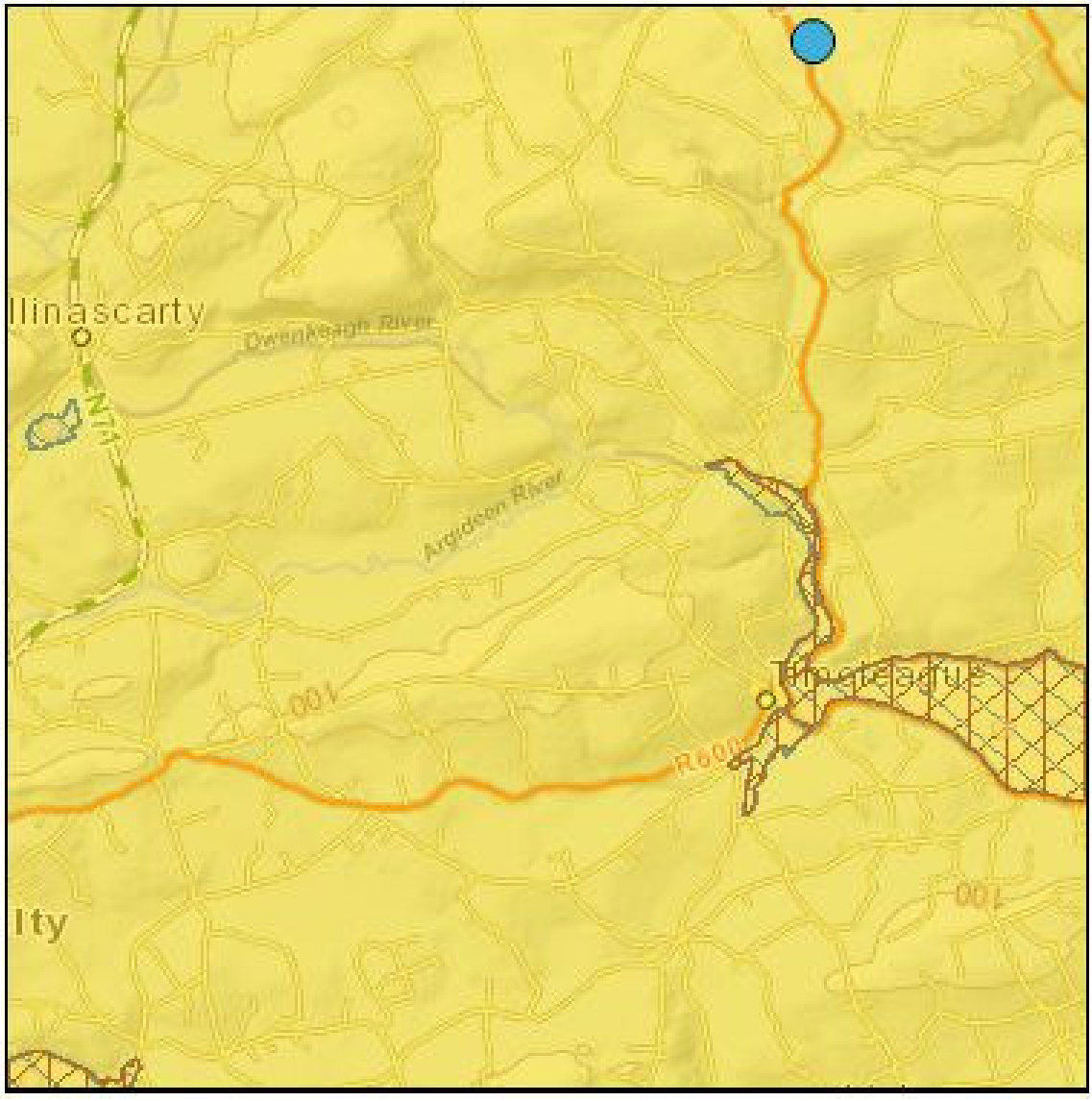
Higher classification: Weasel

In relation to site biodiversity the actual site itself is located predominantly in agricultural pastureland but is bordered to the North by Mixed Mature Forest. In Relation to the National Biodiversity Index the site is recognised as being in the South Western River Basin District, Being 39% suited to the support of a whiskered bat colony and being designated Forestry MXM – Mixed Forest Mature (1998).

http://maps.biodiversityireland.ie/#/Map

3.4 Identification of Natura 2000 Sites and their Relevance to the Proposed Development

Natura 2000 sites are considered relevant where a source-pathway-receptor link exists between the proposed development and the Natura 2000 site. In order for an impact to occur there must be a risk enabled by having a 'source' (e.g. construction works at a proposed development site), a 'receptor' (e.g. a SAC/SPA or other ecologically sensitive feature), and a pathway between the source and the receptor (i.e. a watercourse which connects the proposed development site to the SAC/SPA). The risk of the impact does not automatically mean it will occur, or that it will be significant. However, identification of the risk does mean that there is a possibility of ecological or environmental damage occurring, with the level and significance of the impact depending upon the nature and exposure to the risk and the characteristics of the receptor.



Site Location (blue dot) relative to outlined SAC, SPA & pNHA in NPWS 10km grid (W44)

The Courmacsherry Estuary 4km south of the proposed site is designated as a SAC (001230), SPA (004219) and pNHA (001230). The Shannonvale foods development is so proposed to protect the integrity of the stretch of Baurleigh River which flows into the Kilbrittain River and ultimately to the estuary. Un-soiled surface water will be discharged to a soak pit on the south of the site and soiled Surface water run-off will be percolated through on the north of the site. The rainwater falling in this area of the site therefore infiltrates through approximately 2.0m depth of unsaturated topsoil and subsoil throughout the year, and is able to flow through this material vertically through the site to the groundwater table deep under this portion of the site. This explains the absence of soft ground conditions around the site, as well as the absence of wetland indicators and drains in the immediate vicinity.
Atmospheric emissions from the facility are not significant. A Biomass boiler to burn chicken litter will be installed and will conform to IPPC licence conditions and therefore there is not anticipated to be any significant impact from the proposed development atmospherically proximate to the site.

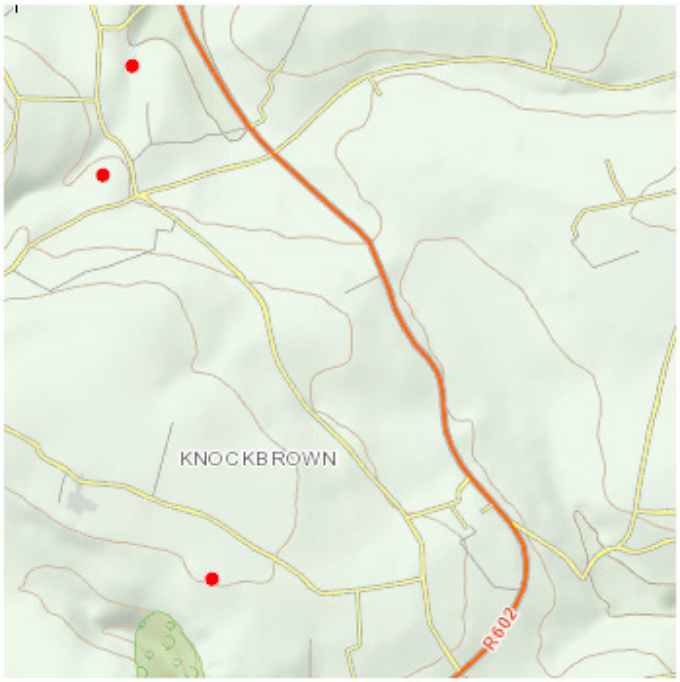
There will be increased traffic in the form of feed deliveries to the site and a road traffic survey may need to be undertaken to assess any significant environmental impacts from increased traffic to and from the site during construction and operation. Below are the current views of the R602 Timoleague to Bandon road from the entrance to the site.

Exiting Left onto R602: Approximately 90m – 100m vision

Exiting Right onto R602: Approximately 120m – 130m vision

As can be seen below in relation to the proposed development there is no considerable archaeological presence proximate to the site. The study identified 3 recorded sites proximate to the proposed development site. These are as follows:

Ringfort – Rath CO123-011 knockbrown (Bottom marker approx 1.5km from proposed site)
Moated Site – Dangan More CO110-070 (Middle marker approx 1.2km from proposed site)
Moated Site – Dangan More CO110-071 (Top marker approx 1.4km from proposed site)

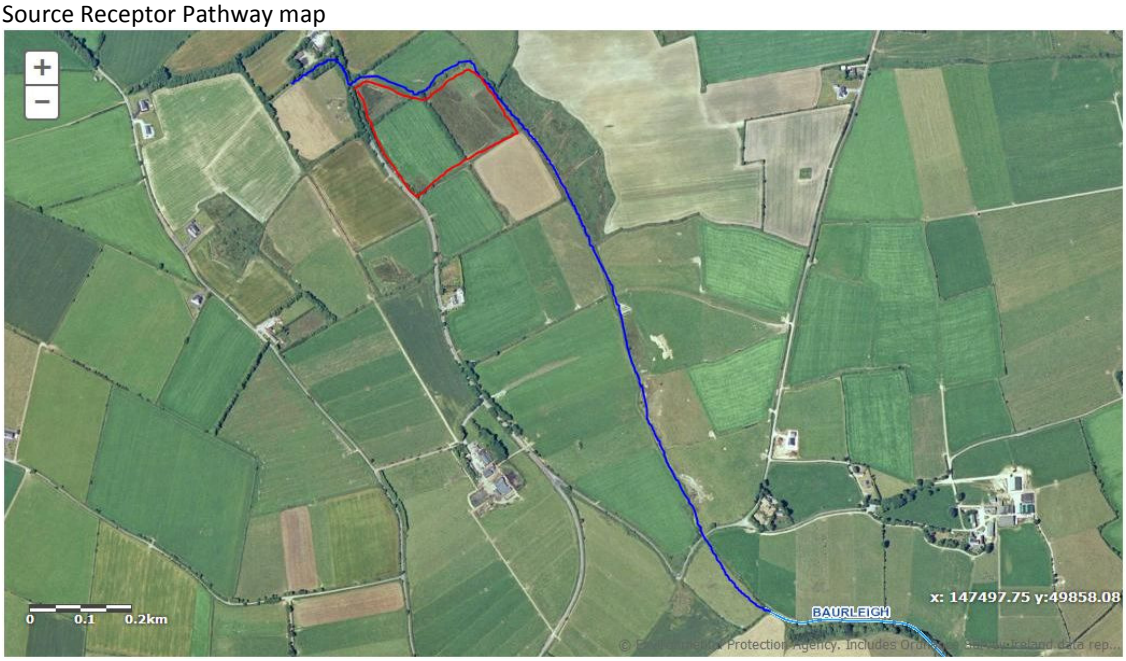


Having reviewed the potential changes from this proposed development no effects will occur in relation to areas or structures of archaeological significance in relation to this development.

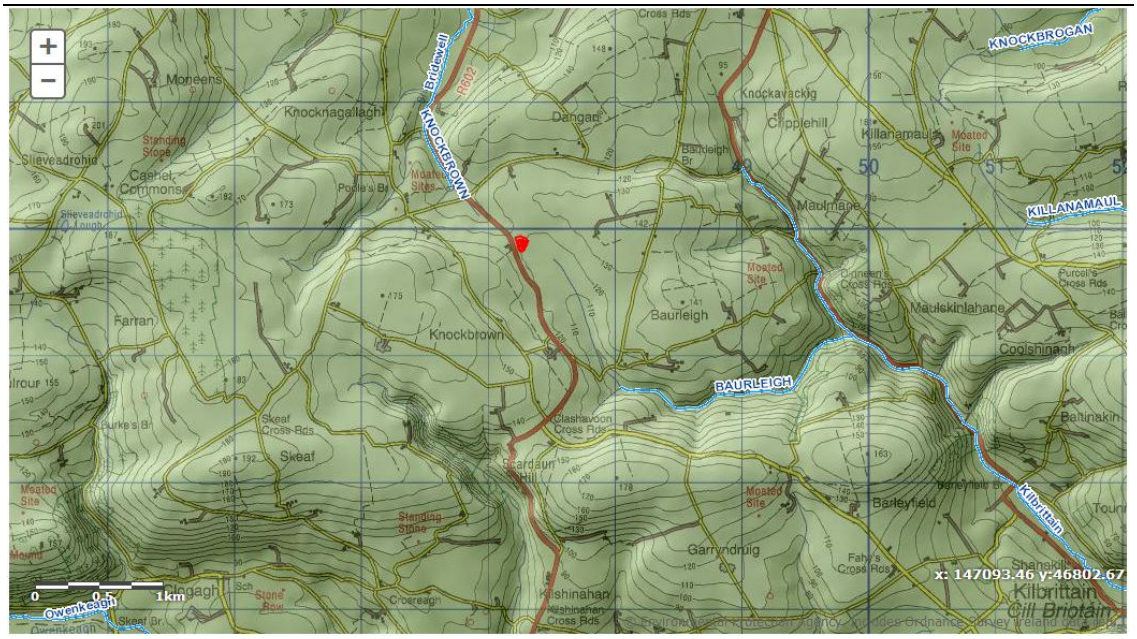
4 Conclusions of Screening Assessment

Two SAC/SPA/NHA's were identified within 10km of the proposed development; 4km to the south the SAC (001230), SPA (004219) and pNHA (001230) of the Courtmacsherry estuary and approximately 10km South East from the site the SAC (000091), SPA (004081) and pNHA (000091) of Klonakilty Bay.
The sites identified within 10km of the proposed development site have potential source-pathway-receptor hydrologic links identified between the proposed development site and any Natura 2000 sites. Following an appraisal of all potential issues described above and by applying the precautionary principle, it was determined that it was possible to rule out significant impacts on the Courtmacsherry Estuary, Konakilty Bay and the pNHA Batemans Lough during the proposed construction and operation of the proposed development. Therefore, it was deemed unnecessary to undertake any further stages of the Appropriate Assessment process.

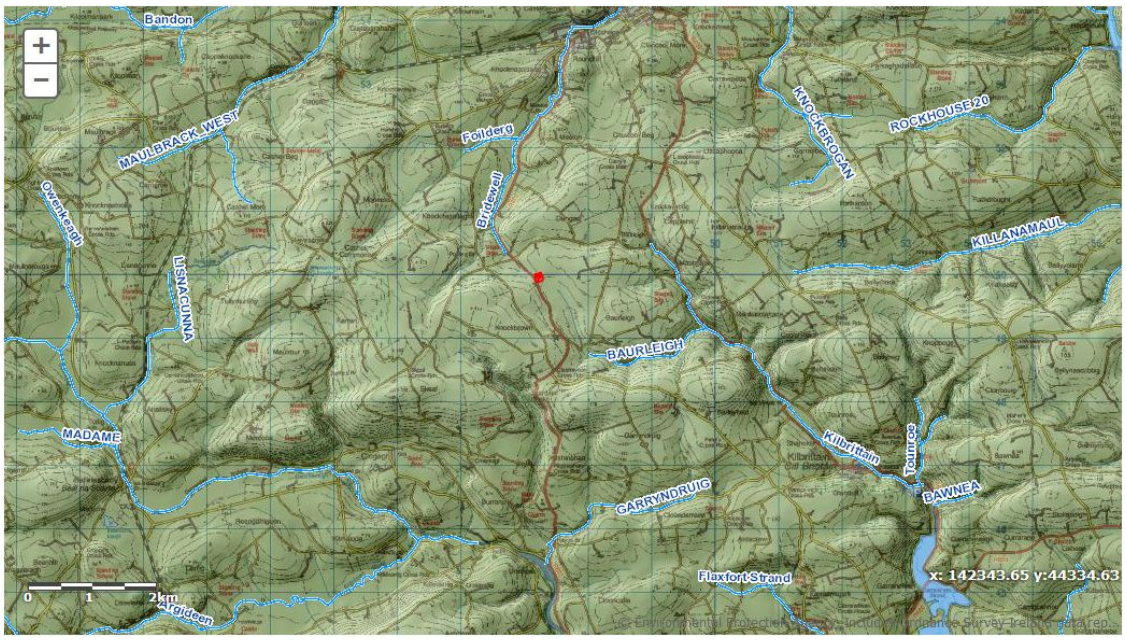
Source Receptor Pathway map



Baurleigh river bottom right (light blue).
Dark blue = stream flowing around site
Red = Site location



Scale relative to killbrittain river
Red = site



Scale Relative to Courtmacsherry Estuary
Red = Site

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ATTACHMENT 2

RoadPlan Stage 1/2 Road Safety Audit

13069

Proposed Development at Baurleigh, Bandon, Co. Cork

ROAD SAFETY AUDIT STAGE 1/2

October 2013

ROADPLAN CONSULTING

7 Ormonde Road
Kilkenny
Tel: 056 7795800
Fax: 056 7702999

Proposed Development at Baurleigh, Bandon, Co. Cork

ROAD SAFETY AUDIT STAGE 1/2

Document Ref	Prepared by	Description	Issue	Date
13069	G Frisby / B Dimitrijevic	Final	1	13/12/13

Proposed Development at Baurleigh, Bandon, Co. Cork

ROAD SAFETY AUDIT STAGE 1/2

1. INTRODUCTION

1.1 This report describes a Stage 1/2 Road Safety Audit carried out on the proposed development at Baurleigh, Bandon, Co. Cork on behalf of Kieran O Regan. The audit was carried out on the 22nd of October 2013 in the offices of Roadplan Consulting, Kilkenny.

1.2 The audit team members were as follows:-

George Frisby, BE CEng MIEI;

Bratislav Dimitrijevic, MEng CEng MIEI

1.3 Both audit team members visited the site on 21st October 2013. The audit comprised an examination of the drawings relating to the scheme supplied by OMB & Associates and an examination of the site.

1.4 This Stage 1/2 Audit has been carried out in accordance with the relevant sections of NRA DMRB HD19 and HA42. The team has examined only those issues within the design relating to the road safety implications of the road access to the scheme, and has therefore not examined or verified the compliance of the design to any other criteria.

1.5 Appendix A lists the audited drawings.

2. STAGE 1/2 AUDIT

2.1 **Problem**

Sightlines at the proposed access may be restricted by the proposed entrance walls and existing roadside boundary which may lead to side impact collisions at the access.

Recommendation

Set-back the proposed entrance walls and roadside boundary to the rear of the visibility splays and ensure that any remaining vegetation within the visibility splays is reduced to a level below 0.26m above the existing road level.

2.2 **Problem**

The horizontal curvature and junction radii on the access road are tight and HGV's may find it difficult to stay in lane when entering and exiting development access.

Recommendation

Carry out a swept path analysis to ensure that HGV's can stay in lane when entering and exiting the access and modify the junction layout if necessary.

2.3 **Problem**

Road edge definition may be reduced by the removal of the existing roadside boundary on the inside of the curve which may result in drivers over running the road edge particularly at night time leading to loss of control collisions.

Recommendation

Provide roadside delineators along the road edge.

2.4 **Problem**

The development is proposed in the rural area where drivers may not expect vehicles, particularly HGV's, to be turning to and from a factory entrance.

Recommendation

Provide a "Factory Entrance Ahead" sign on both approaches to the development access.

3. AUDIT TEAM STATEMENT

3.1 We certify that we have examined the drawing listed in Appendix A and have inspected the site. This examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the safety of the scheme.

Signed……George Frisby..... George Frisby

Date .....22nd October 2013…....

Signed ……Bratislav Dimitrijevic…….. Bratislav Dimitrijevic

Date ..... 22nd October 2013…....

APPENDIX A

List of Drawings Examined:
Drawing numbered SV 02, Rev-A and entitled 'Site Layout Plan – Entrance, Section & Key Plan', provided electronically in AutoCAD format by OMB & Associates.

SAFETY AUDIT FEEDBACK FORM

Scheme: Proposed Development at Baurleigh, Bandon, Co. Cork

Audit Ref No.: 13069

Audit Stage: 1/2

Date Audit Completed: 22nd October 2013

	To Be Completed By Designer			To Be Completed by Audit Team Leader
Paragraph No. In Safety Audit Report	**Problem accepted (yes/no)**	**Recommended measure accepted (yes/no)**	**Describe alternative measure(s). Give reasons for not accepting recommended measure**	**Alternative measures or reasons accepted by auditors (yes/no)**
2.1	✓	✓		
2.2	✓	✓		
2.3	✓	✓		
2.4	✓	✓		

Signed ..... **Design Team Leader**

Date 11/12/13

Safety Audit Signed off: ..... **Audit Team Leader**

Date 13/12/13

Please complete and return to:

Roadplan Consulting Ltd.
7, Ormonde Road
Kilkenny
Email: info@roadplan.ie