S. 37

File With _____

SECTION 131 FORM

Appeal NO:_ACP 32 0010-24 **Defer Re O/H** ☐

Having considered the contents of the submission ~~dated~~/ received 24/2/26 from Applicant I recommend that section 131 of the Planning and Development Act, 2000 be/~~not be~~ invoked at this stage for the following reason(s):. As per Board Direction

E.O.: _____ **Date:** 3/3/26

For further consideration by SEO/SAO

Section 131 not to be invoked at this stage. ☐

Section 131 to be invoked – allow 2/4 weeks for reply. ☐

S.E.O.: _____ **Date:** _____

S.A.O: _____ **Date:** _____

M _____

Please prepare BP 70 **- Section 131 notice enclosing a copy of the attached submission**

to: LCC & P. Swanton **Task No:** 466891-26 17 Day C.

Allow 2/3/4weeks – BP_____

EO: _____ **Date:** 3/3/26

AA: Dillon Corcoran **Date:** 4/3/26

Outlook

FW: ABP-320010-24

From Appeals2 <appeals@pleanala.ie>
Date Tue 24/02/2026 12:25 PM
To David Behan <d.behan@pleanala.ie>

2 attachments (9 MB)
ACP final response submitted.pdf; ACP letter 26th Jan.pdf;

From: Geraldine Fahy <ger@gerfahyplanning.ie>
Sent: Tuesday, February 24, 2026 12:23 PM
To: Appeals2 <appeals@pleanala.ie>
Subject: ABP-320010-24

Dear Sir/Madam

We refer to your letter dated 26th January in respect of the above. Please find attached our response. We shall be grateful for confirmation of receipt of same.

Many thanks.

Kind regards

Ger Fahy Planning
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An Coimisiún Pleanála
64 Marlborough Street
Dublin 1
D01 V902

24/02/2026

Our Case Number: ABP-320010-24
Planning Authority Reference Number: 2460189
Your Reference: Crayvall Egg Production Limited

RE: Construction of poultry house and store with all associated site works. Environmental Protection Agency licence required. Natura Impact Statement and Environmental Impact Assessment Report submitted with planning application. Carrickbaggott, Grangebellow, Co. Louth

Dear Sir/Madam,
We refer to your letter dated 26 January 2026 and request further information contained therein.

We set out below our response in respect of same:

Re: Item 1:
Item 1 of your request stated as follows:

1. *Policy Objective NBG 20 of the Louth County Development Plan 2021-2027 seeks to protect and enhance wetland sites. Policy Objective ENV 15 requires that proposed plans, programmes and projects shall not have an unacceptable impact on the water environment, including groundwater quality and quantity. The wetland site at Carrickbaggot is identified in the Louth County Wetland Survey as being of National importance. Having regard to the location and volume of groundwater abstraction, the applicant is required to access the significance of same alone and cumulatively, and to assess the impact of abstraction on water (groundwater resources), material assets (water supply) and biodiversity (wetlands)*

Response:
The applicants are actively engaged in sustainable farming practices and sustainable management of their entire farm holding, including the small portion of same that bounds, the wetland area. Their efforts in this regard are reflected in the attached article from The Farmers Journal 26th July 2025, which highlights how they have risen to the "sustainability challenge". The applicants entered the Teagasc Signpost programme which was in existence since 2011. This is a collaborative effort of farmers to improve sustainability.

The newspaper article confirms that the export the poultry manure to local tillage farmers to replace their chemical fertiliser use. The applicant advises that they don't apply the hen manure to their own land as it would need to be ploughed into the land and this wouldn't be compatible with their free-range operations. They have an excellent relationship with customer tillage farmers who they supply with the poultry manure. The cycle continues as cereals are used to feed the hens.

The newspaper article confirms that risk areas were identified and flow charts showing flow of water off farm were produced to aid the decision making on what actions to introduce. A farm rain management plan was put in place along with riparian buffer margins along water courses, sediment traps and tree planting in the farmland.
They have also installed solar panels which saved €34,000 in 14 months and reduced their carbon footprint.

As well as the Teagasc-Signpost Programme, the applicants have prepared a Biodiversity EIP Plan for the farm which included the provision of riparian buffers, trees, grass margines and sediment traps and implemented targeted actions on the ground above the normal regulatory requirements. The Water EIP aims to improve water quality at local, catchment and national levels. The measures under this plan included:
Rainwater management, farmer training course, spatially targeted riparian buffer zones, 3.0m margin, tree planting with buffer zone, multi species swards etc.

We also enclose details of organic seeds phacelia and organic wildflower seed and multi species swards that were planted on the farm as part of their pollinator biodiversity plan. The applicant confirms that no machinery is used on the wetland and they have planted multi species swards around the farm to promote biodiversity.

From the foregoing it is clear that the applicants have a clear interest in biodiversity and sustainable farming practices. The evidence provided shows that their activities do not have an unacceptable impact on the wetland. Their actions accord fully with Policy Objective NBG 20 of the Louth County Development Plan.

In response to the request for an assessment of the impact of groundwater abstraction on groundwater resources, material assets and biodiversity the original EIAR proposed two options, a well or group water scheme. It is now decided that the best approach would be to serve the proposed development with the Group Water Scheme and avoid any additional ground water abstraction. A letter is attached from the Group Water Scheme confirming sufficient capacity to cater for the proposed development.

Louth County Wetland Survey was carried out in 2011. Section 5.3 of the Survey stated inter alia as follows:

"Protection of Louth Wetlands
Due to their recognised ecological importance, many wetland sites in county Louth are already given legislative protection under various site conservation designations. The main nature conservation designations that afford protection to wetland sites are summarised below.

NP – National Park National Parks are defined as areas where one or several ecosystems are not materially altered by human exploitation and occupation; where plant and animal species, geomorphological sites and habitats are of special scientific, educational and recreational interest or which contain a natural landscape of great beauty. It is the policy of the Department of Arts, Heritage and the Gaeltacht, endorsed by successive governments, to abide by the criteria and standards for National Parks as set by the IUCN (www.NPWS.ie). There is no National Park in county Louth.

NR - Nature Reserve Nature Reserves are areas set aside for their conservation value by the Minister for the Department of Environment, Heritage and Local Government. These sites are usually State owned, in cases where these areas are privately owned, land-owners enter into a management agreement with the National Parks and Wildlife Service (www.NPWS.ie).

There are no Nature Reserves designated in county Louth.

SAC – Special Area of Conservation Special Areas of Conservation have been selected from the prime examples of wildlife conservation areas in Ireland. The legal basis for their selection is the EU Habitats Directive (92/43/EEC of the 21st May 1992) (CEC 1979). SACs that are undergoing the formal designation process but have not finally been submitted to Europe are called cSACs which stands for "candidate Special Areas of Conservation".

Actions that may affect the ecological integrity of sites are not to be permitted except in circumstances of overriding public interest or safety. Land-owners require permission from the Minister of the Environment to carry out certain 'notifiable actions' such as drainage or fertiliser application, depending on the habitats in question.

There are currently six sites designated as SACs in County Louth, including Carlingford Mountain, Carlingford Shore Dundalk Bay, Clogher Head, Boyne Coast and Estuary and River Boyne and River Blackwater. Only Carlingford Mountain contains significant freshwater wetland areas in the form of upland blanket bog and wet heath.

SPA - Special Protection Area Special Protection Areas for Birds are areas which have been designated to ensure the conservation of certain categories

of birds. Ireland is required to conserve the habitats of two categories of wild birds under the European Birds Directive (Council Directive 79/409/EEC of the 2nd April 1979)

(CEC 1979). The NPWS is responsible for ensuring that such areas are protected from significant damage. There are currently five sites designated as SPAs in County Louth, at Dundalk Bay, Carlingford Lough, Boyne Estuary, River Boyne and River Blackwater (September 2011) and Stabannan – Braganstown.

NHA – Natural Heritage Area
The basic designation for wildlife conservation in Ireland is the Natural Heritage Area (NHA). This is an area considered important in a national context for the habitats present or which holds species of plants and animals whose habitat needs protection. Some of these sites are small, such as roosting areas for rare bats; others can be large, such as a blanket bog complex or a sand dune system.

To date in Ireland, only raised bogs (75 sites) and blanket bogs (73 sites) have been formally designated as Natural Heritage Areas covering an area of ca 60,000 ha (www.NPWS.ie). Under the Wildlife Amendment Act (2000), NHAs are legally protected from damage from the date they are formally proposed for designation. The protection afforded to Natural Heritage Areas is similar to that afforded to Special Areas of Conservation as described above.
There are currently no designated Natural Heritage Areas in county Louth.

pNHA - proposed Natural Heritage Areas Proposed Natural Heritage Areas (pNHA) were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated. These sites are of significance for wildlife and habitats. Some of the pNHAs are tiny, such as a roosting place for rare bats. Others are large - a woodland or a lake, for example.

Nationally pNHAs cover approximately 65,000 ha and NPWS has indicated that designation will proceed on a phased basis over the coming years (www.NPWS.ie). Prior to statutory designation, pNHAs are subject to limited protection being considered in afforestation grants, REPS and recognition by planning authorities. Policy CON 11 in the Louth County Development Plan 2009 – 2015 commits the council "To resist and development that would be harmful to [any pNHA] or that would result in a significant deterioration or habitats or disturbance of species".

There are currently 24 sites designated as pNHAs freshwater wetlands. in County Louth (LCC 2010). Ten of these sites contain [note that geological sites can also be proposed for designation as NHAs and/or as County Geological Sites (CGA). Thirty-four such sites have been identified in Louth, of which at least 18 are of national or higher importance. Some of these may also be wetland or other coastal sites however their real extents have not been defined to the council.]

LWS Sites Following the completion of the LWS 2011 it is recommended that 23 sites which were not previously included on sites of conservation value within the county, should be submitted as cNHA to the National Parks and Wildlife Service for conservation designation. These include sites ranked as C+ Rating: County conservation value or above. See Appendix 1 and the results section for further details".

Notwithstanding the fact that the survey took place in 2011 none of the sites identified in that survey have been designated as pNHA or a cNHA in 2026 some 15 years after the completion of the survey. While the wetland has no statutory protection under the statutory designations, it can be seen from the applicants' actions, and existing management practices, that they have an inherent interest in bio-diversity and it is a core principle underpinning not just the management of their farm, but the philosophy in how they manage their entire farming activities.

The survey recommended that those sites identified with a C+ rating be submitted to the NPWS for conservation designation. The identified wetland at Carrickbaggot was identified as having only a C rating and was not of National Importance as incorrectly stated the letter from An Coimisiún Pleanala.
According to Table 7.5 of that Louth Wetland Identification Survey a C Rating is of local conservation value (high value).

Page 70 of that survey confirms that the summary of the Main habitats of interest on the Carrickbaggot site in 2011 were:

FW4 Drainage ditches
GS4 Wet grassland
PF3 Transition mire & quaking bog
WD2 Mixed broadleaved/conifer woodland

The summary of the Habitats Directive Annex 1 Habitat(s) present on the Carrickbaggot site were as follows:

(7140) Transition mires and quaking bogs

The rating given was a C rating: Local Conservation Value (high value).

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Louth Wetland Identification Survey Foss, Crushell, O'Loughlin & Wilson 2011

LWS Site Name	LWS Site Code	Easting Centre	Northing Centre	Summary of main habitat(s) of interest present on site (Fossitt)	Summary of Habitats Directive Annex 1 Habitat(s) present on site	Conservation ranking following survey
Bellurgan (Marsh Road) - Dundalk Bay SAC	19	308283	309696	FW2 Depositing/lowland rivers FW4 Drainage ditches FS1 Reed and large sedge swamps GA1 Improved agricultural grassland GS2 Dry meadows and grassy verges GS4 Wet grassland WS1 Scrub		E Rating: Local conservation value (low value)
Bellurgan East	22	311030	308468	FW4 Drainage ditches GA1 Improved agricultural grassland GS4 Wet grassland WS1 Scrub WL1 Hedgerows BC3 Tilled land		No Conservation Value
Boycetown	107	313181	289342	FL8 Other artificial lakes and ponds FS1 Reed and large sedge swamps GS2 Dry meadows and grassy verges PF3 Transition mire & quaking bog WS1 Scrub ED3 Recolonising bare ground		C+ Rating: County Conservation value
Briarhill	105	310803	286653	FW4 Drainage ditches GM1 Marsh WS1 Scrub WL1 Hedgerows		D Rating: Local conservation value (moderate value)
Carraghcloghan	7	294397	308383	FS1 Reed and large sedge swamps PF2 Poor fen and flush PF3 Transition mire & quaking bog WN6 Wet willow-alder-ash woodland WS1 Scrub	(7140) Transition mires and quaking bogs	B Rating: Nationally Important
Carrickbaggot	103	310509	285380	FW4 Drainage ditches GS4 Wet grassland PF3 Transition mire & quaking bog WD2 Mixed broadleaved/conifer woodland	(7140) Transition mires and quaking bogs	C Rating: Local conservation value (high value)
Carrickcarnan	2	307015	318435	FW2 Depositing/lowland rivers FW4 Drainage ditches GS2 Dry meadows and grassy verges GS4 Wet grassland WN6 Wet willow-alder-ash woodland WS1 Scrub		E Rating: Local conservation value (low value)

Section 8.3 of the Wetland Survey States as follows:

"Sites Boundary Review
During the course of the LWS 2011, existing site boundaries were largely retained. It is recommended that boundaries should be re-drawn using base mapping at an appropriate scale. Ecological advice should inform the revised boundaries, to ensure that the entire area of ecological interest (and hydrological unit) is included.

8.4 Planning Controls Sites which are listed as being of county importance (C+) or of higher value, local importance (C) and of moderate value, local

importance (D) should be highlighted and included in any recommendations made under the County Biodiversity Action Plan or included in local area plans, county development plans or other planning strategies. Again, such recommendations for recognition and listing of sites should be made on a regular basis as further information on the wetland resource of county Louth becomes known. It is recommended that council staff should be aware of a variety of issues regarding wetlands when assessing development proposals and planning applications. These include:

• The need for an appropriate buffer zone surrounding wetland sites. This is often already provided in REPS plans, where, for example, landowners are required to leave a buffer zone around a wetland when spreading slurry"

The wetland is classed as C of local importance. As can be seen the applicants are currently managing the existing farming activities with clear regard for bio-diversity and local habitats incl. the wetland. The proposed development of an enclosed barn type house will not impact on the management of the current land and farming activities. The applicants are actively promoting biodiversity in that wetland area by avoiding using machinery on that land and planting multi species sward.

"The importance of hydrology in how wetland sites function and how indirect impacts on a wetland system can be caused by activities occurring at some distance from the wetland

• The damaging cumulative effect of seemingly isolated losses of wetland habitats across the county on the overall county resource

• The loss of wetland habitats as a result of fragmentation of sites and impacts on wetland hydrology

• The ecological value of wetland habitats adjacent to, and fringing lakes and ponds

• The ecological value of large areas of reed and tall sedge swamps, rivers and river flood plains in controlling and reducing the impacts of flooding events

• The wetland fauna, some of which are listed on Annex II of the Habitats Directive found in the county's wetlands and the potential impacts on these species as well as their habitats

• The limited coverage provided in the initial NPWS NHA survey – this was never a comprehensive survey of the entire county – many sites of high nature conservation value remain undesignated

• The potential value of wetland sites which are outside statutorily-designated areas and the need for adoption of a precautionary approach when assessing applications that may impact on same

• The role that the wetland resource plays in combating global warming. It is likely that the wetlands of County Louth act as a major sink of carbon".

The map below which was extracted from the Wetlands Survey identifies the Carrickbaggot wetland, part of which extends into the applicant's landholding.

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The proposed development is located c. 400 m from the closest part of the wetland area, and as an enclosed Barn type house will have no impact on the land area external to same which is currently managed in line with the existing approved and licensed development.

There is no loss of wetland arising from the proposed development. The applicants are actively engaged in biodiversity enhancement within their farm by planting and providing appropriate buffers. We are satisfied that the site selection of the proposed development is appropriate and is sufficiently distant from the wetland that it would have impact on same.

Request from An Coimisiún Pleanála:

> *"Having regard to the location and volume of groundwater abstraction, the applicant is required to access the significance of same alone and cumulatively, and to assess the impact of abstraction on water (groundwater resources), material assets (water supply) and biodiversity (wetlands)"*

Having regard to the concerns expressed by An Coimisiún Pleanala it was decided that the best approach would be to avoid any further groundwater abstraction and to procced with the option of sourcing water from the local Group Water Scheme. This was identified and discussed as an option in the EIAR and we attach a letter confirming that the Group Water Scheme can provide the required water. We enclose a letter from IE Consultants, Hydrologists confirming that as there is no increase in ground water abstraction arising from the proposed development the proposed development would not have an impact either in isolation or cumulatively on the ground water or water supply. The attached revised NIS

confirms that as there is no increase in abstraction proposed there is no impact on the wetlands. The ecologist also notes that the wetlands are not designated or protected sites. There will be no increase in groundwater abstraction arising from the proposed development.

Based on the scientific evidence provided in the response from the hydrologist, the confirmation from the Group Water Scheme regarding availability of water supply to serve the proposed development the revised NIS we are satisfied that the proposed development of itself or cumulatively would not have an impact on the wetlands and the concerns of the Coimisiún have been fully addressed in this regard.

Item 2:
Item 2 of the request for Further Information:

> *"Having regard to the results set out in the Air Quality Impact Assessment and to the deficiencies in the Natura Impact Statement submitted with the application in relation to the effects of the modelled level of ammonia emissions on European Dry Heaths at Clogher Head Special Area of Conservation, the Applicant is required to assess whether the proposed development individually, or in combination with other plans or projects, would not be likely to have a significant effect on European Site – Clogher Head Special Area of Conservation (site code: 001459) in view of the site's conservation objectives.*

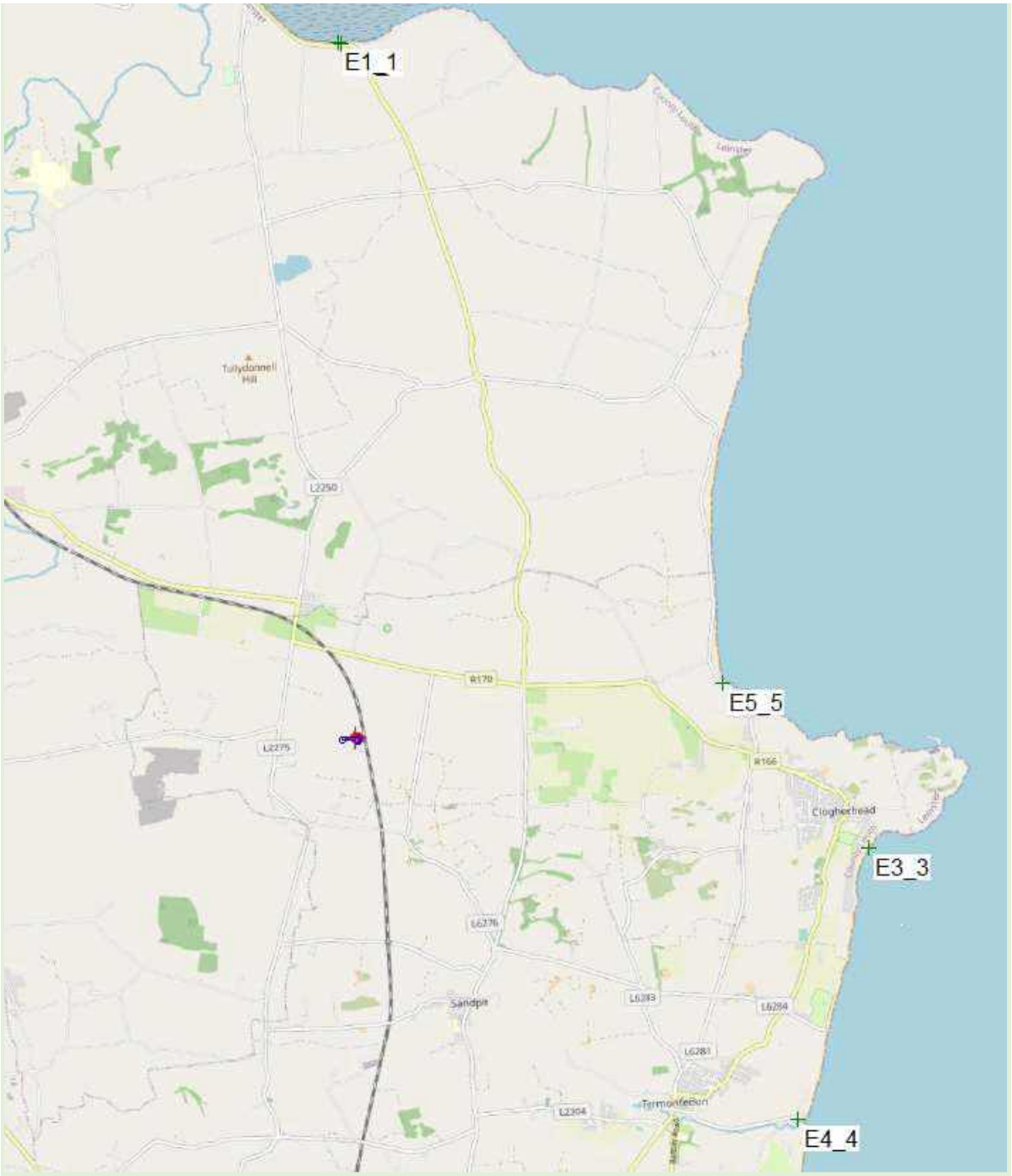
Response:
A revised NIS is submitted which addresses the modelled levels of ammonia emissions on European Dry Heaths at Clogher Head SPA. An addendum to the EIAR is also submitted to address this matter and revised ammonia modelling is submitted. It is noted that the designated sites are at least 4.4km from the appeal site as noted in Section 4 of the Irwin Carr Assessment:

There were five designated sites located within approx. 7.5km of the poultry sheds which are shown in Table 9 below. The closest location of each site to the proposed facility were obtained from SCAIL.

Table 9: Designated areas in vicinity of the proposed site

Location	Description	Designation	Approx. distance to shed (km)*	ING Grid Co-ordinates	
E1	Dundalk Bay	SAC	7.8	310127	293062
E2	Dundalk Bay	SPA	7.8	310162	293043
E3	Clogher Head	SAC	6.6	316399	283546
E4	Boyne Coast and Estuary	SAC	7.4	315562	280342
E5	North- West Irish Sea	SPA	4.4	314670	285494

Extract from Irwin Carr report: Proposed Site Location and Nearest designated sites



It should be noted that since this appeal was submitted the EPA Guidance on assessment of Ammonia Emissions from intensive agriculture have been updated. Also baseline information/background ammonia levels have been updated.
A revised Ammonia Impact Assessment and NIS have taken into consideration this new information and are attached hereto.

The attached documents show that the proposed development is compliant with the E.P.A. Licence Application Instruction Note 1: Assessing the Impact of Ammonia Emissions and Nitrogen Deposition from Intensive Agriculture Installations on European Sites.

The revised NIS confirms that subject to mitigation the proposed development would not significantly affect the conservation objectives of the Natura 2000 sites subject to the mitigation measures proposed.
Within the Aviary Type housing systems, as proposed for this development, there are a number of internal modifications, layouts and management practices that can be implemented that do not materially affect the completion/construction of the development, and which are considered more operational practices. A number of these are laid out in Dutch legislative documents (as detailed in the EIAR Addendum) with a view to setting appropriate Ammonia emission factors for each housing system and management practices within that system. These systems and the associated emissions factors have been widely used and accepted by both Planning authorities and the E.P.A. for use in an Irish context and are routinely written into planning decisions and/or E.P.A. Licence conditions pertaining to poultry farm permissions. This will also be assessed by the E.P.A. in accordance with their own guidance as part of the E.P.A. License review application for this farm. As a result of these assessments the proposed housing management system has been narrowed down from a number of available options/variations/specifications (each of which have their own specific ammonia emission factors, as detailed in the EIA Addendum) previously available to the applicant (within the existing confines of the development proposed) to a specific housing /management system referred to as OW 2005.04, (A copy of which is available in the EIAR Addendum or at OW 2005.04 - Housing description laying hens | Information Point Living Environment.]

The revised housing management system is now proposed referred to as OW2005.04. This is described as an aviary housing system 30-35% slatted floors with manure belt aeration at least 0.7m3/hour per animal. 65 - 70% of the living surface is made up of litter. Ammonia emission control is based on quickly drying the manure on the manure belts under the slats and frequently removing the manure from the stable. Aeration
Manure belt aeration is available. Aeration is provided solely with outside air; no barn air is mixed in.
Air is supplied to the manure belts via pipes located under/next to the grates. The placement of the pipes' outlets ensures even drying of the manure on the belts.
Registration equipment
The following recording equipment is available:

Temperature meter for measuring the temperature of the ventilation air, measuring in the main supply duct of the ventilation.
Equipment for registering whether the ventilation is on (hour meter, kWh meter, rev counter or measuring fan).
Equipment for recording the rotation frequency of the manure belts.
Equipment for measuring the aeration capacity, measuring at the beginning of the aeration pipes above the manure belts.
Manure storage
Short-term or possibly post-drying using a downstream technique, or long-term manure storage. This system does not impose any requirements on the method of

manure storage or further processing (additional drying) of the manure. However, the type of storage or processing does determine the level of ammonia emissions from the farm. The emission factor determined for this housing system applies to the situation in combination with short-term storage on the farm (removal of the manure from the tires directly from the farm or storage in a covered container for a maximum of 14 days).

System usage requirements
Living area
Aeration capacity
Dry air temperature
Type of drying air
Turning frequency of manure belts
Dry matter content of manure
Registration

Living area
The living area is at least 1,111 cm^2 per animal when set up (9 animals per m^2).

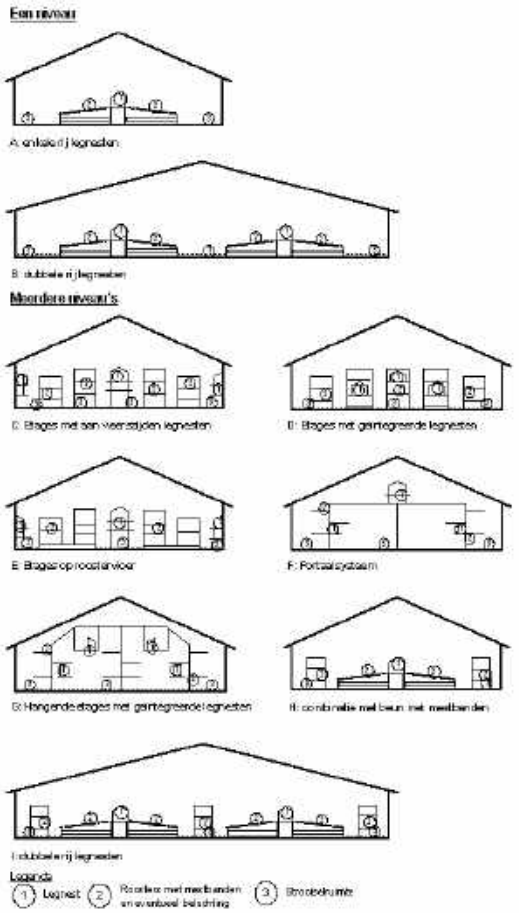
Aeration capacity
The aeration capacity is at least 0.7 m^3 per animal per hour.
Dry air temperature
The temperature of the drying air is at least 17 °C.

Type of drying air
The drying air is only air from outside.

Turning frequency of manure belts
At least once a week, turn the manure into a covered container for short-term storage or other storage; if the manure is dried using a downstream technique, the manure belts must be turned at least twice a week.
Dry matter content

At the time of turning the manure belts, the dry matter content is at least 55%.
The dry matter content of the litter is at least 80%.

Registration system requirements
To check the operation of the manure belt turning and the drying system, the following data must be automatically recorded:
The temperature of aeration air.
The ventilation is on.
The turning frequency of the manure belts.
The capacity of the aeration.
A printout of the current and previous production periods of the recorded values can be requested during the inspection.



Cross-sections of barns with different systems for aviary housing for chickens

Description of the image with the different systems

The illustration shows cross-sections of various types of chicken housing. Each type is designated by

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Description of the image with the different systems
The illustration shows cross-sections of various types of chicken housing. Each type is designated by a letter, from A to I. There are housing types with single-level nesting boxes and housing types with multi-level nesting boxes.
The image is accompanied by the following legend:
Nesting box
Grills with manure belts and possibly ventilation
Litter space

Nesting boxes on 1 level
A: Single row of nesting boxes. In the centre of the coop is a raised platform with a row of nesting boxes on top. Slats with manure strips are located on either side of these nesting boxes. Litter is available on the floor on both sides of the coop.
B: Double row of nesting boxes. This type is similar to type A, but with two raised rows of nesting boxes next to each other.

Multi-level nesting boxes
C: Tiers with nesting boxes on either side. This cross-section shows nesting boxes on the left and right-side walls of the barn. Several modules with tiers are located in the centre of the barn. These tiers provide space for slats with manure belts. The litter area is located on the barn floor.
D: Tiers with integrated nesting boxes. In cross-section, the barn is filled with modules with tiers, each containing integrated nesting boxes. The modules also feature slats with manure belts. The litter area is located on the barn floor.
E: Tiers on slatted floor. This cross-section shows nesting boxes on the left and right-side walls of the barn. Several modules with tiers are positioned in the centre of the barn. These modules rest on a slatted floor.
F: Portal system. In this cross-section, two rectangular pens are placed side by side in the middle of the barn. A nest box is visible on top of these pens. Horizontal slats are attached to both sides of the pens for the chickens to perch on. The litter area is located on the floor.
G: Suspended tiers with integrated laying nests. In the centre of the barn is a structure from which several platforms are suspended. Laying nests are located on these platforms. Also attached to the structure are platforms with laying nests and slats with manure belts. There is a litter area on the barn floor.
H: Combination with a manure belt hopper. In the centre of the barn is a raised platform, similar to type A. On either side of the raised platform is a module with tiers. These tiers are fitted with slatted floors with manure belts. There is a litter area on the barn floor.
I: Double row of nesting boxes. In the middle of the house is a module with tiers. On either side of this module is a raised platform, similar to type A. Another module with tiers is located on either side of the house.

The above housing model has been widely accepted by the EPA and Local Authorities as an appropriate mechanism for reducing ammonia emissions.

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Air Quality Assessment:
A revised independent air quality assessment has been undertaken in response to your request and is contained herein.

The ammonia modelling shows that the predicted results of ammonia do not exceed the limits for protected vegetation at the designated habitats, and that same complies with specific guidance on this matter as issued by the E.P.A. (and as referred to previously). It is confirmed therefore that there would be no adverse effect on areas of ecological interest, including Clogher Head SAC.

The closest sensitive receptors identified are Dundalk Bay and Boyne Coast and Estuary. The air quality report confirms that the guideline level of ammonia is not exceeded at the designated locations.

The report confirms that all of the predicted ground level concentrations of ammonia are significantly below the guidelines limit values in respect of Natura 2000 sites. For example: As per the E.P.A.. Guidance they are required to be less than 1% of the Critical load for ammonia. At Clogher Head the level proposed would be 0.87%.

Natura 2000 Site	Critical Load Guideline	Background	Highest PC	PEC	PC / Guideline Level (%)	PEC / Guideline Level (%)
North-West Irish Sea SPA	3	2.33	0.0237	2.3537	0.79	78
Dundalk Bay SAC	3	2.22	0.0064	2.2264	0.21	74
Dundalk Bay SPA	3	2.22	0.0063	2.2263	0.21	74
Clogher Head SAC	1	1.94	0.0087	1.9487	0.87	195
Boyne Coast and Estuary SAC	1	2.15	0.0048	2.1548	0.48	215

Table 7.10.2 Revised – Ammonia Concentrations (µg/m3) at Natura 2000 Sites – Predicted Impacts from the Proposed Development (Taken from Table 4 Of Natura Impact Statement)

The AERMOD modelling shows that the proposed development would not result in an increase in Nitrogen concentration as set out in the Guidelines.

The revised Air Quality Assessment report and amended EIAR and amended NIS show that the proposed development would not exceed the guideline limits of ammonia or Nitrogen concentration at the designated sites.

The report concludes that the cumulative impact arising from the proposed development would be negligible. There are no other licenced farms within 5km of the appeal site. The proposed development has been assessed in accordance with

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the EPA Guidance on Ammonia Impact. There are no European sites within 500m of a European Site. There are currently 60,000 birds on the farm, the proposed development would increase the number of birds to 124,000. A number of measures are proposed to mitigate against any cumulative impact. There are only 5 licensed intensive agricultural farms in the county, one of which is on this farm. None of the other farms are in the vicinity of the appeal site.

The measures taken in the agricultural industry and on this landholding have resulted in a reduction in the background levels of ammonia from that previously recorded. This is attributed to Low Emission Spreading and low protein diets, details of this are referred to in the Farmer's Journal article attached.

The Air Quality Assessment confirms that the PEC level is less than 1% for ammonia and nitrogen for all sites and as a result there is a negligible risk of cumulative impact. This is in line with the National Guidelines on Ammonia.

The Irwin Carr Consulting report confirms that the predicted levels of ammonia and nitrogen "are expected to be negligible at distances greater than 7.5km from the appeal site"

Ammonia modelling was carried out at sites within 7.5km of the appeal site. The report confirms that the ammonia levels are significantly below the limit values in respect of the protection of vegetation.

The process contribution (PC) does not exceed 1% at any of the designated locations and is therefore in accordance with the Guidelines.

The report confirms that the PC at all locations is less than 0.3kg. N/ha/yr, and would be considered negligible for the purposes of nitrogen assessment.

The report concludes that the predicted results of the ammonia modelling process show that the limits for the protection of vegetation are not exceeded at the designated habitats which are 4.5km from the appeal site and 7.5km from the appeal site.
The revised Air Quality Assessment report and amended EIAR and amended NIS show that the proposed development would not exceed the guideline limits of ammonia or Nitrogen concentration at the designated sites confirms that the proposed development would not have any significant negative effect on any areas of ecological interest from the ammonia emissions from the operation of the farm.

Conclusion

The queries of An Coimisiún Pleanala have been fully addressed in this response and associated supporting documentation. It is clear from the foregoing that the applicant has a strong history of sustainable farming methods which is reflected in the various government approved biodiversity and sustainability schemes that the farm is operating under. A clear reflection of that is the fact that ammonia background levels have decreased in the area since the previous hen house developed.

The proposed housing system designed for the reduction of ammonia is fully approved and has been widely accepted by Local Authorities. Putting it simply: the drying out of the hen manure using this housing system is the key factor in reducing the ammonia levels.

The applicant is operating fully in accordance with EPA Standards and with national policy.

The proposed development has been assessed having regard to Policy Objective NBG 20 of the Louth County Development Plan. The applicant's efforts in terms of best agricultural practices, biodiversity, and enhancement of the wetland are noted and reflected in the attached documents. The proposal has now been refined to avoid the requirement for any additional groundwater abstraction and all water for the proposed development would be sourced by the Ballymakenny/Sandpit Water Scheme. The EIAR and NIS has been amended to reflect same. We are satisfied that the proposed development would not result in any further abstraction of water and would therefore not have any impact on biodiversity either in isolation or cumulatively. We are satisfied that the matter has been fully addressed in this response.

A revised Air Quality Impact Assessment and revised NIS are included with this response. These assessments include modelled levels of ammonia at designated sites some 4.5km to 7.5km away from the appeal site. The assessment included both individual and cumulative impacts in line with the EPA Guidelines. It is noted that the background levels of ammonia have reduced since the submission of the appeal, this is largely due to improvements in farming practices. The assessment confirmed that the ammonia and nitrogen levels from the development, managed as outlined in the EIAR /EIAR Addendum and in line with Louth CO. Co. and E.P.A. requirements are within the acceptable limits and would not have any significant impact on the designated sites, either individually or in combination. We are satisfied that the matters raised in the An Coimisiún Pleanála have been fully addressed in this response.

Yours sincerely,

Geraldine Fahy BA MRUP MIPI

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Our Case Number: ABP-320010-24

Planning Authority Reference Number: 2460189

Your Reference: Crayvall Egg Production Limited

An Coimisiún Pleanála

Ger Fahy Planning
Mulhussey
Maynooth
Co. Kildare
W23 X8X5

Date: 26 January 2026

Re: Construction of poultry house and store with all associated site works. Environmental Protection Agency licence required. Natura Impact Statement and Environmental Impact Assessment Report submitted with planning application.
Carrickbaggott, Grangebellew, Co. Louth

Dear Sir / Madam,

I have been asked by An Coimisiún Pleanála to refer to the above-mentioned appeal.

The Commission has examined the appeal and is of the opinion that certain information is necessary for the purpose of enabling it to determine the appeal.

In accordance with section 132 of the Planning and Development Act, 2000, (as amended), you are required to submit, on or before the 11th of March, the following information:

1. Policy Objective NBG 20 of the Louth County Development Plan 2021- 2027 seeks to protect and enhance wetland sites. Policy Objective ENV 15 requires that proposed plans, programmes and projects shall not have an unacceptable impact on the water environment, including groundwater quality and quantity. The wetland site at Carrickbaggot is identified in the Louth County Wetland Survey as being of National importance. Having regard to the location and volume of groundwater abstraction, the applicant is required to assess the significance of same alone and cumulatively, and to assess the impact of abstraction on water (groundwater resources), material assets (water supply) and biodiversity (wetlands)

2. Having regard to the results set out in the Air Quality Impact Assessment and to the deficiencies in the Natura Impact Statement submitted with the application in relation to the effects of the modelled level of ammonia emissions on European Dry Heaths at Clogher Head Special Area of Conservation, the Applicant is required to assess whether the proposed development individually, or in combination with other plans or projects, would not be likely to have a significant effect on European Site - Clogher Head Special Area of Conservation (site code: 001459) in view of the site's conservation objectives.

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An Coimisiun Pleanála
64 Marlborough St
Dublin 1

12th February 2026

Louth County Council Ref: 24/60189
Appeal Ref: **Construction of 1 No. Poultry Layer House and 1 No. Manure/General Purpose store, together with all ancillary structures, (to include 3 No. meal storage bin(s) and soiled water tank), and all associated site works (to include upgraded internal farm laneway, site drainage and storm water attenuation) associated with the proposed development, at Carrickbaggott, Grangebellew, Co. Louth. This application relates to a development, which is for the purposes of an activity requiring a Licence under part IV of the Environmental Protection Agency (Licensing) Regulations 1994 to 2013. An Environmental Impact Assessment Report (E.I.A.R.) and Natura Impact Statement (N.I.S.) have been submitted with this planning application.**

Site Location: Carrickbaggott, Grangebellew, Co. Louth

Dear Sir/Madam,

I refer to correspondence from An Comisiun Pleanala in relation to the above mentioned development dated 9th January last.

The detailed response to the issues raised is outlined in the EIAR Addendum and revised reports enclosed. The purpose of this cover letter is solely to summarise in a concise and straightforward manner the response to the 2 issues raised, so as to ensure clarity in the response, and for the reader

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1. **Policy Objective NBG 20 of the Louth County Development Plan 2021- 2027 seeks to protect and enhance wetland sites. Policy Objective ENV 15 requires that proposed plans, programmes and projects shall not have an unacceptable impact on the water environment, including groundwater quality and quantity. The wetland site at Carrickbaggot is identified in the Louth County Wetland Survey as being of National importance. Having regard to the location and volume of groundwater abstraction, you are required to assess the significance of same alone and cumulatively, and to assess the impact of abstraction on water (groundwater resources), material assets (water supply) and biodiversity (wetlands)**

Response:

- Water supply to the existing established and authorised activity is will be from an existing deep well located on-site.

- Water supply to the to the proposed development will be from the Ballymakenny/Sandpit Water Scheme.

- There will be no increase in ground water extraction as a result of this proposed development as all additional water requirements are to be met by the Ballymakenny/Sandpit Water Scheme.

- The Ballymakenny/Sandpit Group Water Scheme have provided written confirmation that their scheme has sufficient capacity to supply the required daily water demand of the development as proposed.

- In summary, in consideration of the proposal now to acquire all of the required water demand for the development as proposed from the Ballymakenny/Sandpit Group Water Scheme, in comparison to the existing undeveloped scenario, the development as proposed will not result in an adverse impact to the existing hydrogeological and ground water regime of the area, and, in terms of ground water resources, will not adversely impact the existing status of the wetland site at Carrickbaggot.

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2. **Having regard to the results set out in the Air Quality Impact Assessment and to the deficiencies in the Natura Impact Statement submitted with the application in relation to the effects of the modelled level of ammonia emissions on European Dry Heaths at Clogher Head Special Area of Conservation, you are required to assess whether the proposed development individually, or in combination with other plans or projects, would not be likely to have a significant effect on European Site - Clogher Head Special Area of Conservation (site code: 001459) in view of the site's conservation objectives.**

Response:

- As a result of,
  - updated E.P.A. guidance on the assessment of Ammonia Emissions from Intensive Agriculture, and,
  - updated baseline information / background Ammonia levels,

  issued since this E.I.A.R. was completed/submitted a revised Ammonia Impact Assessment and a revised Natura Impact Statement have been completed and are included in this E.I.A.R.

- As a result of these assessments the proposed housing management system has been narrowed down from a number of available options/variations/specifications (each of which have their own specific ammonia emission factors, as detailed in the EIA Addendum) previously available to the applicant (within the existing confines of the development proposed) to a specific housing /management system referred to as OW 2005.04, (A copy of which is available in the EIAR Addendum or at OW 2005.04 - Housing description laying hens | Information Point Living Environment.]

- The proposed development is compliant with ***Licence Application Instruction Note 1 (IN1) Assessing the Impact of Ammonia Emissions and Nitrogen Deposition from Intensive Agriculture Installations on European Sites*** Issued September 2024**.**

- This current NIS has been undertaken to evaluate the potential impacts of the proposed development with regard to the effects upon the conservation objectives and qualifying interests (including the habitats and species) of the Natura 2000 sites within 15km of the application site. It is considered that following mitigation, that the proposed project does not have the potential to significantly affect the conservation objectives of these aforementioned Natura 2000 sites and the integrity of these sites as a whole will not be adversely impacted.

- The proposed development will be subject to an E.P.A. Licence review, at which time the development will also be assessed by the E.P.A. against this guidance, or any revisions to same issued by the E.P.A. In the interim.

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The issues addressed in this response / E.I.A.R. Addendum have

- not altered the proposal as submitted

but

- have essentially fine tuned the proposal by virtue of limiting the operational options (In terms of water supply and operating system specific to the proposed development) available to the applicant.

Importantly the proposal as per the EIAR Addendum is still within the confines/parameters of the original proposal, and subject to E.P.A. requirements / Assessment as per the required E.P.A. Licence review.

Should you have any queries in relation to this, or, require any further information please do not hesitate to contact me at the above number or on 087-6794459.

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ENVIRONMENTAL IMPACT ASSESSMENT REPORT (E.I.A.R.) ADDENDUM NO. 1

RELATING TO PROPOSED POULTRY HOUSE DEVELOPMENT

AT CARRICKBAGGOTT, GRANGEBELLEW, CO. LOUTH.

FOR

CRAYVALL EGG PRODUCTION LTD. ,
BELVIEW ROAD,
CARSTOWN
DROGHEDA,
CO. LOUTH.

C.L.W. Environmental Planners Ltd.

April 2024

Addendum February 2026

i. PREFACE

THE FOLLOWING FORMS ADDENDUM INFORMATION TO THE SUBMITTED ENVIRONMENTAL IMPACT ASSESSMENT REPORT (DATED APRIL 2024):

THIS ADDENDUM HAS BEEN COMPLETED TO ADDRESS:

- **ADDITIONAL INFORMATION/CLARRIFICATIONS ARISING FROM INFORMATION SOUGHT BY AN COIMISUIN PLEANALA IN CORRESPONDENCE DATED 9TH JANUARY 2026.**

1. Policy Objective NBG 20 of the Louth County Development Plan 2021- 2027 seeks to protect and enhance wetland sites. Policy Objective ENV 15 requires that proposed plans, programmes and projects shall not have an unacceptable impact on the water environment, including groundwater quality and quantity. The wetland site at Carrickbaggot is identified in the Louth County Wetland Survey as being of National importance. Having regard to the location and volume of groundwater abstraction, you are required to assess the significance of same alone and cumulatively, and to assess the impact of abstraction on water (groundwater resources), material assets (water supply) and biodiversity (wetlands)

2. Having regard to the results set out in the Air Quality Impact Assessment and to the deficiencies in the Natura Impact Statement submitted with the application in relation to the effects of the modelled level of ammonia emissions on European Dry Heaths at Clogher Head Special Area of Conservation, you are required to assess whether the proposed development individually, or in combination with other plans or projects, would not be likely to have a significant effect on European Site - Clogher Head Special Area of Conservation (site code: 001459) in view of the site's conservation objectives.

A ADDENDUM

A.1 Introduction

This document contains additional information/clarification requested by An Coimisuin Pleanala in their letter dated 9th January 2026 relating to planning application reference number 24/60189 (Appeal Ref. ABP-320010-24)

It relates to the Proposed Poultry Farm development at Carrickbaggott, Grangebellew, Co.Louth and EIAR dated April 2024, and reflects the issues raised in the Further Information requests of 9th January 2026.

Where the further information request was addressed by way of:

- limited clarifications (with no material effect on the information contained within the E.I.A.R., and/or,
- reference to information already contained within the E.I.A.R.

no alteration to the E.I.A.R. has been deemed to be required.

A.2 Outline

The following paragraph outlines how this addendum information is presented.

- The relevant section of the E.I.A.R. subject to the addendum information (or additional commitments) is quoted.

- Where additional text is to be included …….. is taken to mean that the existing text/paragraphs as per the E.I.A.R. as submitted are unaltered and have not been repeated, but an additional/revised paragraph(s) has/have been included either fore or after. In some instances additional original text is left for context.

- Where existing text is to be edited, the text is appropriately amended as follows.

    - Quoted text is as shown.
    - Text to be deleted is crossed out: ~~*Deleted*~~
    - Amendment text is in bold within square brackets: **[Amendment text]**

Nb. In most circumstances there will be an amendment. In some cases however there may be both a deletion and an amendment.

A.3 Summary of Updates

Updates to the Environmental Impact Assessment Report that have occurred since the original EIAR submission (April 2024) include;

- Revised E.P.A. guidelines on assessing Ammonia impacts from Intensive Agriculture (Issued Sept. 2024) and Updated Baseline information for background Ammonia Levels (Updated to 2021),
- Clarification that the water supply to the proposed development will be entirely from the public/group supply (On-site well will continue to supply the existing approved and authorised development):

As the updates above do not result in a material alteration to the conclusions of the E.I.A.R., an E.I.A.R. Addendum was deemed sufficient to address and document these updates. While a number of sections of the E.I.A.R. has to be updated, the alterations are minor in the context of the overall E.I.A.

Schedule of Updates:

- **Revision(s) to Section 1 of E.I.A.R.**
- **Revision(s) to Section 3 of E.I.A.R.**
- **Revision(s) to Section 4 of E.I.A.R.**
- **Revision(s) to Section 5 of E.I.A.R.**
- **Revision(s) to Section 7 of E.I.A.R.**
- **Revision(s) to Section 9 of E.I.A.R.**
- **Revision(s) to Section 10 of E.I.A.R.**
- **Completion of Updated Natura Impact Statement (Appendix 13A).**
- **Completion of Updated Ammonia Impact Assessment (Appendix 18A).**
- **Additional correspondence from IE Consulting (Appendix 22)**

Note to Updates:

While it is acknowledged that S.I. 113 of 2022 has been replaced by S.I. 588 of 2025 EUROPEAN UNION (GOOD AGRICULTURAL PRACTICE FOR PROTECTION OF WATERS) REGULATIONS 2025 as amended, same has no material impact on the E.I.A.R. as completed as the substantial requirements of this regulation as they pertain to the;

- Existing / Proposed poultry farm,
- Existing / Proposed customer farmers and/or
- the interaction of both

are substantially unchanged and have no material impact on the activities existing/proposed to be carried out, and/or the conclusions reached in this E.I.A.R.

1. Non - Technical Summary

1.12 Bio Diversity - Flora and Fauna / Special Policy Areas

……

Activities at this site are not expected to have any adverse affect on the conservation of these areas and the wildlife contained therein for the following reasons,

- The proposed poultry house is located a significant distance from the North-West Irish Sea SPA (Candidate), Clogher Head SAC, Boyne Coast and Estuary SAC, Dundalk Bay, and/or The River Boyne and River Blackwater SAC / SPA.

- The existing farming activities have been carried out on these lands without any adverse impact on the designated areas, and the same high levels of management and expertise will be afforded to the operation of the proposed development.

- All organic fertiliser arising from this farm is to be allocated to lands in accordance with S.I. 113 of 2022 in accordance with S.I. 113 of 2022, as amended.

- Given that the manure will be in a dry/solid form there are none of the perceived risks that may be associated with liquid manures.

- ***the currently proposed farm diversification has been deemed necessary to comply with current supermarket and consumer requirements in relation to egg production systems, and to offset any reduction in the capacity of existing egg farms currently supplying Belview Egg Farm.***

- Potential gaseous emissions from the development have been screened, assessed and mitigated where appropriate**[, including implementing a specific management and operating system complying with OW2025.04 within the proposed development]**.

……..

1.18 Potential Effects (Cumulative, Long/Medium/Short Term, and/or Transboundary).

……

Within the Local Area;

While it has been detailed previously that the proposed development will not have any significant adverse cumulative impact within the county the potential cumulative impact on the immediate local area needs to be assessed separately.

The proposed development will result in a significant increase in stock numbers on the site, increasing by 64,000 birds to c. 124,000 birds. While this may be perceived as a significant development, it is in keeping with the current scale of existing poultry farms licensed by the E.P.A. in County Louth and country wide, and small by comparable international standards.

The impact of the proposed development within the local area will be minimised by integrating it successfully with the existing farming activities, proper management and storage of all wastes produced on the site and the utilisation of all organic fertiliser in accordance with S.I. 113 of 2022, as amended.

A number of measures have been provided for in the design, layout and planned operation of the proposed development, **[, including implementing a specific management and operating system complying with OW2025.04 within the proposed development]**.so as to mitigate against any adverse impact in the local area or further afield. Any additional requirements placed on this development by Louth Co. Co. and/or the E.P.A. as a result of planning permission or E.P.A. Licence conditions **[which typically integrate conditions specific to the housing management system proposed]** will be integrated into the development and operation of this farm. This will ensure that this proposed development will have no adverse environmental impact on the immediate area and will not lead to a negative cumulative impact on the local environment.

……..

1.19 Measures to avoid, prevent, reduce or if possible offset significant environmental effects.

Although no significant adverse environmental effects are anticipated a number of best practice measures will be implemented in the construction and operation of the farm to ensure that there is no adverse environmental impact. These include, but are not limited to;

- Proper storm water drainage and attenuation system.
- Collection and appropriate management of all soiled water.
- Management of all organic fertiliser / poultry manure in line with requirements of S.I. 113 of 2022, as amended. All poultry manure to be used by customer farmers as an organic fertiliser, as part of a fertiliser substitution programme on their farms to replace imported chemical fertiliser to meet crop / grassland agronomic requirements.
- Proper management and segregation of all wastes produced on site, with use of approved contractors and wastes sent for recycling, recovery where appropriate in preference to disposal.
- Proper management and oversight of the farm at all times.
- Appropriate landscaping.
- **[Implementing a specific management and operating system complying with OW2025.04 within the proposed development]**

1.20 Difficulties encountered in compiling the required information

……

The technical information on which to base an assessment of impact on environmental parameters is readily available in the public domain and additional information can be extrapolated from the operation of the existing farming activities and similar developments elsewhere in the country.

[As a result the assessment of any potential impact from the proposed development is factual as well as projected. The only specific difficulty encountered related to the issuing of updated E.P.A. guidance on the assessment of Ammonia Emissions from Intensive Agriculture (*Licence Application Instruction Note 1 (IN1) Assessing the Impact of Ammonia Emissions and Nitrogen Deposition from Intensive Agriculture Installations on European Sites Issued* September 2024), and, updated background Ammonia levels/reference period, issued after the completion of this E.I.A.R.) and thus necessitating this E.I.A.R. Addendum).

The proposed development has been assessed, (including the preparation of a revised Ammonia Impact Assessment and Natura Impact Statement, copies enclosed) and subject to the implementation of a specific operating/management system OW2025.04, as outlined is compliant with this updated guidance.] As a result the assessment of any potential impact from the proposed development is factual as well as projected. ~~There were no particular difficulties encountered and t~~**[T]**here is no reason to consider that there is any serious risk of error attaching to plans and projections for the treatment of wastes to be generated in the proposed development.

…….

1.21 Summary

The proposed agricultural development is to be completed on/in an agricultural area, consistent with local, regional and national policy. This development will assist in diversifying, and integrating with the applicant's existing farming activities and is a progression in / extension of the poultry farming activities operating on these lands, albeit in a different operating system (i.e. Barn housing, not free range as per existing) . The proposal as outlined will make a significant positive contribution to the rural economy of Co. Louth as it will serve to increase employment and secure the viability and competitiveness of the local agri-food sector

Simultaneously, it will integrate seamlessly with the wider agricultural / tillage sectors to the mutual benefit of both, in an environmentally friendly and sustainable manner, as depicted in the Process Flow Diagram below. The new farm buildings will integrate successfully with their surroundings and will not give rise to any significant environmental effects.

- The granting of permission to the proposed development would strongly accord with the provisions of the County Development Plan and will provide a significant boost to the economy of Co. Louth. The proposed development will operate under the conditions imposed as part of any grant of planning permission and revised E.P.A. Licence for this farm **[which will include conditions pertaining to the implementation of a specific management and operating system complying with OW2025.04 within the proposed development]**

.

Signed:

Paraic Fay
BAgrSc

09/02/2026

_____
Date

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3.. DESCRIPTION OF DEVELOPMENT

……..

3.4.2 Use of Natural Resourses

Water supply and use.

Water supply **[to the existing established and authorised activity is/]**will be from ~~a~~ **[an existing]** deep well ~~to be~~ located on-site.

[Water supply to the to the proposed development will be from] ~~and/or~~ the Ballymakenny/Sandpit Water Scheme.

Water is to be stored in an on-site water storage tank with a capacity of c. 25m^3.

The water used per annum will equal, circa 10,000 m^3(c. 24.5m3/day on average) As detailed in Section 6.2 of the E.I.A.R. the site is located over a Poor Aquifer (Pu), with a Moderate vulnerability. **[There will be no increase in ground water extraction as a result of this proposed development as all additional water requirements are to be met by the Ballymakenny/Sandpit Water Scheme.]**

……..

3.6 Process of Production

……..

The poultry manure from this farm will be moved to the existing/proposed manure stores automatically on a weekly / bi-weekly basis , **[and/or as may be specified by conditions pertaining to the implementation of a specific management and operating system complying with OW2025.04 within the proposed development]** pending application to the customer farmers lands. The estimated manure production as a result of the proposed development and available to the customer farmers will be c. 4,919.62 m3 (increasing from 2,223.94 m3 as calculated in line with S.I. 113 of 2022 (or c. 1250 tonnes based in 2021/2022 annual records)) /annum net. As previously detailed provision has been made on site for 6 months storage capacity in line with the requirements of S.I. 113 of 2022.

……

3.7 Procedures of Production

[As previously detailed the proposed development will operate under the conditions imposed as part of any grant of planning permission and revised E.P.A. Licence for this farm which will include conditions pertaining to the implementation of a specific management and operating system complying with OW2025.04 within the proposed development]

It is envisaged that Crayvall Egg Production Ltd. will seek approved under the Bord Bia approval system, as per the Sustainable Egg Assurance Scheme (SEAS), upon completion of the proposed development and commencement of poultry farming activities in the new house. As part of this approval the daily procedure will follow the Bord Bia Sustainable Egg Assurance Standard Producer Requirements.

The following house checklist and flock inspection checklist are included as part of this standard;

4. Description of the physical characteristics of the proposed development, the land use requirements during construction and operation and the likely significant effects of the project on the environment.

4.10 Description of measures envisaged to avoid, reduce, prevent or if possible, offset any identified significant adverse effects on the environment.

……..

Notwithstanding same, the following best practice / mitigation measures have been implemented / proposed to reduce any potential adverse impact, significant, or otherwise:

(i) Provision of sufficient and safe access to the site and measures to avoid excessive soiling of the public road during construction on the site.

(ii) Preservation of existing trees and hedgerows surrounding the site together with sympathetic design and layout so as to screen the installation from obtrusive view and to allow it to be absorbed into the rural landscape.

(iii) Provision of a storm water drainage and attenuation system to properly collect and discharge to ground all clean rainwater from roofs and clean surfaces, as described in Appendix No. 3.

(iv) Provision of soiled water drains to properly collect any effluent or soiled water and divert it to the nearest soiled water tank.

(v) The collection and the removal from the site of all manure. All soiled waters / organic fertiliser to be collected and used on lands farmed by the customer farmers.

(vi) Appropriate collection and removal from the site of waste materials generated on the site. Record and maintain records of all consignments of waste despatched from the site in accordance with requirements.

(vii) The collection and the removal from the site of all dead animals and all animal tissues. A small proportion of the birds maintained on the farm die prematurely. These carcasses are and will be stored in a covered sealed container on site, awaiting collection by an authorised contractor.

College Proteins is an authorised contractor who regularly removes these carcasses, and any other such material to their authorised Animal By-Products plant at Nobber, Co. Louth, in compliance with existing requirements. Correspondence in this regard is included hereafter, in Appendix No. 9. Ensure collection of animal tissue from the site is in appropriate watertight and covered containers, and timely removal so as to ensure minimal generation or release of odours either at the site, or during transit to the disposal/recovery destination.

(viii) Comprehensive cleaning and hygiene routine to minimise potential odour from the site.

(ix) Specially formulated diets to maximise performance and reduce nutrient excretion. See Appendix No. 8.

(x) Proper maintenance and inspection procedures to ensure that all feeding, water supply, manure removal, and ventilation systems are working to maximum efficiency, ensuring manure is maintained as dry as possible and minimising energy consumption.

(xi) Mr. Dermot Herlihy (Director of Crayvall Egg Production Ltd.) is a highly skilled, efficient and competent poultry operator having gained significant experience with the existing poultry houses, both on this farm and at Carstown.

[

(xii) **The proposed development will operate under the conditions imposed as part of any grant of planning permission and revised E.P.A. Licence for this farm which will include conditions pertaining to the implementation of a specific management and operating system complying with OW2025.04 within the proposed development]**

Implementation of the above will ensure that significant effects on the environment will be avoided and the risk of incidents of environmental significance will be near zero.

……

4.11.2. Water

Water supply **[to the existing established and authorised activity is/]** will come from an existing ~~/proposed~~ deep bore well ~~to be~~ located on-site.

[Water supply to the to the proposed development will be from] ~~and~~ connection to the local group water scheme **[the Ballymakenny/Sandpit Water Scheme]**.

Water is to be stored in on-site water storage tank(s). Water usage will be minimised by using nipple drinkers in all houses. This will ensure that the dry manure management system is not compromised.

Proposed Average daily water usage = c. 80 m^3/'000 birds/annum

While rain water harvesting was reviewed, same is deemed to be inappropriate for a development such as this due to the potential disease risk from wild bird contamination. **[There will be no increase in ground water extraction as a result of this proposed development as all additional water requirements are to be met by the Ballymakenny/Sandpit Water Scheme.]**

……..

4.13 Difficulties encountered in compiling the required information

The processes and technology involved in the construction and operation of the proposed development are standard for agricultural, and in particular poultry house developments, similar to that as previously completed on the farm, and well understood. In addition the principles are already in practice on existing facilities already operating within the county and further afield.

The technical information on which to base an assessment of impact on environmental parameters is readily available in the public domain and additional information can be extrapolated from the operation of the existing development on the farm and/or existing poultry houses operated by Beliew Egg farm Ltd. elsewhere and/or currently supplying Belview Egg Farm Ltd.. As a result the assessment of any potential impact from the proposed development is factual as well as projected. The~~re were no particular difficulties~~ **[only specific difficulty]** encountered **[related to the issuing of updated E.P.A. guidance on the assessment of Ammonia Emissions from Intensive Agriculture (*Licence Application Instruction Note 1 (IN1) Assessing the Impact of Ammonia Emissions and Nitrogen Deposition from Intensive Agriculture Installations on European Sites Issued* September 2024), and, updated background Ammonia levels/reference period, issued after the completion of this E.I.A.R.) and thus necessitating this E.I.A.R. Addendum).**

The proposed development has been assessed, (including the preparation of a revised Ammonia Impact Assessment and Natura Impact Statement, copies enclosed) and subject to the implementation of a specific operating/management system OW2025.04, as outlined is compliant with this updated guidance.] ~~and t~~**[T]**here is no reason to consider that there is any serious risk of error attaching to plans and projections for the treatment of wastes to be generated in the proposed development.

5. DESCRIPTION OF REASONABLE ALTERNATIVES

5.2. Alternative Layout and Design

…….

- Is in line with BAT requirements. The measures outlined as BAT for the Poultry Sector, (***COMMISSION IMPLEMENTING DECISION (EU) 2017/302 of 15 February 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs)***, and in particular this type of production include:
    - **Manure belts (in case of aviary).**

[Within the Aviary Type housing systems, as proposed for this development, there are a number of internal modifications, layouts and management practices that can be implemented that do not materially affect the completion/construction of the development, and which are considered more operational practices. A number of these are laid out in Dutch legislative documents (as per Table 5.2 below) with a view to setting appropriate Ammonia emission factors for each housing system and management practices within that system. These systems and the associated emissions factors have been widely used and accepted by both Planning authorities and the E.P.A. for use in an Irish context and are routinely written into planning decisions and/or E.P.A. Licence conditions pertaining to poultry farm permissions.

As a result of updated E.P.A. guidance on the assessment of Ammonia Emissions from Intensive Agriculture, and updated baseline information / background Ammonia levels, issued since this E.I.A.R. was completed/submitted a revised Ammonia Impact Assessment (Appendix No. 22) and a revised Natura Impact Statement (Appendix No. 13) have been completed and are included in this E.I.A.R.

As a result of these assessments the proposed housing management system has been narrowed down from a number of variations previously available to the applicant (within the confines of the development proposed) to a specific housing /management system referred to as OW 2005.04, (A copy of which is available in Appendix 13 A or at OW 2005.04 - Housing description laying hens | Information Point Living Environment.]

Fig 5.2 Laying Housing Systems and applicable ammonia emission factors.

HE2	Animal category laying hens aged 18 weeks and older, animal category parent animals of laying hens 18 weeks and older

Annex V. to Articles 4.5, 4.6, 4.7, first and second paragraphs, 6.14, fourth and fifth paragraphs, 7.124, second paragraph, 8.31, fourth and fifth paragraphs, and 9.3, third paragraph, of this Regulation (housing systems and emission factors)

Code	Housing system description	System Description Number	Emission factor per animal place		
			ammonia (kg NH_3/year)	Smell (ouE/sec)	particulate matter (g PM_{10}/year)
HE2.3	Aviary housing				
HE2.3.1	At least 50% grid with manure belt	OW 2004.09.V1	0,090	0,34	65
HE2.3.2	45–55% slats and manure belt aeration				
HE2.3.2.1	Aeration at least 0.2 m^3/hour per animal place	OW 2004.10.V1	0,055	0,34	65
HE2.3.2.2	Aeration at least 0.5 m^3/hour per animal place	OW 2004.10.V1	0,042	0,34	65
HE2.3.3	30–35% slats and manure belt aeration 0.7 m^3/hour per animal place	OW 2005.04.V1	0,025	0,34	65
HE2.3.4	55–60% slats and manure belt aeration 0.7 m^3/hour per animal place	OW 2005.05.V1	0,037	0,34	65
HE2.100	Other housing systems		0,315	0,34	84

- Will be well integrated into the landscape with the use of standard construction techniques, natural/dark coloured finishes as proposed, and additional landscaping where required.

- Complies with the requirements of the County Development Plan.

……..

7. Description of the aspects of the environment with potential to be significantly affected by the proposed development.

7.2 Ground Water

(a) Site and Immediate area

The groundwater adjacent to the site is overlain by a low permeability overburden. According to G.S.I. records the aquifer classification of the site is referred to as a Poor Aquifer – Bedrock which is generally unproductive except for local zones(Pu). The aquifer vulnerability for the area of proposed development is classed as Moderate.

[There will be no increase in ground water extraction, and therefore no cumulative adverse impact on ground water resources or groundwater dependant features as a result of this proposed development as all additional water requirements are to be met by the Ballymakenny/Sandpit Water Scheme, the source of which is located a significant distance form this farm. Please refer to additional correspondence from IE Consulting in Appendix. 24]

…….

7.4. Air

……

Conclusions:
An air quality impact assessment has been undertaken for a proposed poultry shed at Carrickbaggot, Grangebellew, Co. Louth. Modelling has been undertaken to determine the impact associated with the existing and proposed shed assuming the maximum capacity of the sheds (60,000 birds in the existing shed and 64,000 in the proposed shed), the lowest possible temperature of the birds during a crop cycle (20^0C) and an average fan capacity of the proposed stacks. It is expected that the typical operation of the site will result in lower predicted ammonia and nitrogen impacts at the closest sensitive receptors than the worst case results presented in this report. The predicted results of the ammonia modelling process show that the limits for the protection of vegetation are not exceeded at the designated habitats within the vicinity of the poultry farm. Thus, any areas of ecological interest will not be adversely affected from the ammonia emissions for the operation of the farm.

Table 25 (extract from Air Quality Impact Assessment Report – Irwin Carr) below details the maximum impact at the closest receptors for ammonia, nitrogen, odour, PM10 and PM2.5. **[Please refer to updated ammonia emissions as per Fig. 7.3a.]**

Fig. 7.4.3 Air Quality Impact Assessment Report Conclusions

Table 25: Maximum predicted impact at closest sensitive receptors

Receptor	Pollutant	Limit Type	Units	Limit Value	Baseline	Max Level	PEC	PC of limit (%)	PEC of Limit (%)
11	Odour	98th Percentile of Max 1-Hour	ou_E/m^3	3	N/A	1.77	1.77	**59**	59
~~14~~	~~Ammonia~~	~~Annual Average~~	~~µg/m³~~	~~1~~	~~2.2~~	~~0.023~~	~~2.223~~	~~2.30~~	~~223~~
16	Nitrogen	Annual Average	kg N/ha/yr	20	6.83	0.32	7.15	**3.22**	72
11	PM_{10}	90.4% of max 24-hr	µg/m³	50	22.8	0.7	23.5	1.5	47.1
		Annual Avg	µg/m³	40	11.4	0.3	11.7	0.7	29.2
11	$PM_{2.5}$	Annual Avg	µg/m³	25	6.5	0.03	6.5	0.1	26.1

It can be seen from the Table above and as discussed in detail in this assessment, the predicted impact of each pollutant is within the appropriate limit/ threshold level.

Appendix C indicates the predicted dispersion of the ammonia plume for 2019 at the site.

[Fig. 7.3a - Table No. 12 from Updated Ammonia Impact Assessment (to replace line Receptor 14 above as a direct replacement table not available.

Table 12: Ammonia concentrations at designated ecologically sensitive locations.

	Location	Guideline (µg/m-3)	Background (µg/m-3)	Highest PC (µg/m-3)	PEC (µg/m-3)	PC/ Guideline level (%)	PEC/ Guideline level (%)
12	Dundalk Bay	3	2.22	0.0064	2.2264	0.21	74
13	Dundalk Bay	3	2.22	0.0063	2.2263	0.21	74
14	Clogher Head	1	1.94	0.0087	1.9487	**0.87**	195
15	Boyne Coast and Estuary	1	2.15	0.0048	2.1548	0.48	215
16	North-West Irish Sea	3	2.33	0.0237	2.3537	0.79	78

The ammonia concentrations at the sites are dominated by the background concentrations, which are approximately 74 – 215% of the air quality guideline for ammonia.

It can be seen from the Table above that the guideline level (critical level) of ammonia is not exceeded at any of Locations detailed above.

]

7.10. Biodiversity - Special Policy Areas

(A) Nationally Designated Environmental Areas

…….

The proposed development will also lead to atmospheric emissions, mainly in the form of ammonia and nitrogen. In order to correctly assess the potential impacts of the operation of the farm on the Natura 2000 sites, detailed atmospheric modelling of the proposed development was undertaken by Irwin Carr Consulting in May 2023 (updated August 2023 **[and January 2026]**). The overall purpose of this report was to quantify the ammonia and nitrogen levels at the ecologically sensitive areas in the vicinity of the proposed poultry farm. The predicted impacts can then be compared to an appropriate criterion and graphically illustrated in the form of "contours of equal concentration" or isopleths which are superimposed on base maps. The conclusions of this assessment follow the guidelines contained in the EPA's Guidelines on Atmospheric Emissions (~~2021, revised 2022~~ **[September 2024]**).

Using an AERMOD Dispersion Modelling Package, the projected ammonia and nitrogen emissions from the proposed development at Carrickbaggot were modelled using details such as animals per house and the ventilation currently used in the house. Other factors taken into consideration as part of the model included meteorological data, building downwash, storage of manure (assuming full storage) and digital terrain data.

The report provided the annual average ammonia concentrations at ecologically sensitive sites, including the Natura 2000 sites considered as part of this assessment. The results are presented in Table 3, whilst Table 4 provides an assessment of the process contribution for ammonia on the Natura 2000 sites arising from the proposed development. For the purpose of this report, Natura 2000 sites beyond 7.5km from the sheds were screened out from further assessment. This Natura 2000 sites included:

- River Boyne and Blackwater SAC
- River Boyne and Blackwater SPA
- Stabannan-Braganstown SPA
- River Nanny Estray and Shore SPA

Given that the predicted levels of ammonia and nitrogen are expected to be negligible at distances greater than 7.5km from the site, no detailed emission assessment for these sites was completed.

Detailed emission modelling was carried out for the following five sites:

- North-West Irish Sea cSPA
- Clogher Head SAC
- Boyne Coast and Estuary SAC
- Dundalk Bay SAC
- Dundalk Bay SPA

Ammonia

The emission report provides the annual average ammonia concentrations (worst case scenario) arising from the farm at ecologically sensitive sites, including the Natura 2000 sites considered as part of this assessment. Ammonia modelling was carried out for the years 2015 – 2019 and an average figure was presented. The results are presented in Table 3, whilst Table 4 takes the highest predicted process concentration from the sheds and it uses this figure to determine the percentage contribution of the farm to the critical load of the designated site. These results are based on the worst case scenario, i.e., the worst case process contribution over the 5-year period.

~~Natura 2000 Site~~	~~2015~~	~~2016~~	~~2017~~	~~2018~~	~~2019~~	~~Average~~
~~North-West Irish Sea cSPA~~	~~0.046~~	~~0.058~~	~~0.062~~	~~0.050~~	~~0.050~~	~~0.053~~
~~Dundalk Bay SAC~~	~~0.020~~	~~0.015~~	~~0.017~~	~~0.021~~	~~0.020~~	~~0.019~~
~~Dundalk Bay SPA~~	~~0.020~~	~~0.015~~	~~0.017~~	~~0.021~~	~~0.020~~	~~0.019~~
~~Clogher Head SAC~~	~~0.019~~	~~0.029~~	~~0.024~~	~~0.018~~	~~0.020~~	~~0.022~~
~~Boyne Coast and Estuary SAC~~	~~0.014~~	~~0.016~~	~~0.014~~	~~0.011~~	~~0.011~~	~~0.013~~

~~Table 7.10.1– Ammonia Concentrations (µg/m3) at Natura 2000 Sites (Taken from Table 18 Of Ammonia Impact Assessment Report)~~

[

Natura 2000 Site	2015	2016	2017	2018	2019	Average
North-West Irish Sea SPA	0.0143	0.0194	0.0237	0.0173	0.0175	0.0184
Dundalk Bay SAC	0.0054	0.0048	0.0043	0.0061	0.0064	0.0054
Dundalk Bay SPA	0.0054	0.0048	0.0043	0.0061	0.0064	0.0054
Clogher Head SAC	0.0062	0.0087	0.0080	0.0063	0.0069	0.0072
Boyne Coast and Estuary SAC	0.0048	0.0046	0.0044	0.0036	0.0036	0.0042

Table 7.10.1 Revised– Ammonia Concentrations (µg/m3) at Natura 2000 Sites (Taken from Table 3 Of Natura Impact Statement)]

All of the predicted ground level concentrations of ammonia detailed above are significantly below the limit values in relation to the protection of vegetation.

~~Natura 2000 Site~~	~~Critical Load Guideline~~	~~Background~~	~~Highest PC~~	~~PEC~~	~~PC / Guideline Level (%)~~	~~PEC / Guideline Level (%)~~
~~North-West Irish Sea cSPA~~	~~3~~	~~2.34~~	~~0.062~~	~~2.402~~	~~2.07~~	~~80~~
~~Dundalk Bay SAC~~	~~3~~	~~2.51~~	~~0.021~~	~~2.531~~	~~0.70~~	~~84~~
~~Dundalk Bay SPA~~	~~3~~	~~2.51~~	~~0.021~~	~~2.531~~	~~0.70~~	~~84~~
~~Clogher Head SAC~~	~~1~~	~~2.2~~	~~0.029~~	~~2.229~~	~~2.90~~	~~223~~
~~Boyne Coast and Estuary SAC~~	~~1~~	~~2.12~~	~~0.016~~	~~2.136~~	~~1.60~~	~~214~~

~~Table 7.10.2– Ammonia Concentrations (µg/m3) at Natura 2000 Sites – Predicted Impacts from the Proposed Development (Taken from Table 19 Of Ammonia Impact Assessment Report)~~

[

Natura 2000 Site	Critical Load Guideline	Background	Highest PC	PEC	PC / Guideline Level (%)	PEC / Guideline Level (%)
North-West Irish Sea SPA	3	2.33	0.0237	2.3537	0.79	78
Dundalk Bay SAC	3	2.22	0.0064	2.2264	0.21	74
Dundalk Bay SPA	3	2.22	0.0063	2.2263	0.21	74
Clogher Head SAC	1	1.94	0.0087	1.9487	0.87	195
Boyne Coast and Estuary SAC	1	2.15	0.0048	2.1548	0.48	215

Table 7.10.2 Revised – Ammonia Concentrations (µg/m3) at Natura 2000 Sites – Predicted Impacts from the Proposed Development (Taken from Table 4 Of Natura Impact Statement)

The ammonia concentrations at the sites are dominated by the background concentrations, which are approximately 74 – 215% of the air quality guideline for ammonia. It can be seen from the Table above that the guideline level (critical level) of ammonia is exceeded at Clogher Head SAC and the Boyne Coast and Estuary SAC. However, the PC at these locations is less than 1%. It should be noted here that the background levels of ammonia at all these sites have decreased since the previous assessment.]

~~It should be noted that the maximum PC of 2.9% at Clogher Head is based on the worst case process contribution over the 5-year period. It can be seen from Table 4 above that the average impact of the sheds is 0.022 µg/m3 which represents a PC of approx. 2%.~~
~~The ammonia concentrations at the sites are dominated by the background concentrations, which are approximately 80 – 223% of the air quality guideline for ammonia.~~

~~It can be seen from the Table above that the guideline level (critical level) of ammonia is not exceeded at Dundalk Bay SAC / SPA or the North-West Irish Sea.~~
~~Where the Critical Level of ammonia is exceeded (Clogher Head, Boyne Estuary and Coast), the PC of the existing and proposed site is <4%, and as a result considered insignificant for the purposes of this assessment.~~

Nitrogen

The AERMOD modelling also report provides an estimate of nitrogen arising from the proposed poultry farm. A summary is provided in Table 5. This is based on a worst case scenario and the figure generated for the Highest PC for N at these sites was generated using a conversion factor.

~~Natura 2000 Site~~	~~Guideline~~	~~Background~~	~~Highest PC~~	~~PEC~~	~~PC / Guideline Level (%)~~	~~PEC / Guideline Level (%)~~
~~North-West Irish Sea cSPA~~	~~20~~	~~6.83~~	~~0.32~~	~~7.15~~	~~3.22~~	~~72~~
~~Dundalk Bay SAC~~	~~10~~	~~15.79~~	~~0.11~~	~~15.90~~	~~1.09~~	~~159~~
~~Dundalk Bay SPA~~	~~10~~	~~15.79~~	~~0.11~~	~~15.90~~	~~1.09~~	~~159~~
~~Clogher Head SAC~~	~~10~~	~~15~~	~~0.15~~	~~15.15~~	~~1.51~~	~~152~~
~~Boyne Coast and Estuary SAC~~	~~10~~	~~15~~	~~0.08~~	~~15.08~~	~~0.83~~	~~151~~

~~Table 7.10.3 – Nitrogen Concentrations (kg/N/ha/yr) at Natura 2000 Sites – Predicted Impacts from the Proposed Development (Taken from Table 22 Of Ammonia Impact Assessment Report)~~

[

Natura 2000 Site	Guideline	Background	Highest PC	PEC	PC / Guideline Level (%)	PEC / Guideline Level (%)
North-West Irish Sea SPA	20	6.83	0.123	6.9531	0.62	35
Dundalk Bay SAC	10	6.63	0.033	6.6630	0.33	67
Dundalk Bay SPA	10	6.63	0.033	6.6628	0.33	67
Clogher Head SAC	10	6.83	0.045	6.8751	0.45	69
Boyne Coast and Estuary SAC	10	4.9	0.025	4.9247	0.25	49

Table 7.10.3 Revised – Nitrogen Concentrations (kg/N/ha/yr) at Natura 2000 Sites – Predicted Impacts from the Proposed Development (Taken from Table 5 Of Natura Impact Statement)

]

It can be seen from Table 5 that there are no exceedances of the nitrogen concentrations at each of the sites, and as a result, the predicted impact would be considered deminimus for the purposes of the Nitrogen assessment.

AERMOD Conclusions

It is expected that the typical operation of the site will result in lower predicted ammonia and nitrogen impacts at the closest sensitive receptors than the worst case results presented in Ammonia Impact Assessment report. The report concluded that the predicted results of the ammonia and nitrogen modelling process showed that the limits for the protection of vegetation are not exceeded at the designated habitats within the vicinity of the poultry farm. Thus, any areas of ecological interest will not be adversely affected from the ammonia or nitrogen emissions arising from the operation of the farm.

Cumulative Impacts

~~There are other agricultural activities ongoing close to the current application site, therefore cumulative impacts arising from the operation of these farms together were considered. All farms, regardless of whether licensed by the EPA or not, are required to operate within the legalisation defined in S.I. 113 of 2022 regarding manure storage, minimisation of soiled water and general good agricultural practice, etc. Therefore, cumulative impacts arising from the combined operation of these activities with the proposed operation of the poultry farm at Carrickbaggot will be negligible.~~

~~The Ammonia Impact Assessment report has also considered potential cumulative impacts.~~

~~The following points detail whether or not a cumulative assessment is necessary as part of this assessment.~~

- ~~It is noted that Step 1 of the flowchart states "Are the background levels already exceeded for the ammonia critical level or nitrogen critical load at Natura sites within the zone of influence? (Go to step 4)~~

- ~~It can be seen from Table 4 above that the background is exceeded at two of the Natura 2000 sites (Clogher Head SAC and Boyne Coast & Estuary SAC), and therefore the assessment continues to Step 4:~~

- ~~'Following detailed modelling and a NIS, is the process contribution (PC) ≤1% of the critical level for ammonia and ≤1% of the critical load for nitrogen deposition?~~

~~It can be seen from Table 4 that the total ammonia at both of these Locations is over 1% and as a result, a cumulative assessment may be required at these locations.~~

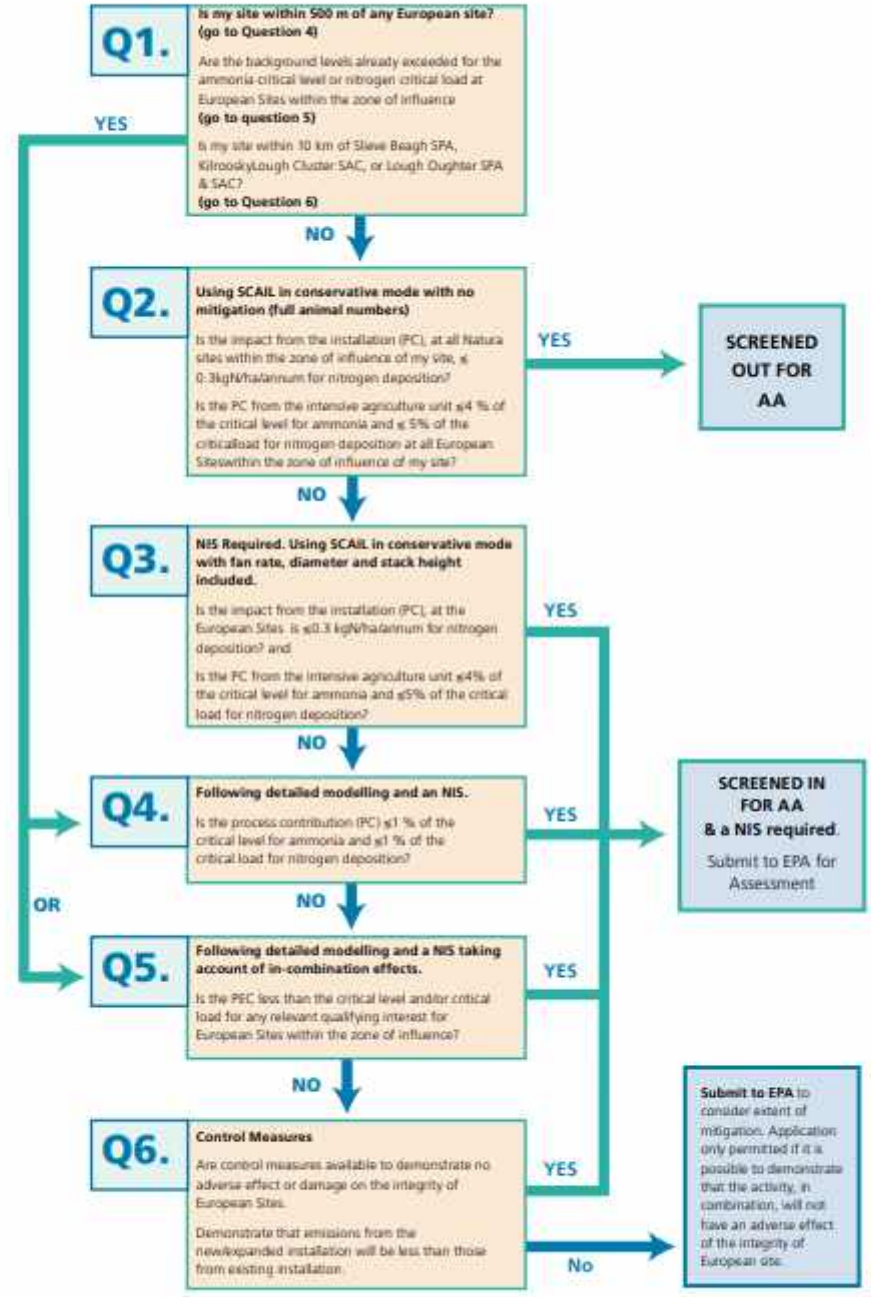
~~In order to carry out a cumulative assessment it was necessary to identify any nearby installations that also have the potential to contribute a significant ammonia impact, in line with the provisions of the E.P.A. guidelines on ammonia assessment for intensive Agricultural sites.. There were no such sites in the relevant vicinity of the sites and as such, there are no relevant sites which are to be considered in a cumulative/ in-combination assessment for this application.~~

[There are other agricultural activities ongoing close to the current application site, therefore cumulative impacts arising from the operation of these farms together were considered. All farms, regardless of whether licensed by the EPA or not, are required to operate within the legalisation defined in S.I. 588 of 2025 regarding manure storage, minimisation of soiled water and general good agricultural practice, etc. Therefore, cumulative impacts arising from the combined operation of these activities with the proposed operation of the poultry farm at Carrickbaggot will be negligible.

Cumulative impacts arising from predicted emissions from the facility when considered in-combination with other farms in the locality have also been considered.

There are no other Licensed farms within 5km of the proposed site.

APPENDIX 1. FLOWCHART



13

The Ammonia Impact Assessment report has also considered potential cumulative impacts in line with the E.P.A. Guidance on this matter. The following points detail whether or not a cumulative assessment is necessary as part of this assessment.

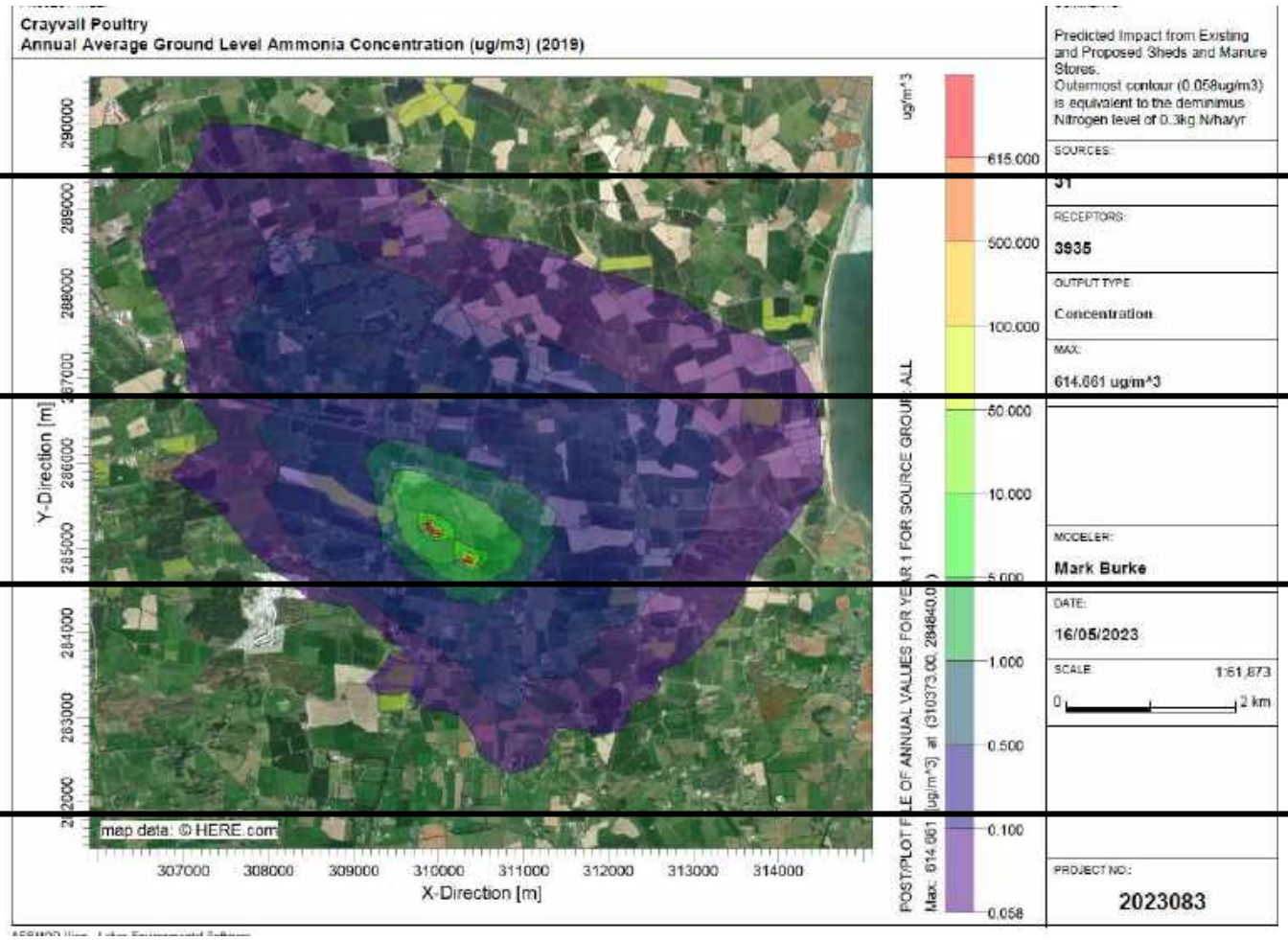
- **It is noted that Question 1 of the flowchart states, "*Is my site within 500m of any European site*?" There are no European sites within 500m, as such the assessment continued to Part 2 of Question 1.**

- **"*Are the background levels already exceeded for the ammonia critical level or nitrogen critical load at European Sites within the Zone of Influence*"**

- **The background levels are exceeded for the ammonia critical level and nitrogen critical load at European Sites within the Zone of Influence. Therefore, the assessment continues to Question 5.**

- **"*Is the PEC less than the critical level and/or critical load for any relevant qualifying interest for European Sites within the Zone of Influence*?**

It can be seen from the assessment above that the PEC is less than 1% for ammonia and nitrogen at all sites and as a result a cumulative assessment is not required for this application.]



~~Fig 7.10 Ammonia Dispersion Plume~~

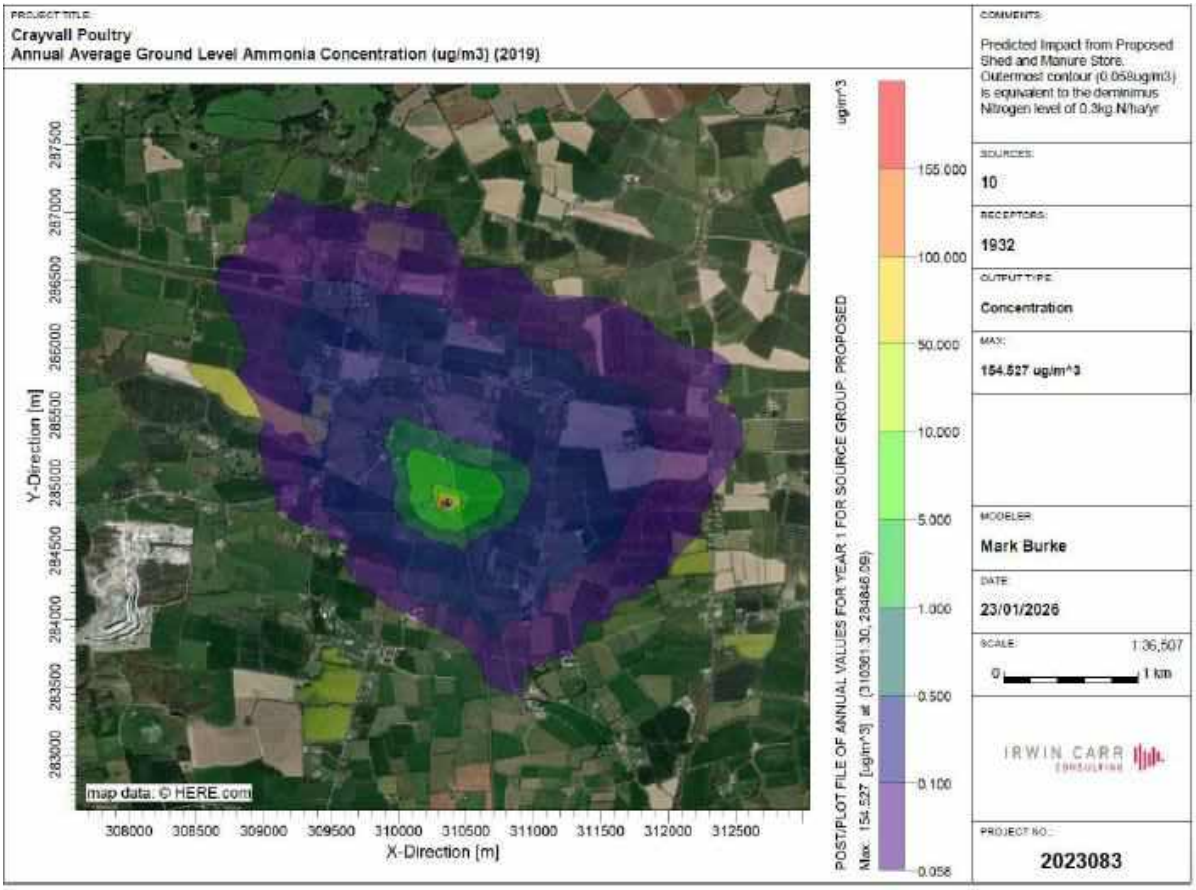


Fig 7.10 Ammonia Dispersion Map (Revised)

The proposed development will result in a significant increase in stock numbers on the site, to 124,000 birds. A number of measures have been provided for so as to mitigate against any adverse cumulative impact. As previously detailed there are only 5 licensed intensive agricultural farms in the county (of twhich this existing site is one), and none of the remaining sites are located close to the site of the existing farm/proposed development, therefore there is negligible risk of an adverse cumulative impact.

~~Furthermore only one of these sites (the current development at this location) has been granted permission and/or developed since the last Ammonia/Nitrogen background measurements (2018) and this has been assessed cumulatively as part of thei application.~~ **[The background ammonia levels have been updated (to 2021) since this EIAR was originally completed. This background information now includes the existing poultry house on site. As this is captured in the background levels the revised ammonia assessment specifically assesses the impact of the proposed development.**

Notwithstanding that the existing development is included in the background levels, these background levels have reduced in most instances based on the most recent data, which is taken to be attributed to measures across the agricultural sector, including the wide adoption of Low Emission Spreading Systems (LESS), Low Protein Diets etc.] ~~Planning permission was only granted for one other sub Epa licence threshold poultry farm in this area (and same related to a re development of an existing site)~~ **It can be seen from the assessment above that the PEC is less than 1% for ammonia and nitrogen at all sites and as a result]** ~~therefore~~ there is negligible risk of cumulative impact associated with the proposed development.

7.14. Potential Effects (Cumulative, Long/Medium/Short Term, Transboundary / other).

Nationally

The report "Irelands Inventory Report 2021" (EPA 2021), identifies agriculture as the primary contributor (99.4%) of Irish ammonia emissions in 2019, emitting a total of 124.6 kilotons (kt) of ammonia in that year. According to that report the emissions from the poultry sector in 2019 were approximately 4.61 Kt.

DAFM has published a Code of Good Agricultural Practice for reducing Ammonia Emissions from Agriculture " as required by the National Emissions Ceiling Directive and this is the appropriate manner in which to address the national ceiling. The proposed development will have negligible impact on the National Ammonia emissions **[which will be minimised by the operational management system proposed]**.

As detailed previously Poultry prodution results in one of the, if not the lowest, emissions of Green House Gases, and meeting any increase in consumer demand with eggs will result in lower Greenhouse gas emissions than other animal source proteins.
……

Within the Local Area;

It has been demonstrated that the proposed development will have little or no adverse cumulative impact within the county. This proposed poultry farm development will have significant integration with,

- the applicant, and the local agri.-sectors existing farming activities, in the areas of feed, labour etc., and,
- the Irish tillage sector with the with the use of poultry manure in the fertiliser substitution programme

and same will be a significant advantage to both enterprises, while at the same time demonstrating a more integrated, environmentally friendly and sustainable production system.

The proposed development will result in a significant increase in stock numbers on the site, to 124,000 birds. A number of measures have been provided for so as to mitigate against any adverse cumulative impact. This in conjunction with any requirements placed on the proposed development by Louth Co. Co. and/or the E.P.A. as a result of planning permission and/or E.P.A. Licence conditions will ensure that this proposed development will have no adverse environmental impact on the immediate area.

It is anticipated that the proposed development will not lead to a negative cumulative impact on the local environment due to the array of mitigation measures proposed and/or to be implemented, together with the low level of poultry farming in the area.

[A number of measures have been provided for in the design, layout and planned operation of the proposed development, including implementing a specific management and operating system complying with OW2025.04 within the proposed development so as to mitigate against any adverse impact in the local area or further afield. Any additional requirements placed on this development by Louth Co. Co. and/or the E.P.A. as a result of planning permission or E.P.A. Licence conditions which typically integrate conditions specific to the housing management system proposed will be integrated into the development and operation of this farm. This will ensure that this proposed development will have no adverse environmental impact on the immediate area and will not lead to a negative cumulative impact on the local environment.
The area of the proposed development is an agricultural area, and poultry farming activities are already established on the farm.]

9. ENVIRONMENTAL MANAGEMENT PROGRAMME

……

9.2. Organic fertiliser / poultry manure Management Programme

The applicant will implement and manage a programme for the allocation of organic fertiliser / soiled water in each particular year. The main aspects of the Organic fertiliser / poultry manure Management Programme are to ensure that the requirements of S.I. 113 of 2022, as amended, are met in full by the applicant. This will include;

- The allocation of poultry manure to customer farmers for use as organic fertiliser with the requirements of S.I. 113 of 2022, as amended,.

- Proper separation of all clean water on site, and the collection of all soiled water in the soiled water storage tanks. The allocation of soiled water for use as an organic fertiliser in line with the requirements of S.I. 113 of 2022, as amended.

- Continuous recording of all organic fertiliser / poultry manure / soiled water transfers off the farm, as per the record 3 form (Record 3 is the term given to the recording of movement of organic fertilisers from one farm to another, for compliance with S.I. 113 of 2022, as amended) or commercial documents (for compliance with Animal By-products regulations) developed by The Department of Agriculture, Food and The Marine, and submission of all records to The Department of Agriculture, Food and The Marine as required.

- **[Poultry house operational and management to be carried out in line with the requirements of OW 2025.04.]**

……..

10. Summary

Summary

The proposal as outlined will make a significant positive contribution to the rural economy of this area and will serve to increase employment and secure the viability and competitiveness of the applicant's existing farm and Belview Egg Farm ltd.s existing business.

The proposed development is the ideal scenario/model whereby;

1. ***The proposed development will produce a highly nutritious, efficient, sustainable and affordable food for the local Irish market, whereby same is to be completed to a high welfare standard, and with a lower environmental/GHG foot pint than alterative animal based protein sources.***
2. ***The proposed development will off set production loss in other houses proposed to be upgraded to higher welfare standards, and also to meet increasing Irish consumer demand as a result of increased consumption / population.***
3. ***the manure produced by the birds housed in the proposed developments, is used in a fertiliser substitution programme, as a substitute for imported chemical fertiliser and will off set the Green house gas emissions associated with the production of this fertiliser.***

The new farm buildings and ancillary structures will integrate successfully within the existing landscape and its surroundings, as well as successfully integrating with the applicant's existing farming activities to the benefit of both the existing and proposed enterprises and will not give rise to any significant environmental effects.

It is envisaged that no aspects of the environment will be significantly affected by this proposed development, for the reasons as outlined**[including operating the proposed development in line with the requirements of OW 2025.04.]**. The proposed development is agricultural in nature, has the potential to be well integrated into the local farming activities (with some of the associated activities i.e. spreading of organic fertiliser / soiled water on land, already occurring), remote from 3rd party dwellings, not located in a sensitive area/landscape, does not involve practices/processes that have the potential for significant adverse impact, does not result in the use or production of materials/products with potential for significant adverse impact, and, is a widely practiced agricultural enterprise.

The granting of permission to the proposed development would strongly accord with the provisions of the County Development Plan, as previously detailed, and will provide a significant boost to the economy of Co. Louth. The proposed development would not seriously injure the amenities of the area or of property in the vicinity, would be acceptable in terms of traffic safety and convenience of road users and would not be prejudicial to public health or pose a threat of environmental pollution and will operate under the conditions imposed as part of any grant of planning permission and revised E.P.A. Licence for this farm.

The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area, and will provide for an efficient and sustainable development which will help to meet the dietary requirements of Irish Consumers in an efficient manner, well below the environmental footprint of other comparable foodstuffs.

The diversification into a farming system that seeks to produce high quality, nutritious food with a lower carbon footprint than existing farming systems, and with a focus on producing food primarily destined for domestic consumption, and meeting increasing demand for high quality, affordable and nutritious food has to be considered both pragmatic and sustainable for the applicant and the local Agri food sector.

Signed:

Páraic Fay
BAgrSc

09/02/2026

Date

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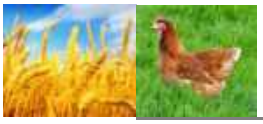
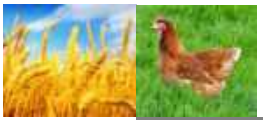


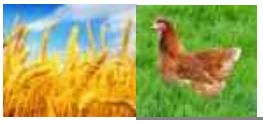
Appendixes

Appendix No. 13A	**~**	**Natura Impact Statement (Revised 2026)**
Appendix No. 18A	**~**	**Ammonia Impact Assessment (Revised 2026)**
Appendix No. 22	**~**	**Correspondence from IE Consulting**



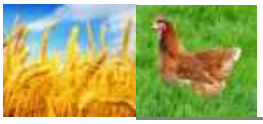
Appendix No. 13A

Naura Impact Statement (Revised 2026)



Appendix No. 18A

Ammonia Impact Assessment (Revised 2026)



Appendix No. 22

IE Consulting Correspondence

Whitehill
Environmental

Noreen McLoughlin, MSc

Environmental Consultant

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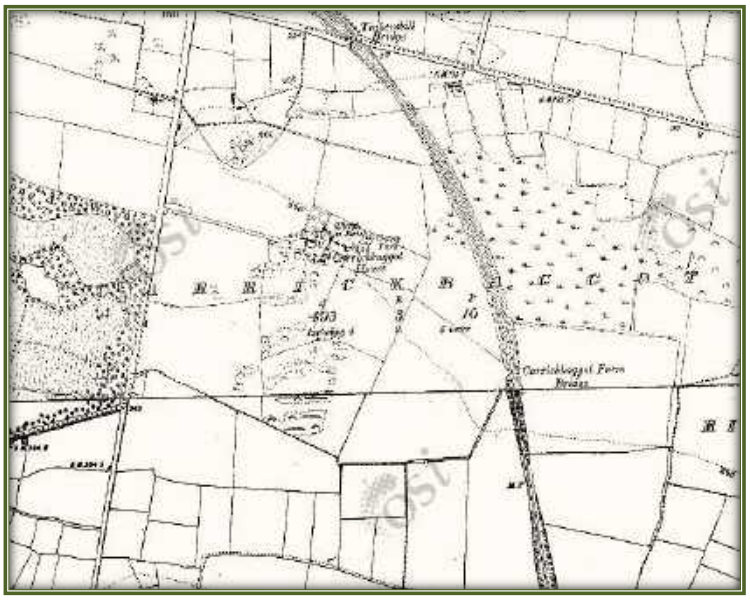
NATURA IMPACT STATEMENT OF AN APPLICATION FOR A LICENCE AT CARRICKBAGGOT, GRANGEBELLEW, CO LOUTH



Crayvall Poultry
c/o Paraic Fay
C.L.W. Environmental Planners Ltd
The Mews
23 Farnham Street

July 2023
Updated January 2026

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1 INTRODUCTION

1.1 REQUIREMENT FOR AN APPROPRIATE ASSESSMENT

This Natura Impact Assessment was prepared for a proposed agricultural development in Carrickbaggot, Grangebellew, Co. Louth. Having regard to the location of the proposed development site and its location within the Zone of Influence of designated European sites (SACs / SPAs), a Natura Impact Statement (NIS) of the proposed development was prepared in accordance with Article 6 of the Habitats Directive. This NIS will allow the competent authority (in this case An Coimisiún Pleanála) to undertake an Appropriate Assessment determination of the above project. This NIS was updated in January 2026 in support of an appeal to An Coimisiún Pleanála against the decision of Louth County Council to refuse planning permission for this proposed development (Planning File Ref: 24/60189).

The purpose of this AA is to determine the appropriateness of the proposed project, in the context of the conservation status of the site or sites. In Ireland, an Appropriate Assessment takes the form of a Natura Impact Statement (NIS), which is a statement of the likely impacts of the plan or project on a Natura 2000 site. The NIS comprises a comprehensive assessment of the plan or project and it examines the direct and indirect impacts that the plan or project might have on its own or in combination with other plans or projects on one or more Natura 2000 sites in view of the sites' conservation objectives.

1.2 THE AIM OF THIS REPORT

This Natura Impact Statement (NIS) has been prepared in accordance with the current guidance (DoEHLG, 2009, Revised February 2010), and it provides an assessment of the potential impacts of a poultry farm at Carrickbaggot, Grangebellew, Co. Louth on designated European sites.

An NIS should provide the information required in order to establish whether or not a proposed development is likely to have a significant impact on certain Natura sites in the context of their conservation objectives and specifically on the habitats and species for which the Natura 2000 conservation sites have been designated.

Accordingly, a comprehensive assessment of the ecological impacts of this application was carried out in July 2023 (updated January 2026) by Noreen McLoughlin, MSc, MCIEEM of Whitehill Environmental. This assessment allowed areas of potential ecological value and potential ecological constraints associated with this proposed development to be identified

and it also enabled potential ecological impacts associated with the proposed development to be assessed and mitigated for.

1.3 REGULATORY CONTEXT

RELEVANT LEGISLATION

The Birds Directive (Council Directive2009/147/EC) recognises that certain species of birds should be subject to special conservation measures concerning their habitats. The Directive requires that Member States take measures to classify the most suitable areas as Special Protection Areas (SPAs) for the conservation of bird species listed in Annex 1 of the Directive. SPAs are selected for bird species (listed in Annex I of the Birds Directive), that are regularly occurring populations of migratory bird species and the SPA areas are of international importance for these migratory birds.

The EU Habitats Directive (92/43/EEC) requires that Member States designate and ensure that particular protection is given to sites (Special Areas of Conservation) which are made up of or support particular habitats and species listed in annexes to this Directive.

Articles 6(3) and 6(4) of this Directive also call for the undertaking of an Appropriate Assessment for plans and projects not directly connected with or necessary to the management of, but which are likely to have a significant effect on any European designated sites (i.e. SACs and SPAs).

The Water Framework Directive (WFD) (2000/60/EC), which came into force in December 2000, establishes a framework for community action in the field of water policy. The WFD was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003). The WFD rationalises and updates existing legislation and provides for water management on the basis of River Basin Districts (RBDs). RBDs are essentially administrative areas for coordinated water management and are comprised of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD. The aim of the WFD is to ensure that waters achieve at least good status by 2027 and that status does not deteriorate in any waters.

Appropriate Assessment and the Habitats Directive

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora – the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats

and species of European Community interest, at a favourable conservation status. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as *Natura 2000*. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC).

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

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

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

Article 6(4) states:

"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

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

The Appropriate Assessment Process

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

The 'Appropriate Assessment' itself is an assessment which must be carried out by the competent authority which confirms whether the plan or project in combination with other plans and projects will have an adverse impact on the integrity of a European site.

Screening for Appropriate Assessment shall be carried out by the competent authority as set out in Section 177U(1) and (2) of the Planning and Development Act 2000 (as amended) as follows:

'(1) A screening for appropriate assessment of a draft Land use plan or application for consent for proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.

(2) A competent authority shall carry out a screening for appropriate assessment under subsection (1) before—

(a) a Land use plan is made including, where appropriate, before a decision on appeal in relation to a draft strategic development zone is made, or

(b) consent for a proposed development is given.'

The competent authority shall determine that an Appropriate Assessment is not required if it can be excluded, that the proposed development, individually or in combination with other plans or project will have a significant effect on a European site.

Where the competent authority cannot exclude the potential for a significant effect on a European site, an Appropriate Assessment shall be deemed required.

Where an Appropriate Assessment is required, the conclusions of the Appropriate Assessment Report (Natura Impact Statement (NIS)) should enable the competent authority to ascertain whether the plan or proposed development would adversely affect the integrity of the European site. If adverse impacts on the integrity of a European site cannot be avoided, then mitigation measures should be applied during the appropriate assessment process to the point where no adverse impacts on the site remain. Under the terms of the

Habitats Directive consent can only be granted for a project if, as a result of the appropriate assessment either (a) it is concluded that the integrity of any European sites will not be adversely affected, or (b) after mitigation, where adverse impacts cannot be excluded, there is shown to be an absence of alternative solutions, and there exists imperative reasons of overriding public interest for the project should go ahead.

Section 177(V) of the Planning and Development Act 2000 (as amended) outlines that the competent authority shall carry out the Appropriate Assessment, taking into account the Natura Impact Statement (amongst any other additional or supplemental information). A determination shall then be made by the competent authority in line with the requirements of Article 6(3) of the Habitats Directive as to whether the plan or proposed development would adversely affect the integrity of a European site, prior to consent being given.

2 METHODOLOGY

2.1 APPROPRIATE ASSESSMENT

This NIS has been prepared with reference to the following:

- European Commission (2018) Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.
- European Commission (2021) Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
- European Commission (2006). Nature and Biodiversity Cases: Ruling of the European Court of Justice.
- European Commission (2007). Clarification of the Concepts of: Alternative Solution, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.
- Department of Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.

The EC Guidance sets out a number of principles as to how to approach decision making during the process. The primary one is 'the precautionary principle' which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty.

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

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

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

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

The four-stage process is:

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

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

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

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

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

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

2.2 STATEMENT OF COMPETENCY

This AA report was carried out by Noreen McLoughlin, BA, MSc, MCIEEM. Noreen has an honours degree in Zoology and an MSc in Freshwater Ecology from Trinity College, Dublin and she has been a full member of the Chartered Institute of Ecology and Environmental Management for over seventeen years. Noreen has over 19 years' experience as a professional ecologist in Ireland.

2.3 DESK STUDIES & CONSULTATION

Information on the site and the area of the proposed development was studied prior to the completion of this statement. The following data sources were accessed in order to complete a thorough examination of potential impacts:

- National Parks and Wildlife Service - Aerial photographs and maps of designated sites, information on habitats and species within these sites and information on protected plant or animal species, conservation objectives, site synopses and standard data forms for relevant designated sites.
- Environmental Protection Agency (EPA)- Information pertaining to water quality, geology and licensed facilities within the area.
- Myplan.ie – Mapped based information.
- National Biodiversity Data Centre (NBDC) – Information pertaining to protected plant and animal species within the study area.
- Bing maps & Google Street View – High quality aerials and street images.
- CLW Environmental Planners / Irwin Carr – Plans and Information Pertaining to the Development.
- Louth County Council – Information on planning history in the area for the assessment of cumulative impacts.

2.4 ASSESSMENT METHODOLOGY

The proposed development was assessed to identify its potential ecological impacts and from this, the Zone of Influence (ZoI) of the proposed development was defined. Based on the potential impacts and their ZoI, the Natura 2000 sites potentially at risk from direct, indirect or in-combination impacts were identified. The assessment considered all potential impact sources and pathways connecting the proposed development to Natura 2000 sites, in view of the conservation objectives supporting the favourable conservation condition of the site's Qualifying Interests (QIs) or Special Conservation Interests (SCIs).

The conservation objectives relating to each Natura 2000 site and its QIs/SCIs are cited generally for SACs as "to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or Annex II species for which the SAC has been selected", and for SPAs "to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA".

As defined in the Habitat's Directive, the favourable conservation status of a habitat is achieved when:

- Its natural range and area it covers within that range is stable or increasing;
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future;

The favourable conservation status of a species is achieved when:

- The population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future;
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Where site-specific conservation objectives (SSCOs) have been prepared for a European site, these include a series of specific attributes and targets against which effects on conservation condition, or integrity, can be measured. Where potential significant effects are identified, then these SSCOs should be considered in detail.

3 DESCRIPTION OF PROPOSED DEVELOPMENT

3.1 PROJECT OVERVIEW

In April 2024, Crayvall Egg Production Ltd applied to Louth County Council for planning permission for a development at an existing poultry farm site at Carrickbaggot, Grangebellew, Co. Louth. Planning permission was sought here for the construction on one additional poultry house on the site. There is one existing poultry house on the site that has the capacity for 60,000 free range birds. The additional house will facilitate the housing on an additional 64,000 birds in a barn system. The proposed range of the birds will include the agricultural lands that surround the site.

The applicant will also be seeking a review of the EPA License on foot of the proposed expansion of this farm.

An extract from the planning drawings can be seen in Figure 1.

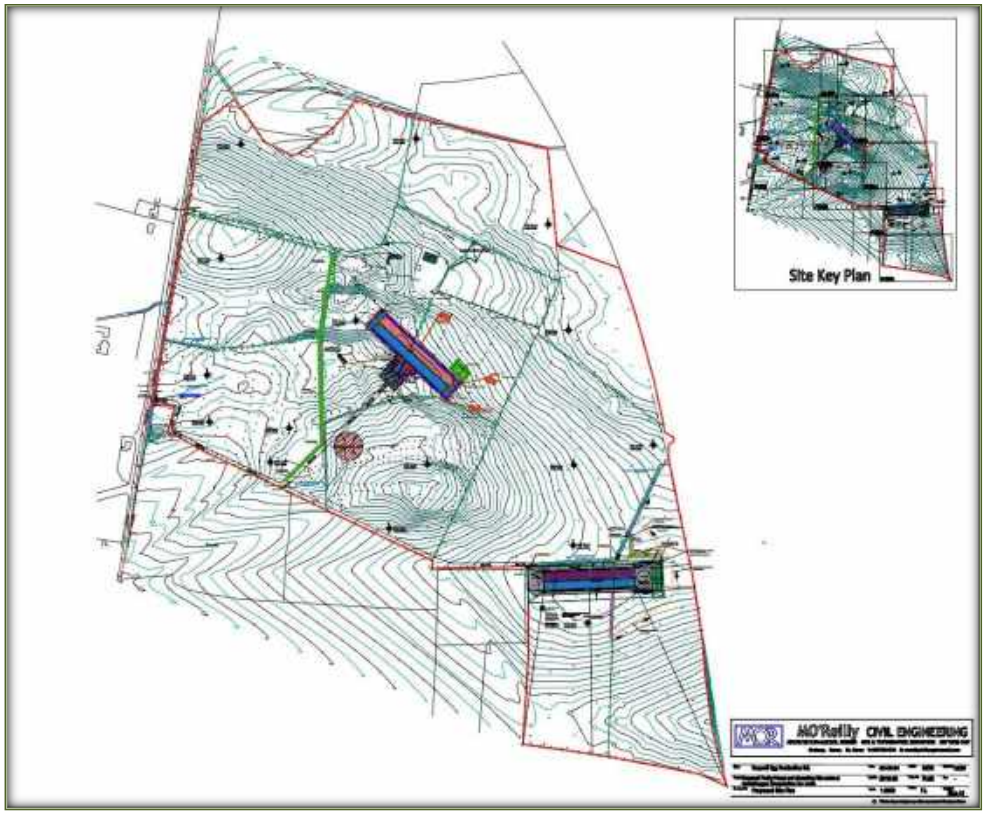


Figure 1 – Proposed Site Plan (as prepared by M O'Reilly Civil Engineering)

Once operation, the proposed development will accommodate up to 64,000 additional egg laying birds in a barn system. The birds will be moved in at approximately 16 weeks old and moved out at end of their lay stage, approximately 56-60 weeks later. Manure will be removed from the houses to a manure store on a weekly basis. The houses will be cleaned down at the end of each 13-14 month cycle.

The main emissions from the poultry farm will include poultry litter, clean surface water and soiled water. The poultry litter will be incorporated into a fertiliser management system where it will be used as an organic fertiliser to replace imported chemical fertiliser and it will be used by customer farmers. Clean roof water will be discharged to local watercourses and soiled water will be directed to storage tanks prior to its application on suitable landholdings.

There will be 4,919.62 tonnes of manure produced per annum. There will be 6 months storage capacity on the farm. The spent poultry litter and manure will be removed from the farm by specialised contractors once a week where it will be composted and used in the mushroom industry or it will be used as an organic fertiliser in accordance with S.I. 588 of 2025.

Management of Storm Water

A Hydrological Assessment of the site has been carried out by IE Consulting. This report concluded that the subsoil conditions within the site are not suitable for the provision of a stormwater infiltration system or soakaway system. It was therefore proposed that stormwater management and attenuation for the development as proposed is provided via a stormwater swale system and incorporating an appropriate flow restriction device. Alternatively, a below ground tank or cellular system may be utilised for stormwater attenuation purposes. The report makes the following conclusions:

- The hydraulic analysis of the "Watercourse Channel" and "Drainage Channel 1" indicates that these watercourses have adequate capacity to convey the predictive 1% AEP+CC (1 in 100 year + climate change) flow volume and surcharging of the channel or out of channel flow is not predicted to occur.

- The hydraulic analysis of "existing culvert 1" and "existing culvert 2" indicates that these culverts do not have sufficient hydraulic capacity to convey the 1% AEP + CC (1 in 100 year + climate change) flow volume and that culvert surcharging and overtopping is predicted to occur.

- The access road/entrance to the site of the proposed development shall partially cross over the watercourse at and in the vicinity of the "existing culvert 2", therefore this existing culvert will need to be removed and upgraded.

- It is proposed to provide a new box culvert of geometric profile 1.8m wide x 0.8m high x 13.8m at the site access road/entrance. This culvert has adequate capacity to convey the 1% AEP + CC (1 in 100 year + climate change) flow volume and provides adequate freeboard.

- "Existing culvert 1" is located on the watercourse channel immediately downstream of the proposed development. The insufficient hydraulic capacity of this culvert presents a potential fluvial flood risk to the development as proposed, therefore it is recommended that this culvert be removed and upgraded.

- It is proposed to replace "existing culvert 1" with a new box culvert of geometric profile 1.8m wide x 0.8m high x 6.2m long. This has adequate capacity to convey the 1% AEP + CC (1 in 100 year + climate change) flow volume and provides adequate freeboard.

- Part of "drainage channel 1" falls with the area of the site of the proposed development. In order to accommodate the development it is proposed to partially divert "drainage channel 1".

- The proposed diversion of 2drainage channel 1" has adequate hydraulic capacity to convey the 1% AEP+CC (1 in 100 year + climate change) and surcharging of the channel or out of channel flow is not predicted to occur.

- Alternatively, a 0.9m diameter culvert may utilised for the proposed partial diversion of "drainage channel 1".

- In summary, the proposed stormwater management system, culvert upgrading works and drainage channel diversion works presented in this study report and not expected to result in an adverse impact to the existing hydrological regime of the area and are therefore considered appropriate from a hydrological perspective.

An extract from the storm water management proposals is included in Figure 2.

Figure 2 – Surface Water Management Proposals (IE Consulting)

Land-Spreading

Land-spreading is the term generally given to the application of fertiliser (in this case poultry manure/organic fertiliser to land). This activity is carried out by customer farmers to fertilise their lands for productive agricultural purposes in line with applicable legislative requirements and good practice, in the same way as they currently utilise their existing fertiliser sources.

The manure produced on the farm will be distributed to customer farmers to allow them to utilise the manure as a fertiliser on their farms in accordance with the Nutrient Management Plan for each specific farm. Currently, the fertiliser needs of these farmers is met from other sources, including chemical fertiliser. The customer farmers will utilise the manure in accordance with S.I. 588 of 2025 and in accordance with their own specific farm requirements. The use of the manure on this land will not result in any additional load of nutrients on this land, rather it will be used as a replacement source. The customer list capacity can receive >165% of projected manure production.

The current customer farms identified for the receipt of the manure produced on the farm are located in Counties Kildare, Meath, Dublin and Louth and they have been mapped and are shown in Appendix I. Records for the movement of all manure will be kept. These customer farms are subject to change on an annual basis. It is beyond the scope of this AA to assess the land spreading activities of these separate farms that are not within the control

of the applicant (as per a recent planning decision made by An Bord Pleanála in regards to an appeal brought against the granting of a farm developments where land-spreading was cited in the appeal).

S.I. 588 OF 2025

The European Union (Good Agricultural Practice for Protection of Waters) Regulations 2025 provides a basic set of measures to ensure the protection of waters, including drinking water sources, against pollution caused by nitrogen and phosphorus from agricultural sources, with the primary emphasis being on the management of livestock manures and other fertilisers. The purpose of these Regulations is to give effect to Ireland's Nitrates Action Programme. This directive outlines measures that must be followed during the land-spreading of manure. These measures are summarised in the points below.

- The amount of livestock manure applied in any year to land on a holding, together with that deposited to land by livestock, shall not exceed an amount containing 170 kg nitrogen per hectare.
- The spreading of any organic fertiliser during certain times of the year is prohibited (The prohibited spreading period, generally between Mid-October and Mid-January).
- Farmers must keep within the overall maximum fertilisation rates for nitrogen and phosphorus.
- Farmers must have sufficient storage capacity to meet the minimum requirements of the regulations.
- All storage facilities must be kept leak proof and structurally sound.
- Records for the movement of fertilisers must be kept.
- Chemical fertilisers, livestock manure and other organic fertilisers, effluents and soiled water must be spread as accurately and as evenly as possible.
- An upward-facing splash plate or sludge irrigator on a tanker or umbilical system must not be used for the spreading of organic fertiliser or soiled water.
- Chemical fertilisers, livestock manure, soiled water or other organic fertilisers must not be spread when:
    - The land is waterlogged;
    - The land is flooded, or it is likely to flood;
    - The land is frozen, or covered with snow;
    - Heavy rain is forecast within 48 hours;
    - The ground slopes steeply and there is a risk of water pollution, when factors such as

surface run-off pathways, the presence of land drains, the absence of hedgerows to mitigate surface flow, soil condition and ground cover are taken into account.

- Chemical fertilisers must not be spread on land within 2 metres of a surface watercourse.

Table 1 shows the buffer zones for various water bodies (lakes, rivers, wells etc.). Soiled water, effluents, farmyard manures or other organic fertilisers must not be spread inside these buffer zones.

Water Feature	Buffer Zone
Any water supply source providing 100m3 or more of water per day, or serving 500 or more people	200m (or as little as 30m where a local authority allow)
Any water supply source providing 10m3 or more of water per day, or serving 50 people or more	100m (or as little as 30m where a local authority allows)
Any other water supply for human consumption	25m (or as little as 15m where a local authority allows)
Lake shoreline or a turlough likely to flood	20m
Exposed cavernous or karstified limestones features	15m
Any surface watercourse where the slope towards the watercourse exceeds 10%	10m
Any other surface waters	5m

Table 1 – Requirements for the Application of Fertilisers and Soiled Water as set out in S.I. 588 of 2025

3.2 SITE LOCATION AND SURROUNDING ENVIRONMENT

The site in question is located in a rural area within the townland of Carrickbaggot. Access to the site is via a private access road that is just off a local, third class road. The area of the site is 68.5 hectares in total and this includes the range area of the birds that surround the site. It is 1.2km south of Grangebellew and 4.6km south-east of Dunleer.

The land use surrounding the site is predominantly agricultural and improved agricultural grassland and tillage lands are the dominant habitats locally. Other habitats represented locally include wet grasslands, mixed broadleaved woodland, scrub, treelines, hedgerows and drains / streams. Site location maps can be seen in Figures 3 and 4a and 4b, whilst an aerial photograph of the site and its surrounding habitats can be seen in Figure 5.

Figure 3 – Map showing the Location of the Proposed Development Site (Pinned)

Figure 4a – Map showing the Location of the Proposed Development Site (Outlined in Red).

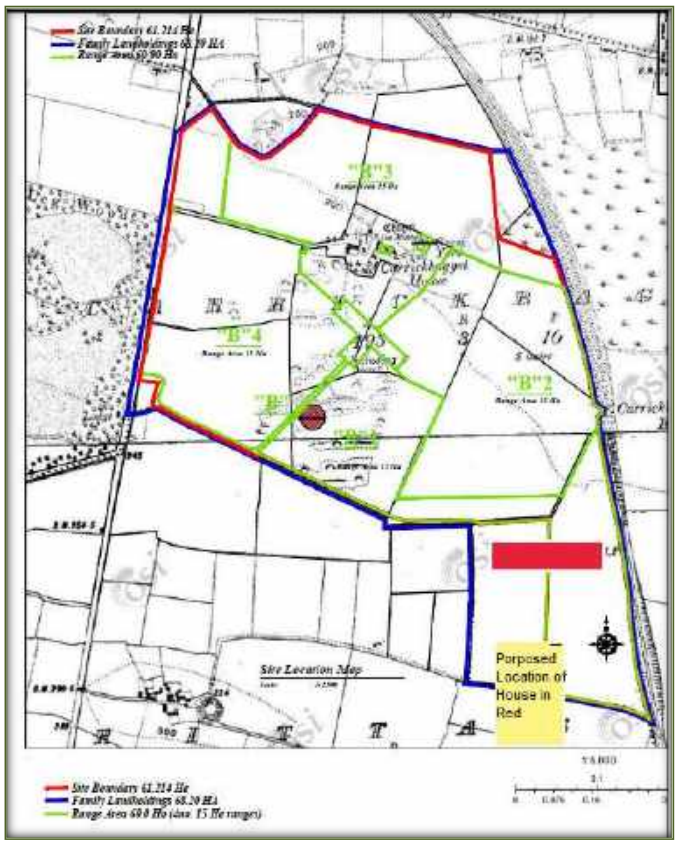


Figure 4b – Map showing the Proposed Range Areas

HABITATS AND SPECIES

Currently, there is a range of natural habitats occurring within the application site. These include tillage lands, areas of neutral grasslands, scattered trees and shrubs and scrub / immature woodland habitats. There are also mature treelines and hedgerows associated with the site boundaries.

The range area of the birds is confined to areas that are currently used for tillage, as well as the neutral and wet grassland habitats that are just west of the site.

An examination of the website of the National Biodiversity Data Centre, revealed that there are no records for the presence of any protected plant or mammal species from the relevant 1km square (O0985) of this proposed development.

WATER FEATURES AND QUALITY

The application site lies within the Newry Fane Glyde and Dee Hydrometric Area and Catchment, the Burren Sub-Catchment and the Slieveboy Sub-Basin. There are open drains within the application site. Water in these drains is likely to flow towards the Moganstown Stream, which flows along the northern perimeter of the landholding. This stream flows east until it flows into the sea near Lurganboy, approximately 5.1km north-east of the application site.

The EPA have classified the ecological status of the Morganstown Stream as moderate status for its entire length. Under the requirements of the Water Framework Directive, this is unsatisfactory and all water bodies are obliged to meet good status within the time frame of the current cycle of the Water Framework Directive (2027) .

Figure 5 – Aerial Photograph of the Site (Outlined in Red) and its Surrounding Habitats. The Range Area of the Birds is Highlighted in Yellow.

4 NATURA 2000 SITES IDENTIFIED

In accordance with the guidelines issued by the Department of the Environment and Local Government, a list of Natura 2000 sites within 15km of the proposed development have been identified and described according to their site synopsis, qualifying interests and conservation objectives. In addition, any other sites further than this, but potentially within its zone of interest were also considered. The zone of impact may be determined by an assessment of the connectivity between the application site and the designated areas by virtue of hydrological connectivity, atmospheric emissions, flight paths, ecological corridors etc.

For significant effects to arise, there must be a potential impact facilitated by having a *source*, i.e., the proposed development and activities arising out of its construction or operation, a *receptor*, i.e., the European site and its qualifying interests and a subsequent *pathway* or *connectivity* between the source and receptor, e.g., a water course. The likelihood for significant effects on the European site will largely depend on the characteristics of the source (e.g., nature and scale of the construction works), the characteristics of the existing pathway and the characteristics of the receptor, e.g., the sensitivities of the Qualifying Interests (habitats or species) to changes in water quality.

There are ten Natura 2000 designated sites within 15km of the application site. These designated areas and their closest points to the proposed development site are summarised in Table 2 and a map showing their locations relative to the application site is shown in Figure 6. A full description of these sites can be read on the websites of the National Parks and Wildlife Service (npws.ie).

Site Name & Code	Distance	Qualifying Interests	Significant Effects
North-West Irish Sea SPA	4.2km east 4.9km downstream via the Morganstown Stream	• Common Scoter (*Melanitta nigra*) • Red-throated Diver (*Gavia stellata*) • Great Northern Diver (*Gavia immer*) • Fulmar (*Fulmarus glacialis*) • Manx Shearwater (*Puffinus puffinus*) • Shag (*Phalacrocorax aristotelis*) • Cormorant (*Phalacrocorax carbo*) • Little Gull (*Larus minutus*) • Kittiwake (*Rissa tridactyla*) • Black-headed Gull (*Chroicocephalus ridibundus*)	*Having regards to the hydrological connectivity of the application site to this SPA, significant effects arising from construction and operation of this proposed development cannot be ruled out.* *As this SPA is within 7.5km of the application site, significant effects arising from atmospheric emissions will be considered further.*

		• Common Gull (*Larus canus*) • Lesser Black-backed Gull (*Larus fuscus)* • Herring Gull (*Larus argentatus*) • Great Black-backed Gull (*Larus marinus)* • Little Tern (*Sterna albifrons*) • Roseate Tern (*Sterna dougallii*) • Common Tern (*Sterna hirundo*) • Arctic Tern (*Sterna paradisaea*) • Puffin (*Fratercula arctica*) • Razorbill (*Alca torda*) • Guillemot (*Uria aalge*)	
Clogher Head SAC 001459	6.6km east	• Vegetated sea cliffs of the Atlantic and Baltic coasts • European dry heaths	*No hydrological connectivity therefore effects arising from run-off during construction / operation are unlikely.* *As this SAC is within 7.5km of the application site, significant effects arising from atmospheric emissions will be considered further.*
Boyne Coast and Estuary SAC 001957	7.4km south	• Estuaries • Mudflats and sandflats not covered by seawater at low tide • Salicornia and other annuals colonizing mud and sand • Spartina swards (*Spartinion maritimae*) • Atlantic salt meadows (*Glauca Puccinellietalia maritimae)* • Mediterranean salt meadows (*Juncetalia maritimi)* • Embryonic shifting dunes • Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) • Fixed coastal dunes with herbaceous vegetation (grey dunes) •	*No hydrological connectivity therefore effects arising from run-off during construction / operation are unlikely.* *As this SAC is within 7.5km of the application site, significant effects arising from atmospheric emissions will be considered further.*
Dundalk Bay SPA 004026	7.8km north	• Great Crested Grebe *(Podiceps cristatus)* • Greylag Goose *(Anser anser)* • Light-bellied Brent Goose *(Branta bernicla hrota)* • Shelduck *(Tadorna tadorna)* • Teal *(Anas crecca)* • Mallard *(Anas platyrhynchos)* • Pintail *(Anas acuta)* • Common Scoter *(Melanitta nigra)* • Red-breasted Merganser *(Mergus serrator)*	*No hydrological connectivity therefore effects arising from run-off during construction / operation are unlikely.* *As this SPA is within 7.5km of the application site, significant effects arising from atmospheric emissions will be considered further.*

		• Oystercatcher *(Haematopus ostralegus)* • Ringed Plover *(Charadrius hiaticula)* • Golden Plover *(Pluvialis apricaria)* • Grey Plover *(Pluvialis squatarola)* • Lapwing *(Vanellus vanellus)* • Knot *(Calidris canutus)* • Dunlin *(Calidris alpina)* • Black-tailed Godwit *(Limosa limosa)* • Bar-tailed Godwit *(Limosa lapponica)* • Curlew *(Numenius arquata)* • Redshank *(Tringa totanus)* • Black-headed Gull *(Chroicocephalus ridibundus)* • Common Gull *(Larus canus)* • Herring Gull *(Larus argentatus)* • Wetland and Waterbirds	
Dundalk Bay SAC 000455	7.8km north	• Estuaries • Mudflats and sandflats not covered by seawater at low tide • Perennial vegetation of stony banks • Salicornia and other annuals colonising mud and sand • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) • Mediterranean salt meadows *(Juncetalia maritimi)*	*No hydrological connectivity therefore effects arising from run-off during construction / operation are unlikely.* *As this SAC is within 7.5km of the application site, significant effects arising from atmospheric emissions will be considered further.*
The Boyne Estuary SPA 004080	8.4km south-east	• Shelduck *(Tadorna tadorna)* • Oystercatcher *(Haematopus ostralegus)* • Golden Plover *(Pluvialis apricaria)* • Grey Plover *(Pluvialis squatarola)* • Lapwing *(Vanellus vanellus)* • Knot *(Calidris canutus)* • Sanderling *(Calidris alba)* • Black-tailed Godwit *(Limosa limosa)* • Redshank *(Tringa totanus)* • Turnstone *(Arenaria interpres)* • Little Tern *(Sterna albifrons)* • Wetlands & Waterbirds	*No hydrological connectivity therefore effects arising from run-off during construction / operation are unlikely.* *The Ammonia Impact Assessment report has concluded that there will no significant effects upon Natura 2000 sites beyond 7.5km from the application site.*
The River Boyne and River Blackwater SAC 002299	9.4km south	• River lamprey *(Lampetra fluviatilis)* • Salmon *(Salmo salar)* • Otter *(Lutra lutra)* • Alkaline fens • Alluvial forests with alder *Alnus glutinosa* and ash *Fraxinus*	*No hydrological connectivity therefore effects arising from run-off during construction / operation are unlikely.* *The Ammonia Impact Assessment report has*

		excelsior	*concluded that there will no significant effects upon Natura 2000 sites beyond 7.5km from the application site.*
River Boyne and Blackwater SPA	10.5km south	• Kingfisher Alcedo atthis	*No hydrological connectivity therefore effects arising from run-off during construction / operation are unlikely.* *The Ammonia Impact Assessment report has concluded that there will no significant effects upon Natura 2000 sites beyond 7.5km from the application site.*
Stabannan-Braganstown SPA	10.8km north-west	• Greylag Goose (Anser anser)	*No hydrological connectivity therefore effects arising from run-off during construction / operation are unlikely.* *The Ammonia Impact Assessment report has concluded that there will no significant effects upon Natura 2000 sites beyond 7.5km from the application site.*
River Nanny Estuary and Shore SPA	14.4km south-east	• Oystercatcher (*Haematopus ostralegus*) • Ringed Plover (*Charadrius hiaticula*) • Golden Plover (*Pluvialis apricaria*) • Knot (*Calidris canutus*) • Sanderling (*Calidris alba*) • Herring Gull (*Larus argentatus*) • Wetlands & Waterbirds	*No hydrological connectivity therefore effects arising from run-off during construction / operation are unlikely.* *The Ammonia Impact Assessment report has concluded that there will no significant effects upon Natura 2000 sites beyond 7.5km from the application site.*

Table 2 – Natura 2000 Sites Within 15km of the Proposed Site

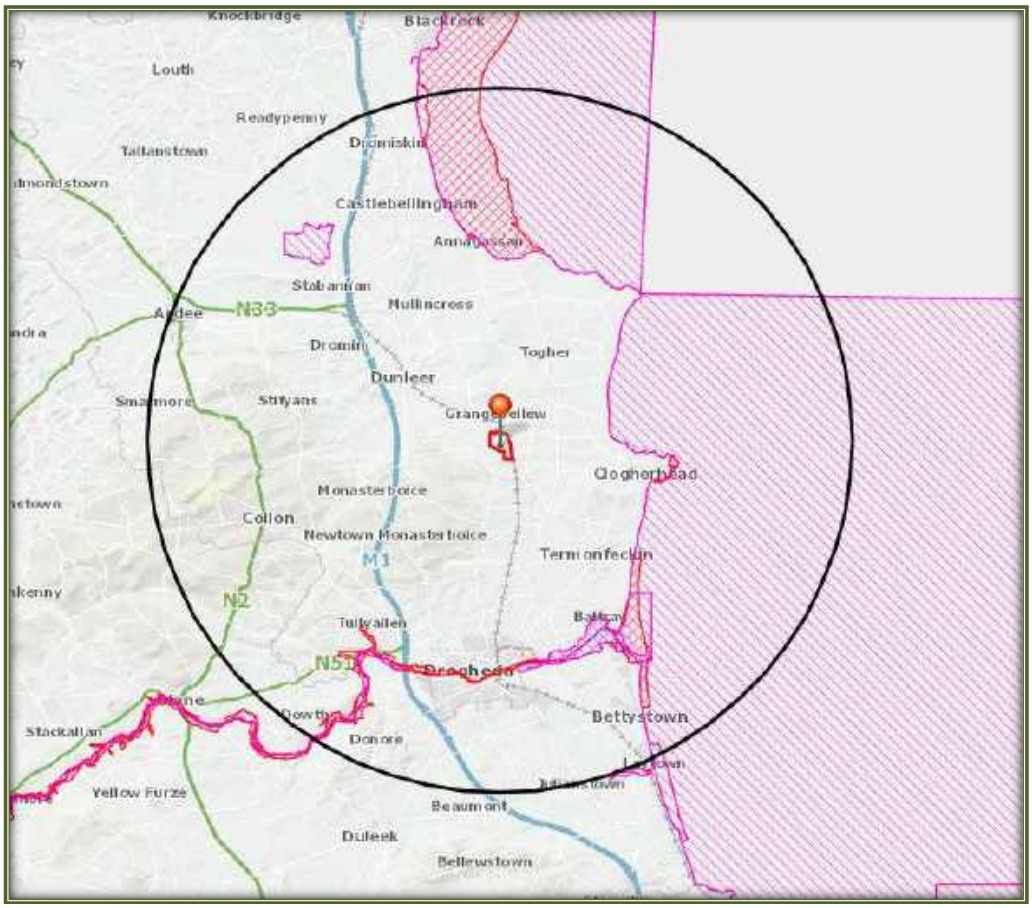


Figure 6 –The Application Site in relation to the Natura 2000 site (SACs – Red Hatching, SPAs – Pink Hatching)

5 IDENTIFICATION OF POTENTIAL EFFECTS

5.1 INTRODUCTION

Only those features of the development that have the potential to affect the integrity and conservation objectives of the identified Natura 2000 sites and protected species have been considered. A number of factors were examined at this stage and dismissed or carried forward for Appropriate Assessment as relevant. Assessment of the potential impacts on the integrity of the identified Natura 2000 sites is also conducted utilising a standard source-pathway-receptor model. In order for an impact to be established all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism is sufficient to conclude that a potential effect is not of any relevance or significance. The following areas were examined in relation to potential impacts from the proposed development on the Natura 2000 sites identified:

- Significant effects upon the North-West Irish Sea SPA arising from pollution due to run-off during the construction and operation of the proposed development.
- Effects upon the designated sites within 15km from atmospheric emissions arising from the operation of the proposed development, either individually or in combination with other ongoing activities.
- Cumulative impacts.

5.2 EMISSIONS TO WATER

The proposed site works will involve the excavation of soil and the pouring of concrete for foundations and other hard surfaces. These works will take place on a site that is upstream of the recently designated North-West Irish Sea SPA. Connectivity is provided by the Morganstown Stream. If appropriate mitigation measures are not taken during the proposed works, then there is the possibility that water quality in this SPA may be negatively impacted upon. Potential direct impacts include the pollution of the water during construction and operation with silt, oil, cement, hydraulic fluid etc. These substances could also have a toxic effect on the ecology of the water in general, directly affecting certain species / communities and their food supplies. Any reduction in water quality could lead to general impacts and effects upon this SPA and its protected bird species.

5.3 ATMOSPHERIC EMISSIONS

Dispersion Modelling

In order to correctly assess the potential impacts of the operation of the farm on the Natura 2000 sites, detailed atmospheric modelling of the proposed development was initially undertaken by Irwin Carr Consulting in May 2023. Following a Request for Further Information that was issued by An Coimisiún Pleanála as part of the planning appeal, this report was revised in January 2026. The overall purpose of this report was to quantify the ammonia and nitrogen levels at the ecologically sensitive areas in the vicinity of the proposed poultry farm. The predicted impacts can then be compared to an appropriate criterion and graphically illustrated in the form of "contours of equal concentration" or isopleths which are superimposed on base maps. The conclusions of this assessment follow the guidelines contained in the EPA's Guidelines on Atmospheric Emissions (2021, revised 2024).

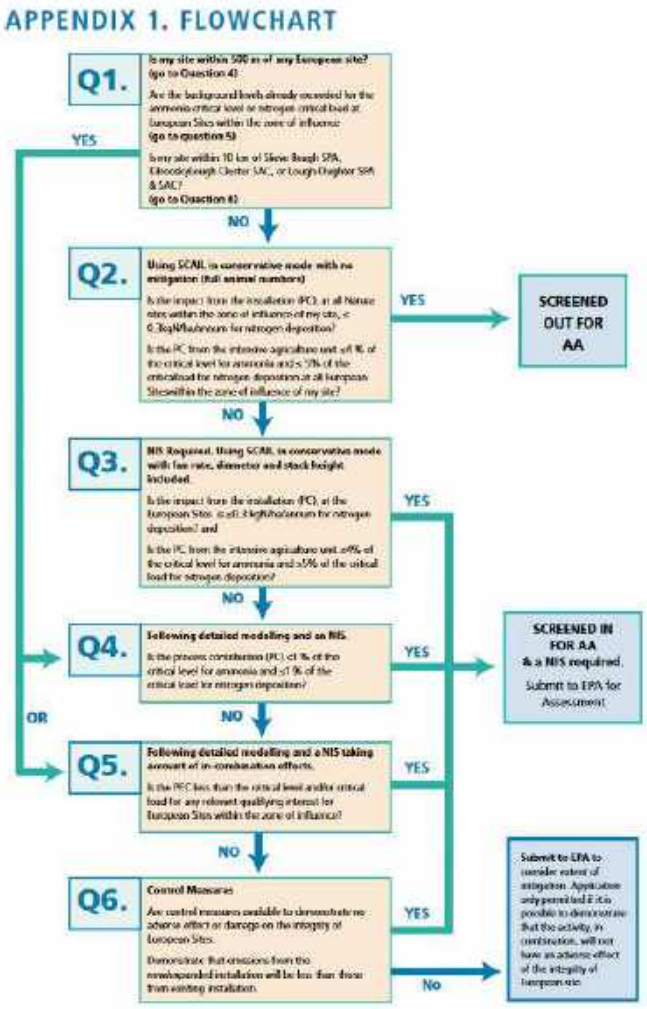


Figure 7 – EPA Flow Chart, Taken from Annex I of the Assessment of the Impact of Ammonia and Nitrogen on Natura 2000 sites from Intensive Agriculture Installations, EPA 2024

Using an AERMOD Dispersion Modelling Package, the projected ammonia and nitrogen emissions from the proposed development (64,000 birds) at Carrickbaggot were modelled using details such as animals per house and the ventilation system. Other factors taken into consideration as part of the model included meteorological data, building downwash, storage of manure (assuming full storage) and digital terrain data.

The report provided the annual average ammonia concentrations at ecologically sensitive sites, including the Natura 2000 sites considered as part of this assessment. The results are presented in Table 3, whilst Table 4 provides an assessment of the process contribution for ammonia on the Natura 2000 sites arising from the proposed development. For the purpose of this report, Natura 2000 sites beyond 7.5km from the sheds were screened out from further assessment. This Natura 2000 sites included:

- River Boyne and Blackwater SAC
- River Boyne and Blackwater SPA
- Stabannan-Braganstown SPA
- River Nanny Estray and Shore SPA

Given that the predicted levels of ammonia and nitrogen are expected to be negligible at distances greater than 7.5km from the site, no detailed emission assessment for these sites was completed.

Detailed emission modelling was carried out for the following four sites:

- North-West Irish Sea SPA
- Clogher Head SAC
- Boyne Coast and Estuary SAC
- Dundalk Bay SAC
- Dundalk Bay SPA

Ammonia

The emission report provides the annual average ammonia concentrations (worst case scenario) arising from the farm at ecologically sensitive sites, including the Natura 2000 sites considered as part of this assessment. Ammonia modelling was carried out for the years 2015 – 2019 and an average figure was presented. The results are presented in Table 3, whilst Table 4 takes the highest predicted process concentration from the sheds and it uses this figure to determine the percentage contribution of the farm to the critical load of the designated site. These results are based on the worst case scenario, i.e., the worst case process contribution over the 5-year period.

Natura 2000 Site	2015	2016	2017	2018	2019	Average
North-West Irish Sea SPA	0.0143	0.0194	0.0237	0.0173	0.0175	0.0184
Dundalk Bay SAC	0.0054	0.0048	0.0043	0.0061	0.0064	0.0054
Dundalk Bay SPA	0.0054	0.0048	0.0043	0.0061	0.0064	0.0054
Clogher Head SAC	0.0062	0.0087	0.0080	0.0063	0.0069	0.0072
Boyne Coast and Estuary SAC	0.0048	0.0046	0.0044	0.0036	0.0036	0.0042

Table 3 – Ammonia Concentrations (µg/m3) at Natura 2000 Sites (Taken from Table 11 Of Ammonia Impact Assessment Report)

All of the predicted ground level concentrations of ammonia detailed above are significantly below the limit values in relation to the protection of vegetation.

Natura 2000 Site	Critical Load Guideline	Background	Highest PC	PEC	PC / Guideline Level (%)	PEC / Guideline Level (%)
North-West Irish Sea SPA	3	2.33	0.0237	2.3537	0.79	78
Dundalk Bay SAC	3	2.22	0.0064	2.2264	0.21	74
Dundalk Bay SPA	3	2.22	0.0063	2.2263	0.21	74
Clogher Head SAC	1	1.94	0.0087	1.9487	0.87	195
Boyne Coast and Estuary SAC	1	2.15	0.0048	2.1548	0.48	215

Table 4 – Ammonia Concentrations (µg/m3) at Natura 2000 Sites – Predicted Impacts from the Proposed Development (Taken from Table 12 Of Ammonia Impact Assessment Report)

The ammonia concentrations at the sites are dominated by the background concentrations, which are approximately 74 – 215% of the air quality guideline for ammonia. It can be seen from the Table above that the guideline level (critical level) of ammonia is not exceeded at any of locations detailed above, including Clogher Head SAC.

Nitrogen

The AERMOD modelling also report provides an estimate of nitrogen arising from the proposed poultry farm. A summary is provided in Table 5. This is based on a worst case scenario and the figure generated for the Highest PC for N at these sites was generated using a conversion factor.

Natura 2000 Site	Guideline	Background	Highest PC	PEC	PC / Guideline Level (%)	PEC / Guideline Level (%)
North-West Irish Sea SPA	20	6.83	0.123	6.9531	0.62	35
Dundalk Bay SAC	10	6.63	0.033	6.6630	0.33	67
Dundalk Bay SPA	10	6.63	0.033	6.6628	0.33	67
Clogher Head SAC	10	6.83	0.045	6.8751	0.45	69
Boyne Coast and Estuary SAC	10	4.9	0.025	4.9247	0.25	49

Table 5 – Nitrogen Concentrations (kg/N/ha/yr) at Natura 2000 Sites – Predicted Impacts from the Proposed Development (Taken from Table 15 Of Ammonia Impact Assessment Report)

It can be seen from Table 5 that the nitrogen concentrations at the sites are dominated by the background concentrations, which are approximately 35 – 69% of the guideline (critical load) for each site. The PC at all Locations is less than 0.3kg.N/ha/yr, and as a result would be considered deminimus for the purposes of the Nitrogen assessment.

AERMOD Conclusions

It is expected that the typical operation of the site will result in lower predicted ammonia and nitrogen impacts at the closest sensitive receptors than the worst case results presented in Ammonia Impact Assessment report. The report concluded that the predicted results of the ammonia and nitrogen modelling process showed that the limits for the protection of vegetation are not exceeded at the designated habitats within the vicinity of the poultry farm. Thus, any areas of ecological interest will not be adversely affected from the ammonia or nitrogen emissions arising from the operation of the farm.

5.4 CUMULATIVE IMPACTS

There are other agricultural activities ongoing close to the current application site, therefore cumulative impacts arising from the operation of these farms together were considered. All farms, regardless of whether licensed by the EPA or not, are required to operate within the legalisation defined in S.I. 588 of 2025 regarding manure storage, minimisation of soiled water and general good agricultural practice, etc. Therefore, cumulative impacts arising from the combined operation of these activities with the proposed operation of the poultry farm at Carrickbaggot will be negligible.

Cumulative impacts arising from predicted emissions from the facility when considered in-combination with other farms in the locality have also been considered. There are no other Licensed farms within 5km of the proposed site.

The Ammonia Impact Assessment report has also considered potential cumulative impacts. The following points detail whether or not a cumulative assessment is necessary as part of this assessment.

- It is noted that Question 1 of the flowchart states, "*Is my site within 500m of any European site*?" There are no European sites within 500m, as such the assessment continued to Part 2 of Question 1.

- "*Are the background levels already exceeded for the ammonia critical level or nitrogen critical load at European Sites within the Zone of Influence*"

- The background levels are exceeded for the ammonia critical level and nitrogen critical load at European Sites within the Zone of Influence. Therefore, the assessment continues to Question 5.

- "*Is the PEC less than the critical level and/or critical load for any relevant qualifying interest for European Sites within the Zone of Influence*?

It can be seen from the assessment above that the PEC is less than 1% for ammonia and nitrogen at all sites and as a result a cumulative assessment is not required for this application.

The land-spreading of the poultry manure produced at the proposed facility has also been considered as part of this process. Records for the distribution and movement of all the manure produced will be kept on site and presented to the Department of Agriculture, Food

and Marine if necessary. All organic fertiliser will replace the use of chemical fertiliser; therefore there will be no overall increase in the amount of nutrients spread.

All farmers that receive the manure from the proposed farm will do so under the European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2025 (S.I. 588 of 2025). Upon the receipt of the manure, they will be informed of their obligation under this legalisation. Compliance with these regulations will minimise cumulative impacts as well as any impacts

6 MITIGATION MEASURES

In order to minimise emissions from the poultry facility at Carrickbaggot and in order to protect certain designated sites and species, the following mitigation measures must be implemented:

Construction

- Prior to the commencement of any site works, the applicant and the contactors must be made aware of the overall sensitivity of this site. They must be made familiar with the overall content of this NIS and they must be made aware of the mitigation measures contained in this NIS. A statement signed by personnel on site to say that they will adhere to the mitigation measures as outlined in this NIS must be presented to the Local Authority prior to the commencement of any works.

- Site preparation and construction should be confined to the development site only and should adhere to all the mitigation measures outlined in this NIS.

- The work areas must be kept to the minimum area required to carry out the proposed works and the area should be clearly marked out and cordoned off in advance of work commencement.

- The construction and operation of the proposed development must comply with the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2024 (S.I. 588 of 2025).

- It is vital that there is no deterioration in water quality in the drains that surround the site that are upstream of the Morganstown Stream. Therefore, strict controls of erosion, sediment generation and other pollutants associated with the construction process should be implemented to reduce and intercept sediment release where necessary. It is strongly recommended that prior to the commencement of works, that a robust geotextile membrane silt fence is installed around the main construction works area in the site to prevent run off mobilising to the north.

- All silt fences should be sturdy and constructed of a suitable geotextile membrane to ensure that water can pass through, but that silt will be retained. An interceptor trench will be required in front of this silt fence. The silt fence must be capable of preventing particles of 425µm from passing though.

- There must be no discharges of contaminated waters to ground or surface waters from this development, either during the construction or operation of the development. The control and management of hydrocarbons on site will be vital to prevent deteriorations in surface and groundwater quality locally. The following measures must be employed on site:

    - A dedicated re-fuelling location should be established on the site in a suitable compound area away from the proposed locations of excavations and groundworks. If possible, the re-fuelling of machines on site should be avoided.
    - The risk of fuel spillages on a construction site is at its greatest when refuelling plant. Therefore, only designated trained and competent operatives should be authorised to refuel plant on site. Plant and equipment should be brought to a designated refuelling area rather than refuelling at numerous locations about the site.
    - Spill kits stations should be provided at the fuelling location for the duration of the works.
    - Workers should be provided with training on spill control and the use of spill kits.
    - All fuel storage containers must be appropriately bunded, roofed and protected from vehicle movements. These bunds will provide added protection in the event of a flood event on site.
    - All chemicals must be stored as per manufacturer's instructions. A dedicated chemical bund should be provided on site if chemicals are to be stored on site. Any chemicals used on site should be returned to the site compound and secured in a lockable and sealed container overnight in proximity to the fuel storage area.
    - Procedures and contingency plans should be established on site to address cleaning up small spillages as well as dealing with an emergency incident. A stock of absorbent materials such as sand, spill granules, absorbent pads and booms should be kept on site, on plant working near the water and at the refuelling area.
    - Daily plant inspections will be completed by all plant operators on site to ensure that all plant is maintained in good working order. Where leaks are noted on these inspection sheets, the applicant should remove the plant from operations for repairs.
    - All personnel shall observe standard precautions for handling of materials as outlined in the Safety Data Sheets (SDS) for each material, including the use of PPE. Where conditions warrant, emergency spill containment supplies should be available for immediate use.

- Best practice concrete / aggregate management measures must also be employed on site. These will include:

  - A designated concrete wash out area should be set up on site; typically this will involve washing the chutes, pumps into a designated IBC before removing the waste water off site for disposal.
  - Best practice in bulk-liquid concrete management should be employed on site addressing pouring and handling, secure shuttering, adequate curing times etc.
  - Stockpile areas for sands and gravel must be kept to a minimum size, well away from the stream on site.
  - Where concrete shuttering is used, measures should be put in place to prevent against shutter failure and control storage, handling and disposal of shutter oils.
  - Activities which result in the creation of cement dust should be controlled by dampening down the areas.
  - Raw and uncured waste concrete should be disposed of by removal from the site;
  - Stockpile areas for sands and gravel must be kept to a minimum size.

- The applicant must follow the guidelines set out in the Department of Agriculture's Explanatory Handbook for Good Agricultural Practice Regulations.

- The proposed storage tanks must adhere to the Department of Agriculture's Farm Building and Structures Specifications. Before use, they should undergo an integrity test that is performed by a suitably qualified person. They should be inspected regularly for deficiencies.

- All construction waste must be removed from site by a registered contractor to a registered site. Evidence of the movement and safe disposal of the construction waste will be retained and presented to Local Authority upon request. The applicants and construction contractors will be responsible for the safe removal of any construction waste generated on site. There must be no disposal of construction waste or spoil in areas outside of the application site.

Site Operation

- The management of surface water from the site has been described in detail in the accompanying report prepared by IE Consulting. The recommendations in this report should be adhered to in full. The development of the surface water management system, including the construction of the swales, the installation of the new box culvert over the road and the diversion of the drainage channel should be supervised by a suitably qualified engineer. The works should be inspected by IE Consulting or similar experts prior to use.

- The mature hedgerow and woodland within the site should be retained in so far as possible. Any removal of hedgerow vegetation should be done outside of the bird nesting season.

- Inappropriate lighting could result in the fragmentation of the habitats of otters, bats and other nocturnal mammals. Therefore, it is recommended that night time lighting is kept to a low level, that results in minimal spill.

- In so far as possible, landscaping should be sympathetic to the natural landscapes that surround the site. The future landscaping of the site should adhere to the following recommendations:
    - Existing vegetation should be retained.
    - Only native trees and shrubs should be used in the landscaping.
    - A proportion of the grass areas should be maintained through methods that mimic traditional grassland management (low level grazing and mowing regimes). This will benefit local pollinators. Locally sourced wildflower seed would also be beneficial;
    - Where possible the importation of topsoil from outside the area should be avoided;
    - When planting flowers, shrubs and trees native species should be used, ideally from a local source;
    - Garden plants that have the potential to become invasive must be avoided;

Land-Spreading

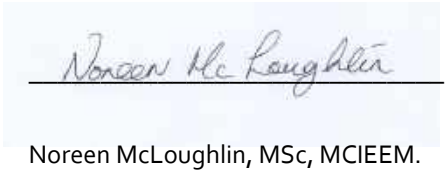
In order to avoid any reductions in water quality within the catchment as a whole, all organic fertiliser must be used in accordance with S.I. 588 of 2025 European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2025).

Reduction of Emissions to Atmosphere

Any other technologies to further reduce the emissions from the poultry installation should be considered where possible.

7 CONCLUSIONS

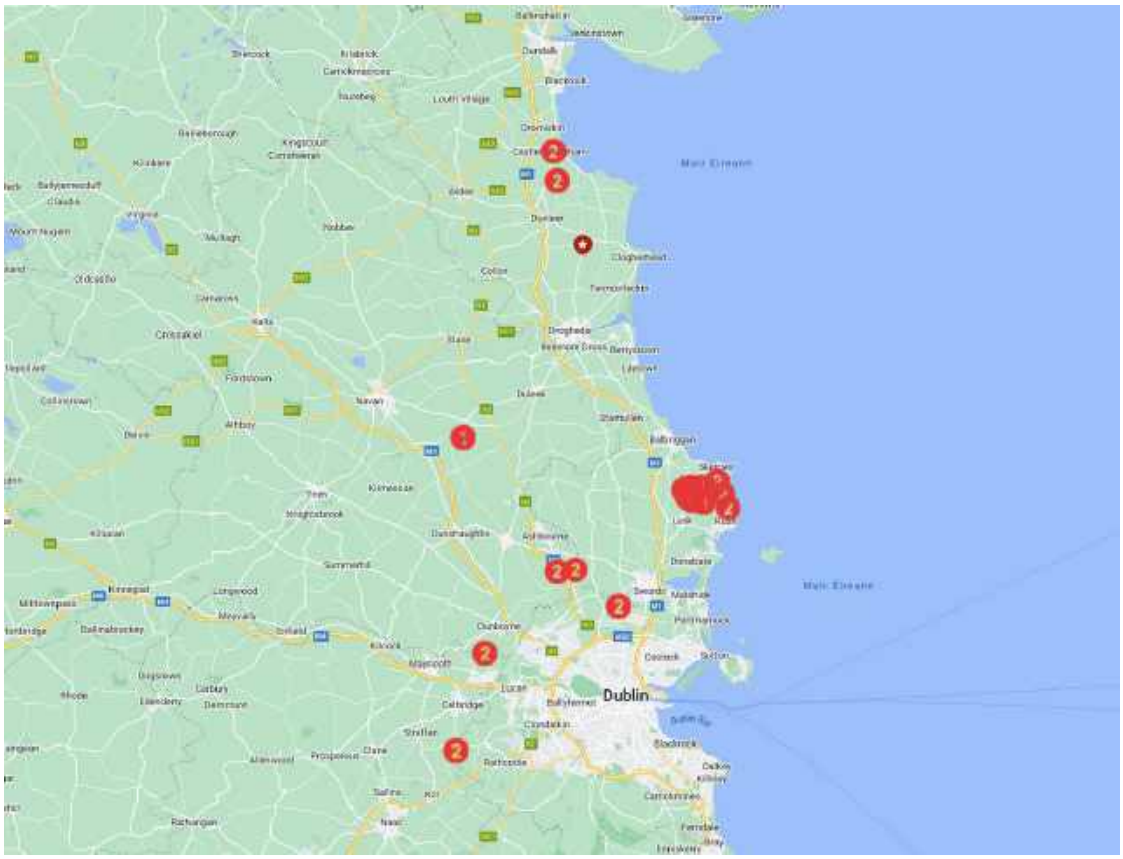
This current NIS has been undertaken to evaluate the potential impacts of the proposed development with regard to the effects upon the conservation objectives and qualifying interests (including the habitats and species) of the Natura 2000 sites within 15km of the application site. It is considered that following mitigation, that the proposed project does not have the potential to significantly affect the conservation objectives of these aforementioned Natura 2000 sites and the integrity of these sites as a whole will not be adversely impacted.



Noreen McLoughlin, MSc, MCIEEM.
Ecologist.

(PI Insurance details available on request)

Appendix I: CUSTOMER FARMLAND LOCATIONS



OW 2005.04 - Barn description laying hens

System description of an aviary housing, 30 - 35% slats with manure belt aeration at least 0.7 m^3/hour per animal place.

Version number: OW 2005.04.V1 of January 2024.

On this page

Animal category

Laying hens of 18 weeks and older and parent animals of laying hens of 18 weeks of age and older (HE2.3.3).

Emission factors

For the emission factors of the housing system, see Annex V of the Environmental Regulations (https://wetten.overheid.nl/BWBR0045528/#BijlageV).

Working principle

Ammonia emission reduction is based on the rapid drying of the manure on the manure belts under the grid and the frequent removal of the manure from the barn.

The technical implementation of the system: architectural

No specifics.

The technical implementation of the system: technical provisions

- Housing
- Floor version
- Food and drinking water
- Manure collection facility
- Aeration
- Recording equipment
- Manure storage

Housing

Alternative housing (animals can move freely in the barn).

Floor version

a. 30 - 35% of the living area is designed as floors with slatted floors.

b. 65 - 70% of the living area is designed as litter flooring.

Food and drinking water

The facilities for feed and drinking water are installed above the slatted floor.

Manure collection facility

The manure belts are located under the slats.

Aeration

a. Manure belt aeration is available. The aeration is only done with air from outside, *no* barn air is added.

b. The supply of air to the manure belts takes place via pipes under/next to the grids. The location of the discharge openings of the pipes ensures an even drying of the manure on the manure belts.

Recording equipment

The following recording equipment is provided:

- Temperature gauge for measuring the temperature of the aeration air, measuring in the main supply duct of the aeration.
- Equipment for recording the aeration on (hour meter, kWh meter, tachometer or measuring fan).
- Equipment for recording the rotation frequency of the manure belts.
- Equipment for measuring the capacity of the aeration, measuring at the beginning of the aeration pipes above the manure belts.

Manure storage

Short-term or possibly post-drying in a downstream technology or long-term manure storage. This system does not impose any requirements on the method of manure storage or further processing (extra drying) of the manure. However, the form of storage or processing does determine the level of ammonia emissions of the company. The emission factor set for this barn system applies to the situation in

combination with short-term storage on the farm (removal of the manure from the tyres directly from the farm or storage in a covered container for a maximum of 14 days).

Technical implementation of the system: housing

System usage requirements

- Living area
- Aeration capacity
- Drying air temperature
- Type of drying air
- Rotation frequency of manure belts
- Dry matter content of manure
- Registration

Living area

The living area is at least 1,111 cm^2 per animal when set up (9 animals per m^2).

Aeration capacity

The aeration capacity is at least 0.7 m^3 per animal per hour.

Drying air temperature

The temperature of the drying air is at least 17 °C.

Type of drying air

The drying air is only air from outside.

Rotation frequency of manure belts

At least once a week, turn the manure to a covered container for short-term storage or other form of storage; When the manure is dried in a downstream technique, the manure belts must be unscrewed at least twice a week.

Dry matter content

a. At the time of turning off the manure belts, the dry matter content is at least 55%.

b. The dry matter content of the litter is at least 80%.

Requirements registration system

For the purpose of checking the operation of the manure belt turning and the drying system, the following data must be recorded automatically:

- The temperature of aeration air.
- The aeration is on.
- The rotation frequency of the manure belts.
- The capacity of the aeration.

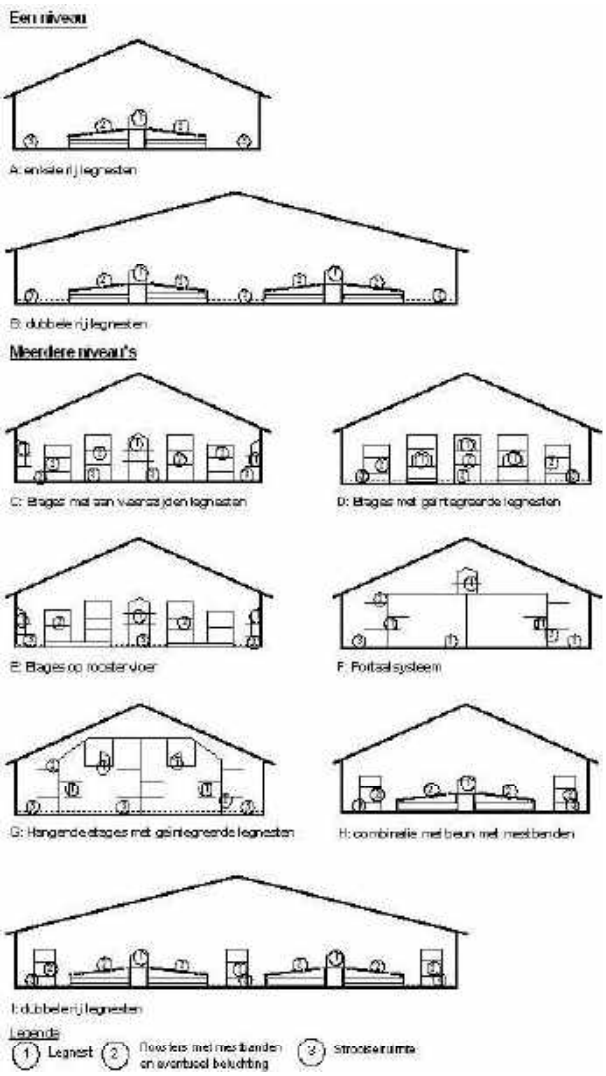
During the inspection, a printout of the current and previous production period of the registered values can be requested.

Measurement reports

Report 235 of ASG (www.pv.wur.nl).

Images

Please note that these images do not meet the requirements for digital accessibility. Are you experiencing problems because of this? Please contact (https://iplo.nl/toegankelijkheid/contactformulier-digitale-toegankelijkheid/) us for a suitable solution.



Cross-sections of houses with different systems for aviary housing for chickens

Description of the image showing the different systems

The image shows different types of housing for chickens in cross-sections. Each type of housing is marked with a letter, from A to I. There are housing types with laying nests on 1 level and housing types with laying nests on several levels.

The image has the following legend:

1. Laying nest
2. Slats with manure belts and possibly aeration

3. Litter room

Laying nests on 1 level

- A: single row of laying nests. In the middle of the barn is an elevation, with a row of laying nests on top. On both sides of these laying nests there are grids with manure belts. There is litter space on the ground, on both sides of the barn.
- B: double row of laying nests. This type is similar to type A, but with 2 raised rows of laying nests next to each other.

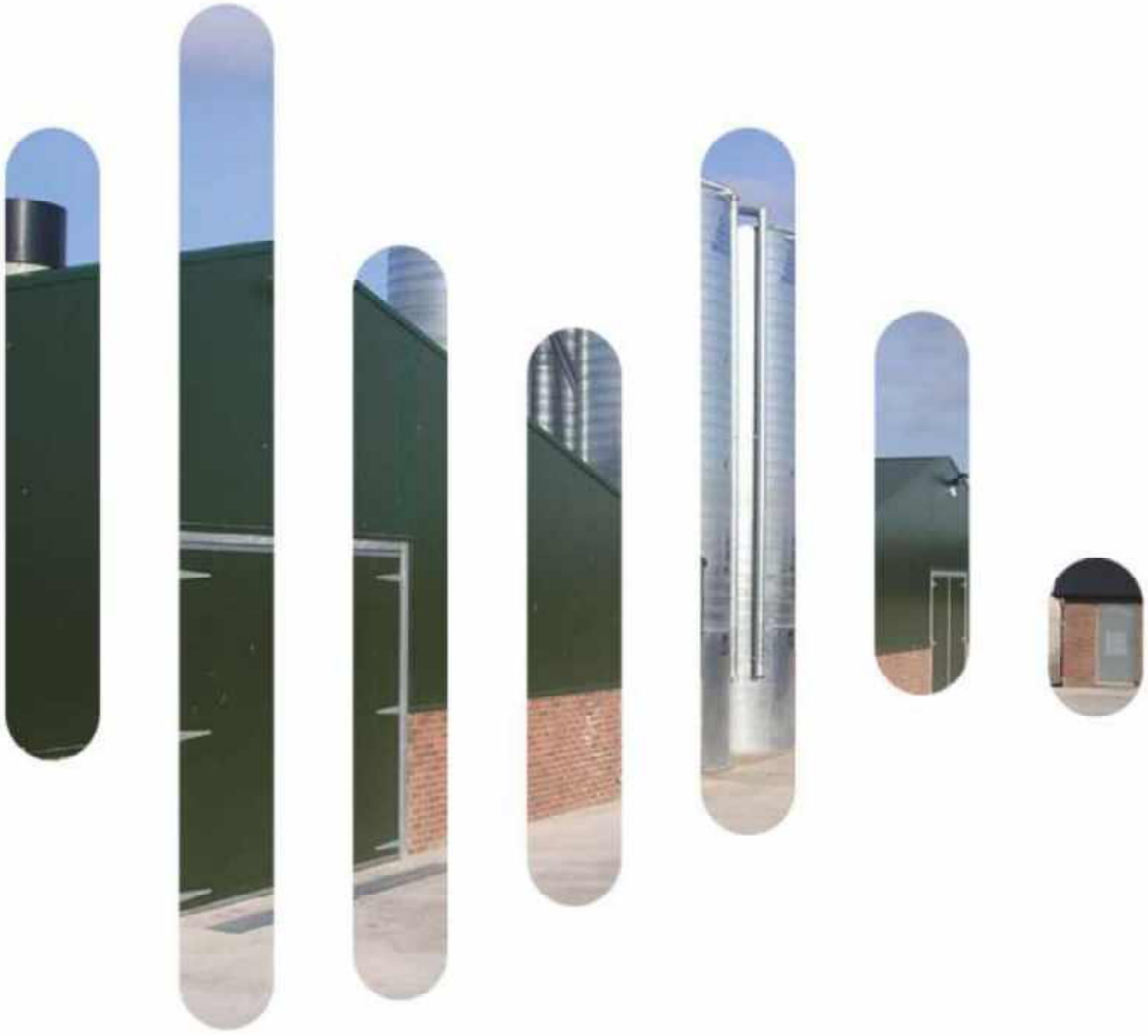
Laying nests on more levels

- C: floors with laying nests on both sides. In this section, laying nests can be seen against the left and right side wall of the barn. In the middle of the barn are several modules with floors. There is room for slats with manure belts on the floors. The litter area is located on the floor of the barn.
- D: floors with integrated laying nests. In the cross-section, the barn is filled with modules with tiers, in which the laying nests are integrated. In addition, there are grids with manure belts in the modules. The litter area is located on the floor of the barn.
- E: floors on slatted floor. In this section, laying nests can be seen against the left and right side wall of the barn. In the middle of the barn are several modules with floors. These modules are placed on a slatted floor.
- F: portal system. In this cross-section, 2 rectangular pens are placed on their sides against each other in the middle of the barn. On top of these pens you can see a laying nest. Horizontal grids have been installed on both sides of the coops, on which the chickens can sit. The litter room is located on the ground.
- G: suspended floors with integrated laying nests. In the middle of the barn is a construction from which several platforms hang. There are laying nests on those platforms. Platforms with laying nests and grids with manure belts are also attached to the construction. There is a litter area on the floor of the barn.
- H: combination with hopper with manure belts. In the middle of the barn is an elevation as in type A. On both sides of the elevation is a module with floors. Grids with manure belts have been installed on these floors. There is a litter area on the floor of the barn.
- I: double row of laying nests. In the middle of the barn is a module with floors. On both sides of this module there is an elevation as in type A. On both sides of the barn there is another module with floors.

Previous version

Description BWL 2005.04.V1 of June 2010.

IRWIN CARR CONSULTING



AMMONIA IMPACT ASSESSMENT
CRAYVALL POULTRY

Rp002 2023083 (Crayvall Poultry)
13 February 2026

PROJECT: AIR QUALITY IMPACT ASSESSMENT

PREPARED FOR: CRAYVALL POULTRY
C/O CLW ENVIRONMENTAL PLANNERS
THE MEWS
23 FARNHAM STREET
CAVAN

ATTENTION: PARAIC FAY

REPORT NO.: Rp002 2023083

Document Control

Status:	Rev:	Comments	Date:	Author:	Reviewer:
	1.0		8 August 2023	Mark Burke	Christy Carr
Final	2.0		13 February 2026	Mark Burke	Christy Carr

TABLE OF CONTENTS

1 INTRODUCTION

Irwin Carr Ltd have been commissioned to undertake air quality dispersion modelling for a proposed poultry shed at Carrickbaggot, Grangebellew, Co. Louth.

On completion, the proposed shed will have the provision for 1x mechanically ventilated poultry shed, housing a maximum of 64,000 layer birds, with 1 adjacent manure store.

The purpose of this report is to quantify the ammonia and nitrogen levels at the ecologically sensitive areas in the vicinity of the poultry farm. This assessment has taken account of the Report Requirements detailed in the EPA Guidance AG4[1] and the most recently published EPA Guidance[2] (May 2021).

The predicted impact can then be compared to an appropriate criterion and graphically illustrated in the form of 'contours of equal concentration' or isopleths which are superimposed on base maps.

1.1 Application History

This assessment is further to a previous assessment completed by Irwin Carr, and a subsequent response from An Coimisiún Pleanála (ACP), dated 9 January 2026.

In their response, ACP had the following queries in relation to Air Quality:

- *'Having regard to the results set out in the Air Quality Impact Assessment and to the deficiencies in the Natura Impact Statement submitted with the application in relation to the effects of the modelled level of ammonia emissions on European Dry Heaths at Clogher Head Special Area of Conservation, you are required to assess whether the proposed development individually, or in combination with other plans or projects, would not be likely to have a significant effect on European Site – Clogher Head Special Area of Conservation (site code:001459) in view of the site's conservation objectives.'*

In line with the most recently published EPA Guidance, this assessment now only considers the predicted impact from the proposed poultry shed, as the existing unit is included in the background levels of ammonia and nitrogen deposition in the vicinity of the site.

It should be noted that since the completion of the previous report, the applicant has confirmed that the proposed shed will utilise the following housing system:

- 30-35% of the living space slats with a manure belt underneath with 0.7m^3 per animal per hour manure aeration. Manure belts operational at least once a week, and slats at least in two levels.

This amended report takes account of the query above, and the update emission rate for the proposed shed.

[1] Air Dispersion Modelling from Industrial Installations Guidance Note (AG4), Environmental Protection Agency Office of Environmental Enforcement (OEE) December 2019

[2] *Licence Application Guidance. Assessment of the Impact of Ammonia and Nitrogen on Natura 2000 sites from Intensive Agriculture Installations. EPA. Version 1.0. May 2021.*

2 ASSESSMENT CRITERIA

The proposed target levels and method of assessment is described in this section.

2.1 Ammonia

The proposed target levels and method of assessment is described in this section.

There are limitations on emissions of ammonia from such installations for the protection of vegetation. They are referenced from *Cape, J.N.; van der Eerden, L.J.; Sheppard, L.J.; Leith, I.D.; Sutton, M.A.. 2009. Evidence for changing the critical level for ammonia. Environmental Pollution, 157 (3). 1033-1037.*

Where the limits are applied to general vegetation such as herbaceous species or forest trees the limit is set at 3 ± 1 µg/m^3 of ammonia (ie. 2-4 µg/m^3) as a long-term (several year) concentration.

For particularly sensitive plants such as lichens and bryophytes, the limit of 1 µg/m^3 is applied to ammonia as a long-term (several year) concentration.

Table 1 shows the target levels for the protection of vegetation.

Table 1: Ammonia limit values

Pollutant	Reason	Guideline Value	Measured as
Ammonia	Protection of Vegetation	1-3 µg/m^3	Annual Mean

It should be noted that this assessment has only taken account of the dry deposition of ammonia, as it is not expected that wet deposition will have a significant effect in the vicinity of the site. This is supported by a Guidance Note published by Natural Resources Wales[3]:

- 'Wet deposition of ammonia is not significant compared to dry deposition close to the source. It is recommended that wet deposition of ammonia emitted at the poultry or pig farm is not considered in the assessment'.

While not applicable to sites under consideration by the EPA, this guidance note is supported by a number of other published reports, namely:

- SCAIL- Agriculture Update[4]: 'Wet deposition of ammonia has been ignored due to the dominance of local ammonia dry deposition'.
- UNECE[5]: This report details why wet deposition is not likely to have a contribution close to the source:

  "At short distances from the source the NH_3 plume has usually not reached the clouds and for that reason in-cloud scavenging of the NH_3 originating from the source will not occur".

  "Within 0.5 – 1km from a source the contribution of the source to wet deposition of NH_x is much less than the contribution to dry deposition. This is caused by the fact that the plume has not been mixed up at this distance and the NH_3 concentration at ground level is relatively high.

  Wet deposition is determined by the average concentration over the whole plume height and not by the much higher ground-level concentration. Due to its limited importance at the very local scale wet deposition is not taken into account in most local models: Danish OML-DEP (Olesen, 1995), the UK LADD (Dragosits et al., 2002), French FIDES (Loubet et al., 2001) and MODDAAS (Loubet et al., 2006)".

Given the information detailed above, and the fact that wet deposition has limited importance at a local level, it has not been included as part of this assessment.

[3] *Natural Resources Wales. Guidance Note- Modelling the concentration and deposition of ammonia emitted from intensive farming. Ref Number: GN036.*

[4] *SCAIL- Agriculture Update. Sniffer ER26: Final Report, March/ 2014. Page 18.*

[5] *UNECE Expert Workshop on Ammonia. Ammonia deposition near hot spots: Processes, models and monitoring methods. Background document for working group 3, Edinburgh 4-6 December 2006.*

2.2 Nitrogen Deposition

Critical load values for nutrient nitrogen deposition are provided by the United Nations Economic Commission for Europe (UNECE) as a range (e.g. 10-20 kg N/ha/yr for dry heaths). This table provides indicative values within the critical load range, by habitat type, for use in detailed impact assessments in Ireland.

Table 2: Critical Load Range for atmospheric Nitrogen

Habitat type (EUNIS code)	Critical load (CL) range (kgN/ha/yr)	Value to use at screening stage (kgN/ha/yr)	Recommended value to use at detailed assessment stage (kgN/ha/yr)
Marine habitats			
Mid-upper saltmarshes (A2.53)	20-30	20	20
Pioneer & low-mid saltmarshes (A2.54 and A2.55)	20-30	30	30
Coastal habitats			
Shifting coastal dunes (B1.3)	10 to 20	10	10
Coastal stable dune grasslands (grey dunes) (B1.4)	8 to 15	8	Acid dunes = 8 Calcareous dunes = 10
Coastal dune heaths (B1.5)	10 to 20	10	10
Moist to wet dune slacks (B1.8)	10 to 20	10	Low base availability = 10 High base availability = 15
Inland surface waters			
Softwater lakes (permanent oligotrophic waters) (C1.1)	3 to 10	Seek site specific advice	
Dune slack pools (permanent oligotrophic waters) (C1.16)	10 to 20	10	10
Permanent dystrophic lakes, ponds and pools (C1.4)	3 to 10	Seek site specific advice	
Mire, bog and fen habitats			
Raised & blanket bogs (D1)	5 to 10	5	Apply guidance
Valley mires, poor fens and transition mires (D2)	10 to 15	10	10
Rich fens (D4.1)	15 to 30	15	15
Montane rich fens (D4.2)	15 to 25	15	15
Grasslands and tall forb habitats			
Sub-atlantic semi-dry calcareous grassland (E1.26)	15 to 25	15	15
Non-Mediterranean dry acid and neutral closed grassland (E1.7)	10 to 15	10	10

Inland dune pioneer grasslands (E1.94) Inland dune siliceous grassland (E1.95)	8 to 15	8	Acid dunes = 8 Calcareous dunes = 10
Low and medium altitude hay meadows (E2.2)	20 to 30	20	20
Mountain hay meadows (E2.3)	10 to 20	10	10
Moist & wet oligotrophic grasslands:			
Molinia caerulea meadows (E3.51)	15 to 25	15	15
Heath (Juncus) meadows & humid (Nardus Stricta) swards (E3.52)	10 to 20	10	10
Moss & lichen dominated mountain summits (E4.2)	5 to 10	5	7
Alpine and subalpine acid grasslands (E4.3) Alpine and subalpine calcareous grasslands (E4.4)	5 to 10	5	5
Heathland, scrub & tundra			
Arctic, alpine and subalpine scrub habitats (F2)	5 to 15	5	5
Northern wet heaths (F4.11) Dry heaths (F4.2)	10 to 20	10	10
Forest habitats (general)			
Use if not one of specific forests in section below			
Broadleaved woodland (G1)	10 to 20	10	10
Coniferous woodland (G3)	5 to 15	5	10 (Use 5 if lichens/free-living algae important features of the site).
Forest habitats (specific)			
Fagus woodland (beech) (G1.6)	10 to 20	10	15
Acidophilous Quercus-dominated woodland (oak) (G1.8)	10 to 15	10	10
Meso- and eutrophic Quercus woodland (G1.A)	15 to 20	15	15
Pinus sylvestris woodland south of the taiga (G3.4)	5 to 15	5	12
Coniferous woodland (G3)	5 to 15	5	10 (Use 5 if lichens/free-living algae important features of the site).

3 AERMOD DISPERSION MODELLING DATA

The inputs for the dispersion modelling assessment are described in detail in this Section. The site layout, including the nearest residential properties, is shown in Appendix A.

3.1 AERMOD Dispersion Modelling Package Description

The AMS.EPA Regulatory Model (AERMOD) is the current US EPA regulatory model used to predict pollutant concentrations from a wide range of sources that are present at typical industrial facilities.

The model accepts hourly meteorological data to define the conditions for plume rise, transport, diffusion and deposition. It estimates the concentration or deposition value for each source and receptor combination for each hour of input meteorology and calculates user-selected short term averages. The model also takes into account the local terrain surrounding the facility. Since most air quality standards are stipulated as averages or percentiles, AERMOD allows further analysis of the results for comparison purposes.

Percentile analysis for emissions is calculated for the maximum averages using the AERMOD-percent post-processing utility. This utility calculates the maximum concentration of a pollutant from all receptors at a specific percentile, for a specific period. Employing the percentile facilitates the omission of unusual short-term meteorological events that may cause elevated pollutant concentrations and hence a more accurate representation of the likely average pollutant concentrations over an averaging period.

The following information was input into the model for the prediction of maximum ground level ambient ammonia concentrations from the poultry farm.

3.2 Input Parameters

The site layout map, building plans and elevations were used as a template for all sources, relevant structures and the boundary of the facility. The AERMOD package uses the steady state Gaussian plume equation for a continuous elevated point or line source.

Table 3 below gives general details of the proposed poultry sheds.

Table 3: Dimensions of proposed and existing Poultry Sheds

	Shed 1 (Proposed)
Dimensions of House	160.6m x 32.2m x 7.0m
No. of birds per Shed	64,000
Efflux temperature	20 °C
Emissions	Mechanically Ventilated

3.2.1 EMISSIONS

The rate of production of an emission, such as ammonia, is best quantified as an emission rate. The ammonia emission factors for poultry are provided in Dutch Environmental Regulations[6], which are acceptable for use by the EPA.

To find the emission from the house, it was necessary to calculate the concentrations within the proposed building. Table 4 below shows the ammonia level within the proposed building on the site.

The proposed shed as part of this application will utilise the following housing system:

- 30-35% of the living space slats with a manure belt underneath with 0.7m^3 per animal per hour manure aeration. Manure belts operational at least once a week, and slats at least in two levels.

The associated emission rate for the housing system is provided in the table below.

Table 4: Concentrations per Building

House No.	No. of Animals per house	Ammonia Emission Factor (kg/yr per animal)	Total Ammonia Emission Rate (kg/yr per house)	Total Ammonia Emission Rate (g/s per house)
1	64,000	0.025	1,600	0.051

A total of 64,000 birds were included as part of this assessment.

For the purposes of the modelling process, the emission rate per house was divided by the number of emissions points to obtain the emission value for each source.

Table 5 below shows the emission rates coming out of emission points.

Table 5: Emission Rates for each stack

House No.	No of Fans (and type)	Ammonia per fan (g/s)
1	8 x EM50	**0.0063**

3.2.2 STACK EMISSIONS VELOCITY

The applicant has confirmed the type of fans proposed on the shed and has also provided a technical specification which details information relevant to the chosen fan types.

Table 6 below shows the ventilation rates for the chosen fan types.

Table 6: Ventilation Rates for fan

Fan Type	Stack Diameter (m)	Cross Sectional Area (m^2)	Exit Velocity (m/s)	Volume Flow (m^3/s)	Volume Flow (m^3/hr)
EM50	1.38	1.495	5.71	8.53	30,720

Technical specifications for the fans detailed in the Table above are included in Appendix D.

[6] *Environment Regulations (Netherlands). Government of the Netherlands, Ministry of Infrastructure and Water Management. Available online at: https://wetten.overheid.nl/BWBR0045528/2025-10-01#BijlageV*

3.2.3 STORAGE OF POULTRY MANURE

The storage capacity of the proposed manure store was confirmed as 1,100m$^{3.}$ In order to ensure a worst-case scenario, it was assumed that the stores were full at all times.

Table 7 below shows the total ammonia produced by the manure in the sheds.

Table 7: Ammonia Concentrations from Manure Stores

Building	Amount Manure per Shed (tonnes)	Ammonia Emission Factor (kg NH_3/ tonne fresh manure)	Total Ammonia Emission Rate (kg/yr)
Manure Store (Proposed)	1,100	2.68	2,948

For the purposes of the modelling process, the emission rate for the manure store was divided by the number of emissions points to obtain the emission value for each source.

Table 8 below shows the emission rates coming out of emission point.

Table 8: Manure Store Emissions

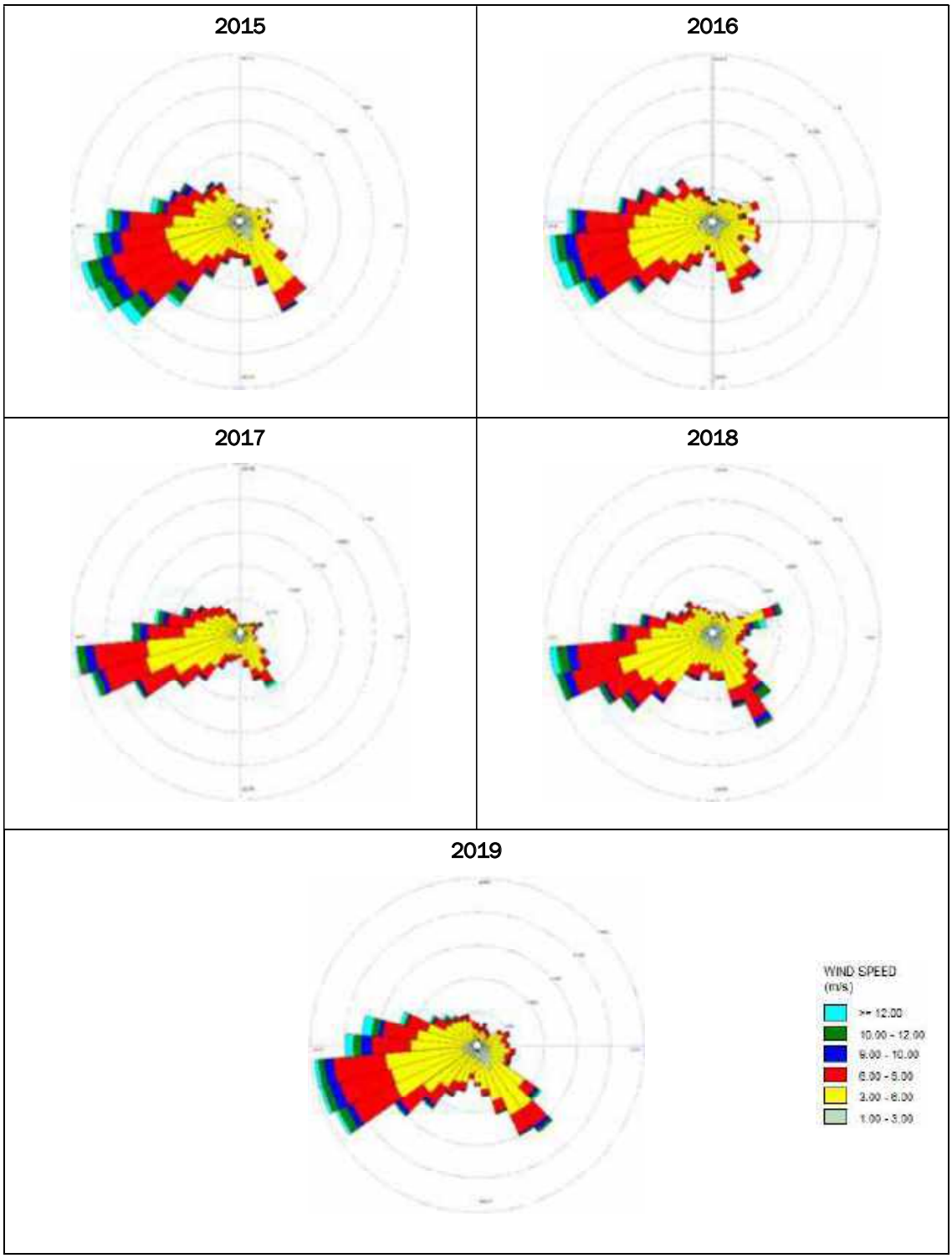
Building	No of Fans (and type)	Emissions (kg/Year)	Ammonia per shed (g/s)
Manure Store (Proposed)	1 x Line Source (Natural)	2,948	**0.094**

3.3 Meteorological Data

Five years of hourly sequential meteorological data (2015 – 2019) was used for the AERMOD dispersion modelling assessment. Dublin Airport has been selected as the most appropriate weather station for the installation, which is located within 10km of the coast.

This allowed for the determination of the predicted overall average impact of emissions from the facility. The windrose data for each individual year is presented in Figure 1 below.

Figure 1: Annual Windrose Data- Dublin Airport



3.4 Building Downwash

When one or more buildings in the vicinity of a point source interrupt wind flow, an area of turbulence known as a building wake is created. Pollutants emitted from a relatively low level can be caught in this turbulence, affecting their dispersion. This phenomenon is called building downwash. In order to conduct an analysis of downwash effects of the point sources created to mimic the release of odorous air from the poultry farm, the dimensions (including heights) of the proposed poultry sheds and any other existing buildings on-site was obtained from drawings.

3.5 Digital Terrain Data

AERMOD contains a terrain data pre-processor called AERMAP. Receptor and source elevation data from AERMAP output is formatted for direct insertion into an AERMOD control file. The elevation data are used by AERMOD when calculating air pollutant concentrations.

Regulatory dispersion models applicable for simple to complex terrain situations require information about the surrounding terrain. With the assumption that terrain will affect air quality concentrations at individual receptors, AERMAP first determines the base elevation at each receptor and source. For complex terrain situations, AERMOD captures the essential physics of dispersion in complex terrain and therefore needs elevation data that convey the features of the surrounding terrain. In response to this need, AERMAP searches for the terrain height and location that has the greatest influence on dispersion for each individual receptor. This height is the referred to as the hill height scale. Both the base elevation and hill height scale data are produced by AERMAP as a file or files which can be directly inserted into an AERMOD input control file.

4 AMMONIA

The ammonia levels were assessed in areas of specific interest in relation to vegetation.

It is noted within Section 3.2.3 of the Environment, Heritage and Local Government Guidance document[7] that as part of the screening for an appropriate assessment, Natura 2000 sites within a distance of 15km from plans should be assessed, however for projects this distance could be much less than 15km.

As this application is considered a project (as defined by Section 5.3 of the Guidance document) and given the nature, size and location of the project, only sites within approx. 7.5km have been included. Furthermore, this detailed modelling is not considered to be screening and therefore the distance utilised in this report is less than that included in the Guidance.

All areas within approximately 7.5km of the site were searched on the EPA website for the four types of designated areas listed below:

- **Special Areas of Conservation (SAC)**

  These areas are given special protection under the European Union's Habitats Directive to protect some of the most seriously threatened habitats and species across Europe.

- **Special Protection Areas (SPA)**

  Areas designated under the European Commission on the conservation of wild birds (the Birds Directive). All EU member states are required to identify internationally important areas for breeding, over-wintering and migrating birds and designate them as SPA's.

There were five designated sites located within approx. 7.5km of the poultry sheds which are shown in Table 9 below. The closest location of each site to the proposed facility were obtained from SCAIL.

Table 9: Designated areas in vicinity of the proposed site

Location	Description	Designation	Approx. distance to shed (km)*	ING Grid Co-ordinates	
E1	Dundalk Bay	SAC	7.8	310127	293062
E2	Dundalk Bay	SPA	7.8	310162	293043
E3	Clogher Head	SAC	6.6	316399	283546
E4	Boyne Coast and Estuary	SAC	7.4	315562	280342
E5	North- West Irish Sea	SPA	4.4	314670	285494

**It should be noted that all distances detailed in the Table above are approximate and are provided for information purposes only. The grid co-ordinates provided were input into the model, and the source locations are provided in Appendix B. These distances have no bearing on the AERMOD model, and the only input from Table 9 is the actual grid co-ordinates.*

There are four additional Natura 2000 sites located up to 15km from the site which are detailed in the Table below. It should be noted that these sites would only be required at the screening stage of an assessment for 'plans' rather than 'projects', but they have been included in the detailed assessment for this project in the interests of clarity.

[7] *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Environment, Heritage and Local Government. 10 December 2009.*

Table 10: Designated areas located up to 15km from proposed site.

Description	Designation	Approx. distance to shed (km)	ING Grid Co-ordinates	
River Boyne And River Blackwater	SAC	9.4	311027	275893
River Boyne and River Blackwater	SPA	10.5	305001	275986
Stabannan-Braganstown	SPA	10.8	302326	292904
River Nanny Estuary and Shore	SPA	14.4	316248	272337

Given that the predicted levels of ammonia and nitrogen are expected to be negligible at distances greater than 7.5km from the site, no assessment for ammonia or nitrogen was undertaken at the site detailed above.

Ammonia modelling was carried out for the sites located within 7.5km for each individual year, with the results at the nearest identified locations presented in Table 11 below. All results are the Ammonia concentration in µg/m^3.

4.1 Predicted Impacts

The predicted impacts and results included in this Section take account of the inputs detailed in Section 3.2 above.

Table 11: Annual Average Ammonia Concentrations at Identified locations

Location	2015	2016	2017	2018	2019	Average
E1	0.0054	0.0048	0.0043	0.0061	0.0064	0.0054
E2	0.0054	0.0048	0.0043	0.0062	0.0063	0.0054
E3	0.0062	0.0087	0.0080	0.0063	0.0069	0.0072
E4	0.0048	0.0046	0.0044	0.0036	0.0036	0.0042
E5	0.0143	0.0194	0.0237	0.0173	0.0175	0.0184

All of the predicted Ground Level Concentrations of ammonia detailed in the Tables above are significantly below the limit values as provided in Table 1 in relation to the protection of vegetation.

The background ammonia level is provided in the SCAIL website which is based on a 3-year average. The grid references provided in Table 9 were searched, with the background ammonia level given in the Table below.

Table 12 below compares the highest annual average predicted levels at the designated areas where:

- The Process contribution (PC), the maximum modelled concentration of the substance due to process emissions alone.
- Predicted Environmental Concentration (PEC) – that is, the maximum modelled concentration (of ammonia) due to process emissions combined with estimated baseline concentrations.
- PC and PEC as a percentage of the objective or guideline.

For the assessment of annual mean concentrations the annual mean contribution of the process can be added to the annual mean estimate for background.

Table 12: Ammonia concentrations at designated ecologically sensitive locations.

	Location	Guideline (µg/m^{-3})	Background (µg/m^{-3})	Highest PC (µg/m^{-3})	PEC (µg/m^{-3})	PC/ Guideline level (%)	PEC/ Guideline level (%)
12	Dundalk Bay	3	2.22	0.0064	2.2264	**0.21**	74
13	Dundalk Bay	3	2.22	0.0063	2.2263	**0.21**	74
14	Clogher Head	1	1.94	0.0087	1.9487	**0.87**	195
15	Boyne Coast and Estuary	1	2.15	0.0048	2.1548	**0.48**	215
16	North-West Irish Sea	3	2.33	0.0237	2.3537	**0.79**	78

The ammonia concentrations at the sites are dominated by the background concentrations, which are approximately 74 – 215% of the air quality guideline for ammonia.

It can be seen from the Table above that the process contribution (PC) does not exceed 1% at any of the Locations detailed above.

5 NITROGEN DEPOSITION

The Critical Load specifies the annual amount of ammonia that can be deposited for a given area per year. Below this level, sensitive habitat should not be affected.

The dry deposition flux (µg/m^{2}/s of ammonia) was calculated using AQTAG06[8] where the predicted ground level of ammonia (in µg/m^{3}) was multiplied by the relevant deposition velocity.

The dry deposition was then multiplied by the conversion factor provided in the guidance to convert to the levels of kgN/ha/yr. The conversion factors are provided in Table 8.1 and 8.2 of the AQTAG06 as presented in the Table 13 below.

Table 13: Conversion Factors

Pollutant	NH_3 Deposition Velocity (m/s)	Conversion Factor
NH_3 to N	0.02 (short vegetation)	260

Table 14 below converts the highest Process Contribution in µg/m^{-3} to kg.N/ha/yr, using the conversion factors detailed in Table 18 above.

Table 14: Conversion of Highest NH3 Results (Worst Case)

Location	Pollutant	Highest PC (µg/m^{-3})	NH_3 Deposition Velocity (m/s)	Conversion Factor	Highest PC (kg.N/ha/yr)
E1	NH_3 to N	0.0064	0.02 (short vegetation)	260	**0.033**
E2		0.0063			**0.033**
E3		0.0087			**0.045**
E4		0.0048			**0.025**
E5		0.0237			**0.123**

Using similar methodology to the ammonia assessment in Section 4 above the PC and PEC can be seen in Table 15 below.

Table 15: Conversion of Highest NH3 Results (Worst Case)

	Location	Guideline (kg N/ha/yr)	Background (kg N/ha/yr)	Highest PC (kg.N/ha/yr)	PEC (kg N/ha/yr)	PC/ Guideline level (%)	PEC/ Guideline level (%)
E1	Dundalk Bay	10	6.63	0.033	6.6630	**0.33**	67
E2	Dundalk Bay	10	6.63	0.033	6.6628	**0.33**	67
E3	Clogher Head	10	6.83	0.045	6.8751	**0.45**	69
E4	Boyne Coast and Estuary	10	4.9	0.025	4.9247	**0.25**	49
E5	North-West Irish Sea	20	6.83	0.123	6.9531	**0.62**	35

It can be seen from Table 15 that the nitrogen concentrations at the sites are dominated by the background concentrations, which are approximately 35 – 69% of the guideline (critical load) for each site.

The PC at all Locations is less than 0.3kg.N/ha/yr, and as a result would be considered deminimus for the purposes of the Nitrogen assessment.

[8] Technical Guidance on Detailed Modelling Approach for an Appropriate Assessment for Emissions to Air, AQTAG06

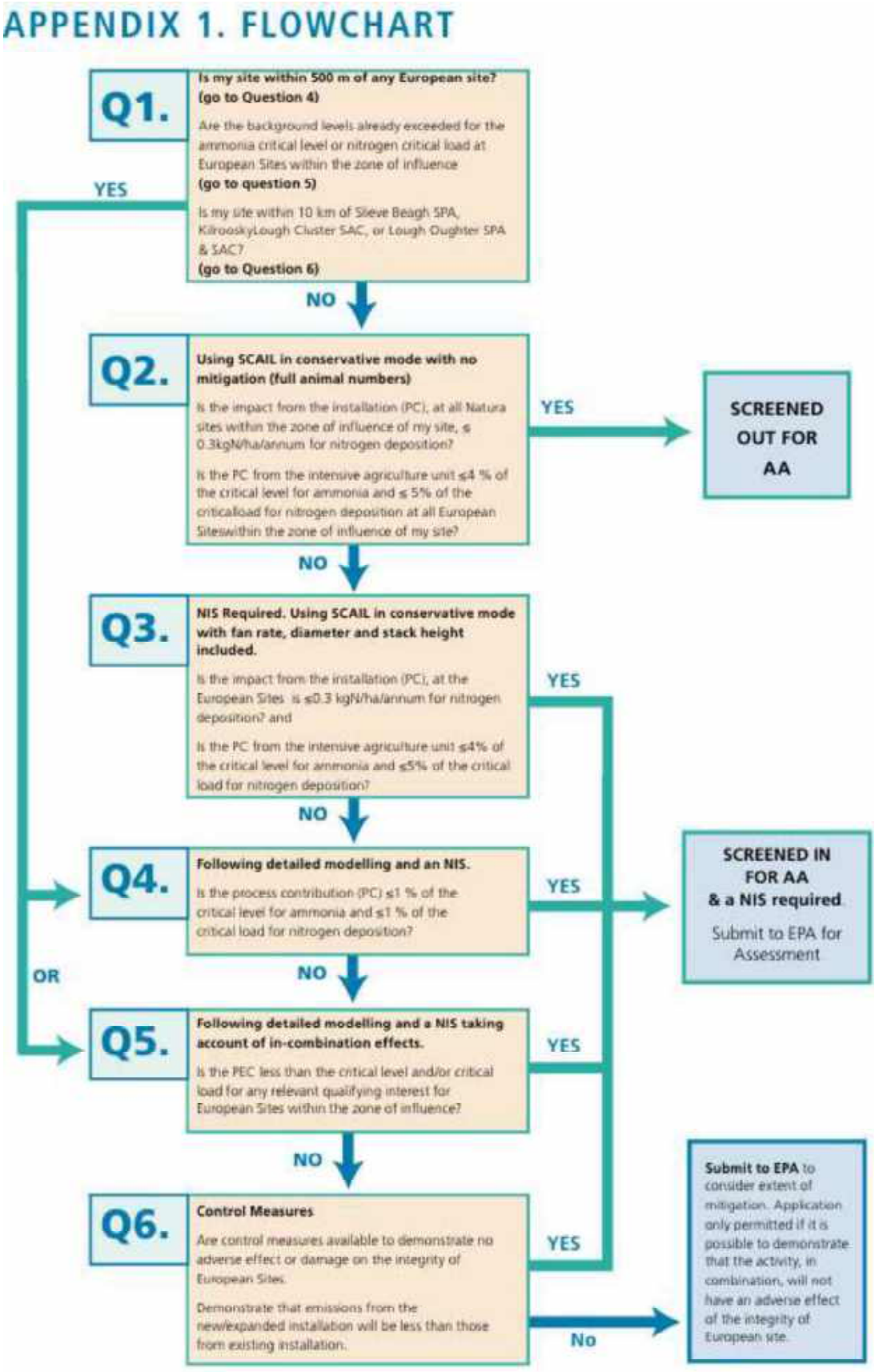
6 CUMULATIVE ASSESSMENT

The EPA have provided Guidance to assist applicant in assessing the impact of ammonia emissions to air and nitrogen deposition (from NH_3 and NO_x) on European sites when preparing licence/licence review applications for industrial sites. The Guidance notes the following in relation to Appropriate Assessment

> *'An Appropriate Assessment (AA) is an assessment of the potential adverse effects of a plan or project (either alone or in combination with other plans or projects) on European sites. Regulation 42 of the Habitats Regulations requires the Public Authority to undertake screening for AA and where necessary AA of any plan or project for which an application/review for consent is received. In relation to the licence applications which are the subject of this Instruction Note it is the EPA that undertake the AA screening and where required undertake the AA.*
>
> *This Instruction Note focuses on ammonia emissions and nitrogen deposition, but the approach may also be applied to NO_x and SO_2 specifically in the context of AA.'*

Appendix 1 of the document shows a flowchart for undertaking a cumulative impact assessment of a nearby industrial installation, which is shown below:

Figure 2: Flowchart for undertaking a Cumulative Assessment of a nearby Industrial Installation.



The following points detail whether or not a cumulative assessment is necessary as part of this assessment.

- It is noted that Question 1 of the flowchart states,

  "Is my site within 500m of any European site?

  It can be seen from Table 9 above that there are no European sites within 500m, as such the assessment continues to Part 2 of Question 1.

- *"Are the background levels already exceeded for the ammonia critical level or nitrogen critical load at European Sites within the zone of influence"*

  It can be seen from Tables 12 and 15 that the background levels are exceeded for the ammonia critical level and nitrogen critical load at European Sites within the zone of influence. Therefore, the assessment continues to Question 5.

- *"Is the PEC less than the critical level and/or critical load for any relevant qualifying interest for European Sites within the zone of influence?*

  It can be seen from Table 12 above that the PEC is less than 1% and as a result a cumulative assessment is not required for this application.

Taking into account the points above, a cumulative/ in-combination assessment is not required for this application.

7 CONCLUSIONS

An air quality impact assessment has been undertaken for a proposed poultry shed at Carrickbaggot, Grangebellew, Co. Louth.

Modelling has been undertaken to determine the impact associated with proposed shed assuming the maximum capacity of the sheds (64,000 in the proposed shed), the lowest possible temperature of the birds during a crop cycle (20^{0}C) and an average fan capacity of the proposed stacks.

It is expected that the typical operation of the site will result in lower predicted ammonia and nitrogen impacts at the closest sensitive receptors than the worst case results presented in this report.

The predicted results of the ammonia modelling process show that the limits for the protection of vegetation are not exceeded at the designated habitats within the vicinity of the poultry farm. Thus, any areas of ecological interest will not be adversely affected from the ammonia emissions for the operation of the farm.

Table 16 below details the maximum impact at the closest receptors for ammonia and nitrogen.

Table 16: Maximum predicted impact at closest sensitive receptors

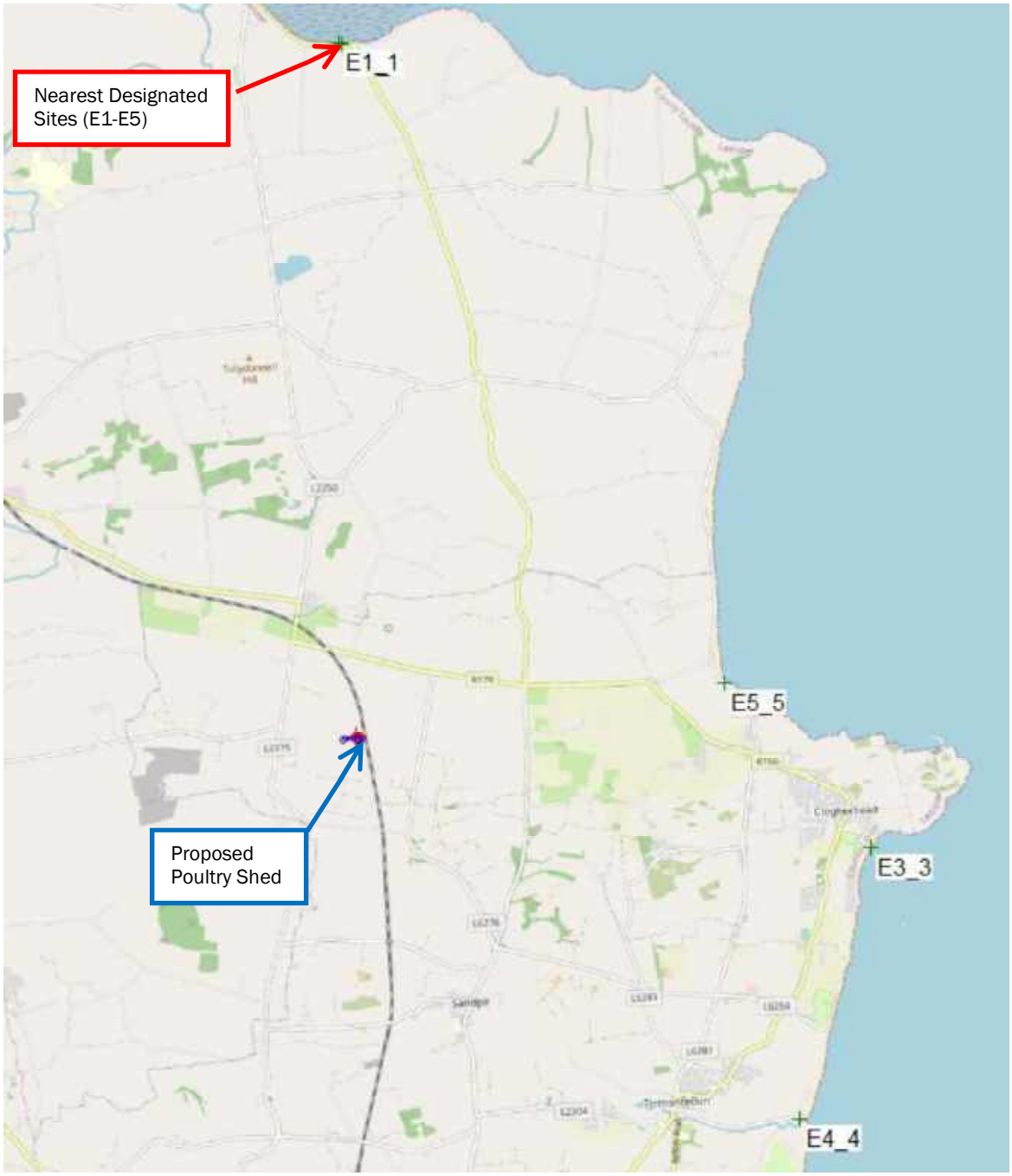
Receptor	Pollutant	Limit Type	Units	Limit Value	Baseline	Max Level	PEC	PC of limit (%)	PEC of Limit (%)
E3	Ammonia	Annual Average	µg/m^3	1	1.94	0.009	1.949	**0.87**	195
E5	Nitrogen	Annual Average	kg.N/ha/ yr	20	6.83	0.123	6.953	**0.62**	35

It can be seen from the Table above and as discussed in detail in this assessment, the predicted impact of each pollutant is within the appropriate limit/ threshold level.

Appendix C indicates the predicted dispersion of the ammonia plume for 2019 at the site.

APPENDIX A SITE LAYOUT

Figure 3: Proposed Site Layout & Nearest Sites.



**Exact co-ordinates of the closest designated sites were obtained from SCAIL and are detailed in Table 9 above.*

APPENDIX B SOURCE AND RECEPTOR LOCATIONS

The information below details the AERMOD model inputs, specifically in relation to source locations, building inputs and grid receptor inputs.

Table 17: Building Location

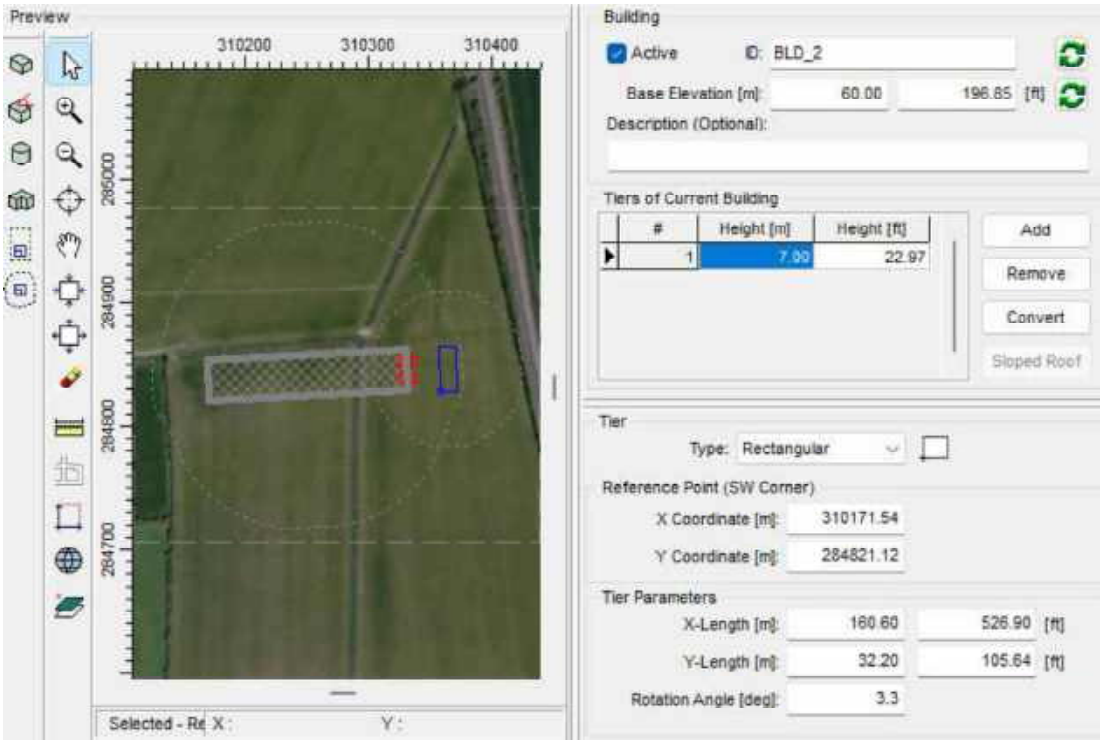
Building Number	Irish Grid Co-ordinates (SW Corner)
1	310172 284821
Manure Store (Proposed)	310359 284828

Table 18: Poultry Shed Source Locations

Building Number	Section	Fan Type	Source	Approx. Irish Grid Co-ordinates (to the nearest 1m)	
1	1	EM50	1	310331	284858
			2	310331	284850
			3	310332	284842
			4	310332	284834
			5	310331	284858
			6	310331	284850
			7	310332	284842
			8	310332	284834
Manure Store (Proposed)		Line Source (Start)		310364	284865
		Line Source (End)		310366	284828

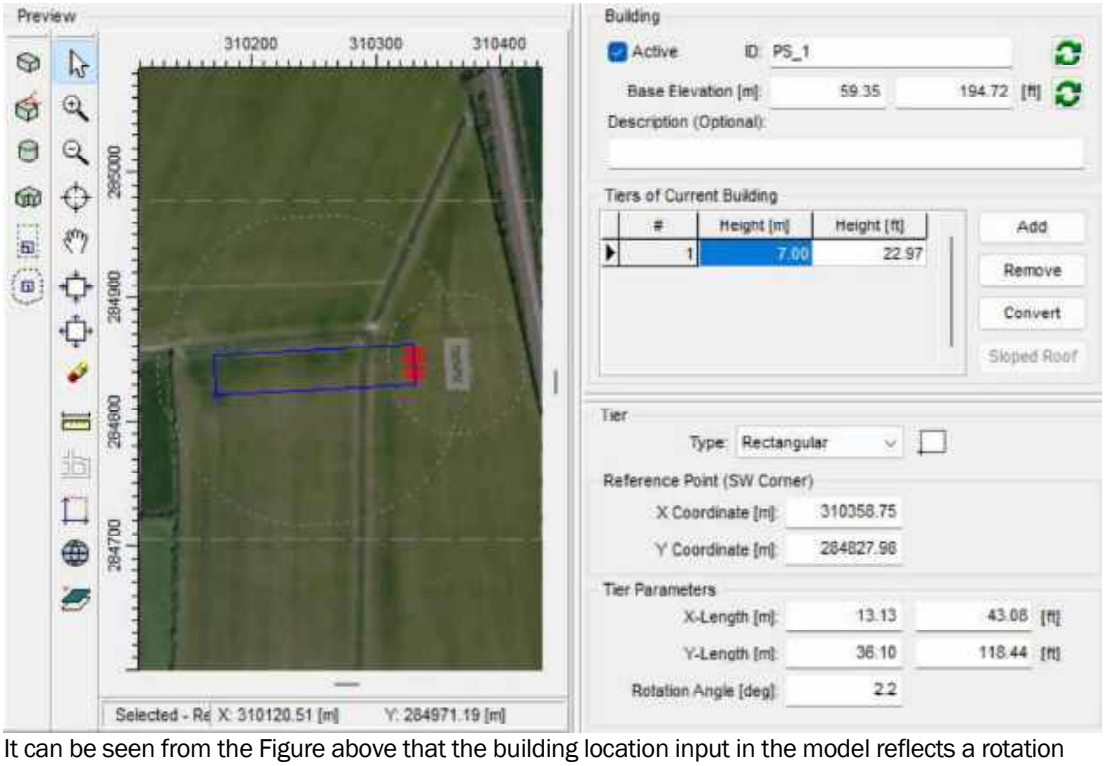
For the proposed shed, a total of 8 x EM50 horizontal fans were input into the AERMOD model to represent these fans. The model has taken account of all 64,000 proposed birds.

Figure 4: Proposed Building Inputs



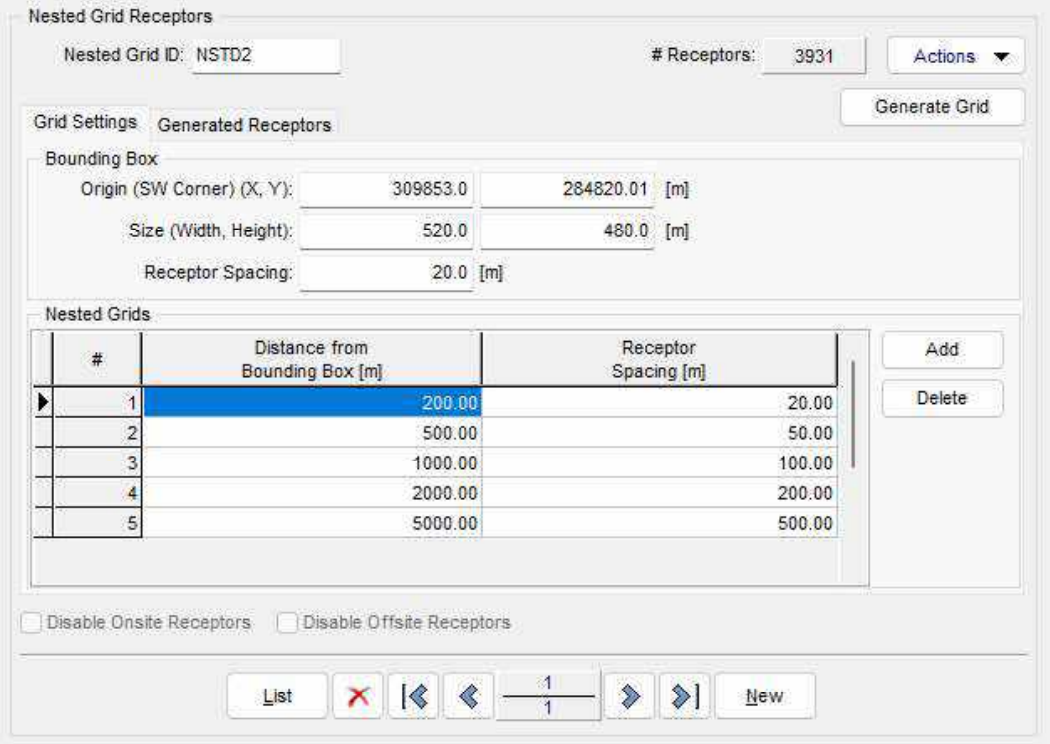
It can be seen from the Figure above that the building location input in the model reflects a rotation angle of 3.3 degrees.

Figure 5: Manure Store Inputs



It can be seen from the Figure above that the building location input in the model reflects a rotation angle of 2.2 degrees.

Figure 6: Details of Nested Grid Receptor– Ammonia

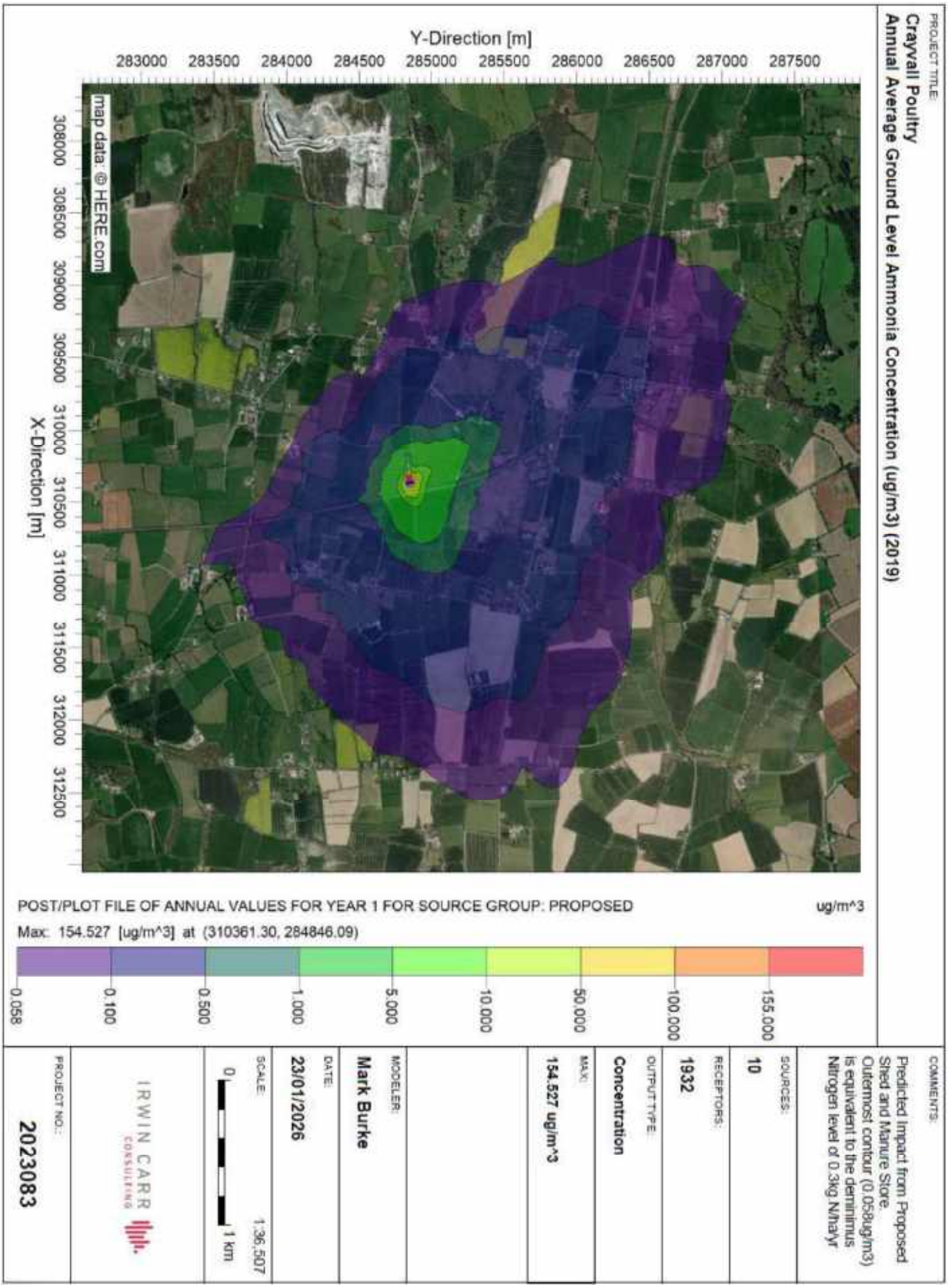


The Figures above detail the inputs of the Nested grid receptor that was used to show the expected ammonia contour/ plume in the vicinity of the proposed site.

APPENDIX C MODELLING RESULTS

The ammonia plume below shows the annual average ammonia impact in the vicinity of the site. It should be noted that the outermost contour (0.058µg/m^3) corresponds to a nitrogen deposition of 0.3kg.N/ha/yr, which is considered deminimus for the purposes of a Nitrogen assessment.

There are no sensitive habitats located within this area (the 0.058µg/µm^3 contour line) that would be subject to a nitrogen deposition that is considered 'significant' (0.3kg.N/ha/yr).


PROJECT TITLE:
Crayvall Poultry
Annual Average Ground Level Ammonia Concentration (ug/m3) (2019)
Y-Direction [m]
283000 283500 284000 284500 285000 285500 286000 286500 287000 287500
X-Direction [m]
308000 308500 309000 309500 310000 310500 311000 311500 312000 312500
map data: © HERE.com
POST/PLOT FILE OF ANNUAL VALUES FOR YEAR 1 FOR SOURCE GROUP: PROPOSED
ug/m^3
Max: 154.527 [ug/m^3] at (310361.30, 284846.09)
0.058 0.100 0.500 1.000 5.000 10.000 50.000 100.000 155.000
COMMENTS:
Predicted Impact from Proposed Shed and Manure Store.
Outermost contour (0.058ug/m3) is equivalent to the deminimus Nitrogen level of 0.3kg N/ha/yr
SOURCES:
10
RECEPTORS:
1932
OUTPUT TYPE:
Concentration
MAX:
154.527 ug/m^3
MODELER:
Mark Burke
DATE:
23/01/2026
SCALE:
0 1 km 1:36,507
IRWIN CARR CONSULTING
PROJECT NO.:
2023083

APPENDIX D TECHNICAL SPECIFICATION

PRODUCT SHEET

Munters

Munters EM 50-52

Air extraction fans

The EM Series, the most well-known box fan family designed and produced by Munters, since the 1980s has delivered excellent performance in any livestock farming (broiler, layer, swine, dairy) and greenhouse application.

Features

- Superior durability with Munters Protect coating, 3 years warranty against corrosion
- Reliable, proven in the market for 40 years
- Light and air draft reduction, when shutter is closed
- Energy efficient solution
- Suited for tunnel ventilation

EM50 front view

EM52 rear view

Munters EM 50-52 are the ideal exhaust fans whenever extra high airflow capacity is required, even in high static pressure environments, thanks to their unique propeller shape that ensures full efficiency and reliability.

Munters EM Series features extra strength against corrosion with housing, conveyor and shutter in Munters Protect coated steel. For highly corrosive applications, the EMX50 version is featuring elements in stainless steel in addition to the Munters Protect.

The belt drive system enables low speed, to reduce energy consumption and noise, as well as to assure comfortable environment for animals and operators.

The patented centrifugal system provides an energy efficient solution and powerful springs keep shutters tightly closed when the fan is not turned on, avoiding air leakage and blocking light.

Munters EM 50-52 undergo strict quality control and performances are validated by tests carried out in BESS Lab at the Agricultural Engineering Department of University of Illinois (USA).

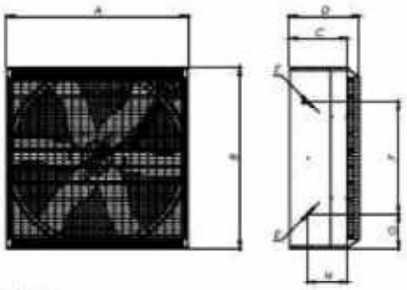
As market leader in ventilation solutions for more than 60 years, Munters guarantees quality and is ISO 9001 certified.

munters.com

Munters EM 50-52

Air extraction fans

Dimensions

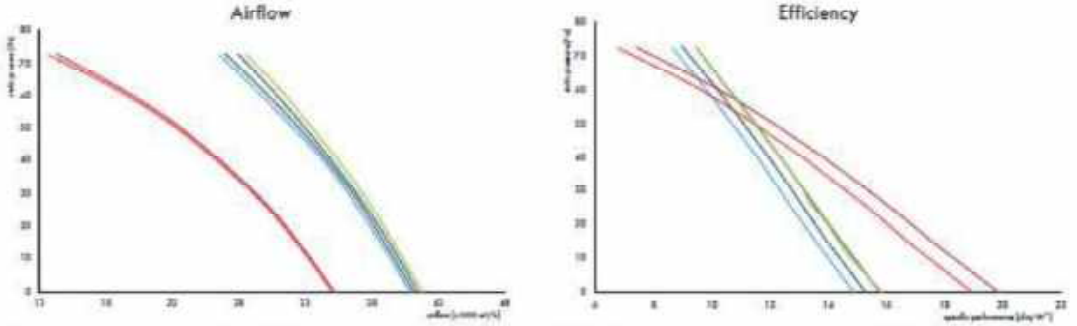


	EM/EMX50	EM52
A	1380 mm	1425 mm
B	1380 mm	1425 mm
C	450 mm	455 mm
D	540 mm	545 mm
E	M8	M8
F	830 mm	830 mm
G	275 mm	298 mm
H	308 mm	310 mm

Technical specifications

		EM/EMX50		EM52
Nominal power	Hp	1.0	1.5	2.0
Propeller diameter	mm [inch]	1270 [50]		1334 [52]
Number of blades/material		6/Munters Protect		6/Munters Protect
Number of shutter blades		10		10
Transmission		Belt drive		Belt drive
Weight of fully equipped fan	kg	84	86	90
Max power consumption/max current[1]	W/A	1150/2.1	1810/3.3	1770/3.5
Max operating temperature	°C [°F]	50 [122]		50 [122]
Max operating pressure	Pa	50		100
Motor insulation grade/protective class		F/IP55		F/IP55
Noise level[2]	Db(a)	67.6	70.4	70.3

[1]50 Hz 400 V specification, 60 Hz available upon request, [2]Noise measure made according to ISO 3744



Airflow and efficiency data measured at standard conditions (20°; 1013 hPa). *1 cfm/W = 1.7 m³/hW

Load capacity

	EM/EMX50		EM52	
	Unassembled	Assembled	Unassembled	Assembled
20' Container	170 (120')	24	120	24
40' Container	-	49	-	49
40' HC Container	300	57	300	57
Truck	328	65	328	64

Pyramidal mesh for installation below 2.7 m available upon request. 'With CE plastic protection

Find your nearest Munters office at **www.munters.com**

FS_EM50_52_202203_EN

Our Ref: IE2888/PMS/8411

Your Ref: ABP-320010-24

Date: 29th January 2026

IE CONSULTING
WATER-ENVIRONMENTAL-CIVIL

The Planning Inspector

An Coimisiún Pleanála

64 Marlborough Street

Dublin 1

Dear Sir/Madam

Re: Crayvall Egg Production Ltd, Carrickbaggot, Grangebellew, Co Louth – Planning Authority Reference No. 2460189

We refer to your correspondence dated 09th January 2026, and specifically Point 1 of the correspondence as duplicated below:

1. **Policy Objective NBG 20 of the Louth County Development Plan 2021-2027 seeks to protect and enhance wetland sites. Policy Objective ENV 15 required that proposed plans, programmes and projects shall not have an unacceptable impact on the water environment, including groundwater quality and quantity. The wetland site at Carrickbaggot is identified in the Louth County Wetland Survey as being of National importance. Having regard to the location and volume of groundwater abstraction, you are required to assess the significance of same alone and cumulatively, and to assess the impact of abstraction on water (ground water resources), material assets (water supply) and biodiversity (wetlands).**

In respect of Point 1 above we hereby respond as follows:

The assessment of potential impact on water (ground water resources), material assets (water supply) and biodiversity (wetlands) as requested above is made on the basis of the proposal to abstract groundwater at the location of the development as proposed via a new proposed groundwater borehole or suitable well installation, and as was presented in the planning application submission (Planning Ref: 2460189 – Louth County Council).

It is now proposed that the main and primary source of water supply for the development as proposed shall be supplied via a local potable mains source, which is currently operated, managed and maintained by the Ballymakenny/Sandpit Group Water Scheme, Galroostown, Termonfeckin, Drogheda, Co Louth. This scheme shall supply all of the required water demand to the development as proposed. In this regard there is now no requirement or no proposal to abstract groundwater at the location of the development as proposed via a new groundwater borehole or suitable well installation.

In consideration of the proposal now to acquire all of the required water demand for the development as proposed from the Ballymakenny/Sandpit Group Water Scheme, and in particular consideration that there is now no proposal to abstract groundwater at this location, in comparison to the existing undeveloped scenario, the development as proposed will not result in an adverse impact on water (ground water resources), material assets (water supply) or biodiversity (wetland).

The Ballymakenny/Sandpit Group Water Scheme have provided written confirmation that their scheme has sufficient capacity to supply the required daily water demand of the development as proposed (see copy of confirmation contained in *Appendix A*).

The main source of the Ballymakenny/Sandpit Group Water Scheme is in excess of 6 KM from the site of the proposed development and the location of the wetland site at Carrickbaggot.

In summary, in consideration of the proposal now to acquire all of the required water demand for the development as proposed from the Ballymakenny/Sandpit Group Water Scheme, in comparison to the existing undeveloped scenario, the development as proposed will not result in an adverse impact to the existing hydrogeological and ground water regime of the area, and, in terms of ground water resources, will not adversely impact the existing status of the wetland site at Carrickbaggot.

Yours Sincerely

Paul McShane

Senior Hydrological Engineer

For IE Consulting

Appendix A

Ballymakenny / Sandpit Ground Water Scheme
Written Confirmation

Ballymakenny/Sandpit Water Scheme
Galroostown, Termonfeckin, Drogheda, Co Louth.

Email: ballymakennysandpitgws@gmail.com

16 Jan 2026

Planning Application: Louth County Council

Applicant: Dermot Herlihy, Managing Director, Belview Egg Farm Ltd.

Location: Carstown, Drogheda, Co. Louth, A92 AT28

To: Planning Section of Louth Co. Council:

REF: Planning Application

Dear Sir / Madam,

The Ballymakenny/Sandpit Group Water Scheme can confirm that it currently has sufficient capacity to supply 25 cubes per day capacity available to Crayvall Egg Production Ltd and excess if needed. Note: Supply cannot be absolutely guaranteed in perpetuity.

Regards,
Sarah Jane Stanley

On behalf of Ballymakenny/Sandpit Water Scheme.

Ballymakenny/Sandpit Water Scheme
Galroostown, Termonfeckin, Drogheda, Co Louth.

Email: ballymakennysandpitgws@gmail.com

16 Jan 2026

Planning Application: Louth County Council

Applicant: Dermot Herlihy, Managing Director, Belview Egg Farm Ltd.

Location: Carstown, Drogheda, Co. Louth, A92 AT28

To: Planning Section of Louth Co. Council:

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Regards,
Sarah Jane Stanley

On behalf of Ballymakenny/Sandpit Water Scheme.

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Licence Application Instruction Note 1 (IN1)

Assessing the Impact of Ammonia Emissions and Nitrogen Deposition from Intensive Agriculture Installations on European Sites

Published by Environmental Protection Agency, Ireland

DISCLAIMER

ISBN: 978-1-80009-204-4

September 2024 Version 3

1. INTRODUCTION

This Instruction Note is to assist applicants/licensees, within the intensive agriculture sector, in assessing the impact of ammonia emissions to air and nitrogen deposition (from NH_3 and NO_x) on European Site(s) when preparing licence/licence review applications.

European Site(s) also known as Natura 2000 Sites are a European network of important ecological sites. The EU Habitats Directive (92/43/EEC) placed an obligation on Member States of the EU to establish the Natura 2000 network. The network is made up of Special Protection Areas (SPAs), established under the EU Birds Directive (2009/147/EC), and Special Areas of Conservation (SACs), established under the Habitats Directive itself. The European Communities (Natural Habitats) Regulations, 2011 as amended transpose these EU Directives into Irish national law. More information on the European site(s) in Ireland can be found on the National Parks and Wildlife Service (NPWS) webpage at *www.npws.ie/protected-sites*.

An Appropriate Assessment (AA) is an assessment of the potential adverse effects of a plan or project (either alone or in combination with other plans or projects) on European site(s). Regulation 42 of the Habitats Regulations requires the Competent Authority to undertake screening for AA and where necessary AA of any plan or project for which an application/ review for consent is received. In relation to the licence applications which are the subject of this Instruction Note, it is the EPA that undertake the AA screening and where required undertake the AA.

Potential impacts at European site(s) from pig or poultry intensive agriculture installations (IAI) are ammonia emissions to air and associated nitrogen deposition. These installations by their nature, generate quantities of these pollutants which require assessment to demonstrate they will not impact on European site(s).

This Instruction Note and flowchart in Appendix 1 are designed to assist in determining the course of action to be taken when evaluating the impacts on European Site(s) of ammonia emissions to air and nitrogen deposition from intensive agriculture installations. Each of the questions set out later in this document must be addressed sequentially, in the order presented in the flowchart in Appendix 1.

This Instruction Note focuses on ammonia emissions and nitrogen deposition but the approach may also be applied to NO_x and SO_2 specifically in the context of AA.

1.1 FIRST STEPS

Before using the flowchart, the applicant/licensee will need site specific information available to them and may need to carry out air dispersion modelling on the air emissions from the installation. Air dispersion modelling should be conducted in accordance with the EPA "Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)" or similar guidelines from a recognised authority.

The information the applicant/licensee will need includes key pieces of information in relation to European site(s), their qualifying interests and conservation objectives as well as relevant critical loads/levels and background concentrations at the European site(s). The applicant/licensee shall identify all the European Site(s) within the zone of influence of the activity and their appropriate critical levels for ammonia and the critical loads for nitrogen deposition. On-line tools, namely Air Pollution Information Systems (*APIS*[1]) or Simple Calculation of Atmospheric Impacts Limits (*SCAIL*[2]) should be used to identify the critical levels and critical loads for each qualifying interest habitat or species in each European Site included in the assessment. Both APIS and SCAIL contain the same data in relation to critical loads/levels. The National Parks and Wildlife Service (NPWS) are the responsible authority for setting critical levels and loads in Ireland and have been part

1 The Air Pollution Information System (APIS) provides a searchable database and information on pollutants and their impacts on habitats and species.

2 *http://www.scail.ceh.ac.uk/*

of the development of the APIS application in Ireland. In relation to critical loads for nitrogen deposition, these are usually given as a range of values, and the lowest figure in the range (i.e. the most conservative), for that habitat/species, must be used unless otherwise justified.

This instruction note shall be reviewed and updated where necessary.

2. DEFINITION OF TERMS

Term	Definition
Activity	Any process, development or operation specified in the First Schedule of EPA Act 1992 as amended, and carried out in an installation.
Appropriate Assessment	An appropriate assessment (AA) is an assessment of the potential effects of a plan or project (either alone or in combination with other plans or projects) in view of the conservation objectives of Special Areas of Conservation and Special Protection Areas (European Site(s)).
Background concentration	Existing ambient levels/loads, including contributions from operational activities, developments etc.
Best Available Techniques (BAT)	As set in Commission Implementing Decision (CID) Ref: 2017/302.
Critical Level for ammonia (Cle) expressed as µg/m³	Concentration of ammonia in the atmosphere above which direct adverse effects on receptors, such as plants and ecosystems may occur according to present knowledge.
Critical Load for nitrogen deposition (CLo) expressed as kg/ha/year	A quantitative estimate of exposure to nitrogen deposition below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge.
Development	Has the meaning assigned to it in the Planning and Development Act 2000 as amended.
Installation	A stationary technical unit or plant where the activity concerned referred to in the First Schedule of EPA Act 1992 as amended is or will be carried on, and shall be deemed to include any directly associated activity, which has a technical connection with the activity and is carried out on the site of the activity.
Natura Impact Statement (NIS)	A report prepared by the applicant comprising the scientific examination of a plan or project and the relevant European Site or European Site(s), to identify and characterise any possible implications of the plan or project individually or in combination with other plans or projects in view of the conservation objectives of the site or sites, and any further information including, but not limited to, any plans, maps or drawings, scientific information or data required to inform the Appropriate Assessment.
Process Contribution (PC)	Contribution of a substance from the installation to atmospheric levels/ deposition, modelled at a receptor location.
Predicted Environmental Contribution (PEC)	All relevant PCs in combination plus the background at a receptor location.
Intensive agriculture installations (IAI)	Intensive agriculture installations as licensed under 6.1 and 6.2 of the First Schedule of the Environmental Protection Agency Acts 1992 as amended.

Term	Definition
Zone of Influence	The zone of influence of a development/activity is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. The zone of influence should be established using the Source-Pathway-Receptor model and not by arbitrary distances; however, the following exceptions occur (see question 1 later in this document), the installation is located within: ◢ 500 m of any European Site, or ◢ 10 km of one or more of the following named European site(s): ▼ Slieve Beagh Special Protection Area (SPA) (004167), ▼ Kilroosky Lough Cluster Special Area of Conservation (SAC) (001786), ▼ Lough Oughter designated as both a SAC (000007), or ▼ Lough Oughter SPA (004049). Reference may also be made to published guidance on this topic from authorities in other European jurisdictions where relevant.

3. INSTRUCTIONS ON THE USE OF THIS INSTRUCTION NOTE TOOL

3.1 APPROPRIATE ASSESSMENT

An appropriate assessment (AA) is an assessment of the potential effects of a plan or project (either alone or in combination with other plans or projects) in view of the conservation objectives of Special Areas of Conservation and Special Protection Areas (European Site(s)).

As stated previously, the EPA is required to undertake Stage 1 Screening for AA and where necessary, a Stage 2 AA of any plan or project for which an application/review for consent is received. The applicant/licensee must provide the EPA with the required information, as outlined below, to allow the EPA to conduct the AA screening and any subsequent AA and draw its conclusions.

In Addition to APIS and SCAIL, an AA mapping tool, i.e. the AA GeoTool application, helps with the data gathering process of Stage 1 and Stage 2 Appropriate Assessment. The EPA and the National Parks and Wildlife Service (NPWS) have worked together to develop the AA GeoTool.

The AA GeoTool can be found at the following link:

https://gis.epa.ie/EPAMaps/AAGeoTool

Details on the use of this GeoTool can be found at the link below:

http://www.epa.ie/terminalfour/AppropAssess/index.jsp

Questions 1 and 2 in the flowchart in Appendix 1, are related to the AA screening stage determining whether Appropriate Assessment is required. These questions are intended to guide applicants/licensees and do not result in formal screening conclusions. A formal AA screening determination will be carried out by the EPA in view of best scientific knowledge and in view of the conservation objectives of the European site(s) when an application is received.

3.2 CONFIRMATION OF BACKGROUND AMMONIA LEVELS AND NITROGEN LOADS AT EUROPEAN SITE(S)

Background levels are existing ambient levels/loads, and include contributions from operational activities, developments etc. Background concentrations/levels (BC) for ammonia and nitrogen deposition at the European site(s) shall be obtained by the applicant/licensee, as stated previously, from APIS or SCAIL. Please note that when retrieving background data levels from APIS or SCAIL, that the datasets are from different jurisdictions (i.e. Ireland and Northern Ireland). Therefore, when assessing potential impacts at a European site within Northern Ireland, then the Northern Ireland dataset should be selected on APIS/SCAIL. This is done by switching the country selected from Ireland to Northern Ireland.

The applicant/licensee should note the date of the background data used when considering what operational plans and projects are already included in the background. If the applicant/licensee is proposing to use other site-specific background data, clear scientific justification must be provided.

Where background levels already exceed critical levels/loads at sensitive receptors within the zone of influence, detailed modelling of emissions, including in-combination effects, a Natura Impact Statement (NIS) and additional mitigation measures will be required.

On-site assessments of the sensitive receptor (e.g. at specific locations within a European site), to demonstrate impacts have not already occurred, may be required as part of the assessment process.

3.3 SCREENING DISTANCE

Where an IAI is within **500 m** of a European Site, an AA assessment using detailed modelling and a NIS is automatically required for that development. In the case of an IAI within 10 km of the Natura sites: Slieve Beagh Special Protection Area (SPA) (004167); Kilroosky Lough Cluster Special Area of Conservation (SAC) (001786); or Lough Oughter designated as both a SAC (000007) and a SPA (004049), a detailed assessment using detailed modelling which includes cumulative impacts, and a NIS is also automatically required.

3.4 IDENTIFYING SENSITIVE RECEPTORS (EUROPEAN SITE(S))

Applicants/licensees should conduct screening assessments using the most up-to-date information available on the distribution of qualifying interests at European site. At the screening stage, the most conservative values, assigned to the most sensitive habitat/species for each European Site should be used, unless otherwise justified. For example, where large European site(s) are being considered, the most sensitive habitat/species may be located significant distances from the installation, and this would need be explained.

Additional Information on these sites can be found at:

http://www.epa.ie/terminalfour/AppropAssess/index.jsp

https://www.npws.ie/protected-sites

https://www.daera-ni.gov.uk/landing-pages/protected-areas

3.5 SIMPLE SCREENING AGAINST CRITICAL LEVELS AND CRITICAL LOADS

Notwithstanding the scenarios already described, screening carried out at the pre-application stage will assist the applicant/licensee to determine whether detailed modelling is required in support of a licensing application/review. This basic assessment can be completed using the free on-line SCAIL tool using the conservative model mode.

Other screening models are available should applicants/licensees wish to use them.

3.6 ASSIGNING CRITICAL LEVELS AND CRITICAL LOADS

At all European Site(s), the appropriate ammonia critical level and nitrogen critical load should be determined. As stated, the on-line tools Air Pollution Information Systems (*APIS*[3]) or Simple Calculation of Atmospheric Impacts Limits (*SCAIL*[4]) should be used to identify the critical levels and critical loads for each qualifying interest habitat or species in each European Site included in the assessment.

Information on the conservation objectives for each site must be obtained from either:

https://www.npws.ie/protected-sites

https://www.daera-ni.gov.uk/landing-pages/protected-areas

https://www.rivm.nl/bibliotheek/rapporten/680359002.pdf

For ammonia critical levels where:

- Lichens and bryophytes (moss and liverworts) are integral to the sensitive receptor and/or are a qualifying interest for the site, apply a critical level of 1 µg/m^3.
- Lichens and bryophytes are not a qualifying interest for the site or integral to the sensitive receptor then apply a critical level of 3 µg/m^3.

3 The Air Pollution Information System (APIS) provides a searchable database and information on pollutants and their impacts on habitats and species.

4 *http://www.scail.ceh.ac.uk/*

Nitrogen critical loads are based on the sensitivity of each habitat and differ accordingly. Nitrogen critical loads are expressed as a range (e.g. 10 – 20 kgN/ha/yr). As stated, at screening stage, the most conservative values, assigned to the most sensitive habitat/species for each European Site should be used unless otherwise justified with reference to data obtained from the NPWS or the Department of Agriculture, Environment and Rural affairs (DAEAA) in Northern Ireland DAERA.

3.7 DETERMINING IMPACT FROM THE IAI TO BE UNDETECTABLE

Based on research, a nitrogen deposition level of ≤0.3 kgN/ha/annum is undetectable. This is considered in this screening process. If an IAI can demonstrate, using a screening model (with no mitigation measures considered), (see Section 3.8 below), that emissions from the site meet this criterion, in addition to the PC from the installation being ≤4 % of the critical level for ammonia and ≤5 % of the critical load for nitrogen deposition, then the European site may be screened out for AA. This does not apply IAI within 10 km of the Natura sites: Slieve Beagh SPA, Kilroosky Lough Cluster SAC and Lough Oughter SAC & SPA.

3.8 DATA REQUIRED WITH YOUR APPLICATION/REVIEW DOCUMENTS

When using a screening model, such as SCAIL Agriculture, the applicant/licensee must ensure that for AA stage 1 (AA screening) submission to the EPA, the fan speeds at the discharge point(s) are set to zero and discharge height (for the discharge point(s)) are set to roof height in the model input parameters. This is to ensure mitigation measures are not considered during the AA screening process. When submitting the results of the screening model, the applicant/licensee will need to include the following information with their licence application/review:

Screening Model Input data:

- flow velocity, (confirm it has been set to zero),
- fan diameter,
- number of animal units in assessment i.e. animal numbers,
- type(s) of animal housed in the installation,
- number of houses associated with each type of animal, where applicable,
- roof height, (confirm stack height not used),
- size & capacity of site manure store(s) or slurry tank(s), if applicable, and
- screen shots of the SCAIL input and output data or SCAIL input and output files.

If detailed modelling is conducted, information submitted in the modelling report should be sufficiently detailed to allow the regulator to determine whether the modelling has been undertaken in accordance with Air Dispersion Modelling from Industrial Installations Guidance Note (AG4). It should also be sufficiently detailed that an independent model user could replicate the modelling based on the information contained in the modelling report (and associated computer files).

3.9 OTHER SOURCES WHICH MAY ACT IN-COMBINATION WITH THE APPLICATION/REVIEW INSTALLATION

In the context of Question 5 the applicant/licensee must consider in-combination effects. In doing so they must consider site specific factors such as the location of the installation with regard to proximity to European Site(s) and other sources of ammonia and nitrogen. Caution is needed to avoid an overly conservative approach here when estimating the combined effects which arise from spatially discrete sources, attention needs to be paid to sources where the impact footprints are overlapping with the installation i.e. the in-combination assessment can be geographically constrained. Specific considerations include:

- sources and type/quantity of air emissions which may have in-combination effects, at the European Site(s), and
- sensitivity of the particular European Site(s) within the zone of influence and the particular vulnerability of the habitats/species within.

At the relevant European site(s), all IAIs, which meet the following criteria (in SCAIL) and which (with abatement in place), have a PC of ≥4 % of the critical level for ammonia and/or ≥ 5 % of the critical load for nitrogen deposition at the relevant European Site(s) must be included:

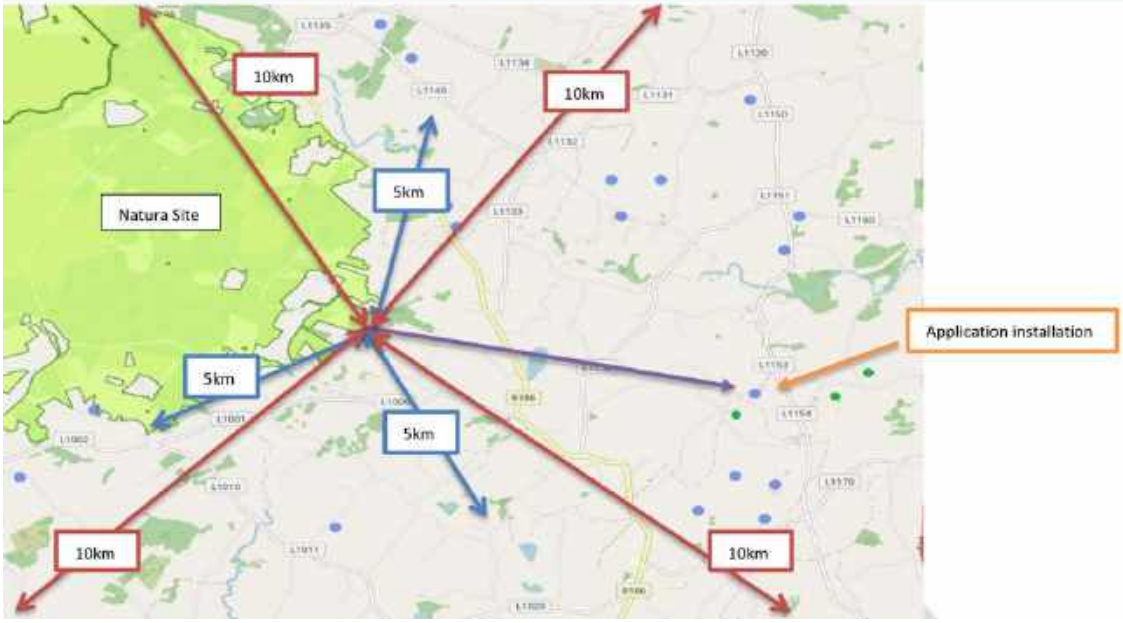
(i) developments/activities that are not yet operational or developments/activities that are not included in the background concentration, including both those above and below licensing thresholds (i.e. operational/expanded after the date of collection/modelling of the background data), and

(ii) developments/activities that have planning permission and/or licences but are not yet (fully) operating; including those both above and below licensing thresholds that may contribute to ammonia and/or nitrogen emissions.

The criteria to use to determine the geographical range of the installations, which meet the above criteria, to include in the in-combination assessment, is outlined below (See Figure 1).

- All below threshold developments/activities within 5 km of the European Site, [Blue lines on Figure 1].
- All licensed developments/activities within 10 km of the European Site [Red lines on Figure 1].
- In the case of the IAI within 10 km of any of the following European Site(s); Slieve Beagh SPA, Kilroosky Lough Cluster SAC or Lough Oughter SAC & SPA, the in-combination assessment shall include all developments/activities (EPA licensed and unlicensed) within 10 km of the Natura site.
- A clear justification of what PCs from other plans and projects are included or excluded shall be provided by the applicant/licensee.

Figure 1: Example of the range of IAI to be include in the in-combination assessment (illustration only, not to scale for location shown).



3.10 DEMONSTRATE THAT THERE WILL BE NO ADVERSE EFFECT TO SITE INTEGRITY

Where AA is required, consent can only be granted if it is possible to ascertain that the activity will not have an adverse effect on the integrity of European site(s) in view of the sites' conservation objectives.

In answering this question, the applicant/licensee will need to consider a range of factors specific to their circumstances including for example:

- the conservation objectives of the relevant European site(s),
- background pollution levels at the relevant European site(s),
- spatial scale and duration of predicted impact and ecological functioning of the affected area,
- site survey information, and
- any national, regional or local initiatives/trends which might be relied upon to reduce background levels at the European site(s).

All relevant National and European guidance on Appropriate Assessment should be consulted by the applicant/licensee. Specifically in respect of an assessment of air pollution impacts, the English nature conservation body (Natural England) has provided *guidance in respect of assessing air quality impacts in England in respect of road emissions.* Whilst not dealing with road emissions here, certain sections of Natural England's guidance are transferable to other air pollution sources so is referenced here by way of example.

If the BC of ammonia levels or nitrogen deposition already exceeds the critical level or critical load at a European Site within the zone of influence of the installation, no additional emissions that represents a risk of an adverse effect on the integrity of the European Site can be authorised. The applicant may wish to contact the EPA to discuss the details of the proposed application at a pre-application meeting at this stage.

Where an existing installation already contributes to an exceedance of the relevant critical level/ load, it will be necessary to demonstrate that a net reduction in emissions, will be achieved, to conclude that there will be no adverse effect on the integrity of the site.

4. THE ASSESSMENT PROCESS

The applicant/licensee should answer the following questions in sequence. (Flow diagram, Appendix 1)

Question 1

1. Is my site within 500 m of a European site?
2. Are the background levels already exceeded for the ammonia critical level or nitrogen critical load at European site(s) within the zone of influence of my site (as reported by APIS/SCAIL)?
3. Is my site within 10 km of Slieve Beagh SPA, Kilroosky Lough Cluster SAC, or Lough Oughter SPA & SAC?

IF ANSWER IS	
Yes, to question 1	Proceed to Question 4.
Yes, to question 2	Proceed to Question 5.
Yes, to question 3	Proceed to Question 6.
No, to all questions	Proceed to Question 2.

Question 2

Using SCAIL Agriculture in conservative mode with ventilation fans set to zero and the full (existing & proposed) animal numbers onsite, obtain the following data:

- Is the impact from the installation (PC), at all Natura sites within the zone of influence of my site, ≤0.3 kgN/ha/annum for nitrogen deposition?
- Is the PC from the intensive agriculture unit ≤ 4 % of the critical level for ammonia and ≤ 5 % of the critical load for nitrogen deposition at all Natura sites within the zone of influence of my site?

IF ANSWER IS	
Yes, to all questions	Application/review potentially screened out for AA (in relation to air emissions only) and can be submitted to the Agency for assessment.
No, to either question	Proceed to Question 3

Question 3 – Appropriate Assessment (NIS) Required

At this point, a full AA is required including the assessment of effects on the integrity of a European site. A more detailed air dispersion modelling assessment is required in conjunction with producing a NIS.

Using SCAIL in conservative model with fan rate and stack height included, answer the following questions:

- is the impact from the installation (PC), at the Natura site is ≤0.3 kgN/ha/annum for nitrogen deposition? and
- is the PC from the intensive agriculture unit ≤ 4 % of the critical level for ammonia and ≤5 % of the critical load for nitrogen deposition?

IF ANSWER IS	
Yes, to both questions	The application/review may be determined and should be submitted (along with a NIS) to the EPA for assessment.
No, to either question	Proceed to Question 4.

Question 4

The applicant/licensee is required to complete detailed modelling and a NIS. Air dispersion modelling should be conducted in accordance with the EPA's guidance "Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)" or similar guidelines from a recognised authority.

Following completion of the NIS and modelling, the results can again be assessed using the criteria below.

Thresholds: Is the process contribution (PC)

- ≤1 % of the critical level for ammonia?
- ≤1 % of the critical load for nitrogen deposition?

IF ANSWER IS	
Yes, to both questions	The application/review may be determined and should be submitted (along with a NIS) to the EPA for assessment.
No, to either question	Proceed to Question 5.

Question 5

At this stage the modelling must take account of effects which might arise in-combination with other plans and projects in addition to the background concentration (BC) to obtain a worst-case Predicted Environmental Concentration (PEC) at appropriate locations within each of the European Site(s) within the zone of influence. Air dispersion modelling should be conducted in accordance with the EPA's guidance "Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)" or similar guidelines from a recognised authority.

A clear justification of what is included and excluded in PCs from other plans and projects shall be provided by the applicant/licensee.

Thresholds: Is the PEC = [PC + Sum of PCs from other plans and projects + BC] less than the critical level, critical load the European site(s)?

IF ANSWER IS	
Yes	Submit assessment with application/review to EPA for consideration.
No	Proceed to Question 6.

Question 6

If the BC of ammonia levels or nitrogen deposition already exceeds the critical level or critical load at a European Site within the zone of influence of the installation, no additional emissions that represents a risk of an adverse effect on the integrity of the European Site can be authorised.

Are control measures available which:

1. Demonstrate that there will be no adverse effect on the integrity the European Site(s) and demonstrate that there will be no damage to the qualifying interest(s) of the European Site(s).

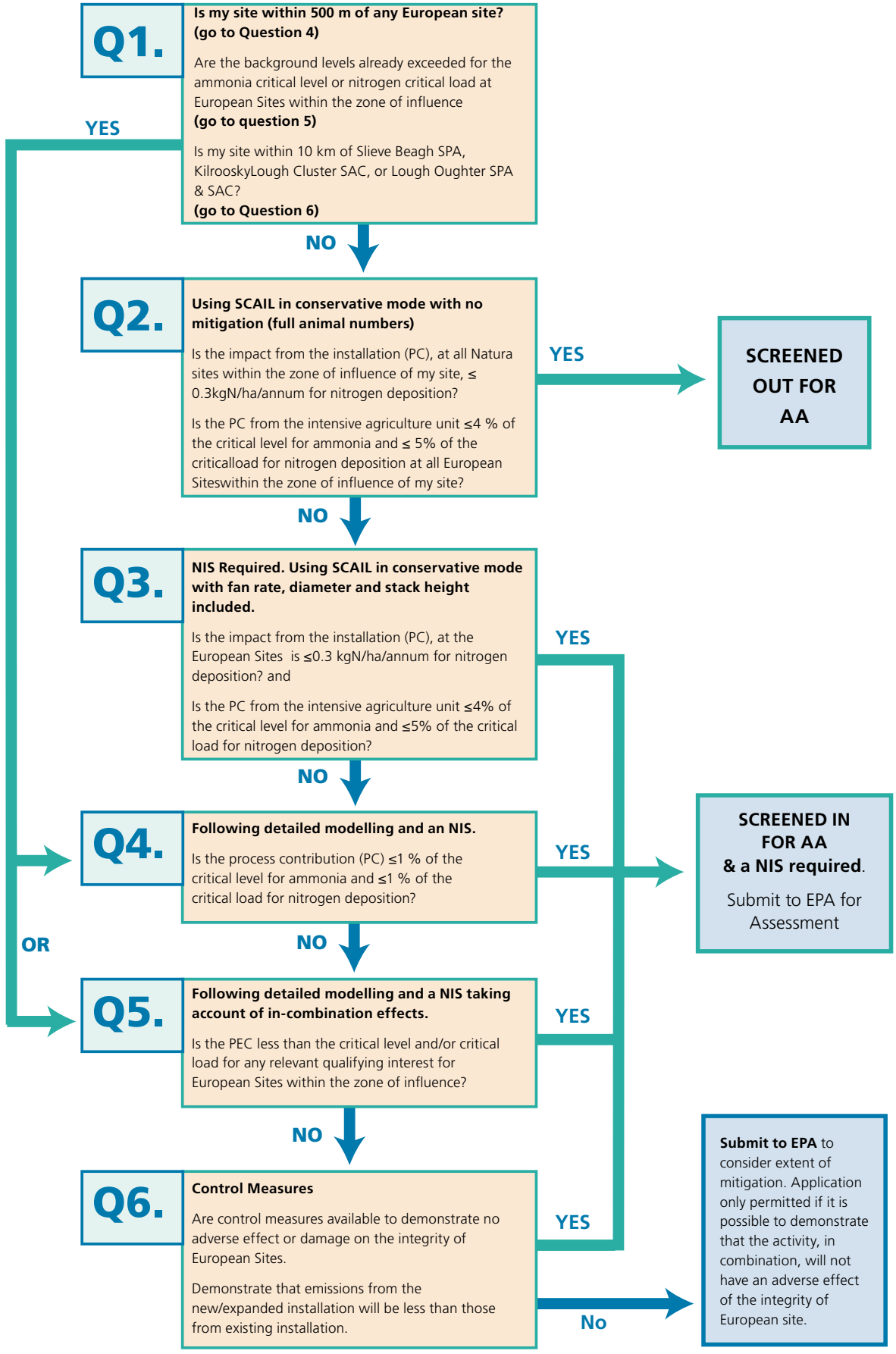
or

2. Where an existing installation already contributes to an exceedance of the relevant critical level/load, it will be necessary to demonstrate a net reduction in emissions, will be achieved in order to conclude that there will be no adverse effect on the integrity of the site.

IF ANSWER IS	
Yes, to any question	Assessments will be made on a case-by-case basis by the EPA considering all the material presented.
No, to any questions	The application/review may potentially be refused when all avenues to reduce the contributions are exhausted, and it cannot be shown that damage to the sensitive receptors will not occur*.

*Where a plan or a project is deemed to have an adverse effect on the integrity of a European site and no alternative solutions are available, the plan or project can only then proceed on the grounds of Imperative Reasons of Overriding Public Interest (IROPI). Refer to Article 6(4) of the EU Habitats Directive (92/43/EEC).

APPENDIX 1. FLOWCHART



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An Ghníomhaireacht um Chaomhnú Comhshaoil

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Poultry Farmer

Belview Egg Farm Ltd

Free Range Egg Production

Dermot Herlihy began egg production in 1978 with 5,000 hens expanding to 3 Enriched Colony Systems by 2010. In 2020, Belview established their free-range unit at Carrickbaggot in County Louth. The unit is divided into 4 multi-tier laying houses, each containing 15,000 birds and has a central egg collection room.

The farm is located on 168 acres of land. Point-of-Lay pullets are transferred at 16 weeks of age to the production house. Birds are given access to the range every day. Hens produce on average 346 eggs during the laying cycle of 60 weeks.

Farm Manager John Roche who has 10 years' experience with poultry runs both farms, with two full time and six part time staff. Rachel Johnson is the General Manager in Belview Eggs, with Dermot Herlihy as Managing Director.

Signpost Farm Measures Undertaken

Energy Efficiency

Energy efficiency is key in layer systems due to the amount of energy used in the system. Belview Eggs will establish the energy used by each system in the unit. By establishing the kW being used, methods to reduce this can be identified.

Carbon Footprint

Belview Eggs will aim to reduce the carbon footprint of producing Free Range eggs. To do this, the carbon footprint must be established. Once established, methods will then be identified and put in place to reduce the CO_2 produced per dozen eggs.

Manure Management

Belview Eggs export manure primarily to tillage producers in the local area. In conjunction with the tillage advisers a Nutrient Management Plan will be developed and implemented on the importing tillage farms.

Lidl Ireland Climate Supplier of the Year – 2022

Lidl Ireland ecognise Belview Eggs for establishing a carbon footprint for Free Range egg production in Ireland and Ireland's first poultry farmer to be part of the Teagasc Signpost Programme.

Belview Egg Farm are Teagasc's poultry Signpost Farm with Rebecca Tierney been their Teagasc poultry adviser. The company was established in 1978 by Dermot & Nicola Herlihy with a mere 5,000 hens and has since grown to Ireland's fourth largest egg packing centre and the largest egg packer and producer in Leinster. The company is currently run by Dermot Herlihy and Rachel Johnson. Belview supply eggs to Lidl, Musgraves, Iceland, Applegreen, BWG, Glanbia and Tesco. The packing centre employs 30 staff and additional 10 staff on their two poultry sites.

In 2020 Belview Eggs built the largest free range layer site in Ireland, Carrickbaggot Free Range Farm, situated on 168 acres of grassland. The house is constructed with four 15,000 bird units under one roof, with a central egg collection room. The unit is managed by John Roche, with the assistance of two full time staff, six part time staff and a robotic egg palletiser.

Belview Eggs have undertaken a number of measures through the Signpost Programme, these include the establishment of the kWh used for the production of free range eggs; as well as establishing a carbon footprint for free range eggs. When this has been completed, Belview Eggs will begin implementing strategies to reduce both energy usage and the farms carbon footprint.

Belview Eggs export manure primarily to tillage producers in the local area. In conjunction with the tillage advisers, a Nutrient Management Plan will be developed and implemented on the importing to tillage farms.

Belview Eggs are working to reduce their CO2 emissions by changing over to electric company cars with 4 vehicles in the fleet now fully electric.

The company also plans to remove all of its fluorescent lighting from both factory & farm and change to LED throughout.

92% of the egg cartons used at Belview Eggs have been changed over to pulp; 100% of their egg cartons are supplied by sustainably sourced suppliers.

Belview Egg Farm were recently awarded Lidl Ireland Climate Supplier of the Year for 2022. The award was received as recognition for Belview's work on establishing the carbon footprint of Free Range egg production and for being Irelands' first poultry farmer to be part of the Teagasc Signpost Programme. Belview Eggs were one of 5 company's first picked by Lidl in 2021 to be part of their Supplier Engagement Programme.

Our Ref: EIP00687

Crayvall Egg Production Ltd,
Belview Rd,
Carstown,
Drogheda,
Co. Louth,

March 26th, 2025

Re: Approval to implement measures under the Farming for Water EIP

Dear Crayvall Egg Production LTD,

I hereby confirm that your application to implement measures under the Farming for Water EIP has been approved. Total sum approved is **€15,185.00**

The approved measures are listed in the accompanying table, together with the methods of verification required, which can be emailed to verify@watereip.ie

Once a measure has been verified, the respective payment will issue within four weeks from the date of verification. Payments from the Farming for Water EIP will be an electronic funds transfer to the bank account provided with the application. You will be notified by a remittance email from *Tipperary County Council's Finance Section,* with the reference '**FarmingForWater**'.

You may now proceed to implement the measures at your earliest convenience, and no later than 12 months from date of this letter.

Measures approved under the Farming for Water EIP are in addition to requirements under the Good Agricultural Practice for Protection of Waters (GAP) Regulations. It is important to ensure that all requirements under the GAP Regs are adhered to.

Your ASSAP Advisor has also been notified of approval of your application.

Your sincerely,

Alan Walsh,
Finance Lead,
Farming for Water EIP

	Measure	Min	Max	Unit	Payment Rate	Quantity/ Area/ Length	One-off Payment	2025 Payment	2026 Payment	2027 Payment	Total	Requirement
1	Rainwater Management Plan	1	1	/plan	€250	1	€250.00				€250.00	
2	Farmer Training Course	1	1	/course	€156	1	€156.00				€156.00	Sign In/Out on attendance register
14B	Spatially targeted riparian buffer zones: *for areas min 0.05Ha max 0.1Ha* Note fencing can be applied for in conjunction with this measure, 30 & 31 only. **Min 1, max 5 combined between 14A, 14B, 14C.**	1	5	/unit	€915	1	€915.00				€915.00	Geotagged photo
14C	Spatially targeted riparian buffer zones: *for areas min 0.11Ha max 0.2Ha* Note fencing can be applied for in conjunction with this measure, 30 & 31 only. **Min 1, max 5 combined between 14A, 14B & 14C.**	1	5	/unit	€1,656	3	€4,968.00				€4,968.00	Geotagged photo
15A.1	3.0m margin	50	500	/m/yr	€1.71	200		€342.00	€342.00	€342.00	€1,026.00	Annual Geotagged Photo
17	Tree Planting within Buffer Zone	5	100	/whip	€16.00	100	€1,600.00				€1,600.00	Geotagged photo & proof of costs.
24	Sediment Traps	1	6	/unit/yr	€120	1	€120.00	€120.00	€120.00	€120.00	€480.00	Annual Geotagged photo
30	Bovine exclusion from water bodies	10m	1000m	/m	€2.77	1000	€2,770.00				€2,770.00	Geotagged photo & proof of costs
39	Host Farmer Payment	1	5	/farmer	€180	3	€540.00				€540.00	Course/Event form signed by ASSAP advisor
40	Contractor Mobilisation Fee	1	1	/applicant	€200	1	€200.00				€200.00	Reciept/ Invoice
42	Farmyard Bucket and Brush	1	1	50% of cost to max of	€2,000	1	€2,000.00				€2,000.00	Reciept/ Invoice
43	Slurry Testing	1	4	/farmer	€70	4	€280.00				€280.00	Submission of Slurry Testing Report
	Total						**€13,799.00**	**€462.00**	**€462.00**	**€462.00**	**€15,185.00**	

- Purple – fallen tree which we are keeping as our bug hotel
- Pink – new bee hotels
- Yellow – new tree planting
- Red – Sediment trap fenced off with cattle fencing

- This whole area is being replanted with multi species swards and wild flower (the weeds are blowing into our range area and causing issues so it really needs a clean up)

- Tree planting – strip along road is 63.5mtr = 21 trees
  strip along sediment trap roughly 15.3mtr = 5 trees
  13 Aspen, 4 Oak, 3 Goats Willow, 7 Silver Birch

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Townrath
Drogheda
Co. Louth

Drummonds
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SI-802509

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Newhouse Farm Services Ltd
Newhouse
Termonfeckin
Drogheda
Louth
Ireland

Invoice No SI-802509

Account No: FLY16
Reference: 090699
Invoice Date: 26 September 2025
Delivery Date(s):
Remarks:
All amounts are in € as on 17 February 2026

VAT 13B Authorisation No

Branch: Drogheda
Manager: Conor McKeown
Payment Terms: 30 Days(s) After Invoice Month End
Due Date: 30 October 2025
Other Terms:
Herd No.:

See https://drummonds.ie/terms-and-conditions/ for Drummonds Standard Terms & Conditions of Sale

No	Code	Name	Quantity	Tonne	Price	VAT Exc	VAT	VAT Inc	VAT Code
1	GMUL1	Multispecies MSS Measure 1Ac Pk	10.000		95.00	950.00	0.00	950.00	VAT R 0%
	Batch No: 2524MS04 Qty: 10.000								
2	GSUP1	Supergrow Permanent Pasture 1 Acre	1.000		76.00	76.00	0.00	76.00	VAT R 0%
	Batch No: 2524SGW02 Qty: 1.000								
					Total:	1,026.00	0.00	1,026.00	

Bank Name: Bank of Ireland, Bank Branch: Dunboyne, Co. Meath, Bank Account: 27369131, Bank Sort Code: 90-33-49, BIC/SWIFT Code: BOFIIE2D, IBAN: IE25BOFI90334927369131

Invoice

Invoice	Order Date	Issue Date
INV41419	February 16, 2026	February 16, 2026

Supplier

Seeds Ireland
Old Schoolhouse
Patrickswell, Limerick
Ireland
IE3771234JH

support@seedsireland.ie
061-320900

Ship To

Rachel Johnson
Belview Egg Farm
Carstown
Drogheda, Louth
Ireland - A92 AT28

racheljohnson014@gmail.com
+353863374610

Bill To

Rachel Johnson
Belview Egg Farm
Carstown
Drogheda, Louth
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racheljohnson014@gmail.com
+353863374610

Item	Unit Price	TAX %	TAX Amount	Qty.	Total
 Phacelia Organic Seed 500g to cover 200m2	EUR 19.99	0.00%	EUR 0.00	5	EUR 99.95
 Organic Wildflower Seed 1Kg to cover 500m2	EUR 59.99	13.50%	EUR 14.27	2	EUR 119.98

Shipping Method
Tracked Delivery (An Post)

SHIPPING	EUR 0.00
SUBTOTAL	EUR 219.93
IE VAT 13.5%	EUR 14.27
TOTAL	EUR 219.93

Total Paid	EUR 0.00	Amount Due	EUR 219.93

Thank you very much for your business!

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Saturday 26 July 2025

SUSTAINABLE FARM INSIGHTS

A partnership between the Irish Farmers Journal and Tirlán

Tirlán

IRISH FARMERS JOURNAL

Belview Eggs rises to sustainability challenge

Adam Woods reports from a Teagasc Signpost open day held at Belview Eggs in Co Louth

This Teagasc Signpost programme has been in existence since 2021. It's a collaborative effort with 62 industry partners as well as 120 Signpost demonstration farms, all working together to support Irish farmers to improve environmental sustainability while maintaining profitability and production, in particular reducing greenhouse gas emissions.

More than 5,000 soil samples were analysed from participating farms, showing big improvements in soil fertility with, for example, 70% of soils on dairy farms being optimum for pH, P and K in 2024.

A major deep-soil carbon campaign covering 91 farms confirmed that Irish grasslands, particularly those on clay-rich soils, have strong potential to act as carbon sinks.

Improved nutrient use efficiency has contributed to a decline in overall fertiliser nitrogen (N) use, aided by greater incorporation of clover in swards, precision slurry application, and enhanced nutrient planning.

Use of protected urea fertiliser has increased dramatically among Signpost farmers, with 76%, 58% and 69% of the chemical N applied on dairy, suckler beef and dairy beef farms respectively.

Over 90% of cattle farmers in the programme now use low-emission slurry spreading (LESS) methods, which significantly reduce ammonia losses and improve nutrient retention.

In tillage systems, practices such as cover cropping, reduced fertiliser use, and incorporation of organic manures have all seen increased use across the programme.

The Belview Egg farm is a good example of this where poultry manure is exported to local tillage farms to replace chemical fertiliser use.

When you think of poultry farming you could be forgiven for thinking about intensive systems with sustainability initiatives far from any thoughts.

The farm walk outlined how any poultry unit can take steps to be more sustainable, from utilising poultry manure to being more energy efficient, to protecting water quality. There are 186 egg production sites in Ireland, 135 of which are in a free range production system where hens have access to an outdoor area.

The majority of hen laying farms (142) are located in Cavan and Monaghan.

This presents challenges for manure export to tillage farms but there are some good examples of relationships being built

Tom O'Dwyer and Rebecca Tierney wlecome attendees to Belview Eggs.

Belview Eggs

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ing cycle of 60 weeks.

The farm has made a number of changes to the system since joining the Signpost Programme including solar panel installation, exporting poultry manure to local tillage farmers and placing a focus on water qual-

contributed to a decline in overall fertiliser nitrogen (N) use, aided by greater incorporation of clover in swards, precision slurry application, and enhanced nutrient planning.

Use of protected urea fertiliser has increased dramatically among Signpost farmers, with 76%, 58% and 69% of the chemical N applied on dairy, suckler beef and dairy beef farms respectively, compared to a national average of less than 30%.

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The majority of hen laying farms (142) are located in Cavan and Monaghan.

This presents challenges for manure export to tillage farms but there are some good examples of relationships being built between poultry and tillage farms in the northeast of the country.

A new 60,000 hen unit was built by Belview Egg Farms in 2020.

Belview Eggs

Belview Eggs was established in 1978 by Dermot and Nicola Herlihy starting out with 5,000 hens. Today, the company now has 21 production houses, 11 in Louth and ten in Monaghan. In 2020, Belview established their free range unit at Carrickbaggot in County Louth. The unit is divided into four multi-tier laying houses, each containing 15,000 birds and has a central egg collection room. Rachel Johnson is the general manager with the Carrickbaggot unit managed by John Roche, with the assistance of two full-time staff, six part-time staff and a robotic egg palletiser.

. The farm is located on 168 acres of land. Point-of-Lay pullets are transferred at 16 weeks of age to the production house. Birds are given access to the range every day. Hens produce on average 346 eggs during the laying cycle of 60 weeks.

The farm has made a number of changes to the system since joining the Signpost Programme including solar panel installation, exporting poultry manure to local tillage farmers and placing a focus on water quality. Domhnall Kennedy an Agricultural Sustainability Support and Adviser Programme (ASSAP) adviser based in Cavan outlined some of the actions the farm has undertaken in relation to water quality.

Risk areas were identified and flow charts showing the flow of water off the farm were produced to aid the decision-making on what actions to introduce. A farmyard rain management plan was put in place along with riparian buffer margins along water courses, sediment traps and tree planting within buffer zones.

Solar panel saving on poultry units

Rebecca Tierney, poultry adviser with Teagasc outlines how Belview Eggs has saved €34,000 in 14 months through the installation of solar panels.

"Sustainability is the real buzzword now in agriculture, and poultry is no different," says Rebecca.

"Through the Signpost Programme, our partners Belview Eggs have established a carbon footprint of 2.38 kgCO2e/kg egg for free range egg production, using the EggBase Carbon Footprint calculator.

"The farm also installed solar panels on the roof of the poultry unit. This led to a financial saving of approximately €34,000 in a 14 month period.

"Poultry farming and solar panels are a very natural fit in terms of energy demand and energy generation. Energy demand is highest during the day, which is also the period for highest energy generation.

"As a result, very little energy is exported back to the grid.

"Another area we looked at with the Signpost Programme was the correct use of poultry manure, and creating solid relationships with local tillage farmers.

"Andrew and Leonie Workman imported free range layer manure onto their organic tillage farm.

"Andrew is delighted with the results from using an organic manure, which not only adds the required nutrients of nitrogen, phosphorus and potassium but also improves soil structure and workability.

"It is crucial for poultry farmers to be aware that they need to provide a high quality manure so we can increase the usage on tillage farms. Tillage producers need to know the N, P and K levels of the manure, so having it tested is an added bonus.

"Also, the drier the manure is the easier it is for the tillage farmer to use. Drier litter is also better for the poultry farm, as it improves bird welfare."

Dermot Herlihy outlines some of his frustrations on the planning process – listen here: ifj.ie/podcast

FARMING for WATER

Water European Innovation Partnership - AGRI

MEASURES INFORMATION BOOKLET

A €60M FARMER AND ADVISORY LED PROJECT TO PROTECT AND RESTORE WATER QUALITY

FIVE YEAR PROGRAMME FROM 2023-2027

VERSION 1

Rialtas na hÉireann
Government of Ireland

Co-funded by the European Union

eip-agri

Local Authority Waters Programme

Dairy Industry Ireland

Ibec

eagasc

Agriculture and Food Development Authority

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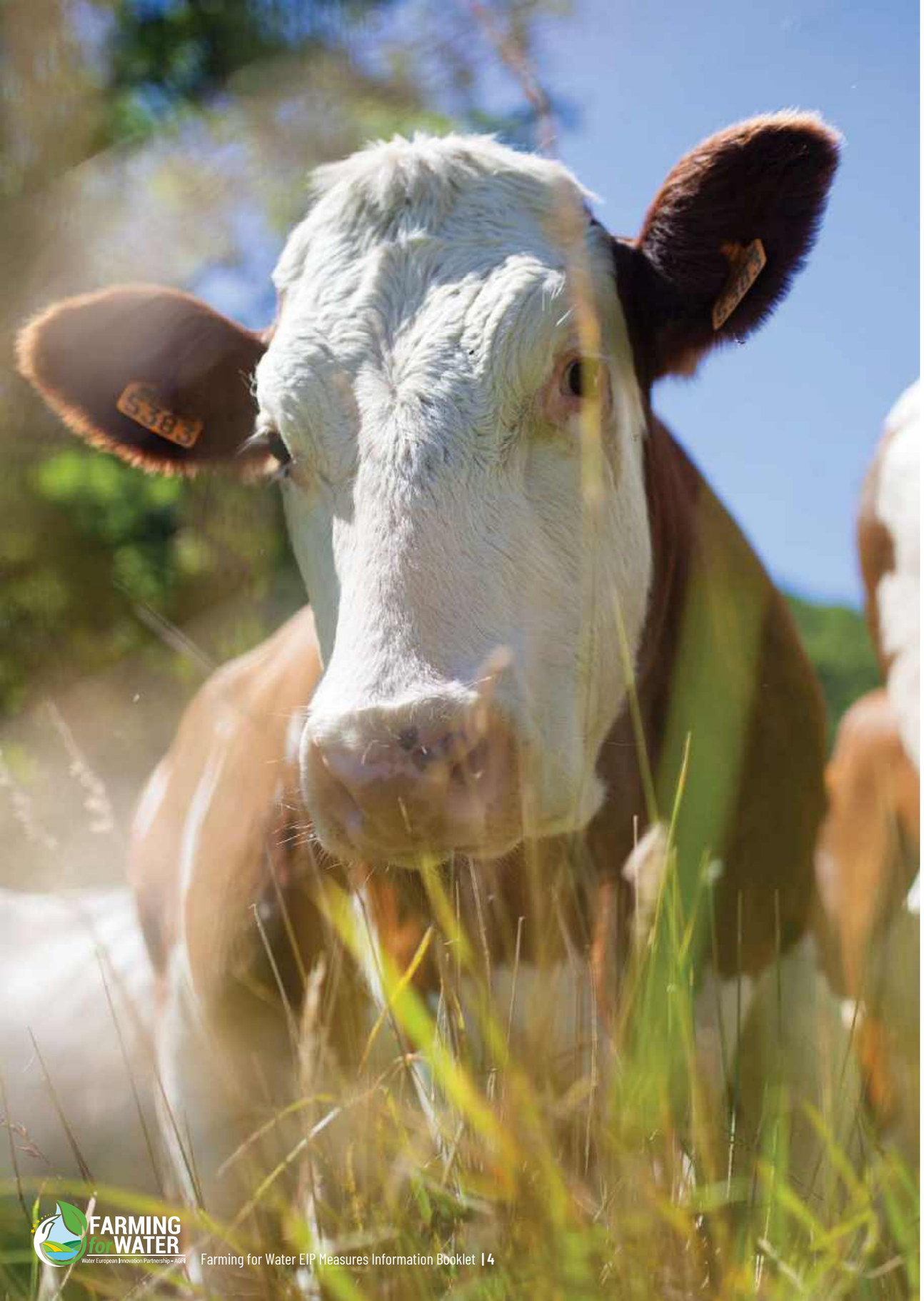


OVERVIEW

The "Farming for Water" European Innovation Partnership AGRI Project

The Farming for Water (FFW) project is a new initiative under the European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI). This ambitious project aims to address water quality challenges while delivering additional environmental benefits. FFW fosters collaboration among farmers, researchers, policymakers, and other stakeholders to co-develop and refine innovative solutions. By focusing on practical and scalable measures, the project seeks to improve water quality and promote sustainable agricultural practices. The Water EIP aims to improve water quality at local, catchment and national levels. The Department of Agriculture, Food and the Marine (DAFM) and the European Commission (EC) are providing 50 million euros which is ring fenced for farmer payments to implement targeted actions on the ground above regulatory requirements. The Department of Housing, Local Government and Heritage (DHLGH) are providing the administrative support for the project to the value of 10 million euros. The Local Authority Waters Programme (LAWPRO) leads this initiative in partnership with Teagasc and Dairy Industry Ireland (DII). Launched in March 2024, the programme will run until 2027 and is supported by a broad network of collaborators, including farmers, researchers, local authorities and other key stakeholders.

Overview: Why Protecting Our Waters is Important

Rivers are the lifeblood of the land, carrying water from upstream sources all the way to the coast. What enters a river at the top of a catchment area—such as chemicals, nutrients, or pollutants—ultimately impacts the quality of water in estuaries and coastal areas. Clean, healthy rivers are essential for the environment, the economy, and society. Currently, only 54% of Ireland's surface waters meet minimum water quality standards, with an even lower percentage of estuaries achieving these benchmarks.

The Water Framework Directive

The Water Framework Directive is a law adopted by European countries in 2000 that aims to protect all water bodies (rivers, lakes, groundwater, estuaries, and coastal waters). The goal is to make sure that by 2027, all these waters are at least of "good" water quality, with some exceptions. This law is important because clean water is essential for public health, farming, and economic development. For example, farmers need clean water for consumption, crops, livestock, and food production.

The Role of Agriculture

The Agri-Food sector is Ireland's most important indigenous industry, playing a crucial role in the economy and food security; however, it can also impact water quality. Government policy is to support a sustainable model of food production that ensures a viable farming sector while protecting the vital resource that is our environment. The Water Action Plan (2024) is Ireland's third River Basin Management Plan. It outlines the measures the Government and other sectors are taking to improve water quality in Ireland's groundwater, rivers, lakes, estuarine and coastal waters, and provide sustainable management of our water resources. It sets out a roadmap for the various sectors on how to restore Ireland's waterbodies to the equivalent of 'good status' or better and to protect water from any further deterioration. The Water Action Plan (2024) states that farming is the biggest threat to water quality in Ireland. Fertilisers like nitrates (N) and phosphates (P) are commonly used on farms to help crops grow, but when too much gets into rivers, it causes problems like the excessive growth of plants in water, which can lead to eutrophication and ecological impacts such as fish kills. Excess sediment in our waters can destroy fish eggs, harm aquatic ecosystems, and result in farmers losing valuable topsoil from their fields.

Available Resources/Tools

A team of scientists from the Local Authority Waters Programme and other stakeholders are studying which watercourses are most affected by pollution and why. Where they find pollution and pressures from agriculture, they pass on the relevant information to the ASSAP (Agricultural Sustainability Support and Advisory Programme) team who will engage with the farmers in the affected area to try reduce nutrient, sediment and pesticide losses from agriculture. The first step in every farm visit is a rainwater management plan (RWMP) whereby ASSAP use all the available evidence as well as the tools recently developed by the EPA called Pollution Impact Potential (PIP) maps. The PIP maps are based on the nutrient loading at farm scale as well as the soil drainage potential and show the riskiest areas in the landscape for losses of nitrogen and phosphorus to water. PIP maps also show modelled overland flow pathways and flow interception points to help target actions in areas where water quality monitoring indicates an impact. The ASSAP team are using these maps, together with the farmers knowledge of water movement within farmyards and across fields to select the 'right measure in the right place'. There are 43 measures designed to address different pressures on the farm, including reducing the Source of the nutrients (e.g. the nitrogen surplus measure), intercepting the Pathway of nutrient movement (e.g. spatially targeted buffers) and protecting the Receptor (e.g. fencing watercourses to restrict animal access).

How the Funding Works
The "Farming for Water" project provides funding to help farmers implement 43 measures designed to protect water quality by reducing pollution from nitrates, phosphorus, sediment, and pesticides. These measures include practices like creating riparian buffer strips to intercept runoff and using specialised equipment to minimise pesticide loss. Applications are prepared by advisors on behalf of farmers and undergo a thorough administrative review, technical validation, and dual funding risk assessment. Once approved, farmers will receive a letter of approval outlining the supported measures and can proceed with their implementation according to the specified guidelines.

After implementing the measure, the method of verification as outlined in the approval letter, must be submitted via email to the Farming for Water team at Verify@watereip.ie. Once the project team validates the submission, payment will be issued directly to the farmer via electronic funds transfer to their bank account. Funding is allocated on a measure-by-measure basis, meaning the farmer is compensated solely for the measures they have successfully implemented.

Rules and Regulations
While the project supports farmers in implementing extra measures to improve water quality, it doesn't replace the legal requirements farmers must already follow under National and European Union rules (such as the Good Agricultural Practice for Protection of Waters). All applications must comply with the terms and conditions of the FFW EIP project, and all funded measures must comply with national and European laws protecting the environment and wildlife.

Eligibility for the Farming for Water EIP
The Farming for Water project is not an open-call initiative. Its core principle is implementing the "right measure in the right place." Determining appropriate measures involves several key factors such as:

- Key issues of concern: such as phosphates, nitrates, sediment, or pesticides.
- Waterbody objectives: whether to 'restore' (improve) or 'protect' (maintain) water quality.
- Hydrogeological characteristics: whether the area has freely draining or poorly draining soils.

Achieving the 'restore' objective is often more challenging when compared to maintaining 'protect' conditions. Therefore, these factors must be carefully assessed to ensure that measures are both efficient and effective in achieving their intended outcomes.

Targeting the Right Areas
The challenges posed by elevated levels of nitrate and phosphorous differ regionally as illustrated in the EPA's The "Targeting Agricultural Measures" map shown in Figure 1 highlights areas where agricultural measures are needed to restore water quality. Flags are used to indicate the specific types of water quality issues present in those areas.

- Orange flags show areas with nitrate pollution.
- Navy flags show areas with phosphorus or sediment pollution.
- Red flags indicate areas with pollution directly from farms or point sources.
- White flags are for areas where agriculture is not a major issue, and the focus is on protecting already clean water or there are other more significant pressures.

This map, along with additional supporting information, assists scientists and advisors in determining the most appropriate measures for each area. Nitrate pollution is a significant concern in the estuaries and coastal waters of southern, eastern, and southeastern Ireland, primarily due to the region's freely draining soils combined with intensive agricultural activity. Reductions in nitrogen losses from agricultural soils is needed here to prevent any further deterioration in the quality of our estuaries and coastal waters. Phosphorus pollution typically happens in areas with poorly draining soils where runoff happens overland, bringing soil and bound phosphorus with it, into watercourses. Targeted measures to intercept these overland pathways could deliver significant improvements in our inland waters. Soil/sediment can also wash into rivers, harming water quality and wildlife for example clogging up spawning beds for fish. For more information on how to use this Targeting Agricultural Measures Mapping tool, please visit https://www.catchments.ie/epa-launch-leaflet-to-highlight-the-targeting-agricultural-measures-mapping-tool/

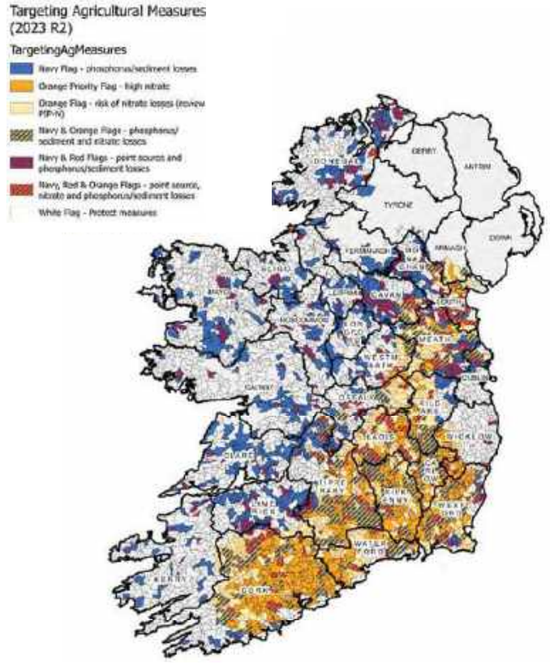


FIGURE 1: TARGETING AGRICULTURAL MEASURES TO PROTECT AND RESTORE WATER QUALITY (SOURCE EPA)

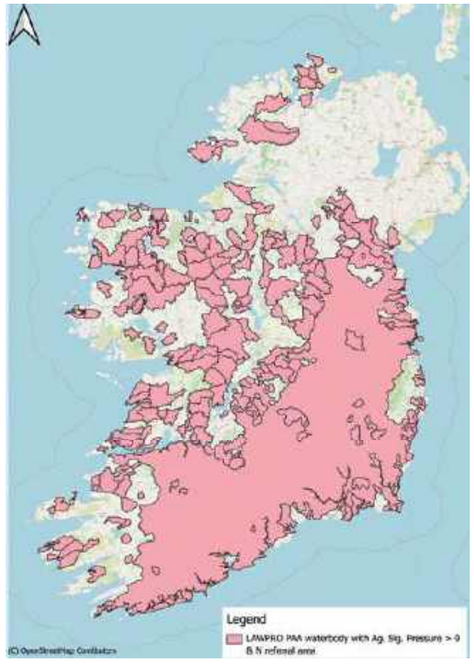


FIGURE 2: FARMING FOR WATER EIP AREAS FOR ACTION (AFA). SOURCE: LAWPRO.

Pesticides and their Impact
The use of pesticides on farms can significantly affect water quality. Certain pesticides, such as those used for treating sheep or managing rushes in grasslands, have been detected in both surface water and groundwater. The project aims to raise awareness about responsible pesticide use and reduce the amount that reaches our waterbodies.

Prioritisation of Entry into the Project
The Water EIP team will prioritise areas for focused attention, as illustrated in Figure 2, based on assessed risk levels.
The Water EIP team prioritises farms based on the following criteria, particularly where water quality targets are not being achieved and agriculture has been identified as a pressure:

1. Farmers in Areas for Action under WFD Cycle 2 with objectives to restore water quality.
2. Farmers in Areas for Action under WFD Cycle 3 with objectives to restore water quality.
3. Farmers in Areas for Action under WFD Cycles 2 and 3 with objectives to protect water quality.
4. Dairy and Tillage Farmers in High Nitrate-Risk Areas, along with other high-risk enterprises, such as piggery and poultry operations in high nitrate-risk areas.
5. Community-Led Water Initiatives: Farmers in catchments with community-driven water initiatives, which will be assessed on a case-by-case basis.
6. Referrals from EPA, Local Authorities, and other Stakeholders: Farmers outside the above categories, referred by the Environmental Protection Agency (EPA), Local Authorities (LA), or other relevant stakeholders, which will be assessed on a case-by-case basis.

In short, the "Farming for Water" project is a major initiative to reduce pollution from farming practices in Ireland and ensure that the country's rivers and other waterbodies are kept clean and healthy for the future and that we meet our obligations under the Water Framework Directive.

RAINWATER MANAGEMENT PLAN

1. RAINWATER MANAGEMENT PLAN

A rainwater management plan is a detailed evaluation of a farm, designed to map water flow across both the farmyard and the surrounding land, following the ASSAP assessment methodology. This assessment identifies areas where nutrients, pesticides, and sediment are at risk of entering nearby rivers and drainage systems. It plays a vital role in determining the most effective locations for implementing mitigation measures. The assessment is conducted in collaboration with the farmer to ensure its accuracy. The plan also considers extreme weather events, such as heavy rainfall and cloudbursts, to ensure resilient water management strategies. Furthermore, it provides an opportunity to engage with the farmer and share valuable insights about local water quality.

REQUIREMENTS

1. A rainwater management plan must be provided with all applications. This equates to the standard ASSAP farm assessment plus farm maps (including PIP maps) for the land within the Area for Action (farmyard & land holding subject to application). Proposed exceptions to the above must be accompanied by justification.

2. The farm is to be assessed as per the ASSAP Farm Assessment methodology using the Ag Planner system where available.

3. Water serves as the primary vector for transporting nutrients, sediment, and pesticides to vulnerable water receptors. By following rainwater pathways and intercepting pollutants, farmers can adopt a logical approach, enabling them to target the right mitigation measures in the right locations. The rainwater management plan consists of two key components: a) the Farmyard Map and b) the Farmland Map. These maps highlight areas at risk of pollutant runoff into water sources and identify the appropriate Farming for Water (FFW) Environmental Innovation Programme (EIP) measures to reduce these losses.

   a. Farmyards (Figure 3)
      i. To identify if rainwater enters the yard from upslope and transverses the farmyard area.
      ii. Identify the outfall drains from the farmyard and provide advice on how to prevent contaminant losses entering the drainage network e.g. recommending applicants to apply for TAMS funding where necessary.
      iii. To identify locations for interception measures.
      iv. Provide advice (captured on Ag Planner) on areas within the yard that require attention, diverting clean water away from the yard.
   b. Farmlands
      i. To use information available from EPA PIP and Flow Delivery Path, Flow Delivery Point maps and LAWPRO characterisation and referral information to identify the areas/points on a farm map where mitigation measures are best situated. PIP maps must be verified on the ground in consultation with the farmer.
      ii. Advisors and farmers should leverage their expertise and local knowledge to identify areas not included on the EPA maps that may be contributing to water quality issues. Appropriate measures should then be recommended to address these concerns.
      iii. Interception of pathways with appropriate measures to be recommend by Advisors from the list of FFW EIP measures and may also consider Bespoke Measures.

4. The farmyard, farm roadways, farm drain network springs/ wells, location of underpasses, culverts etc. must all be examined as part of the rainwater management plan.

5. The rainwater management plan submitted to the EIP project team must include the following:
   a. An aerial (satellite) map of the farmyard, identifying flow of water through the yard & clean water outfall to drainage network. This map must also show/identify any EIP funded measures for the farmyard.
   b. Aerial (satellite) maps identifying the flow delivery paths and points for the farm that fall within the Area for Action or Referral area.
   c. PIP N & PIP P maps for the applicants farm that fall within the Area for Action or referral area.
   d. The flow delivery path/point map must show/identify the locations of any EIP funded measures outside of the farmyard.
   e. The measures for submission to the EIP Team are to be identified on the excel application form.

PAYMENT

Applicants will receive a one-off payment of €250 for participation in the development of the Rainwater Management Plan. The critically important aspect for knowledge transfer and enhancing farmer awareness of water quality both within their own farm and their river catchment.

VALIDATION

Submission of plan.

Rain Water Management Plan: Farmyard Map

Notes:
Mark out the preferential flow pathways that rainwater will take during wet weather, including very heavy weather such as cloud bursts.

Slope:

Water outlet from yard:

Clean Water Drain

M28 – Willow Bed

M29 – Farmyard Settlement

Tank

FIGURE 3: EXAMPLE OF A RAIN WATER MANAGMENT PLAN: FARMYARD MAP

Rain Water Management Plan: Land Area Maps

Key:
- River:
- Drain:
- Water outlet from farmyard:
- Farm boundary:
- Slope:
- M5 Multi Species Swards
- M14 - Spatially Targeted Buffer
- M23 & M24 - Water bars & Sediment Traps

Notes:
- North of farmland: High PIP (N)
- South of farm: High PIP (P)

FIGURE 4: EXAMPLE OF A RAIN WATER MANAGMENT PLAN: LAND AREA MAPS

SOURCE CONTROL MEASURES

SOURCE CONTROL MEASURES

2. FARMER TRAINING COURSE

Farmers will be given the opportunity to attend a training course as part of the FFW EIP. The course will provide farmers with information on water quality, how water pollution occurs, and actions to mitigate pressures on water. ASSAP advisors will be required to organise & facilitate farmer training courses as part of the EIP.

REQUIREMENTS

1. Attendance at the course is voluntary and each farmer will be offered the opportunity to attend one course.
2. The duration of the course will be 3 hours at a central location.
3. Farmers will be permitted to send a family member/ person involved in the farming operation (spouse, son/ daughter, farm manager) if unable to attend in person. Proof of identity will be required e.g. photo ID, drivers' licence etc. and attendee must be over 18.
4. Topics covered in the training course will be relevant to significant local water quality pressures e.g. best practice in pesticide use in areas where pesticides are impacting water quality.
5. The maximum number of participants per course is 30. Ideally, courses should be held outdoors at a suitable streamside location or another relevant site. Indoor venues may be used if inclement weather is forecast, but only as a last resort.

PAYMENT

Applicants will receive €156 on completion of the course. Proof of attendance at the course must be submitted to the EIP project team. This EIP Farmer Training Course does not satisfy the required training for Nitrates derogation farmers.

VALIDATION

Sign in and sign out on attendance register for the 3-hour course. Advisors will be required to return completed attendance sheet to EIP project team to facilitate payment.

3. NUTRIENT MANAGEMENT PLAN

A nutrient management plan (NMP) provides farmers with valuable information on the nutrient status of their farm/ farming system. The aim is to inform farmers when & where to apply nutrients to achieve optimum slurry recycling and nutrient uptake by plants and to prevent over application of nutrients.

REQUIREMENTS

1. This measure is applicable to those participants that do not require a NMP under current GAP regulations or other scheme requirements.
2. Nitrates Derogation applicants are not eligible to apply for this measure.
3. A new NMP must be prepared by an approved agricultural advisor along with farm maps based on soil sampling results.
4. Only a plan produced by the Teagasc Online (NMP) Programme, The Farm Eye (NMP), Grassland Agro (NMP) Programme or any other DAFM approved NMP Programme is acceptable.
5. Soil Samples must be from a DAFM approved laboratory (ISO/IEC 17025:2000 accredited).
6. Soil samples should be taken within 2 years of the NMP submission date to the EIP Project Team. Samples must follow DAFM best practices, which recommend taking one soil sample every 2-4 hectares.
7. Critical source areas (areas at high risk of nutrient losses) must be identified through discussions with the applicant and appropriate nutrient advice given.
8. The plan should identify any peat soils and appropriate advice given.
9. The applicant must be provided with a full NMP including organic manure generation & storage, fertiliser allowances, liming plan and relevant colour coded maps.

PAYMENT

- Applicants will receive €400 for the submission of an NMP. Applicants can avail of this measure once over the lifetime of the EIP project.

VALIDATION

Submission of completed (NMP) (including farm maps) along with a copy of relevant soil sample results.

4. NITROGEN SURPLUS

Nitrogen Surplus follows a nutrient accounting approach. Farm gate inputs of nitrogen (e.g. purchased fertiliser, feeds, livestock, imported organic manures) are calculated minus farm gate outputs of nitrogen (e.g. sales of milk, livestock, manures exported) to give a nitrogen balance per hectare figure and Nitrogen Surplus for the participating farm.

A Nitrogen Surplus is an indicator of potential risk of loss of nitrogen to our aquatic environment. Completing a Nitrogen Surplus will allow for advisor/farmer discussions on how best to reduce excess nitrogen in the farming system by taking on measures to reduce nitrogen inputs and improve utilisation of existing nitrogen inputs. Soil fertility is a key driver when aiming to maximise nutrient uptake by the plant. The application of sulphur is an important nutrient for grassland production and is closely associated with nitrogen uptake and efficiency. Currently Nitrogen Surplus does not take account of clover levels in the grassland swards. It is hoped to integrate this aspect over time.

REQUIREMENTS

1. This measure is only applicable to dairy farms where nitrate is a significant issue in the receiving waterbody/ estuary.

2. The following three datasets should be used to identify where nitrate is a significant issue in the receiving waterbody/estuary.
   a. The Targeted Agricultural Measures Map - any areas with an orange flag.
   b. The 12 Catchments of Concern that have been identified by the EPA as having elevated nitrate concentrations (The Boyne, the Tolka, the Liffey, the Slaney, the Barrow, the Nore, the Suir, the Blackwater, the Lee, the Bandon, the Deel and the Maigue).
   c. The LAWPRO catchment referrals for nitrogen

3. Identify a full Nitrogen Surplus per hectare for each farm using the online platform AgNav. Where a farmer is not signed up to the AgNav platform, the nitrogen surplus calculation may be submitted using the Pasture Base system or other excel based system agreed with the EIP team. The figure shall be used for a discussion between farmer and advisor on measures to reduce the nitrogen surplus per hectare figure. The farmer and advisor should agree to take on a measure for the coming year. At the end of the year the advisor will revisit the farm to assess the implementation of the agreed action. On completion of a new nitrogen surplus calculation, the farmer will be paid another €250. This can be repeated yearly, until the end of the project.

4. Suggested measures include:
   - Reduce chemical N application by 10% from baseline figure. The baseline figure is the tonnes of N purchased in the previous calendar year.
   - Reduce chemical N application by a further 5% for the remaining years of the EIP.
   - Incorporate sulphur into 50% of chemical N applications.
   - Reduce crude protein content of concentrates fed to livestock below regulatory requirements.
   - Other measures, as deemed suitable by the advisor.

5. Nitrogen Surplus requires data from fertiliser register, co-op milk sales, livestock sales and purchases, imported and exported feed, BISS application etc. Ensure all dockets used for data input are retained.

PAYMENT

Applicants will receive €250 on submission of a Nitrogen Surplus figure. Payment on annual basis subject to submission of the relevant information.

VALIDATION

Year 1: Submission of a Nitrogen Surplus figure and a signed declaration (Appendix 9) by both farmer and advisor on how to reduce to Nitrogen Surplus/ha.

Subsequent years: Submission of a Nitrogen Surplus figure annually and a signed declaration by both farmer and advisor on how to reduce Nitrogen Surplus/ha. Documentation to be submitted prior to the EIP application approval date anniversary. For example, the application approval date is August 1st, 2024, then verification, then verification requirements need to be sent in prior to the anniversary date in subsequent years.
For further information:

- https://www.teagasc.ie/news--events/daily/environment/nitrogen-use-efficiency--cleaner-water.php
- https://www.teagasc.ie/news--events/daily/grassland/why-all-the-fuss-about-sulphur.php

5. MULTI-SPECIES SWARDS

Multi-species swards (MSS) are made up of a variety of plants from different families, including clovers, grasses, brassicas, and herbs. These swards offer numerous benefits, such as improving soil biodiversity, enhancing soil structure, and reducing greenhouse gas emissions. In terms of water quality, MSS can help reduce the need for fertiliser applications while supporting steady plant growth. The inclusion of plantain (at 30%) and chicory in multi-species swards can reduce nitrogen losses on the farm by improving nitrogen utilisation by animals and decreasing farm leaching. Additionally, multi-species swards are more resilient to drought compared to monocultures. They recover more quickly after receiving moisture, providing greater adaptability and resilience to climate change.

REQUIREMENTS

1. This measure cannot be used for DAFM annual Multi-Species Sward Measure (MSSM) or for Eco Scheme requirements.

2. This measure cannot be located in an ACRES area-based action.

3. Commonage and Natura 2000 sites are excluded from this measure

4. Avoid replacing areas of existing biodiversity (naturally diverse permanent pasture that is not designated) or unused land on the farm with new multi-species swards.

5. Incorporate MSS as part of the normal spring reseeding programme for the farm.

6. This measure is recommended for PIP N ranked 1 - 4 paddocks.

7. Choose grazing paddocks over silage fields and choose paddocks with a low weed burden.

8. Over-sowing/direct drilling is preferable as it will result in lower losses of nitrogen & retains more soil organic matter than a full reseed.

9. Sow the multi-species seed mix at a rate of 12kg/acre (30kg/ha) at approx. 1 cm deep (choose seeder carefully to avoid seed separation).

10. Chemical fertiliser N must be reduced to allow the clover within the MSS to work. It is important that soil fertility is good i.e. pH 6.2-6.5 and Index 3+ for P & K. Best conditions for sowing are without drought or frost, and ideally a warm, moist seedbed (~10°C) between April and August.

11. Where MSS fails to establish, it must be replanted.

12. The MSS must remain in place for duration of the EIP project.

PAYMENT RATE

- €300/ha
- Min 0.5ha. Max Area: 10ha @ 30kgs/ha

VALIDATION

Relevant geotagged photo (using apps such as GPS Map Camera) showing clearly the measure that has been applied for and proof of costs (seed labels/receipts/invoices).

For more information on MSS:

- https://www.teagasc.ie/media/website/environment/climate-change/signpost-programme/Factsheet_MultiSpeciesSwards.pdf
- https://www.teagasc.ie/environment/climate-change—air-quality/signpost-programme/research-updates/multi-species-swards/

6. CATCH CROPS

Catch crops utilise residual nutrients in the soil following the harvest of a cereal or oilseed crop, thus maintaining soil biology and preventing leaching of soluble nutrients such as nitrate. With their vigorous root systems, these crop species condition and break up the soil, making it more friable for ease of cultivation, while the residual herbage that remains greatly enhances the organic carbon content and structure of the soil. Catch crops generate a large mass of herbage which helps protect the soil from exposure to heavy rainfall during the winter period. This reduces the potential of leaching of nutrients, soil erosion and surface run-off while also increasing water infiltration.

REQUIREMENTS

1. Establish a catch crop using non-inversion techniques (ploughing is not allowed) where it will provide a water quality benefit.

2. For Option 6A (Other Cropping Systems), the crop should be sown as early as possible, ideally by mid-August but no later than 1st September annually each year. This catch crop must remain in place until 1st January annually.

3. For Option 6B (Winter Cropping Systems), the catch crop should be set by the 1st August and remain in place until 30th September.

4. The minimum area to be delivered is 0.5 hectares. The maximum area for payment is 20 hectares, cumulative between Measures 6A & 6B.

5. Area for payment may be increased based on scientific justification. This will be decided on a case-by-case basis in conjunction with the FFW EIP Project Team.

6. When sowing the catch crop, the under sowing or sowing of a grass crop is not permitted.

7. The main cereal crop cannot be under sown with catch crop species.

8. The seed mixture should consist of at least 2 species from the list in Appendix 2. Suggested mixtures in table below:

Brassica Mix (4kgs Mustard & 4 kgs Leafy Turnip)
Non Brassica Mix + Graze (30kgs Forage Rye, 2.75kgs Winter Vetch (hairy) 3.75kgs Spring Vetch)
Best N Capture (less club root risk) (black oats & oilseed radish)
Rotation Friendly (15kg Vetch, 4kg Phacelia)

9. After 1 January, light grazing or incorporation is permitted. Participants should ensure grazing only takes place where soil erosion is not considered to be an issue. Intensive strip grazing/zero grazing is not permitted. Grazing of a catch crop in situ requires a 4m buffer (grass/vegetated margin) from the surface water edge (GAP Regulations). Ensure to comply with all GAP regulations when setting Catch/Cover Crops.

10. Where a watercourse is present on or adjacent to the parcel, bovines are not permitted to access the watercourse. Where no natural barrier exists, the watercourse must be fenced at least 1.5m from the top of the bank when bovines are present (drinking points are not permitted.) In tillage settings, riparian buffer measures must be fenced off if livestock graze the cover crop at any stage.

11. Annual Declaration plus map must be submitted to EIP Project Team outlining the following:
    a. Map outlining area sown with Catch Crops under EIP
    b. Completed Annual Catch Crop declaration form (Appendix 1).

12. A farmer participating in the ACRES programme for catch crops (or any other scheme involving catch crop measures) cannot simultaneously overlap Water EIP catch crops on the same land area designated for ACRES during any given programme year. This ensures compliance with programme rules and prevents double funding for the same measure on the same parcel of land.

13. EIP Catch Crops do not qualify for GAEC 7 (crop diversification rule) which is required for BISS payments.

14. All EIP dockets should be separate to ACRES.

PAYMENT

- 6A: Other Cropping System: €229/ha/yr.
- 6B: Winter Cropping System: €173/ha/yr.

The minimum area to be delivered is 0.5 hectares. The maximum area for payment is 20 hectares cumulative between Measures 6A & 6B.

VALIDATION

Option 6A: Annual Relevant geotagged photo (using apps such as GPS Map Camera) showing the measure and area that has been applied for, proof of seed purchased (showing type of seed purchased plus kgs i.e. seed bag labels) along with an annual declaration submitted by 1st October annually.

Option 6B: Annual Relevant geotagged photo (using apps such as GPS Map Camera) showing the measure and area that has been applied for, proof of seed purchased (showing type of seed purchased plus kgs i.e. seed bag labels) along with an annual declaration submitted by 1st September annually.

For more information on Catch Crops:

- https://www.teagasc.ie/media/website/environment/climate-change/signpost-programme/The-Soil-is-Alive—Willing-to-Help.pdf
- https://www.teagasc.ie/media/website/publications/2023/Catch-crops-yield-multiple-benefits-if-you-get-them-in-early.pdf
- https://www.teagasc.ie/crops/crops/cover-crops/

7. LOW DRIFT NOZZLES

Low-drift nozzles are specifically designed to produce larger spray droplets with minimal driftable fines, thereby reducing the potential for pollution. This is achieved through a pressure-reducing chamber inside the nozzle, which incorporates air into the spray droplets to enhance their size and stability.

REQUIREMENTS

1. Retro fit existing sprayer with low drift nozzles to reduce spray drift.

2. Reduced buffer zone requirements as per STRIPE is not allowed under the Waters EIP.

PAYMENT RATE

- €5/nozzle up to a max of 40 nozzles.

VALIDATION

Proof of costs.

8. MOBILE DRIP TRAY

A mobile drip tray is designed to prevent spills while filling sprayer tanks, ensuring a cleaner and safer operation by containing any accidental leaks or overflows.

REQUIREMENTS

1. Use a mobile drip tray when filling sprayers to catch any accidental spills and prevent these spills from reaching clean water drains.

PAYMENT

- €22/tray. Min 1. Max 2.

VALIDATION

Proof of costs.

9. WATER STORAGE TANKS (IBC TANK)

Water storage tanks are essential for use on fragmented farmland, providing a reliable water source for filling sprayers without drawing directly from streams or rivers. They are also valuable for sheep farmers, offering a safe and contained solution for storing spent sheep dip, thereby reducing environmental impact.

REQUIREMENTS

1. IBC tank with 1000L of storage which can be filled in the farmyard and taken to the outside block of land where it must be used for filling the sprayer.

2. Tanks must be non-transparent to block light that encourages algae growth.

3. Applicants cannot apply for funding through the EIP and TAMS for the same water storage tank.

PAYMENT

- €400/tank. Min 1. Max 2.

VALIDATION

Proof of costs (must be a new IBC tank to qualify for EIP funding).

10. RETROFIT A CLEAN WATER TANK

Retrofitting a clean water tank onto basic sprayers promotes efficient tank rinsing directly in the field. This upgrade is particularly beneficial for safety and it also minimises environmental contamination, especially for sprayers that currently lack this feature.

REQUIREMENTS

1. Retrofit water tank onto existing sprayer.

2. This measure is open to all farmers.

PAYMENT

- Up to €500/applicant. Max of 1 per applicant.

VALIDATION

Proof of costs.

11. DECOMMISSION SHEEP DIP TUB

Sheep dipping is an essential practice for controlling specific parasites in sheep. However, the chemicals involved can be toxic, posing significant risks to watercourses and aquatic organisms. These risks are heightened when dipping stations are poorly constructed or maintained, situated near watercourses, or lack safe disposal grounds for spent sheep dip. Improper handling or disposal of sheep dips and pour-ons can result in toxic events in water bodies, severely impacting invertebrate populations and disrupting aquatic ecosystems.

REQUIREMENTS

1. The dipping station must be permanently decommissioned. This requires the tank to be filled in and capped with concrete. The dipping station can continue to be used as a pen provided there is no pathway to watercourses.

2. Applicants cannot apply for funding through the EIP and TAMS for the decommissioning of the same sheep dip tub.

PAYMENT

- €284 for 1 sheep dipping facility only. Max 1.

VALIDATION

Relevant geotagged photo (using apps such as GPS Map Camera) showing clearly the measure that has been applied for.

12. SUBMERSIBLE PUMP

A submersible pump can only be applied for in conjunction with a water storage tank (Measure 9). The pump is used to transfer spent sheep dip from a dipping tub into a water storage tank, such as an IBC. The tank is then removed, and the contents are disposed of following best practices for the disposal of spent sheep dip, typically by transferring it into a slurry storage tank.

REQUIREMENTS

1. The spent sheep dip must be disposed of following all guidelines regarding diluting it with slurry/water and land spreading under suitable conditions on suitable spread lands.

2. The applicant must have a suitable facility to store the spent sheep dip for the correct disposal.

3. If the IBC tank is being transported to an authorised disposal site, it must be moved on a bunded trailer or transferred into a vacuum tanker, as there is a high risk of spillage.

4. Applicants cannot apply for funding through the EIP and TAMS for the same submersible pump.

PAYMENT RATE

- Max funding of €175 in total.

VALIDATION

Proof of costs.

PATHWAY INTERCEPTION MEASURES

PATHWAY INTERCEPTION MEASURES:

13. HEDGEROW ESTABLISHMENT

Hedgerows are very effective in reducing the risk of land-spread material moving over sloped ground during heavy weather or cloud bursts, if planted across the slope in an overland flow pathway. There are two options to this measure, planting a hedgerow with or without an earthen mound. The earthen mound increases water interception and storage at the base of the hedge.

Advisors should recommend this measure in the dominant flow pathways, i.e. the high and very high flow pathways as indicated on the EPA PIP P Flow Pathway Maps and verified by an ASSAP advisor and farmer on the ground. The earthen mound should be sufficiently long to intercept and slow the overland flow. Be mindful when applying for this measure that the flow won't be diverted elsewhere to create a new flow pathway.

Hedgerow establishment will also have co-benefits for flood mitigation, carbon sequestration, soil erosion and biodiversity.

REQUIREMENTS

1. This measure cannot be located within an ACRES area-based action to avoid dual funding risks.

2. Identify and agree on locations in collaboration with the farmer, using tools such as the EPA PIP Maps, particularly on sloped ground or in areas like large open fields where significant overland flow occurs during wet weather.

3. Determine the most suitable native hedgerow species for the area by observing which species are thriving locally. For example, whitethorn and holly do not tolerate very wet soils, and whitethorn is not well-suited for high elevations. Blackthorn, in contrast, thrives better in heavy soils and on coastal, exposed sites.

4. Plants must be of Irish Origin or Irish Provenance and purchased from DAFM registered professional operators. All plants must have accompanying plant passports.

5. To establish a mound, furrow or break the ground to loosen the soil, then build a low earthen mound at the base. The height of the mound will vary depending on the location, but it should generally be around 0.3 meters high (with heights over 0.15 meters still offering benefits), 1 meter wide at the base, and 0.4 meters wide at the crest. The slope of the bank should be as shallow as possible to blend into the landscape, especially on the downslope side, which could be prone to erosion if overtopped. Allow an additional 25% of material to account for soil settlement. Ensure proper compaction during the formation of the bank. Position the hedge just off the crest of the bank on the downslope side to prevent the trees from drying out. (Source: The Natural Flood Management Manual).

6. Plant whips in a double staggered row, 1ft between the whips and 1ft between the rows (minimum 5 plants per metre).

7. The use of pesticides or herbicides is not permitted within 1.5 metres of the hedge after planting, although spot treatment of noxious weeds is allowed. Biodegradable plastic can be used to suppress grass growth. If rabbits are an issue, consider using tree guards (preferably biodegradable) or a low electric fence for protection.

8. Failed or dead plants must be replaced during the following planting season.

9. The applicant must have control of and access to both sides of the new hedgerow to ensure proper maintenance.

10. Generally, the wider the hedge, the more effective it is at capturing water and sequestering carbon.

11. Identify if the farm meets the "space for nature" requirement for the Eco Scheme.

12. The newly planted hedge must be fenced off to protect it from livestock. For best practice, place the fence at least 1.5 metres away from the plants to prevent livestock from grazing on the young hedge.

13. Planting should be carried out between October & March.

14. It is recommended to prune whitethorn plants at planting, leaving them about 4 inches above ground level. Ideally, further pruning should be done in years 2, 3, and 4 to promote the growth of a dense, stock-proof hedgerow.

15. The new hedgerow must be maintained following best practices to ensure proper establishment and healthy growth.

16. Aim to allow the hedgerow to eventually establish to over 1.8m in height.

PAYMENT RATE

- 13A: Hedgerow establishment including earthen mound: €24.37/m

- 13B: Hedgerow establishment without earthen mound:€21.17/m

- Cumulative meters of hedgerow paid is 250m and can be made up of a combination of 13A & 13B e.g.: 50m of 13A plus 200m of 13B. Min of 10m required. Max of 250m.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs.

14. SPATIALLY TARGETED RIPARIAN BUFFER ZONES

A spatially targeted riparian buffer zone is an uncultivated area adjacent to rivers, streams, drains, ponds, lakes, turloughs, and similar bodies of water, designed to intercept sediment and nutrients that have been mobilised from soil surfaces. Correctly designed, located and managed these will work to intercept and retain water and pollutants transferred from adjacent fields by surface and subsurface pathways, diversify terrestrial habitats and provide other services to benefit communities and wildlife. Spatially targeted buffers will be of various shapes and sizes. The sizing of the buffers will need to take account of the size of the flow pathway relative to the contributing catchment area.

These buffers are suited for mitigating overland flow pathways with point discharge to the drainage network rather than sheet flow discharge. Linear riparian buffer zones (Measures 15 & 16) are more suited to mitigating sheet flow discharges to the drainage network.

It should be noted that adequate source control measures must be implemented on each farm to avoid riparian buffers becoming overloaded with nutrients. Riparian buffers are part of a wider catchment management plan to reduce overall loads.

The advisor will use the EPA PIP Maps and Diffuse Tools to identify focused flow delivery zones and points, validated at the field scale. This process helps pinpoint pathways and areas in the landscape with the highest risk of phosphate and sediment loss to water bodies.

REQUIREMENTS

1. Spatially Targeted Riparian Buffer Zones are site-specific and have irregular shapes. Their shape and size are determined by the overland flow pathways identified using the EPA PIP Maps.

2. Spatially Targeted Riparian Buffer Zones can be sited within ACRES Low Input Permanent Pasture, Extensively Grazed Parcels and/or Management of Intensive Grassland next to a Watercourse at the reduced rates outlined below.

3. No organic/inorganic manures allowed in the spatially targeted riparian buffer zone.

4. No grazing allowed within the spatially targeted riparian buffer zone.

5. Grassland spatially targeted riparian buffer zones must be fenced off. Tillage buffer zones can be unfenced where no livestock are present.

6. It is strongly recommended to plant spatially targeted buffer areas with native trees in conjunction with Measure 17 (Tree Planting).

7. Where required, maintenance of spatially targeted buffer zones should be carried out to ensure that they continue to function effectively. This may require periodic cutting/strimming and removal of vegetation (observe all legal requirements) as required. Leave a gap handle or install a suitable gate to allow access for maintenance.

FIGURE 3: SPATIALLY TARGETED RIPARIAN BUFFER ZONES WILL HELP TO INTERCEPT SEDIMENT AND NUTRIENTS FROM SOIL SURFACES.

8. Spatially Targeted Riparian Buffer Zones can also be applied in other areas on the farm that generate overland flow, such as hard surfaces like farm roadways. In these cases, Measure 14 can be combined with Measure 23 (Water Bars) and, ideally, densely planted with native trees (Measure 17) to serve as a polishing filter.

PAYMENT RATE

- 14A: Spatially targeted riparian buffer zones: 0.01ha - 0.04ha. €400/unit (ACRES Reduced Rate: €228/unit)
- 14B: Spatially targeted riparian buffer zones: 0.05ha - 0.1ha. €915/unit (ACRES Reduced Rate: €481/unit)
- 14C: Spatially targeted riparian buffer zones: 0.11ha - 0.2ha. €1656/unit (ACRES Reduced Rate: €787/unit)
- Min 1 & max 5 combined from 14A, 14B and 14C.
- Applicant to apply for fencing of this measure under Measures 30 (Bovine Exclusion from Watercourses) and 31 (Ovine Exclusion from Watercourses) (1000m cumulative limit applies). Applicant may also apply for Measure 33 (Solar Powered Electric Fence) if required.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for.

For more information on spatially targeted measures:

- https://lawaters.ie/app/uploads/2022/01/Print_CSM-Volume-1_April-2022.pdf
- https://www.ballyhouradevelopment.com/european-innovation-partnership-deel-river

15. 16. LINEAR RIPARIAN BUFFER ZONES

A linear riparian buffer zone is an uncultivated area located adjacent to rivers, streams, drains, ponds, lakes, turloughs, and similar waterbodies. It helps intercept sediment and nutrients that have been mobilised from soil surfaces. When properly designed, located, and managed, riparian buffers effectively intercept and retain water and pollutants transported from adjacent fields through surface and subsurface pathways. They also enhance terrestrial habitats and provide various services that benefit wildlife.

The EPA PIP - P map and the flowpaths map should be used to inform where best to site linear riparian buffer zones.

REQUIREMENTS

1. Erect a permanent fence to create a 3m or 6m linear riparian buffer zone from the top of the bank of any surface water (rivers/streams/drains/ponds/lakes/turloughs etc.). Measure from the top of the bank of the river, even if the riverbank is sloped out. Do not measure from the highest water line.
2. The 3m and 6m is exclusive of the mandatory 1.5m for derogation farmers. The total distance to be fenced out from the surface water is 4.5m or 7.5m, for derogation farmers, depending on option chosen.
3. Grassland buffer zones are to be fenced off.
4. Tillage buffer zones can be unfenced where no livestock is present.
5. For tillage buffer zones, a grass mix must be established by May 31st using non-inversion techniques (ploughing is not permitted). The mandatory 3m uncultivated margin remains untouched as per GAP regulations.
6. The establishment of the grass mix will occur within the additional 3-metre area during year 1 only. Once the grass buffer is established, no soil cultivation is permitted within the buffer zone.
7. The seed mix must contain at least 3 grass species, of which Cocksfoot must make up a minimum of 40%. Seed labels and receipts must be kept for the duration of the contract. Grass mix @ 25-30kgs/ha: Meadow Fescue (Festuca pratensis), Timothy (Phleum pratense), Perennial Ryegrass (Lolium perenne), Smooth Meadowgrass (Poa pratensis), Red Fescue (Festuca Rubra), Cocksfoot (Dactylis glomerata) @ least 40%.
8. No pesticides or fertilisers (whether chemical or organic) are allowed within this area, except for the treatment of noxious weeds or invasive species.
9. No grazing is allowed within riparian buffer zones.
10. Topping or strimming these strips is strongly encouraged between August and September, with the cuttings removed to minimize nutrient buildup in the buffer zone. This maintenance can be carried out annually or less frequently, depending on the extent of the overland flow pathway.
11. Overlap of measures with other DAFM schemes or other EIP/LIFE projects is not permitted (i.e., double funding of measures is prohibited).
12. Payment cannot be received on any measure that is currently a requirement of the GAP Regulations (i.e., current buffer of 6m for late harvested crops is not eligible for payment under the Waters EIP).
13. Permission may be required before commencing any work within or near a protected area, Natura 2000 site, or archaeological site.
14. The maximum total length of combined Linear Riparian Buffer Zones (Grassland and Tillage) allowed per farm is 500 metres.
15. It should be noted that adequate source control measures must be implemented on each farm to avoid riparian buffers becoming overloaded with nutrients. Riparian buffers are part of a wider catchment management plan to reduce overall loads.

FIGURE 4: CORRECTLY DESIGNED, LOCATED AND MANAGED LINEAR BUFFER ZONES WORK TO INTERCEPT AND RETAIN WATER AND POLLUTANTS TRANSFERRED FROM ADJACENT FIELDS.

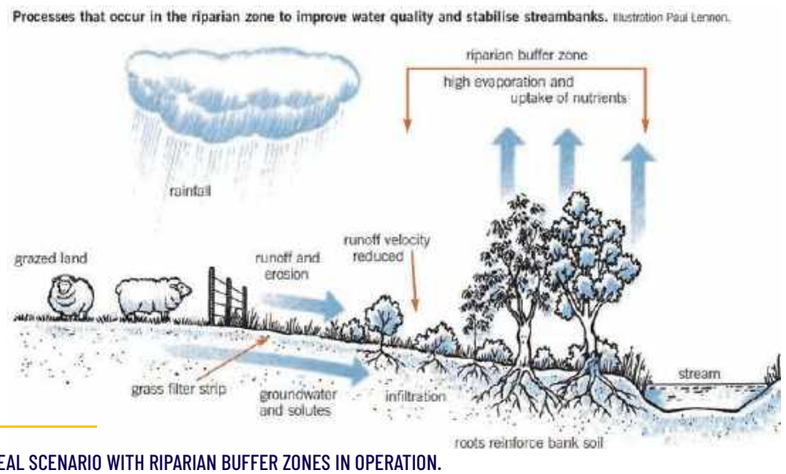


FIGURE 5: AN IDEAL SCENARIO WITH RIPARIAN BUFFER ZONES IN OPERATION.

PAYMENT RATES

15	Linear Riparian Buffer Zones: Grassland (in addition to Mandatory GAP Regulations)				
15A.1	3.0 Margin	50	500	/m/yr	€1.71
15A.2	3.0 Margin (Sheep Fencing Rate)	50	500	/m/yr	€2.50
15B.1	6.0m margin	50	500	/m/yr	€2.11
15B.2	6.0m margin (Sheep Fencing Rate)	50	500	/m/yr	(€2.90)
16	Linear Riparian Buffer Zones: Tillage (in addition to Mandatory GAP Regulations)				
16A	3.0m margin	50	500	/m/yr	€0.38
16B	4.0m margin	50	500	/m/yr	€0.51
16C	6.0m margin	50	500	/m/yr	€0.77
16D	8.0m margin	50	500	/m/yr	€1.02

VALIDATION

Annual relevant geotagged photo showing clearly the measure that has been applied for.

17. TREE PLANTING

A wooded buffer along one or both banks of a river provides significant benefits. Trees help absorb excess nutrients, such as phosphorus, and prevent sediment from reaching the river. They also increase soil infiltration rates and slow the overland flow of water. Additionally, trees stabilise the riverbank, reducing erosion, and offer a terrestrial habitat for various animal species.

In certain situations, Forests for Water (FT2) or the Native Tree Areas Scheme (NTA 1 or NTA 2) under the current Forestry Programme 2023-2027 may be more appropriate options. Please contact the EIP team for further discussion and guidance.

REQUIREMENTS

1. This measure can be implemented alongside Measure 14 (Spatially Targeted Buffers) as well as Measures 15 and 16 (Linear Riparian Buffer Strips for both grassland and tillage).

2. Applicants can also apply for this measure where planting of trees along surface waters has potential to lead to a water quality benefit.

3. The planting of trees under this measure does not contribute to the planting of trees as part of an Eco scheme for Pillar 1 payments.

4. Plants must be of Irish Origin or Irish Provenance and purchased from DAFM registered professional operators. All plants must have accompanying plant passports.

5. Refer to the list of approved trees provided in Appendix 3 for this measure.

6. Plant at least three species from the approved list of trees to enhance diversity and rooting depth. Ensure a minimum spacing of 3 metres between trees.

7. Min height of trees at planting is 60cm. Tree guards/ shelters required to ensure good establishment.

8. Any failed trees must be replaced to ensure successful establishment.

9. Do not plant trees within the vicinity of overhead wires, 20m of railway lines and within 60m of a neighbouring dwelling house (see Appendix 4).

10. Site disturbance and inputs should be minimised. Trees must be pit-planted in a vegetation-free area, with no heavy machinery or drainage allowed. Species selection should align with the most suitable native woodland type for the site, considering factors such as site conditions, soil, drainage, and elevation. For further details, please refer to DAFM's Forestry Standards Manual / Native Forest Framework and the Teagasc website for further information.

FIGURE 6: PLANTING TREES BENEFITS WATER QUALITY, BIODIVERSITY, AND CLIMATE CHANGE, WHILE ALSO HELPING TO PREVENT EROSION.

11. In arterial drained catchments, the OPW requires certain banks to remain vegetation-free. Please consult with the OPW before planting in these catchments. Similarly, prior consultation with NPWS is required for planting within a Natura 2000 site (an action that requires consent).

12. Avoid potential tunnelling along rivers where both banks are densely planted with trees. "A monoculture of alders, a common feature on many drained Irish channels, can have a particularly heavy shading effect. In contrast, a mixed assemblage of deciduous trees (such as Oak, Ash (now not recommended due to ash die-back), Birch, Holly, Willow and Alder) tend to have different profiles and vary in height. This broken canopy will usually allow sufficient incident light to reach the bed and banks of the channel thereby preventing a tunnelling problem". (O'Grady, M.F., 2006)

13. Where feasible, plant trees on the southern bank of the waterbody to provide shade, which offers a climate change benefit by helping to regulate water temperature.

14. Planting trees near salmonid rivers requires consultation with Inland Fisheries Ireland. Additional measures should be implemented to reduce sedimentation, especially during spawning seasons and when eggs are in the gravels, in order to protect these sensitive rivers.

15. Do not remove existing trees, scrub or hedgerow to facilitate the tree planting action.

ADDITIONAL INFORMATION ON TREE PLANTING

Forest land is defined as land under trees with a minimum area of 0.1 hectare and tree crown cover of more than 20% of the total area (or the potential to achieve this cover at maturity). To remain in line with the Amendment of Forestry Act 2014 under Animal Health and Welfare and Forestry (Miscellaneous Provisions Act 2022) which facilitates planting of native trees in areas not less than 0.1 hectare and not greater than 1 hectare without an afforestation licence, the total cumulative area of forest that can be planted on a holding is limited to 1 hectare. This would apply to the combination of all tree planting actions that could be considered forests depending on planting layout and density i.e. Planting trees in riparian buffer zones.

PAYMENT RATE

- Min 5. Max 100 trees

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs.

For more information:

- https://www.teagasc.ie/media/website/crops/forestry/grants/Native-Tree-Area-Scheme.pdf
- https://www.teagasc.ie/crops/forestry/grants/overview-of-forest-establishment-grant-rates/

18. SMALL SCALE WETLAND POND

Ponds and wetlands serve as diverse habitats for plants, insects, birds, mammals, and amphibians, while also acting as natural water filters. They slow water flow, deposit particles, and promote microbial degradation of pollutants in environments with high organic matter. This measure aims to create new wetlands and/or ponds to capture sediment, phosphorus (P), and nitrogen (N) losses along flow pathways to waters.

REQUIREMENTS

1. Small Scale Wetland Ponds must be no greater than 0.2ha in size. If larger than this they will become ineligible features under BISS (Basic Income Support for Sustainability Scheme).

2. An individual small scale wetland pond can be applied for in conjunction with ACRES measures Low Input Grassland, Extensively Grazed Pasture and Management of Intensive Grassland Next to a Watercourse where the reduced ACRES rate is applied for (see below).

3. Ponds and wetlands are most suitable on impermeable soils where infiltration is limited. Where infiltration is insufficient to hold water permanently, consider a willow filter bed instead.

4. Wetlands should be designed to remain permanently wet and allowed to naturally revegetate with native wetland species such as reeds, bulrush, and flag iris (see Appendix 8). Where possible, collect the seed heads of common reed, bulrush, etc., and use them to encourage new growth.

5. Consideration must be given to the proximity and hydrological connectivity to nearby Natura 2000 sites, including the size of existing habitats/wetlands and any archaeological features, before installing small-scale wetland ponds.

6. It should be noted that these small-scale wetland ponds are not the same as constructed wetlands and do not require planning permission or a discharge licence. They are not designed to handle nutrients that must be collected under the GAP regulations, such as silage effluent, soiled water, dairy washings, slurry, etc.

7. Do not locate small-scale wetland ponds in areas of existing ecological benefit or in floodplains.

8. Small-scale wetland ponds should be fenced off from livestock, with a gap left for maintenance access. Fencing can also be applied for under Measures 30 and 31.

PAYMENT RATE

- Small scale wetland establishment - €800/unit (ACRES reduced rate €627).
- Example sizing = 10m X 6m X .5m.
- Min 1 and Max 3.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs.

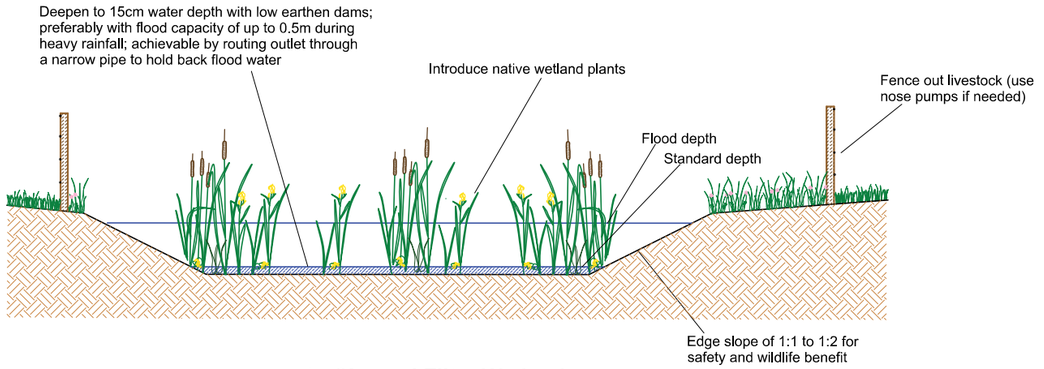


FIGURE 7: IN-CHANNEL FILTER WETLAND

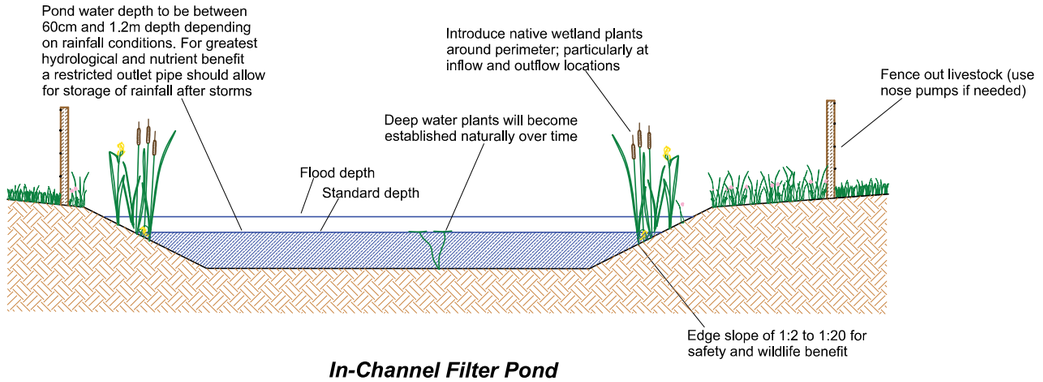


FIGURE 8: IN-CHANNEL FILTER POND

19. EARTHEN BUND

An earthen bund (bank), when properly positioned to intercept overland flow pathways, can temporarily pond field runoff water and sediments, targeting surface runoff or diverting clean rainwater away from farmyards. These features can trap significant amounts of sediment, including valuable topsoil. Unlike more permanent wetlands, earthen bunds have minimal impact on farming productivity, as they drain quickly after a storm.

REQUIREMENTS

1. Earthen Bunds will be paid on a per unit basis (1 unit = 25m long x 0.5m high) & the min length of a unit is 15m
2. Where the applicant is applying for two adjoining units, the minimum required length is 40m (25m plus 15m) to receive payment for both units. This applies similarly for subsequent bunds when they are joined together.
3. To ensure structural integrity, the base of the bund should be 1.2m wide at ground level and 0.5m wide at the crest.
4. Typically, but not mandatory, a pipe is placed through the bund to assist with drainage. The pipe can be raised to allow some water retention for longer periods, which helps more sediment to settle and can increase groundwater recharge.
5. Earthen bunds must be constructed from soil sourced on the farm to prevent the introduction of invasive species.
6. If silt or sediment builds up over time, it may be removed periodically, such as in a tillage scenario.
7. Permission is required before starting any work within or near a protected area, Natura 2000 site, or archaeological site.
8. Check OPW's website https://www.floodinfo.ie/ for more information. This information portal, provides location specific access to flood risk and flood management information.

PAYMENT RATES

- Earthen bund:€300/unit. Min. 1, Max. 5

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs.

20. SWALES

A swale is a linear, mostly dry, vegetated channel laid with a shallow fall on its base. Swales are designed to collect and transfer runoff during rainfall events. The vegetated surface of a swale helps to filter coarse sediments and pollutants from runoff allowing them to settle out and be retained within the swale. A swale will help to slow down the rate of surface water runoff and increases opportunities for infiltration into soils.

REQUIREMENTS

1. Swales are not suitable for steep slopes.
2. Swale design should avoid sharp bends or corners; only gentle, sweeping curves are permitted.
3. The sides of the swale must be gently sloped downwards to facilitate water retention.
4. Check dams to slow the flow of water in the swale are recommended.
5. Swales must be of sufficient design to ensure there is no risk of damage during very high flow periods.
6. See Appendix 11 for further information on swale design.

Swale Gradient %	1	2	3	4	5
Distance between check dams (m)	50	25	16.5	12.5	10

PAYMENT

- €680/unit. Max 3 units
- Min length 20m. Max length 50m.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for.

21. MANAGEMENT OF A CRITICAL SOURCE AREA

Critical source areas are areas that deliver a disproportionally high amount of pollutants compared to other areas of a water body or subcatchment, and represent the areas with the highest risk of impacting a water body. In order to determine where critical source areas are located, we need to determine the hydro(geo)logical susceptibility of the land and also the nutrient loadings applied to that land. This measure is to mitigate against phosphorous losses. The majority of P losses at catchment scale are from critical source areas. These can be identified using the PIP – P maps (ranks 1-3) and/or the EPA modelled flow delivery paths. PIP-P maps consider the P loading at farm scale as well as the hydro(geo)logical susceptibility of the land to overland flow. The EPA modelled flow delivery paths are based on topography (5m resolution) and are only modelled for soils with impaired permeability (e.g. poorly drained minerals and peaty soils).

REQUIREMENTS

Only areas with PIP-P rankings 1-3 and/or flow delivery paths are eligible for this measure unless the advisor provides justification that the proposed area is at high risk for P losses in overland flow (e.g. prone be very wet/saturated ground).

1. This measure cannot be funded on an ACRES area-based action.
2. Tillage Management practices include:
   a. No slurry/fertiliser allowed from 15th September to 15th March inclusive.
   b. No chemical control of weeds allowed at any time. Spot spraying allowed where necessary.
   c. No drainage allowed at any time.
   d. The critical source area should, as agreed between the applicant & ASSAP advisor, be set with grass seed by May 31st using non-inversion techniques (ploughing not permitted). National regeneration of these areas is also allowed but a green cover must be established within 6 weeks.
   e. The seed mix must contain at least 3 grass species, of which Cocksfoot must make up a minimum of 40%. Seed labels and receipts must be kept for the duration of the contract.
   f. Grass mix @ 25-30kgs/ha.
      i. Meadow Fescue (Festuca pratensis),
      ii. Timothy (Phleum pratense),
      iii. Perennial Ryegrass (Lolium perenne),
      iv. Smooth Meadowgrass (Poa pratensis),
      v. Red Fescue (Festuca Rubra),
      vi. Cocksfoot (Dactylis glomerata) @ least 40%.
   g. The mandatory 3m uncultivated margin remains untouched as per GAP regulations.
   h. If used for grazing a max stocking rate of 0.8LU/ha applies during the period 15th September to 15th March inclusive.
3. Grassland Management practices include:
   a. Reduced stocking rate (max 0.8LU/ha) from 15th September to 15th March inclusive.
   b. No slurry/fertiliser should be applied during the period.
   c. No drainage or reseeding allowed at any time.
   d. No chemical control of rushes and other weeds at any time. Spot spraying allowed where necessary.
   e. These requirements may need to be adjusted depending on localised conditions.
4. Funding is available as an annual payment for reducing agricultural activity on these areas during high-risk periods. Annual payment for this measure will be paid once all of the qualifying criteria for the measure have been fulfilled by the applicant and the relevant validation checks satisfied.
5. ASSAP advisor should consider complementary measures in conjunction with this measure where appropriate.

PAYMENT

- €500/ha/yr.
- Min area: 0.2ha. Max of 3ha.

VALIDATION

Annual relevant geotagged photo showing clearly the measure that has been applied for taken between October & March. Participants will be subject to spot checks during the October to March period annually.

23. WATER BARS

Run-off from impermeable surfaces such as farm roadways must be managed to prevent flows into rivers and streams. Retrofitting water bars on existing farm roadways can mitigate runoff pathways by diverting water into areas of higher permeability such as fields and verges or into sediment traps. Cross drains typically sit below the surface of the road whereas water bars/deflectors sit above the surface.

REQUIREMENTS

1. Pencil stone or re-enforced concrete bars direct surface water off the roadway.
2. It is recommended to install water bars in conjunction with Measure 24 Sediment Traps.
3. Water bars cannot direct water directly into surface drains, streams or watercourses.

PAYMENT RATES

- €213/unit
- Min 1. Max 6.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for.

24. SEDIMENT TRAPS

A sediment trap is a shallow basin with a slight slope on its base. It is typically used to intercept runoff from farm roadways travelled by livestock or machinery, allowing sediment or heavier materials to settle before being discharged to grassland, away from watercourses. The size of the sediment trap can vary depending on the estimated volume of runoff from the farm road that needs to be contained for enough time to allow sediment to settle out of suspension.

REQUIREMENTS

1. Site sediment traps in areas where there is a risk of sediment runoff.
2. Siting of sediment traps will need to account for the risk to groundwater. In such cases, keep the base of the sediment trap as high in the ground as possible, while still providing sufficient storage depth to catch and hold water. Any soil used to seal the base of the sediment trap must be sourced from within the farm gate.
3. Works should be undertaken during growing season & during dry weather.
4. As a guideline the sediment trap should be 10-20% of the runoff area. Design and sizing of the sediment traps will be site specific. Suggested dimensions (internal base area) 4m x 10m x 1m deep, with the inlet and outlet at opposite ends to maximise the flow-path through the basin.
5. The outlet from sediment traps cannot be directly connected to the drainage/river network.
6. The soil used from the excavation may be used to create gently sloping banks.
7. On sloping ground the soil excavated from the upper end of the silt trap may be used to build a retaining embankment around the lower end.
8. Maintain sediment traps as required and dispose of material appropriately by land spreading well back from any water courses or drains.
9. Fencing of sediment traps, where required, can be applied for under Measures 30 & 31.

PAYMENT

- €120/unit/yr.
- Min 1. Max 6.

VALIDATION

Annual relevant geotagged photo showing clearly the measure that has been applied for.

25. CULVERTS

The movement of animals, people and vehicles across drains damages banks and aquatic vegetation. This increases the risk of soil particles and plant nutrients entering the drain and the potential for these materials to be transported to a stream or river. Defecation from animals also increases pathogen loading in rivers, which is particularly important for the quality of our bathing and drinking waters. The use of culverts are for field drains only i.e. those not identified as a blue line on the OSI 1:5000 maps. It is the responsibility of the farmer to ensure that all relevant legal requirements are adhered to & relevant authorities consulted prior to any works being carried out.

REQUIREMENTS

1. Select a suitable drain i.e. one that does not have a gravel bed.
2. Select a suitable location within the drain to avoid any overland flow pathways or CSAs.
3. Ensure crossing design does not impede high flows (consider storm events). Culverts are suitable for the safe passage of livestock/vehicles across land drains in small catchments and gentle slopes.
4. A box culvert is preferable to a piped culvert.
5. The movement of livestock should be controlled, as the culvert could become a choke point where frequent passage of animals leads to poaching near the drain.
6. Works should be carried out during the July to September time period.
7. IFI should be contacted regarding design and works methodology would need to be agreed between the relevant contractor and the relevant Fisheries Environmental Officer in advance of the works. See guidance manuals at this link https://www.fisheriesireland.ie/sites/default/files/migrated/docman/2016/Guidelines%20Report%202016.pdf).

PAYMENT

- €800 per unit.
- Min 1. Max 5 units.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs and all required relevant permissions.

26. WATERCOURSE CROSSING/BRIDGES

River crossings by animals and farm vehicles can introduce sediment and pollutants into the river, especially when the crossing is part of a farm roadway. Replacing such crossings with a properly designed bridge can positively impact the river. The bridge should be fit for its intended purpose and constructed with materials that will not cause pollution (e.g., timber, pre-cast concrete, steel). It should also be appropriately sized for its use, such as for cattle or quad crossings. Clear-span bridges are preferred, as they eliminate the potential for interference with the riverbed.

REQUIREMENTS

1. It is the responsibility of the farmer to ensure that all relevant legal requirements are adhered to & relevant authorities are consulted with prior to any works being carried out.

2. Planning permission and an appropriate assessment may be required for this measure. Please contact your local authority to ascertain what permissions are required.

3. Select a suitable location on the watercourse to avoid any overland flow pathways or critical source areas (CSAs).

4. Ensure bridge does not impede high flows (consider storm events).

5. IFI must be contacted re design and works methodology

PAYMENT RATE

- 50% of cost of bridge installation up to a max of €5000 per applicant.
- Max 1.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs and all required relevant permissions.

FIGURE 9: THE PROJECT CAN PROVIDE FUNDING TOWARDS THE COST OF BRIDGE PLANNING, DESIGN AND INSTALLATION.

27. GATEWAY MEASURES

Gateways located close to rivers or streams can deliver sediment and pollutants to the river, particularly frequently used gateways. Redesigning the paddock and relocating the gateway can have a positive impact on water quality.

REQUIREMENTS

1. Identify suitable location for relocated gate.

2. Permanently close up old gateway.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs.

PAYMENT RATES

Measures 27A & 27B can be applied for individually or applicants can apply for both measures combined where it is required. Applicants can apply for a minimum of 1 gateway up to a maximum of 4 gateways to be relocated (i.e. Max of €720 x 4 can be claimed by an applicant).

27A	Gateway Remediation (closing of gap) & Relocation	€360
27B	New Gateway (per gateway, includes gate & posts)	€360

Measure 27C is available for an existing gateway that is contributing to nutrient or sediment loss to the drainage network. This measure cannot be applied for in conjunction with 27A and 27B.

27C	Gateway Resurface	€118

FIGURE 10: RELOCATING THE GATEWAY CAN HAVE A POSITIVE IMPACT ON WATER QUALITY.

28. WILLOW FILTER BED

Willow filter beds are areas of densely planted willow trees. They help to slow the flow of water, allow sediment to settle out and any traces of dissolved nutrients to be taken up by growing vegetation. They act as a filter and allow for polishing of water from farm roadways and clean concreted yard areas.

All farms must adhere to the most current Nitrates Regulations regarding storage of silage effluent, dairy washings, slurry and farmyard manure. This measure is not to address any issues that are currently a GAP regulation requirement.

REQUIREMENTS

1. Willow filter beds are a suitable measure for free draining soils, where small scale wetland ponds may not be so effective due to the high infiltration rates; however willow filter beds may be used in any circumstances where there is sufficient soil depth to get them established.

2. Willow filter beds are not suitable for streams or other permanent watercourses or drains with a gravel bed.

3. Willow filter beds can be sited in existing man-made farm drains that do not support or have the capacity to support fish life. If in any doubt contact IFI for clarification.

4. Willow filter beds can also be sited on green field sites. Ensure sufficient soil depth to establish willow cuttings and always consider suitability of location in terms of vulnerable aquifers, proximity to karst areas, proximity to waterways and tall hedgerows; soil type, percolation rate and depth; topography of the land and other similar factors.

5. The size of the willow filter bed should allow an internal effective area of ≥10% of the runoff area, whether from farm roads or clean yard areas.

6. Where possible, the willow filter bed should be long and thin but where more width is available or where awkward corners are being used, the shape may be amended. In these circumstances increase the size to 15% of the runoff area if possible, to compensate for reduced evapotranspiration effectiveness.

7. A wetland planted silt trap (10m x 4-8m wide) for fines should be installed, where appropriate, at the head of the willow bed, to protect the willow bed from silt accumulation over time. This includes a sump/scrape at the head of the wetland planted silt trap.

8. Any build-up of sediment in the initial planted silt trap should be removed periodically and as required to avoid the willow bed becoming a source of nutrients rather than a sink.

9. Site gradient must be considered in terms of the required number of bunds and the required number of willow filter beds. On sloping sites, place bunds at intervals to enable a series of basins (each level within their own bunded area) to be built with minimum of earth movement.

10. Bund height of 0.5m but may be up to 1m in certain scenarios. The higher bund will allow for more storage of water.

11. Ensure bunds are well compacted and allowed to vegetate.

12. Ensure that the bed of the basins used are level and that the embankments are not less than 300mm high around the perimeter of each basin.

13. Ensure water flowing through the willow bed is dispersed evenly and not making a single path through the willow bed. During storm events the water should sit to a depth of 10-30cm across the entire bed, and then draw down afterwards to soil level.

14. Densely plant the willow filter bed with native Sallix species.

15. Plants must be of Irish Origin or Irish Provenance and purchased from DAFM registered professional operators. All plants must have accompanying plant passports.

16. Plant 6 rows of willows at 0.8m – 1m (80-100cm) spacing between rows and 0.5m (50cm) spacing within each row.

17. 2400 willow cuttings required for an area 4-8m x 200m. 1200 willow cuttings required for an area 4-8m x 100m.

18. The willow trees should be coppiced on a 3-5yr rotational basis, depending on inflow, to ensure active growth and uptake of any potential traces of nutrients. Use a circular saw or chainsaw for coppicing & remove cuttings. Cut willow may be chipped for use on the farm, cut for firewood if large enough and dried for 2 years before use, or piled up as a wildlife haven at a distance of ≥10m from the willow bed or any waterway.

19. For health and safety reasons, it is recommended to fence off the area using Measure 30, etc.

20. Please note that minor adjustments may be required during installation, depending on specific site conditions.

21. Permission required prior to any work if within or close to any protected area, Natura 2000 site or archaeological site.

22. Please note, site location could impact the effectiveness of the willow filter bed measure. The department guidance S133 provides some details on Site Restrictions at https://assets.gov.ie/95195/3f86e4a7-9a32-462c-8d46-9ab5298fa34c.pdf.

23. For further details, please see Appendix 10.

PAYMENT RATE

- Min 30m up to a max of 200m
- €34/m
- Applicant must apply for fencing of the Willow Filter Bed separately through Measure 30 etc.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs (receipts/invoices).

29. FARMYARD SETTLEMENT TANK

As farms have expanded over the last number of years, so too has the area of concreted yards within farmyards. Capturing water and allowing sediment to settle in a two-chamber settlement tank will help filter and polish the water before it flows into the drainage network.

REQUIREMENTS

1. Install a 2-chamber settlement tank (see diagram below) to collect run-off from clean unsoiled areas. The tank below is 3.5m x 2.5m x 2.2m (internal dimensions, taking into account freeboard).

2. The outlet of the settlement tank should ideally discharge into a nature-based solution, such as a willow bed (see Measure 28), to further polish water coming from farmyards, especially those with large areas of concrete. If an alternative to a nature-based solution is proposed, justification must be submitted by the advisor submitting the proposal.

3. The outlet of the 2-chamber settlement tank must not go directly into a waterbody (drain, stream, river, pond, lake, swallow hole etc.).

4. All farms must adhere to the most current Nitrates Regulations, specifically the European Union (Good Agricultural Practice for the Protection of Waters) Regulations, as amended, regarding the storage of silage effluent, dairy washings, slurry, soiled water, and farmyard manure (see below).

    a. In these Regulations "soiled water" includes, subject to this sub-article, water from concreted areas, hard standing areas, holding areas for livestock and other farmyard areas where such water is contaminated by contact with any of the following substances:

        i. livestock faeces or urine or silage effluent,

        ii. chemical fertilisers,

        iii. washings such as vegetable washings, milking parlour washings or washings from mushroom houses,

        iv. water used in washing farm equipment.

    b. In these Regulations, "soiled water" does not include any liquid where such liquid has either—

        i. a biochemical oxygen demand exceeding 2,500mg per litre, or

        ii. a dry matter content exceeding 1% (10 g/L).

5. This measure is not to address any issues that are currently a GAP regulation requirement.

6. Tank design should consider the potential for pipe blockages, as well as the ease of clearing/cleaning them.

7. The farmer must make every effort to keep yards reasonably clean and take care to prevent the entry of excessive debris (such as leaves) into the settlement tank.

8. Regular emptying (every 3-6 months or more frequently) and supervision will facilitate the efficient operation of settlement tanks.

9. The applicant is required to ensure compliance with all planning permission requirements. Additionally, the lid must be removable for maintenance purposes.

10. All tanks must be constructed in line with DAFM specifications (S123).

PAYMENT

- 100% of the cost up to €6500 (ex VAT).
- Min 1. Max 1 per farm.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs.

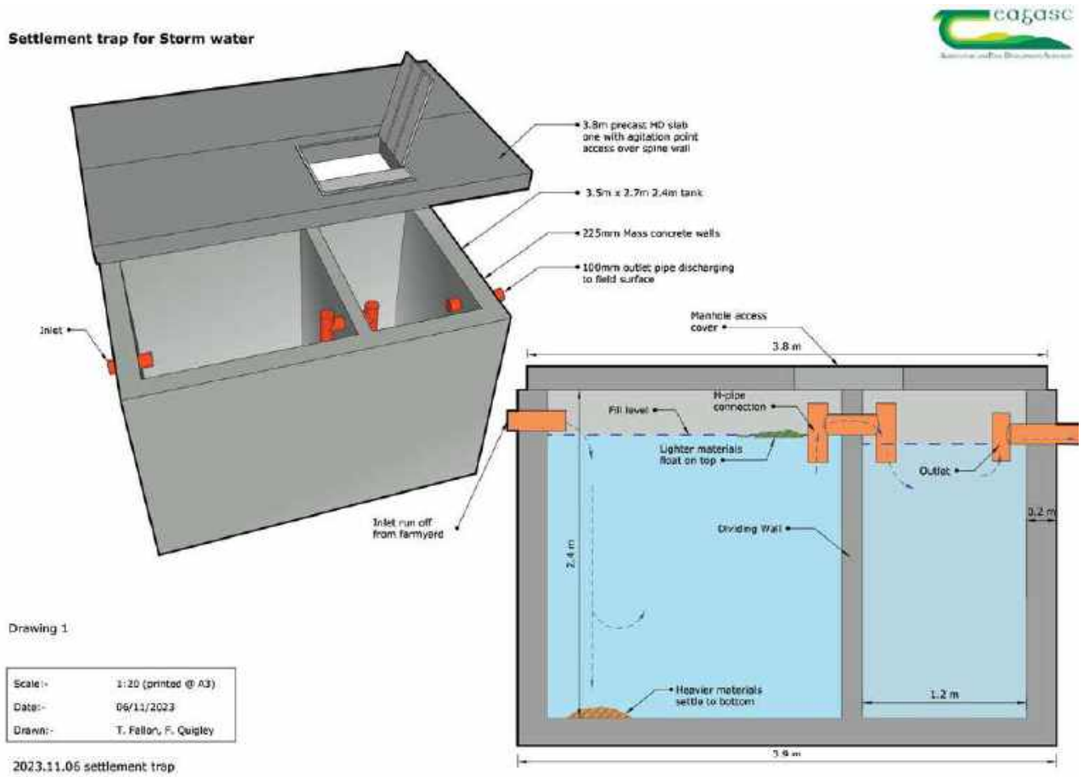


FIGURE 11: USING A TWO CHAMBER SETTLEMENT TANK TO POLISH THE WATER CAPTURED IS A VITAL COMPONENT IN ENSURING BETTER WATER QUALITY.

RECEPTOR MEASURES

RECEPTOR MEASURES:

30. 31. 32: BOVINE, OVINE EXCLUSION FROM WATERBODIES

Fence off water bodies (such as rivers, streams, drains, ponds, and lakes) to prevent access by bovine and ovine livestock. This will help reduce the impacts of nutrient and sediment enrichment, as well as prevent bank destabilisation. This measure should only be recommended when it is expected to provide a significant benefit to water quality.

REQUIREMENTS

1. Erect a permanent fence 1.5m from the top of the bank of any surface water (rivers, streams, drains, ponds, lakes, etc.). Measure from the top of the riverbank, even if the bank is sloped, and not from the highest waterline.

2. Ensure that there is no risk of double funding with TAMS.

3. The fence must be fit for purpose. It is required to follow the DAFM Minimum specification for Farm Fencing S148 & Accepted Fencing Post Suppliers Specification S148A (equivalent to TAMS requirement).

4. Cutting of hedgerow vegetation inside the fence line is permitted but cannot take place between the 1st of March and the 31st of August each year. Consider leaving a gap to allow access for maintenance. Strimming of grass beneath wires is permitted as needed throughout the year.

5. Extensive removal of existing vegetation to facilitate fencing is contrary to the objective of this measure and therefore cannot be allowed within the EIP

6. Livestock are not permitted inside the fence line. The battery can also power secondary devices, such as an electric fence, meaning you do not need to apply for a separate solar-powered electric fencer with this measure.

7. All fencing must be carried out in compliance with all relevant legal obligations. Fencing of commonage land or previously unclosed areas is not permitted.

8. **PAYMENT**

- M30: Bovine exclusion from waterbodies – fencing, single strand electric fencing: €2.77/m.
- M31: Ovine exclusion from waterbodies – fencing, sheep mesh and 1 strand of wire: €6.75/m. The lowest line of the sheep wire mesh must be 100mm above ground level to allow adequate clearance for wildlife.
- M32: Ovine exclusion from waterbodies (mountain rate) – fencing, sheep mesh and 1 strand of wire: €8.81/m. The lowest line of the sheep wire mesh must be 100mm above ground level to allow adequate clearance for wildlife.
- Cumulative meters of fencing paid is 1000m and can be made up of any combination of M30, M31 & M32 e.g.: 500m of M30 plus 500m of M31. Min of 5m required. Max of 1000m.
- Applicants cannot apply for Measures 30, 31 & 32 and Linear Riparian Buffer Zones Measures 15 & 16 on the same section i.e. fencing cost is already included in the Linear Riparian Buffer Zone costing.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs. No proof of costs are required under 10m.

33. SOLAR POWERED ELECTRIC FENCER

If a mains-powered electric fence supply is unavailable, farmers may apply to the Water EIP for a solar-powered electric fencer. These provide a flexible and cost-effective solution for powering long sections of electric fencing. To be eligible for payment, applications must be made in conjunction with Measure 30 (Bovine Exclusion from Waterbodies), Measure 31 (Ovine Exclusion from Waterbodies), Measure 14 (Spatially Targeted Riparian Buffer Zone), or Measure 15 (Linear Riparian Buffer Zone Grassland).

REQUIREMENTS

1. The size of the solar powered electric fencer should be based on the length of fence to be electrified.

2. Ensure that there is no risk of double funding with TAMS.

3. To ensure adequate operation they should not be placed in the shade.

4. They can be put into storage when not in use.

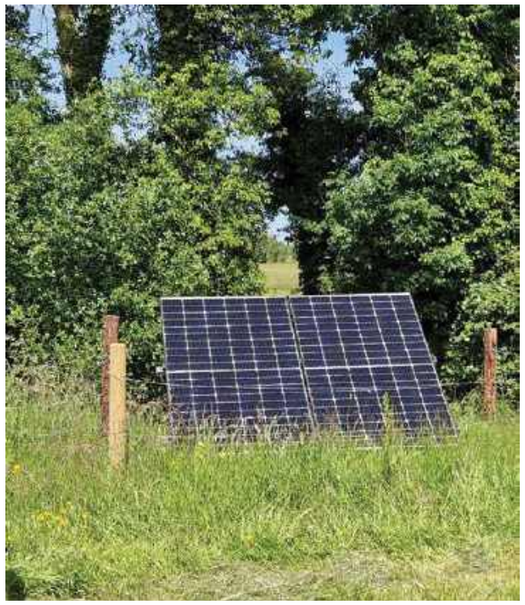
5. Funding for two solar electric fencers will only be provided where there is a clear need for a second unit, such as when it is not possible to connect the electrified fence to the second location.

PAYMENT

- Applicant will receive up to €634 for a solar powered electric fencer. Min. 1, Max 2.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs.



34. 35. 36. 37: ALTERNATIVE WATER SUPPLY (M34 & M35), WATER TROUGHS (M36), PIPING AND FITTINGS (M37)

Pasture pumps and solar powered pumps with water troughs are a sustainable way to provide drinking water to livestock. Implementing this measure on farms will prevent livestock access to river channels thereby preventing damage to channel banks, reduce hydromorphological impacts and help to improve water quality. This measure is only applicable to those with a Grassland Stocking Rate <170kgs/ha.

REQUIREMENTS

1. To be eligible to apply for this measure there must be a clear requirement to provide an alternative drinking water supply source to livestock.

2. Ensure that there is no risk of double funding with TAMS.

3. Measures 34, 35, 36 & 37 can only be applied for in conjunction with measures M15, M30, M31, M32 or where a drinking point has been closed to exclude livestock for drinking purposes.

4. All pasture pumps & water troughs must be located at least 20m from surface waters (includes open drains).

5. Pasture pumps, solar powered pumps & water troughs cannot be located within 40m of archaeological structures.

6. Troughs should be located away from wet or waterlogged ground which is easily poached or eroded.

7. Drinking troughs are not to be located within sensitive habitats.

8. Water troughs, solar pumps and pasture pumps must be fixed in situ where applicable, fully functional, and connected to a piped supply or an adequate rainwater harvesting system prior to payment being issued by the project team. If the equipment is at risk from flooding, the farmer must take appropriate measures to prevent damage.

9. Solar pumps cannot be used if they result in an increased rate of water extraction from a water supply e.g. stream / river beyond the current extraction rate.

10. If more than one pasture pump, solar pump, or water trough is being applied for, funding will only be provided where there is a clear need for the additional equipment. This may include situations where it is not possible to provide sufficient water to livestock or where connecting a supply to a second location is not feasible.

11. Where multiple solar pumps are required across different holdings in close proximity, the advisor should work to facilitate farmers in coming together to install the minimum number of pumps needed to service the area effectively. This approach aims to optimise resources and reduce unnecessary duplication of equipment.

12. The intake pipe from the stream should have a protective filter/gauze to prevent blockage of pasture pumps.

13. Measure 37 is to help cover the cost of piping and fittings to farmers and should match what has been applied for in Measures 34 and 35..

PAYMENT

- M34: Alternative water supply – Pasture pump: up to €400/unit; min. 1, max. 4
- M35: Alternative water supply – Solar pump: €2,500/unit; min. 1, max. 2
- M36: Alternative water supply – water trough: up to €300/unit; min. 1, max. 5
- M37: Alternative water supply – piping and fittings: €150/unit: min 1 max: correspond with what is applied for in M34 & M35 only.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs.

Relevant geotagged photos of the closed off drinking points/ animal access points must be submitted.

38. VEGETATED BUNDED DRAIN

Ditches and drains serve as significant pathways for the transport of water and associated nutrients and sediments from fields to receiving watercourses. There are opportunities to attenuate nutrients and sediment along this pathway by slowing the flow, enhancing sediment deposition and promoting plant uptake of nutrients within the ditch or drain. Vegetated Bunded Drains help maximise the retention of sediments and nutrients, while also creating opportunities for water infiltration into the soil.

REQUIREMENTS

1. Vegetated bunded drains are not suitable for streams, permanent watercourses, or drains with a gravel bed, as these are considered by to have potential for supporting macroinvertebrates and fish life.

2. IFI should be contacted regarding design & works methodology would need to be agreed between the relevant contractor and the relevant Fisheries Environmental Officer. https://www.fisheriesireland.ie/sites/default/files/migrated/docman/2016/Guidelines%20Report%202016.pdf

3. This measure is not suitable in hilly areas where there is a high risk of flash flooding or for drains with high flow volumes.

4. A suitable ditch or drain, dry or wet must have a slope of less than 5%.

5. This measure is not suitable in free-draining areas unless the floor is sealed with impermeable clay.

6. The ideal time to carry out work on farm drains is between July and September. This timing helps minimise soil damage, sediment loss, and disturbance to wildlife. Additionally, it is important to consider bird nesting season restrictions during this period to ensure compliance with environmental guidelines.

7. A sediment plug, such as a bale of straw or rushes, should be placed downstream of the works during the construction phase. This helps capture any sediment that becomes mobilised during the work, preventing it from entering nearby water sources and minimising sediment pollution.

8. Where suitable excavate material from the base of the drain to create a sump within the drain approx. 60cm (2ft) deep. Use this material to create a bund downslope from the sump. Where no sump is created the earth used to create the bund must be sourced from within the farm gate. If possible, the bund should be at least 90cm (3ft) wide. Ideally, widen the channel just up-slope from the bund to at least twice the original width. The slope of the bank should be re-profiled if the bank is steep.

9. The bunds cannot be used as a crossing point for livestock or machinery.

10. The number of bunds required will be site specific. The distance between bunds is dependent on the slope of the drain.

11. Introduce native wetland plants (Appendix 8) from elsewhere on the farm or from a specialist supplier. Plant these at the waterline.

12. Removal of sediment & associated P should take place as necessary. Ongoing management is required to avoid these areas becoming sources of nutrients rather than sinks.

13. Permissions may be required prior to any work if within or close to any protected area, Natura 2000 site or archaeological site.

PAYMENT

- €1000 per vegetated bunded drain. Min 1. Max of 3 per farm.
- Min length: 20m. Max length: 50m.

VALIDATION

Relevant geotagged photo showing clearly the measure that has been applied for & proof of costs.

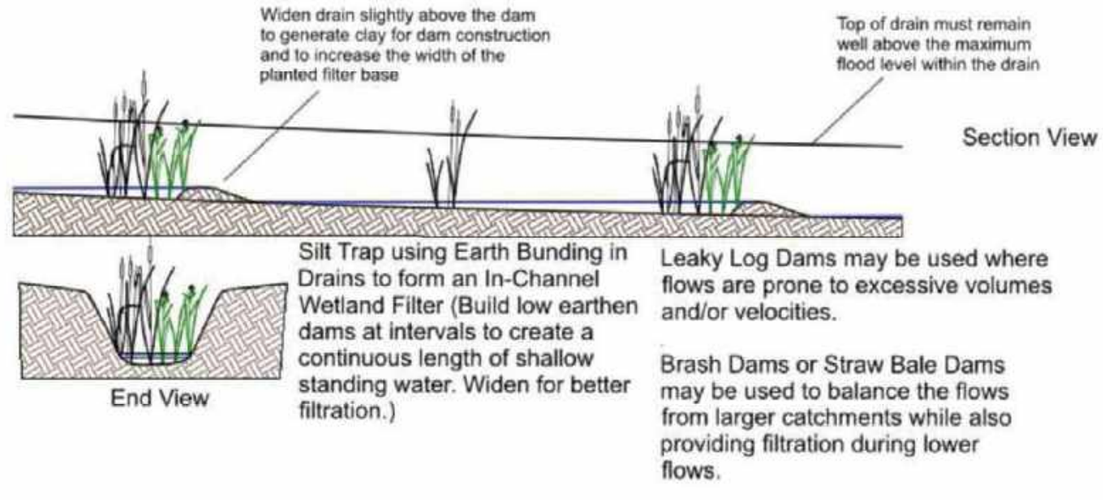


FIGURE 12: IN-CHANNEL FILTER BUFFERS FOR SILT SETTLEMENT IN FARM DRAINS.

OTHER MEASURES

OTHER MEASURES:

39. HOST FARMER PAYMENT

To facilitate outdoor farmer training courses, advisors will need to identify suitable farms to host the events. These farms will be approved by the EIP Project team, and a host farmer application form must be submitted. The selected farms will serve as demonstration sites for various mitigation measures, helping to disseminate knowledge to other FFW EIP participants.

PAYMENT

A farmer that hosts a FFW EIP course or event will be paid €180 for the use of his/her premises for the course or the event. Host farmers can receive this payment up to a max of 5 times during the lifetime of the EIP. If the opportunity arises to collaborate with a local Signpost Farmer, it should be taken advantage of.

VALIDATION

Submission of FFW EIP Course/Event Host Farm form signed by the organising ASSAP advisor and farmer.

40. CONTRACTOR MOBILISATION FEE - EXCAVATOR

This is a fee payable to facilitate the use of an excavator on a farm for putting in place the following measures:

1. M13 (Hedgerow Establishment
2. M18 (Small Scale Wetland Pond)
3. M19 (Earthen Bund)
4. M20 (Swale)
5. M23 (Water Bars)
6. M24 (Sediment Traps)
7. M25 (Culverts)
8. M26 (Watercourse Crossing/Bridges)
9. M27 (Gateway Measures)
10. M28 (Willow Filter Beds)
11. M29 (Farmyard Settlement Tank)
12. M38 (Vegetated Bunded Drain)

The fee, a one-time payment of €200, covers the cost of transporting the excavator to the farm.

41. BESPOKE MEASURES

Bespoke Measures must be identified as part of the Rainwater Management Plan to be considered for funding by the Project Team. Any measures identified that do not form part of the core measures must provide a water quality benefit to the catchment. Farmers can apply for funding for Bespoke Measures on a case-by-case basis. To receive funding the measure must demonstrate that:

- It will provide a water quality benefit within the particular catchment area.
- Have detailed costings of the proposed measure.
- Provide guideline specifications as to how the measure will be installed & implemented.
- Proof of compliance with legal obligations.
- To be agreed where necessary, by the farmers own advisor /consultant.

Examples of Bespoke Measures include:

1. The FFW EIP project will consider other measures that the farmer and advisor deem suitable.

2. Batch footbaths. These are roofed footbaths that retain mineral solutions for foot-bathing sheep to prevent foot rot. They will reduce run-off of foot-bathing solution.

3. In certain cases, payment of a contractor can be reviewed to carry out weed wiping in a drinking water protected area, s to ensure no contamination of the water supply.

42. FARMYARD BUCKET AND BRUSH

Using a farmyard bucket and brush is a labour-efficient method for keeping clean yards within the farmyard complex tidy. This helps reduce the potential for contamination of clean water exiting through the clean water outlet.

REQUIREMENTS

1. Applicants can apply to the EIP for 1 farmyard bucket & brush.

2. The bucket and brush measure must be purchased new and cannot be second-hand.

3. For this mitigation measure to be successful, the bucket and brush must be used on a regular basis to maintain the farmyard clean and tidy.

4. There must be clear justification for the applicant to be successful to secure this funding.

5. Yards that are poorly managed and require more fundamental work will not be considered.

6. EIP team will require evidence to support the claim.

PAYMENT

- 50% of the cost up to a max funding of €2000 (ex VAT).

VALIDATION

Proof of costs.

43. SLURRY TESTING

Knowing the nutrient content of the slurry and soiled water in the various tanks on the farm is crucial for both the economic and environmental sustainability of the farm. This information enables more targeted nutrient application, in line with a tailored Nutrient Management Plan, and may help reduce the need for inorganic fertilisers.

REQUIREMENTS

1. Applicants can apply for a max of 4 slurry samples @ €70/sample.

2. Sample each tank separately to get individualised results.

3. Incorporate the results of the slurry testing into the NMP for the farm which will allow for more accurate application of nutrients based on the nutrient content of the relevant slurry tank.

4. Collecting yard tanks and soiled water tanks can be tested as part of this measure.

5. This measure is open to all farmers (not just dairy farmers).

PAYMENT

- Applicants can apply for a max of 4 samples @ €70/sample.

VALIDATION

Submission of slurry testing report.

More information available at: https://www.teagasc.ie/news--events/daily/environment/get-your-slurry-analysed-for-nutrient-content.php

APPENDICES

APPENDIX 1:

ANNUAL CATCH CROP DECLARATION FORM

Applicant Name: _____

Applicant Herd Number: _____

I am applying to the Farming for FFW EIP for:
Measure 6A Catch Crop (Other Cropping Systems) ha____
Insert relevant reference coordinates & LPIS details below:

_____

_____

_____

Measure 6B Catch Crop (Winter Cropping Systems) _____ha
Insert relevant reference coordinates & LPIS details below:

_____

_____

_____

Please tick the relevant year that this form applies to below.

2024 ☐

2025 ☐

2026 ☐

2027 ☐

I will establish and grow the Catch Crop in line with the Farming for FFW EIP Booklet of Measures. I have included a map outlining the areas sown as detailed above. Please note that funding under the Farming for FFW EIP cannot overlap with any other relevant DAFM funded scheme.

Signature: _____

Date: _____

APPENDIX 2:

LIST OF PRESCRIBED CATCH CROP SPECIES

Catch Crop Species	Monoculture Seed Rate (Kg/Ha)
Buckwheat	50kgs
Crimson Clover	15kgs
Berseem Clover	15kgs
Balansa Clover	15kgs
Squarrosa Clover	15kgs
Forage/Fodder Rape	8kgs
Mustard (White)	15kgs
Mustard (Brown)	7kgs
Oats	100kgs
Black Oats	60kgs
Phacelia	8kgs
Sunflower	20kgs
Rye	150kgs
Tillage Radish	10kgs
Vetch	30kgs
Leafy Turnip	8kgs
Peas	80kgs
Beans	140kgs
Linseed	30kgs
Red Clover	20kgs
Fodder Radish	10kgs
Kale/Rape Hybrid	8kgs

APPENDIX 3:

LIST OF APPROVED NATIVE TREE SPECIES FOR RIPARIAN BUFFER PLANTING:

Alder (Alnus glutinosa)
Goats Willow (Salix caprea)
Grey Willow (Salix cinerea)
Bay Willow (Salix pentandr)
Downy Birch (Betula pubescens)
Pedunculate Oak (Quercus robur)
Hazel (Corylus avellana)
Holly (Ilex aquifolium)
Aspen (Populus tremula)

APPENDIX 4:

TREE PLANTING & CLEARANCE DISTANCE FROM OVERHEAD WIRES.

Power line type	**Clearance distance (from centre of line)**
Low voltage (230/400V)	5 m
10 kV and 38 kV	10 m
110 kV	31 m
220 Kv	34 m
400 Kv	37 m

Note: All trees must be outside their falling distance from line support structures.

APPENDIX 5:

TREE SELECTION DEPENDING ON SOIL TYPE FROM THE FORESTRY STANDARDS MANUAL NOV 2023

- Scenario 1: Podzols (Oak-Birch-Holly Woodland)
- Scenario 2: Brown Podzolics (Oak-Birch-Holly with Hazel Woodland)
- Scenario 3: Brown Earths (Oak-Ash-Hazel Woodland)
- Scenario 4: Gleys (Alder-Oak-Ash Woodland)
- Scenario 5: Highly Modified Peat & Peaty Podzols (Pioneer Birch Woodland)
- Scenario 6: Alluvial Floodplains (Alluvial Woodland)

APPENDIX 6:

LIST OF APPROVED NATIVE HEDGEROW SPECIES:

Hawthorn/Whitethorn (Crataegus monogyna)
Blackthorn (Prunus spinosa)
Dog Rose (Rosa canina)
Guelder Rose (Viburnum opulus)
Holly (Ilex aquifolium)
Hazel (Corylus avellana)
Alder Buckthorn (Frangula alnus)
Spindle (Euonymous europaeus)
Elder (Sambucus nigra)

APPENDIX 7:

LIST OF APPROVED TREE SPECIES WITHIN A NEW HEDGEROW:

Bird Cherry (Prunus padus)
Crab Apple (Malus sylvestris)
Goat Willow (Salix caprea)
Grey Willow (Salix cinerea)
Rowan (Sorbus aucuparia)
Wild Cherry (Prunus avium)
Hawthorn/Whitethorn (Crataegus monogyna)
Irish Whitebeam (Sorbis Hibernia)
Sessile oak (Quercus petraea)
Pedunculate oak (Quercus robur)
Holly (Ilex aquifolium)

APPENDIX 8:

LIST OF WETLAND PLANTS FOR MEASURE 18 (SMALL SCALE WETLAND POND) & MEASURE 38 (VEGETATED BUNDED DRAINS).

Taller Wetland Plants
Bulrush (typha latifolia)
Yellow Flag (Iris pseudacorus)
Blanched Burr Reed (Sparganium erectum)
Red Sweet Grass (Gltceria maxima)
Reed Canary Grass (Phalaris grundinacea)
Greater Pond Sedge (Carex riparia)

Lower Growing Species
Fools Cress (Apium nodiflorum)
Water cress (Nasturtium officinale)
Water mint (Mentha aquatica)
Water mint (Mentha aquatica)
Brooklime (Veronica beccabunga)
Brooklime (Veronica beccabunga)

For any location where these are required, have one tall species as a minimum, and ideally several tall species and also a selection of the lower growing species. Ideally harvest from within the farm or within a closer radius from existing farm drains or wetland areas (but outside of an SAC or SPA). Alternatively obtain from a specialist supplier of native Irish wetland plants.

APPENDIX 9:

ANNUAL NITROGEN SURPLUS CONSULTATION DECLARATION FORM

Applicant Name: _____

Applicant Herd Number: _____

I confirm that I have completed a Nitrogen Surplus calculation for (please tick the relevant year that this form applies to below). The nitrogen surplus number for this year is _____ (See Ag Nav print out attached).

2024 ☐ 2025 ☐ 2026 ☐ 2027 ☐

I confirm that I have discussed with my advisor measure(s) that can be undertaken to reduce the nitrogen surplus per hectare figure and agree to apply the measure(s) for the coming year.

Brief summary of discussion:

Farmer Signature: _____

Date: _____

Advisor Signature: _____

Date: _____

APPENDIX 10:

WILLOW FILTER BED

Willow Filter Beds for clean yard runoff, roof surfaces & farm roads.

DESIGN SIZING AND LAYOUT

1. Size at ≥10% of the total contributory catchment area.
2. Select an area down-gradient of the farmyard/road for gravity flow.
3. Ideally keep the system width to between 4 and 8m wide; but this may be flexible if there is an awkward corner that lends itself to use as a filter bed.
4. Place a wetland planted silt trap before the willow bed for suspended solids retention, sized at approximately 10-20% of the willow bed size.
5. Keep the ground level within each basin level, left to right and inlet to outlet.
6. Plan to build and plant the system between February and April, so that willow planting can commence immediately upon completion.

CONSTRUCTION NOTES

1. Remove topsoil scraw (plants and roots) and set to one side for reuse in the base of the willow filter. Remove remaining topsoil and set to one side for reuse in the basin.
2. Mould the subsoil to the required layout. Allow for a maximum drop of 1m between basins; and use internal bund walls to divide the area available into separate basins where gradients require it.
3. Track back and forth over moist clay for all made ground. This is more effective than simply compacting with the bucket of the digger. It is important that all water remains in the willow basin until it reaches the final outlet point and does not spill out over the field or other area.
4. Dig out the willow filter basin to a depth of 50cm (or up to 1.5m where deep clays or peats are present to protect ground water).
5. Replace top scraw (upper area of topsoil) into the base of the willow filter. Replace loose subsoil over this. Finally replace the weed-free topsoil across the upper level of the willow basin.
6. Let outlet pipes horizontal to allow free flow of water through the basins. This may be raised only after the willows have become well established - either in April of year 2, or earlier if needed to hold a bit more moisture during a dry summer in year 1.
7. Keep the willows weed-free in years 1 and 2. Thereafter the willow growth will keep weeds down. Do not use herbicides, which can be readily absorbed by the willow stems even in winter, killing your willows.

PLANTING AND COPPICING NOTES FOR WILLOW FILTER

1. Lower any hedge lines within 5m of the willow filter to maximise the exposure to light and wind to maximise evapotranspiration and effluent uptake. Keep maintained on an ongoing basis.

2. Willow trees are to be coppiced on a 3-yr rotation basis as set out below:

3. 1st February after planting: cut back all trees to 150mm above bed level to encourage stem development.

4. 2nd February after planting: leave all willows uncut.

5. 3rd February after planting: cut back all three rows on one side of the filter area to 100mm above the previous cut.

6. 4th February after planting: cut back all three rows on the other side of the filter area to 100mm above the previous cut.

7. 5th February after planting: leave all willows uncut.

8. 6th February after planning: Repeat cycle from 3rd year.

9. Coppicing may be carried out with a loppers or brush cutter or tractor mounted hedge cutter.
   Remove cut trees from the area and store away from drains to prevent re-entry of nutrients into watercourses.
   Timber may be chipped or logged for fuel, used as a wildlife habitat log-pile, or for landscaping.

10. Note that if firewood is desired, leave cuttings to grow for 5 years rather than 3, and allow cut lengths to dry for 2 years prior to logging for firewood.

PLANTING NOTES FOR WETLAND PLANTED SILT TRAP

1. Planting should be carried out in the spring, prior to or approaching the growing season; and usual plant care adhered to.

2. The wetland area(s) should be planted with large groups of single species of tall emergent species to prevent the dominant species covering the whole area. Plant species listed are indicative and may be amended within certain limits.

3. The main tall plants should be planted at c.0.7m spacing (2 plants/m2). Seeding may also be used but will take longer to become established.

4. Ensure that trees (other than willows in the willow filter or smaller hedgerow trees) are not less than 4m from the silt trap to protect the integrity of the clay lined base. Weed out tree seedlings if found.

5. Water should be kept just below marsh soil level until plants are firmly rooted and growing well, to prevent them floating away. A few weeks of growing season growth should be sufficient for rooted plants. Longer will be needed for seeded areas.

6. The water levels should be sufficient to keep the marsh soil moist. If the system is showing signs of drying out, water well, with the outlet flow control pipe raised up to enough hold water at base level.

7. For the first full year, keep water level at ≤10cm depth. In May of year 2, levels may be raised to 20cm operating depth.

RECOMMENDED PLANTS FOR WETLAND PLANTED SILT TRAP:

Iris pseudacorus - yellow flag

Mentha aquatica - water mint

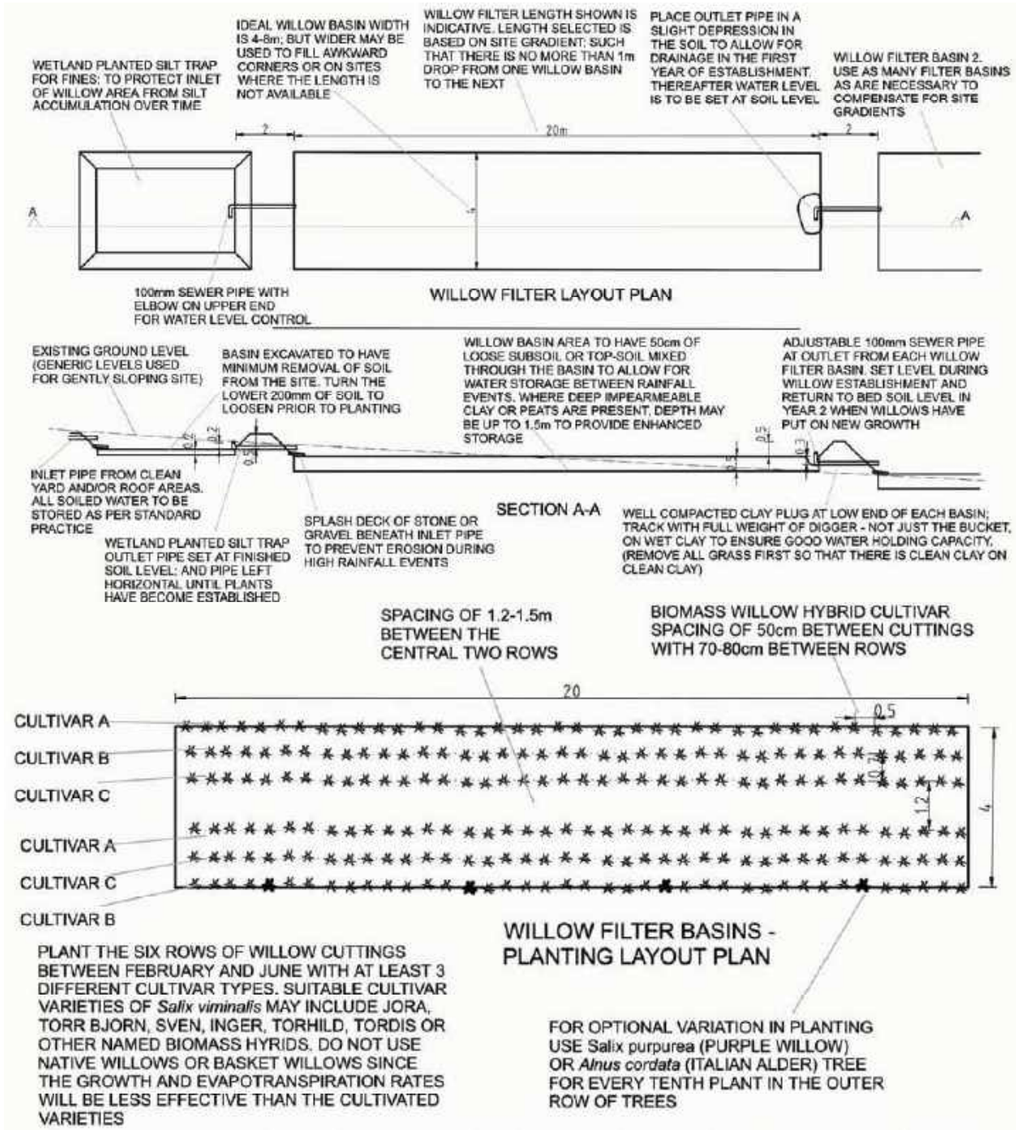
Nasturtium officinale – watercress

Typha latifolia - bulrush

Sparganium erectum - branched burr reed

Essentially any tall, flat-leaved, emergent wetland plants are typically suitable for use in wetland planted silt traps or buffer zones.
If these are present on the farm, harvest by hand and use in preference to buying in stock.
Plants available from FH Wetland Systems if needed.

FH Wetland Systems Ltd.
Knocknaskeagh, Lahinch, Co. Clare
www.wetlandsystems.ie
Tel. 065-7075631
e-mail: reeds@wetlandsystems.ie

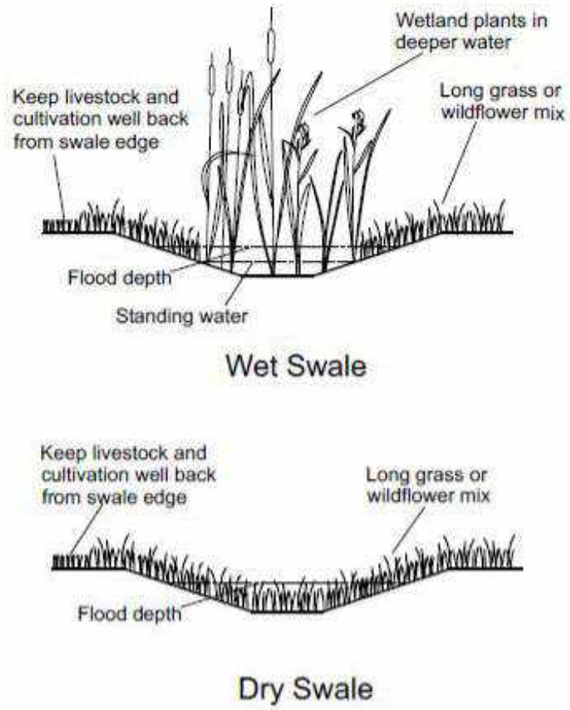


Example above of a willow bed layout for filtering farm clean yard runoff.
For further information: Planted Farm Scale Buffer Zones October 2023 by FH Wetland Systems.
Short Rotation Coppice Willow Best Practice Guidelines by Teagasc & AFBI.

FIGURE 13: FARM-SCALE-BUFFER-ZONES

APPENDIX 11:

POTENTIAL SWALE DESIGN



FH Wetland Systems Ltd.

Knocknaskeagh, Lahinch, Co. Clare
www.wetlandsystems.ie
Tel. 065-7075631
e-mail: reeds@wetlandsystems.ie

FIGURE 14: POTENTIAL SWALE DESIGN.

REFERENCES & SOURCES OF INFORMATION:

Harty F (2023) Planted Farm-scale Buffer Zones. FH Wetland Systems, Lahinch, Co. Clare
WREN, E, BARNES, M JANES, M, KITCHEN, A, NUTT, N, PATTERSON, C, PIGGOTT, M, ROBINS, J, ROSS, M, SIMONS, C, TAYLOR, M, TIMIBRELL, S, TURNER, D and DOWN, P (2022) The natural flood management manual, C802, CIRIA, London, UK (ISBN: 978-0-86017-945-0)

(O'GRADY, M.F., 2006) Channels & Challenges. Enhancing Salmonid Rivers. Irish Freshwater Fisheries Ecology & Management Series: Number 4, Central Fisheries Board, Dublin, Ireland.

LAWPRO/EPA, 2022. An Overview of Catchment Science and Management. A Guidance Handbook, Volume 1. Local Authority Waters Programme and Catchment Science and Management Unit, Environmental Protection Agency.
SMARTER_BufferZ project. This EPA funded project, which is undertaken by Teagasc and the James Hutton Institute, outines the role of riparian buffers for the effective management of Irish rivers. http://www.smarterbufferz.ie

Water of Life, 2023a. Framework of Measures and Best Practice Guidelines for the Protection and Restoration of High Status River Waterbodies Annex 1: Agriculture WATERS OF LIFE IP

2010 Department of the Environment, Heritage and Local Government Integrated Constructed Wetlands Guidance Document for Farmyard Soiled Water and Domestic Wastewater Applications

NFGWS, 2020. A Handbook of Source Protection and Mitigation Actions for Farming. Published by the National Federation of Group Water Schemes. Available @ www.nfgws.ie

O'Connor, M. (2023). Duhallow Farming for Blue Dot Catchments. Booklet of Measures. IRD Duhallow.

DAFM, 2022. S.I. 113 of 2022. European Union (Good Agricultural Practices for Protection of Waters) Regulations, 2022 and subsequent amendments.

Infiltration rate assessment of some representative soils. Proc. Agricultural Research Forum, Dublin 1998.
Harty F (2023) Planted Farm-scale Buffer Zones. FH Wetland Systems, Lahinch, Co. Clare

Teagasc National Farm Survey 2022 Sustainability Report.

Moloney, T., Daly, K., Fenton, O., (2019) Ranking connectivity risk for phosphorus loss along agricultural drainage ditches.
Russell Adams , Christopher Johnston , Evaluating the Impacts of SRC Willows on Phosphorus Export from a Temperate Grassland Micro-catchment, Nature-Based Solutions (2024), doi:
Forestry Act 2014 & Amendments
Pearl Mussel Project

ACRES Co-operation Draft Non Productive Investments Specification

Assessment of the catchments that need reductions in nitrogen concentrations to achieve water quality objectives.

Short Rotation Coppice Willow Best Practice Guidelines. Teagasc & AFBI. ISBN number 1-84170-610-8

Design Guidance for Fish Passage on Small Barries OPW 2022.

New Zealand Fish Passage Guidelines for Structures up to 4m April 2018

DAFM: Native Tree Area Scheme Specification and Terms & Conditions October 2023

NOTES:

FOR MORE INFORMATION

Email the EIP office: info@watereip.ie
Contact your local Teagasc / Co-Op Adviser
Scan the QR code or visit **www.farmingforwater.ie**

Rialtas na hÉireann
Government of Ireland

Co-funded by
the European Union

eip-agri
AGRICULTURE & INNOVATION

Local Authority Waters Programme

Dairy Industry Ireland
Ibec

teagasc
Agriculture and Food Development Authority

Our Case Number: ABP-320010-24

Planning Authority Reference Number: 2460189

Your Reference: Crayvall Egg Production Limited

An Coimisiún Pleanála

Ger Fahy Planning
Mulhussey
Maynooth
Co. Kildare
W23 X8X5

Date: 26 January 2026

Re: Construction of poultry house and store with all associated site works. Environmental Protection Agency licence required. Natura Impact Statement and Environmental Impact Assessment Report submitted with planning application.
Carrickbaggott, Grangebellew, Co. Louth

Dear Sir / Madam,

I have been asked by An Coimisiún Pleanála to refer to the above-mentioned appeal.

The Commission has examined the appeal and is of the opinion that certain information is necessary for the purpose of enabling it to determine the appeal.

In accordance with section 132 of the Planning and Development Act, 2000, (as amended), you are required to submit, on or before the 11th of March, the following information:

1. Policy Objective NBG 20 of the Louth County Development Plan 2021- 2027 seeks to protect and enhance wetland sites. Policy Objective ENV 15 requires that proposed plans, programmes and projects shall not have an unacceptable impact on the water environment, including groundwater quality and quantity. The wetland site at Carrickbaggot is identified in the Louth County Wetland Survey as being of National importance. Having regard to the location and volume of groundwater abstraction, the applicant is required to assess the significance of same alone and cumulatively, and to assess the impact of abstraction on water (groundwater resources), material assets (water supply) and biodiversity (wetlands)

2. Having regard to the results set out in the Air Quality Impact Assessment and to the deficiencies in the Natura Impact Statement submitted with the application in relation to the effects of the modelled level of ammonia emissions on European Dry Heaths at Clogher Head Special Area of Conservation, the Applicant is required to assess whether the proposed development individually, or in combination with other plans or projects, would not be likely to have a significant effect on European Site - Clogher Head Special Area of Conservation (site code: 001459) in view of the site's conservation objectives.

Teil	Tel	(01) 858 8100
Glao Áitiúil	LoCall	1800 275 175
Facs	Fax	(01) 872 2684
Láithreán Gréasáin	Website	www.pleanala.ie
Ríomhphost	Email	communications@pleanala.ie

64 Sráid Maoilbhríde
Baile Átha Cliath 1
D01 V902

64 Marlborough Street
Dublin 1
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