Laura.

**Lita Clarke**

| | |
|---|---|
| **From:** | Joe Kilbride <j.kilbride@jkdesign.ie> |
| **Sent:** | Monday 25 November 2024 12:07 |
| **To:** | Appeals2 |
| **Subject:** | ABP-319970-24 |
| **Attachments:** | Cover Letter.pdf; Kingfisher An Bord Plenala Observation - Mark Rochford -24.11.2024.pdf; Dempsey Agri Rochford Agricultural Report 2024 rev 2.pdf; Rochford NMP 2024 map.pdf; Rochford NMP 2024.pdf |

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**FAO Laura Grady Lawlor**
**Executive Officer**

**Case Number ABP-319970-24**
**Reference - Mark Rochford**

RE: Application for substitute consent under Section 177E of the Planning and Development Act, 2000 (as amended) for agricultural development at Forest Lower, Mountmellick, Co Laois

Dear Sir / Madam
Please find attached our submission / observation in response to your letter dated 05th November 2024.
Can you please acknowledge receipt of this email for our files.

Regards & Thanks

**Joe Kilbride**
**JK Design**
Tullamoy
Stradbally
County Laois

Mobile 086 3640366

JKD

JK Design

**Architectural Drawing, Design & Planning**
**Tullamoy Stradbally Co. Laois**

Mobile: 086 3640366
E-mail: j.kilbride@jkdesign.ie

An Bord Pleanála,
Marlborough Street,
Dublin 1,

**FAO Laura Grady Lawlor**
**Executive Officer**

**Case Number ABP-319970-24**
**Reference - Mark Rochford**

RE: Application for substitute consent under Section 177E of the Planning and Development Act, 2000 (as amended) for agricultural development at Forest Lower, Mountmellick, Co Laois

Dear Laura

With reference to your letter dated 05th November 2024, please find attached 2 no submissions in relation to the NPWS observations. The two reports attached are from Freddie Symmons of Kingfisher Environmental Consultants (Ecologist) and Declan Dempsey of Dempsey Agri (Agricultural Consultant).

**Kingfisher Environmental Consultants Report**

This document is a submission related to an application for substitute consent under Section 177E of the Planning and Development Act 2000, as amended. The case, identified as ABP-319970-24, involves an agricultural development at Forest Lower, Mountmellick, Co. Laois. The submission, prepared by Kingfisher Environmental Consultants on behalf of the applicant Mark Rochford, addresses concerns raised by the Development Applications Units of the NPWS regarding the potential environmental impact of the development, particularly related to landspreading of slurry and its effects on the River Barrow and River Nore SAC.

The document argues that the development complies with the Nitrates Directive and other relevant regulations, and that there has been no intensification of landspreading activities. It includes detailed assessments and reports to support this claim, emphasizing that the farm has adhered to all necessary environmental standards and regulations. The submission also disputes the NPWS's concerns about water quality and in-combination effects, providing evidence to counter these points. The document concludes with a request for a positive response from An Bord Pleanala

**Dempsey Agri Report**

**Overview**

The document is a report regarding the development of agricultural structures and the spreading of organic manures on a specific holding in Mountmellick, Co Laois. The document is a report addressed to An Bord Pleanála regarding the development of agricultural structures at Forest, Mountmellick, Co Laois, and the management of organic manures on the holding. Key points include:

1. **Nutrient Management Plan**: An updated plan reflecting changes in the 2024 Nitrates Legislation, detailing the quantities of slurry, soiled water, dairy washings, and farmyard manure produced and their storage facilities. It also includes a map of areas for slurry application based on soil fertility and cropping plans.
2. **Nitrates Regulations Compliance**: Organic manures are not spread on soils with a Phosphorus Index (P Index) of 4 unless soils with a P Index of 3 or below are exhausted. The plan ensures even distribution of organic nutrients and adheres to European Communities regulations.
3. **Nitrates Derogation**: The holding has applied for a Nitrates Derogation annually from 2014 to 2024, allowing a maximum of 250 Kg/N/Ha until 2023, reduced to 220 Kg/N/Ha from 2024. The holding complies with stricter standards to protect water quality.
4. **Organic Nitrogen Data**: Table 1 provides data on organic nitrogen and phosphorus produced from 2014 to 2024, showing compliance with regulations and no increase in organic nitrogen per hectare due to the development.
5. **Regulatory Compliance**: The holding is regularly inspected by the Department of Agriculture and Laois County Council, with no sanctions for non-compliance.
6. **Nitrates Legislation Extracts**: Appendix 1 includes key points from relevant nitrates legislation, such as prohibited periods for spreading soiled water and slurry, distances from water bodies for fertiliser application, and requirements for low emission slurry spreading equipment.

The document emphasizes adherence to regulations, proper nutrient management, and environmental protection measures.

Hope it meets with your requirement

Joe Kilbride 25th November 2024

Joe Kilbride, Agent.

KINGFISHER
ENVIRONMENTAL CONSULTANTS

The Railway Cottage,
Mullanboys, Inver,
Co. Donegal. F94 R3P9
Mobile: 087 2641979
www.wastepermitireland.com
freddiesymmons@hotmail.com

**SUBMISSION IN RELATION TO APPLICATION FOR SUBSTITUTE CONSENT UNDER SECTION 177E OF THE PLANNING AND DEVELOPMENT ACT, 2000 (AS AMENDED)**

**An Bord Pleanala Case No:** ABP-319970-24

| | |
|---|---|
| **Development:** | **Re: Proposed development - Substitute Consent under 177E for agricultural development at Forest Lower, Mountmellick, Co. Laois.** |
| **Site Location:** | Forest Lower, Mountmellick, Co. Laois. |
| **Summary of the Submission:** | Submission under Section 131 to a 3rd Party Submission dated 15/10/2024 from the Development Applications Units of the NPWS |
| **To:** | The Secretary,<br>An Bord Pleanala.<br>64 Malborough Street,<br>Dublin 1. |
| **Name of Applicant:** | Mark Rochford |
| **Submission Prepared on Behalf of Applicant by:** | Mr. Freddie P.R. Symmons B.Env. Sc. (HONS) MCIEEM<br>Senior Environmental Consultant<br>Kingfisher Environmental Consultants.<br>The Railway Cottage,<br>Mullanboys,<br>Inver,<br>Co. Donegal.<br>F94 R3P9 |
| **Date:** | 24th November 2024. |

KINGFISHER
ENVIRONMENTAL CONSULTANTS

The Railway Cottage,
Mullanboys, Inver,
Co. Donegal. F94 R3P9
Mobile: 087 2641979
www.wastepermitireland.com
freddiesymmons@hotmail.com

**Submission under Section 131 of the Planning and Development Act 2000 (as amended)**

Kingfisher Environmental Consultants on behalf of the applicant – Mark Rochford has examined the 3rd Party submission from the Development Applications Units of the NPWS and wish to make the following submission and observations to An Bord Pleanala:

**Point 1: Nature Conservation**

**i) Landspreading**

The Development Applications Units of the NPWS in their first paragraph have stated that the rNIS does not adequately assess the potential for the development to adversely affect the conservation objectives of the River Barrow and River Nore SAC "*due to increased landspreading of slurry arising from the development*"

We would contend that the rNIS fully assesses the potential for the development to adversely affect the conservation objectives of the River Barrow and River Nore SAC and that this also refers to landspreading of slurry. The development has created no new activity or intensification of landspreading as the landbank has exponentially increased and the slurry application rates of organic manures and especially nitrogen have reduced in accordance with the Nitrates Directive.

To this point we refer the Board to the detailed information provided in the rNIS:

Prior to the construction of the works at set out in the Substitute Consent application, the land upon which the structures were built were in agricultural use already with an established bull house and slatted tank on the lands (which remains in use). The lands were agricultural grazing pastures associated with the existing adjacent dairy unit. As such there has been no marked change of use as they always have and remain in agricultural use associated with dairy farming. The same applies to the lands associated with the overall farm holding, and no new practices have occurred since the construction of the works as the lands have been subject to dairy cow grazing and management for many years.

The effluent is temporarily stored in the lagoon before being periodically removed by tanker and spread within the land holding in compliance with standard Department of Agriculture Code of Practice for Landspreading and adheres to closed periods during the winter period. Clean storm water runoff from the roofs is carefully segreagated and collected in a clean surface water system and discharges to the open field ditch to the south-east of the site.

Dempsey Agri – Agricultural Consultants have provided a detailed Nutrient Management Report for the dairy farm subject to the Substitute Consent application and have made the following independent findings:

*The enclosed "Farmer Full - Fertiliser Plan 2023" outlines the total quantity of slurry, soiled water, dairy washings and farmyard manure produced on the holding together with the associated storage facilities.*

*All silage effluent from existing silage bases is piped to existing slatted tank/slurry lagoon adjacent. No additional storage capacity required for silage effluent as all effluent will be land spread prior to the 01st of October annually. The quantity of silage effluent produced during the closed period, 01st of October to the 12th of January, will be negligible.*

*The quantity of soiled water generated from the silage bases is based on a maximum average area of 25 percent been in used during the closed period (the length of the silage base in the fertiliser plan is entered as 25 percent of the total length).*

The Railway Cottage,
Mullanboys, Inver,
Co. Donegal. F94 R3P9
Mobile: 087 2641979
www.wastepermitireland.com
freddiesymmons@hotmail.com

*The production of dairy washing and soiled water from the collecting yard is based on all dairy cows been dried off from milk production for a minimum period of 55 days during the closed period. The figures entered for average number of cows and maximum number of cows milked at any time represents the maximum extent of the production of dairy washing and soiled water during the closed period, with historical figures less than those used in calculations.*

**Figure 3.1.1.1.2** is a summary of the Dempsey Agri – Agricultural Consultants Nutrient Management Plan for the Forest Lower Dairy Unit (whole report issued with Substitue Consent application).

Slurry spreading is closed for the period of 1st October to 12th January in order to protect surface waters. The applicant will adhere to Statutory Instrument S.I. No. 113 of 2022 [European Union (Good Agricultural Practice for Protection of Waters) Regulations 2022] & Statutory Instrument S.I. No. 393 of 2022 [European Union (Good Agricultural Practice for Protected of Waters) (Amendment) Regulations 2022].

Dempsey Agri have provided a further report to accompany this Section 131 which demonstrates beyond any reasonable scientific doubt that the landspreading pre-development works and post development works has been in accordance with the Nitrates Directive and all applicable legislation.

*An updated nutrient management plan has been provided to reflect changes in the Nitrates Legislation which came into force in 2024. The enclosed "Farmer Full - Fertiliser Plan 2024" outlines the total quantity of slurry, soiled water, dairy washings and farmyard manure produced on the holding together with the associated storage facilities. This plan also outlines the spread lands to which all slurry, soiled water, dairy washings and farmyard manure are applied. This information is also available in the Farmer Full - Fertiliser Plan 2023".*

*A map has been provided which outlines the areas to which slurry may be applied. The area selected for slurry spreading is based on the existing soil fertility and the proposed cropping of the land. Under the Nitrates Regulations no land spreading of organic manures is permitted on soils with a Phosphorus Index (P Index) of 4 unless all soils with a P index of 3 or below have been exhausted. The slurry is applied to fields which have the lowest organic loading from grazing livestock. The fields which are cut for silage or zero grazed throughout the year are grazed during the shoulders of the year, February/March and October/November. As these fields are not grazed to the same extent by livestock these are considered the most suitable locations for land spreading of organic manures. This ensures that there is an even distribution of organic nutrient loadings across the entire holding subject to the restriction on land spreading organic manures on soils with a P index of 4. The proposed maximum quantity of nutrients to be applied to the holding is outlined in pages 6 through 12 of the plan. The quantities applied per hectare are within the limits set down in European Communities (Good Agricultural Practice For The Protection of Waters) Regulations 2022, (S.I. No. 113 of 2022)) and as amended. There are several conditions outlined in SI 113 and as amended which afford protection to waters bodies.*

*Table 1 outlines the total quantity of organic nitrogen produced on the holding from the period 2014 to 2024. This holding has applied for a Nitrates Derogation during each of these years. The maximum permitted organic nitrogen per hectare from 2014 to 2023 by way of Derogation is 250 Kg Organic Nitrogen per Hectare (250 Kg/N/Ha). The maximum figure has been reduced to 220 Kg/N/Ha for 2024 and thereafter. As part of the Derogation Terms and Conditions the applicants must adhere to stricter standards to protect water quality which exceed the minimum requirements outlined in the SI 113 and as amended.*

The Railway Cottage,
Mullanboys, Inver,
Co. Donegal. F94 R3P9
Mobile: 087 2641979
www.wastepermitireland.com
freddiesymmons@hotmail.com

The farm was compliant with the Nitrates Directive before the development which is subject to the Substitute Consent and has been since. The development did not lead to an increase or intensification of slurry spreading on the farm as the land bank increased exponentially and slurry application rates reduced in line with the requirements of the Nitrates Directive.

Also, at no time has there been any incidents with regards to slurry spreading under the farm fertiliser plans as set out under Statutory Instruments. All lands included in the Farm Fertiliser Plan have always been subject to landspreading and no new practices have occurred as a consequence of the development. Therefore, to imply that water quality in the River Barrow and Nore may have been affected by landspreading from the development is unscientific and unfounded.

The landspreading of organic manures as a natural fertilizer is integral to farming systems and is established best practice which is carried out under the Nitrates Directive and Good Agricultural Practice for the Protection of Waters Regulations 2022. A farmer is entitled to farm and manage his farmland as he deems appropriate subject to the above guidance. The appropriate assessment screening relates to the development site as outlined in red on the site location and layout maps.

The landspreading of organic manures is a standard design measures incorporated into the design of this agricultural development and these may be considered during AA Screening as per Eco Advocacy v An Bord Pleanala (Case EJC C-721/21). On 15th June 2023, the European Court of Justice found that standard design measures could be taken into account in Stage 1 Screening for AA, where previously they had been regarded as being mitigation measures.

On the test for mitigation measures point, the CJEU found that where measures are incorporated into the design of a project not with the aim of reducing the negative effects of that project on the site concerned, but as standard features required for all projects of the same type, those elements cannot be regarded as indicative of probable significant harm to that site.

The landspreading of organic manures as a natural fertilizer is integral to farming systems and is established best practice which is carried out under the Nitrates Directive and the Good Agricultural Practice for the Protection of Waters Regulations 2022. A farmer is entitled to farm and manage his farmland as he deems appropriate subject to the above guidance. The appropriate assessment screening relates to the development site as outlined in red on the site location and layout maps.

The inclusion of assessing spreadlands specifically for AA Screening is outside of the remit of the planning authority once the applicant has demonstrated compliance with the Nitrates Directive and Good Agricultural Practice for the Protection of Waters Regulations 2022 which has been done in the Substitute Consent. The Development Applications Units of the NPWS are attempting to expand the scope of this Substitute Consent application to every part of the farm to even field level which is not supported by case-law or EJC C-721/21.

The Railway Cottage,
Mullanboys, Inver,
Co. Donegal. F94 R3P9
Mobile: 087 2641979
www.wastepermitireland.com
freddiesymmons@hotmail.com

**ii) Sample Case 3 in the OPR Guidance on Appropriate Assessment Screening**

The Development Applications Units of the NPWS have cited the above sample case 3 in the OPR Guidance manual.

Firstly, we would contend that the development area is within the redline boundary as submitted with the Substitute Consent under 177E. It does not extend to the spreadlands. Notwithstanding this the applicant has provided detailed information to demonstrate full compliance with the Nitrates Directive and a full fertiliser plan including mapping.

The OPR Guidance manual specifically states:

*For the avoidance of doubt, Practice Notes do not have the status of Ministerial Guidelines under Section 28 of the Planning and Development Act 2000, as amended.* They are issued for general information purposes only, in accordance with the OPR's statutory remit to engage in education, training and research activities. Practice Notes cannot be relied upon as containing, or as a substitute for, legal advice. Legal or other professional advice on specific issues may be required in any particular case*

The case study 3 is not case-law, is not part of any ministerial guidance and cannot be relied on as a like for like scenario to the development before the Board.

This case study 3 refers to The "*Construction of a pig house (1,600 weaners) with slatted floor and slurry tank underneath, an extension to existing concrete yard and ancillary site works*"

The case study specially states that the "*Application does not include details of land-spreading/disposal of slurry arising from the development*"

Due to this absence in information the Case Study 3 states with regards to potential impacts:

*Water pollution from land spreading of slurry from the slatted tank. No detail is provided of the amount of effluent arising from the proposed development, the quantity of land required for disposal (land spreading) or the locations for land spreading. A general statement is made that activities will be carried out in accordance with the EU (Good Agricultural Practice for the Protection of Waters) Regulations 2017.Land spreading of nutrient rich effluent would occur at certain times of the year and impacts may be significant due to the proximity and pathway to the SAC and the sensitivity of the QI to changes in water quality.*

We would respectfully request that An Bord Pleanala considers that the Development Applications Units of the NPWS in using this reference to this case study in their submission taken from a guidance document with no legal standing "as being a "*similar case*" is both misleading and disingenuous in light of the comprehensive information provided by the applicant with regards to landspreading despite it satisfying the criteria set out in EJC C-721/21.

Furthermore, by their very nature Pig Units rely on third party lands for landspreading or anaerobic digestion to manage the effluent produced. They do not as a rule have large privately owned or managed landbanks upon which to sustainably Landspread their effluent and therefore are not similar in any way to a privately owned dairy farm with its own landbanks. If this were not the case then why are Pig Units specifically mentioned in the EIA Directive and dairy units are not.

The Railway Cottage,
Mullanboys, Inver,
Co. Donegal. F94 R3P9
Mobile: 087 2641979
www.wastepermitireland.com
freddiesymmons@hotmail.com

**iii) Water Quality of the River Barrow and River Nore**

The Development Applications Units of the NPWS have stated the following:

> The Conservation objective for Atlantic Salmon is to restore the favourable conservation condition of Salmon in the River Barrow and River Nore SAC, which is defined, *inter alia*, by the target for at least an EPA Q value of Q4 at all sites sampled by the EPA. The Department notes that the most recent water quality monitoring within the Barrow_040 waterbody downstream of the development (2023) is moderate (3-4) (Barranagh's Bridge), while the latest upstream river Q value score is good (4) (Twomile Bridge) (2023). Land spreading of slurry will occur close to the Barrow_040 river waterbody, which as outlined above, lies adjacent to the landholding for approximately 2 kilometres. This waterbody is described as at risk of not meeting its Water Framework Directive (2000/60/EC) obligations due to the presence of nutrients from agriculture.[3]

There is a clear attempt by the Development Applications Units of the NPWS in their submission to suggest that the farm subject to this substitute consent has caused a reduction in water quality downstream of the landspreading areas. **There is no scientific evidence whatsoever to suggest this is correct rather the applicant has demonstrated beyond reasonable scientific doubt that the landspreading is in full compliance with all Directives and Statutory Instruments pertaining to landspreading of organic manures prior to and since the development subject to this Substitute Consent.**

Please see attached **Figure 1**: EPA Water maps for the Farm area (Yellow dots are Water Monitoring Points (Q3-4) (Moderate)and Green Points are Water Monitoring Points (Q4) Good).

The downstream water monitoring point the NPWS submission refers to (Barranagh's Bridge) is downstream from the Farm and also Mountmellick WWTP D0152-01. The 2022 and 2023 Annual Environmental Reports (as seen on the EPA's website) show persistent exceedances of permitted discharge levels by the Mountmellick WWTP and they were subject to an EPA Site visit on 6/3/2024 which is summarised accordingly by the EPA:

*Waste water discharges from Mountmellick have been identified as a pressure putting the Owenass_020 waterbody at risk of not meeting its environmental objective during the characterisation for the third cycle of Ireland's River Basin Management Plan. EPA inspectors carried out a site visit at Mountmellick waste water treatment plant (WWTP) to follow up on this and assess compliance with the licence. There have been some ammonia Emission Limit Value (ELV) breaches year-to-date and ortho-phosphate in all samples over the past year breached the ELV.*

*The waste water discharge licence requires Uisce Éireann to provide appropriate nutrient removal to comply with the ELVs in the licence by 31/12/2019. Uisce Éireann has failed to carry out this work. Uisce Éireann's representatives advised that the outstanding work is due for completion shortly. Uisce Éireann must take all steps necessary to ensure the upgrade w orks are completed and that discharges from Mountmellick WWTP comply with the ELVs at all times. Discharges from Mountmellick WWTP breached the emission limit values (ELV) for both ammonia and orthophosphate in the last 12 months. Uisce Éireann's representatives advised that process optimisation will begin in the aeration basin to resolve the ammonia breaches, however the ortho-phosphate* ***breaches are still ongoing and recurring.***

Therefore for the NPWS statements must be questioned in light of these findings as the real issue is the non-compliance of Mountmellick WWTP and this is scientifically proven.

**KINGFISHER**
**ENVIRONMENTAL CONSULTANTS**

**The Railway Cottage,**
**Mullanboys, Inver,**
**Co. Donegal. F94 R3P9**
**Mobile: 087 2641979**
**www.wastepermitireland.com**
**freddiesymmons@hotmail.com**

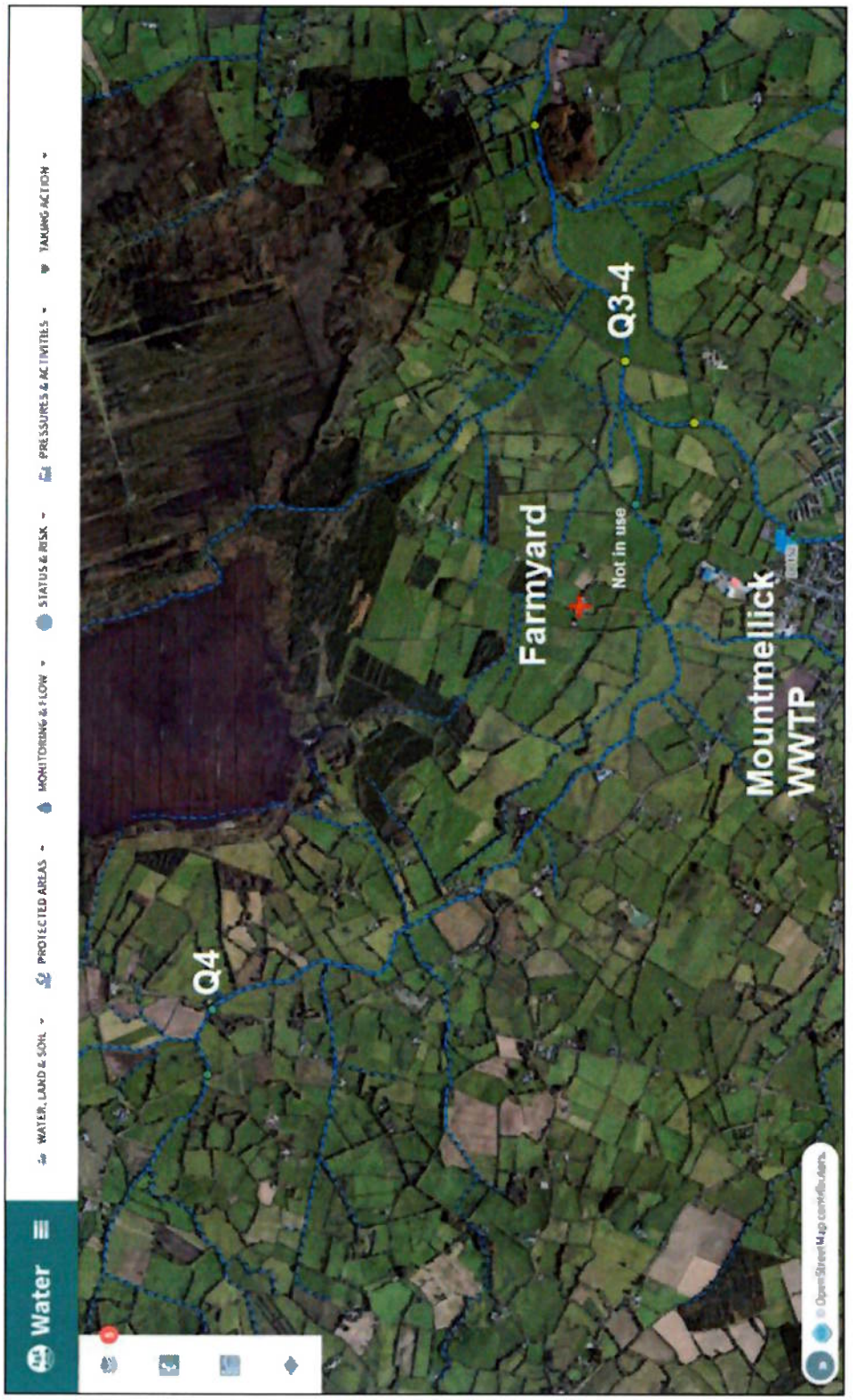


**Figure 1: Latest EPA Water Quality Map showing impact of Mountmellick WWTP**

The Railway Cottage,
Mullanboys, Inver,
Co. Donegal. F94 R3P9
Mobile: 087 2641979
www.wastepermitireland.com
freddiesymmons@hotmail.com

**iv) National Standards for Landspreading in Accordance with the Nitrates Directive**

The Development Applications Units of the NPWS have stated:

"*The rNIS states that Slurry spreading is closed for the period of 1st October to 12th January in order to protect surface waters. The applicant will adhere to Statutory Instrument S.I. No. 113 of 2022 [European Union (Good Agricultural Practice for Protection of Waters) Regulations 2022] & Statutory Instrument S.I. No. 393 of 2022 [European Union (Good Agricultural Practice for Protected of Waters) (Amendment) Regulations 2022].....*

*.....It is not clear that the general provisions of the above regulations or the Farm Full Fertiliser Plan are sufficient to ensure that the development will not affect the integrity of the River Barrow and River Nore SAC, in particular relating water quality and the target to achieve at least Q4 for Atlantic Salmon and secure the lasting preservation of the species within the site".*

Dempsey Agri have supplied a full response to this point and have stated:

*The quantities applied per hectare are within the limits set down in European Communities (Good Agricultural Practice For The Protection of Waters) Regulations 2022, (S.I. No. 113 of 2022)) and as amended. There are several conditions outlined in SI 113 and as amended which afford protection to waters bodies. An extract of the main points are included in Appendix 1 contained herein.*

We would add that it is disingenuous and misleading by the Development Applications Units of the NPWS to suggest "*it is not clear*" that adherence to the Nitrates Directive as implemented in Ireland by the above referenced Statutory Instruments (which set out National Government policy as dictated by EU Law) are not "*sufficient to ensure that the development will not affect the integrity of the River Barrow and River Nore SAC".*

There is no higher standard that farmers can achieve that to meet than the specific measures as set out in the European Communities (Good Agricultural Practice For The Protection of Waters) Regulations 2022, (S.I. No. 113 of 2022)) and as amended.

**It would appear therefore that the Development Applications Units of the NPWS have an issue nationally with regards to the landspreading of organic manures and they are questioning the very EU and National Legislation which controls and governs this. Our client has met his obligations under the Nitrates Directive as enacted in Ireland and specifically request that An Bord Pleanala acknowledge this fact in their decision making.**

**v) In Combination Effects**

We resolutely reject the Development Applications Units of the NPWS comments with regards to In Combination Effects. Kingfisher Environmental Consultants have prepared in excess of 200 AA Screening and NIS reports with over 32 years of professional experience. The in-combination effects have been described and assessed fully and comprehensively. The NPWS are not the prescribed body to carry out Appropriate Assessment rather it is the role of the planning authority and in this case An Bord Pleanala. Whilst they are entitled to make submissions we do not agree on any level with their comments.

Landspreading within the zone of influence of the farmyard site, the subject of this Substitute Consent has been fully assessed and goes above and beyond what is required for this type of standard agricultural development.

**KINGFISHER**
ENVIRONMENTAL CONSULTANTS

The Railway Cottage,
Mullanboys, Inver,
Co. Donegal. F94 R3P9
Mobile: 087 2641979
www.wastepermitireland.com
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**The landspreading of organic manures is a standard design measures incorporated into the design of this agricultural development and these may be considered during AA Screening as per Eco Advocacy v An Bord Pleanala (Case EJC C-721/21). On 15th June 2023, the European Court of Justice found that standard design measures could be taken into account in Stage 1 Screening for AA, where previously they had been regarded as being mitigation measures.**

**On the test for mitigation measures point, the CJEU found that where measures are incorporated into the design of a project not with the aim of reducing the negative effects of that project on the site concerned, but as standard features required for all projects of the same type, those elements cannot be regarded as indicative of probable significant harm to that site.**

**The landspreading of organic manures as a natural fertilizer is integral to farming systems and is established best practice which is carried out under the Nitrates Directive and the Good Agricultural Practice for the Protection of Waters Regulations 2022. A farmer is entitled to farm and manage his farmland as he deems appropriate subject to the above guidance. The appropriate assessment screening relates to the development site as outlined in red on the site location and layout maps.**

**The inclusion of assessing spreadlands specifically for AA Screening is outside of the remit of the planning authority once the applicant has demonstrated compliance with the Nitrates Directive and Good Agricultural Practice for the Protection of Waters Regulations 2022 which has been done in the Substitute Consent. The Development Applications Units of the NPWS are attempting to expand the scope of this Substitute Consent application to any farm within the catchment area of the River Barrow and River Nore which is not supported by case-law or EJC C-721/21.**

The farm was compliant with the Nitrates Directive before the development which is subject to the Substitute Consent and has been since. The development did not lead to an increase or intensification of slurry spreading on the farm as the land bank increased exponentially and slurry application rates reduced in line with the requirements of the Nitrates Directive.

All lands included in the Farm Fertiliser Plan have always been subject to landspreading and no new practices have occurred as a consequence of the development. Therefore, to imply that "*the potential for in combination effects with the existing land spreading of slurry within the project zone of influence has not been assessed*" is without merit and in unfounded.

We look forward to a positive response to this Submission

Yours sincerely,

**FREDDIE P.R. SYMMONS B.Env.Sc. (HONS) M.C.I.E.E.M.**
*Senior Environmental Consultant*

On Behalf of the applicant: Mark Rochford

Agricultural Consultants Association

DDAAS Limited

An Bord Pleanála,

64 Marlborough St,

Rotunda,

Dublin 1,

D01 V902.

Date: 20th of November 2024

**To Whom It May Concern:**

**Re: Mark Rochford, Lower Forest, Mountmellick, Co Laois**

**Development Of Agricultural Structures Located At Forest, Mountmellick, Co Laois**

**Ref:ABP-319970-24**

This report has been compiled to provide clarification regarding spreading of organic manures produced on the holding.

An updated nutrient management plan has been provided to reflect changes in the Nitrates Legislation which came into force in 2024. The enclosed "Farmer Full - Fertiliser Plan 2024" outlines the total quantity of slurry, soiled water, dairy washings and farmyard manure produced on the holding together with the associated storage facilities. This plan also outlines the spread lands to which all slurry, soiled water, dairy washings and farmyard manure are applied. This information is also available in the Farmer Full - Fertiliser Plan 2023". A map has been provided which outlines the areas to which slurry may be applied. The area selected for slurry spreading is based on the existing soil fertility and the proposed cropping of the land. Under the Nitrates Regulations no land spreading of organic manures is permitted on soils with a Phosphorus Index (P Index) of 4 unless all soils with a P index of 3 or below have been exhausted. The slurry is applied to fields which have the lowest organic loading from grazing livestock. The fields which are cut for silage or zero grazed throughout

the year are grazed during the shoulders of the year, February/March and October/November. As these fields are not grazed to the same extent by livestock these are considered the most suitable locations for land spreading of organic manures. This ensures that there is an even distribution of organic nutrient loadings across the entire holding subject to the restriction on land spreading organic manures on soils with a P index of 4. The proposed maximum quantity of nutrients to be applied to the holding is outlined in pages 6 through 12 of the plan. The quantities applied per hectare are within the limits set down in European Communities (Good Agricultural Practice For The Protection of Waters) Regulations 2022, (S.I. No. 113 of 2022)) and as amended. There are several conditions outlined in SI 113 and as amended which afford protection to waters bodies. An extract of the main points are included in Appendix 1 contained herein.

Table 1 outlines the total quantity of organic nitrogen produced on the holding from the period 2014 to 2024. This holding has applied for a Nitrates Derogation during each of these years. The maximum permitted organic nitrogen per hectare from 2014 to 2023 by way of Derogation is 250 Kg Organic Nitrogen per Hectare (250 Kg/N/Ha). The maximum figure has been reduced to 220 Kg/N/Ha for 2024 and thereafter. As part of the Derogation Terms and Conditions the applicants must adhere to stricter standards to protect water quality which exceed the minimum requirements outlined in the SI 113 and as amended.

Table 1 Organic Nitrogen

| Nitrogen [kg] | Phosphorus [Kg] | Year | Land [Ha] | Nph [N kg/Ha] | Period From | Period To |
|---|---|---|---|---|---|---|
| 70481 | 10262 | 2024 | 435.22 | *162 | 01/01/2024 | 31/10/2024 |
| 85670 | 12016 | 2023 | 423.32 | 202 | 01/01/2023 | 31/12/2023 |
| 92212 | 13242 | 2022 | 421.09 | 219 | 01/01/2022 | 31/12/2022 |
| 95808 | 13742 | 2021 | 418.25 | 229 | 01/01/2021 | 31/12/2021 |
| 83871 | 12485 | 2020 | 427.68 | 196 | 01/01/2020 | 31/12/2020 |
| 84802 | 12625 | 2019 | 353.42 | 240 | 01/01/2019 | 31/12/2019 |
| 84264 | 12487 | 2018 | 342.7 | 246 | 01/01/2018 | 31/12/2018 |
| 76282 | 11267 | 2017 | 342.7 | 223 | 01/01/2017 | 31/12/2017 |
| 65237 | 9629 | 2016 | 259.04 | **252 | 01/01/2016 | 31/12/2016 |
| 60394 | 8922 | 2015 | 243.36 | 248 | 01/01/2015 | 31/12/2015 |
| 59119 | 8765 | 2014 | 238.43 | 248 | 01/01/2014 | 31/12/2014 |

*the projected figure for 2024 is 194 Kg/N/Ha

**The applicant exported organic nitrogen in 2016 to reduce the quantity applied to the lands farmed to 247 Kg/N/Ha.

This holding has complied with the requirements of Nitrates Directive and all associated regulations both prior to and after the development which is subject to the Substitute Consent. The development did not lead to an increase or intensification of stocking rates or associated organic nitrogen per hectare. The additional lands included in recent years were rented/leased from holdings which were traditionally intensively farmed. The inclusion of this additional land bank has

not led to any increase in land spreading of organic manures in this catchment area. This holding is subject to regular inspections from the Department of Agriculture and is also subject to inspection by Laois County Council. There have been no sanctions for non-compliances associated with any of the requirements outlined in Appendix 1 included herein since the construction of the facilities subject to the Substitute Consent.

If you have any queries, please call.

Yours faithfully,

Declan Dempsey

Registered Offices
The Quay, Thomastown, Co. Kilkenny 087 9051062 info@dempseyagri.ie
IE7208400K www.dempseyagri.ie

Appendix 1 Extracts from relevant Nitrates legislation.

**S.I. No. 113/2022 - European Union (Good Agricultural Practice for Protection of Waters) Regulations 2022 Minimisation of soiled water**

5.

(3) The spreading of soiled water to land is prohibited between the

following dates:

(a) Between 21st December and 31st December for all milk

producers from 2022,

(b) Between 10th December and 31st December for all milk

producers from 2023,

(c) Between 1st December and 31st December from 2024 onwards

for all milk producers with the exception of winter/liquid milk

producers, and

(d) Between 1st December and 31st December from 1st January 2025

onwards for all milk producers including winter/liquid milk

producers

(6) Subject to sub-article (7), the spreading of all slurry must be applied by:

(a) 8th October from 2022;

(b) 1st October from 2023 onwards.

PART 4

PREVENTION OF WATER POLLUTION FROM FERTILISERS AND

CERTAIN ACTIVITIES

Distances from a water body and other issues

17. (1) Chemical fertiliser shall not be applied to land within 2m of any

surface waters.

(2) Organic fertiliser or soiled water shall not be applied to land within—

(a) 200m of the abstraction point of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 100m3 or more of water per day or serving 500 or more persons,

(b) 100m of the abstraction point (other than an abstraction point specified in paragraph (a)) of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m3 or more of water per day or serving 50 or more persons,

(c) 25m of any borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified in paragraph (a) or (b),

(d) 20m of a lake shoreline or a turlough likely to flood,

(e) 15m of exposed cavernous or karstified limestone features (such as swallow-holes and collapse features),

(f) subject to sub-article (12), 5m of any surface waters (other than a lake or surface waters specified at paragraph (a) or (b)), or

(g) the distance specified in sub-article 2(f) shall be increased to 10m for a period of two weeks preceding and two weeks following the periods specified in Schedule 4.

(3) Notwithstanding the requirements of sub-articles (2)(a), (2)(b) and (2)(c), organic fertiliser or soiled water may be applied to land within:

(a) 30m from the abstraction point in the case of any surface waters, bore-hole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m3 or more

of water per day or serving 50 or more persons, or

(b) 15m from the abstraction point in the case of any borehole,

spring or well used for the abstraction of water for human

consumption other than a borehole, spring or well specified in

paragraph (a),

where the provisions of sub-article (4) are complied with.

(12) Notwithstanding sub-article (2)(f), organic fertiliser or soiled water

shall not be applied to land within 10m of any surface waters where the land

has an average incline greater than 10% towards the water.

(13) Where farmyard manure is held in a field prior to landspreading it shall

be held in a compact heap and shall not be placed within-

(a) 250m of the abstraction point of any surface waters or borehole,

spring or well used for the abstraction of water for human20 [113]

consumption in a water scheme supplying 10m3 or more of

water per day or serving 50 or more persons,

(b) 50m of any other borehole, spring or well used for the

abstraction of water for human consumption other than a

borehole, spring or well specified at paragraph (a),

(c) 20m of a lake shoreline or a turlough likely to flood,

(d) 50m of exposed cavernous or karstified limestone features (such

as swallow-holes and collapse features),

(e) 20m of any surface waters (other than a lake or surface waters

specified at paragraph (a)).

(14) Organic fertiliser shall not be held in a field at any time during the

periods specified in Schedule 4 as applicable to that substance.

(15) Silage bales shall not be stored outside of farmyards within 20m of

surface waters or a drinking water abstraction point in the absence of adequate facilities for the collection and storage of any effluent arising.

(16) No cultivation shall take place within 2m of a watercourse identified on a modern 1:5,000 scale OSi mapping or better, except in the case of grassland establishment or the sowing of grass crops.

(17) Supplementary feeding points shall not be located within 20m of waters and shall not be located on bare rock.

(18) In the case of livestock holdings with grassland stocking rates of 170 kg nitrogen per hectare from livestock manure or above prior to export of livestock manure, bovine livestock shall not be permitted to drink directly from watercourses identified on the modern 1:5,000 scale OSi mapping or better. Where bovine livestock have direct access to watercourses on the holding, a fence shall be placed at least 1.5m from the top of the riverbank or water's edge (as the case may be). It will be permissible to move livestock across a watercourse to an isolated land parcel where necessary, provided that both sides of the watercourse are fenced.

(19) In the case of holdings identified in sub-Article 18, supplementary drinking points may not be located within 20m of surface waters.

(20) There shall be no direct runoff of soiled water from farm roadways to waters. The occupier of a holding shall comply with any specification for farm roadways specified by the Minister for Agriculture, Food and the Marine pursuant to this requirement.

(21) There shall be no direct runoff of soiled waters to waters resulting from the poaching of land on the holding.

(22) For late harvested crops and late harvested spring cereal crops, a minimum buffer of 6m shall be put in place to protect any intersecting watercourses.

*Requirements as to manner of application of fertilisers, soiled water etc*

18. (1) (a) Livestock manure, other organic fertilisers, effluents, soiled water and chemical fertilisers shall be applied to land in as accurate and uniform a manner as is practically possible.

(b) Low emission slurry spreading equipment must be used for the application of slurry on holdings with grassland stocking rates of :

i. 170 kg nitrogen per hectare from grazing livestock manure or above prior to export of livestock manure from the holding.

ii. 150 kg nitrogen per hectare from grazing livestock manure or above prior to export of livestock manure from the holding from 1st January 2023.

iii. 130 kg nitrogen per hectare from grazing livestock manure or above prior to export of livestock manure from the holding from 1st January 2024.

iv. 100 kg nitrogen per hectare from grazing livestock manure or above prior to export of livestock manure from the holding from 1st January 2025.

v. slurry produced by pigs on any holding from 1st January 2023

(2) Organic and chemical fertilisers or soiled water shall not be applied to land in any of the following circumstances—

(a) the land is waterlogged;

(b) the land is flooded or likely to flood;

(c) the land is snow-covered or frozen;

(d) heavy rain is forecast within 48 hours, or

(e) the ground slopes steeply and there is a risk of water pollution having regard to factors such as surface runoff pathways, the presence of land drains, the absence of hedgerows to mitigate surface flow, soil condition and ground cover.

(3) A person shall, for the purposes of sub-article (2)(d), have regard to weather forecasts issued by Met Éireann.

(4) Organic fertilisers or soiled water shall not be applied to land—

(a) by use of an umbilical system with an upward-facing splashplate,

(b) by use of a tanker with an upward-facing splashplate,

(c) by use of a sludge irrigator mounted on a tanker, or22 [113]

(d) from a road or passageway adjacent to the land irrespective of whether or not the road or passageway is within or outside the curtilage of the holding.

(5) Subject to sub-article (6), soiled water shall not be applied to land—

(a) in quantities which exceed in any period of 42 days a total quantity of 50,000 litres per hectare, or

(b) by irrigation at a rate exceeding 5 mm per hour.

PERIODS WHEN APPLICATION OF FERTILISERS TO LAND IS PROHIBITED

1.In counties Carlow, Cork, Dublin, Kildare, Kilkenny, Laois, Offaly, Tipperary, Waterford, Wexford and Wicklow, the period during which the application of fertilisers to land is prohibited in the period from—

(a) 15th September to 26th January in the case of the application of

chemical fertiliser and not withstanding sub-paragraph (4)

(b) 8th October11 to 12th January in the case of the application of organic fertiliser (other than farmyard manure) and not withstanding sub-paragraph (5)

(c) 1st November to 12th January in the case of the application of farmyard manure.

**S.I. No. 716 of 2022**

**EUROPEAN UNION (GOOD AGRICULTURAL PRACTICE**

**FOR PROTECTION OF WATERS) (AMENDMENT)(No. 2)**

**REGULATIONS 2022**

11. The following Article 17 (1) is substituted for Article 17 (1) of the 2022 Regulations:

"Chemical fertiliser shall not be applied to land within 3m of any surface waters."

12. The following Article 17 (15) is substituted for Article 17 (15) of the 2022 Regulations:

"Where there is inadequate facilities for the collection and storage of any potential effluent from silage bales, bales may only be stored at a maximum height of 2 bales, and at least 20m from surface water or a drinking water abstraction point."

13. The following Article 17 (16) is substituted for Article 17 (16) of the 2022 Regulations:

"No cultivation shall take place within 3m of a watercourse identified on a modern 1:5,000 scale OSi mapping or better, except in the case of grassland establishment or the sowing of grass crops."

**S.I. No. 393/2022 - European Union (Good Agricultural Practice for Protection of Waters) (Amendment) Regulations 2022**

15. The following Schedule 4 (2)(b) is substituted for Schedule 4 (2)(b) of the 2022 Regulations:

"8th October11 to 15th January in the case of the application of organic fertiliser (other than farmyard manure) and not withstanding sub-paragraph (5)"

16. The following Schedule 4 (3)(b) is substituted for Schedule 4 (3)(b) of the 2022 Regulations:

"8th October11 to 15th January in the case of the application of organic fertiliser (other than farmyard manure) and not withstanding sub-paragraph (5)"

Conditions applying in relation to Derogation

The following are the conditions for the purposes of Article 35 (1) of these Regulations in relation to the application to land on a holding in any year of livestock manure in excess of the amount specified in Article 20(1):

Application of manure and other fertilisers

1. The amount of livestock manure from grazing livestock applied to the land each year on grassland farms, including by the animals themselves, shall not exceed the amount of manure containing 250 kg nitrogen per hectare per year, subject to the conditions laid down in paragraphs 2 to 6 of this Article. From 2024, as a consequence of the two-year review, this maximum amount shall not exceed 220 kg nitrogen per hectare per year in the areas referred to in Article 12 of the Commission Decision.

# Ger, Bernard & Mark Rochford

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Date: 21/11/2024

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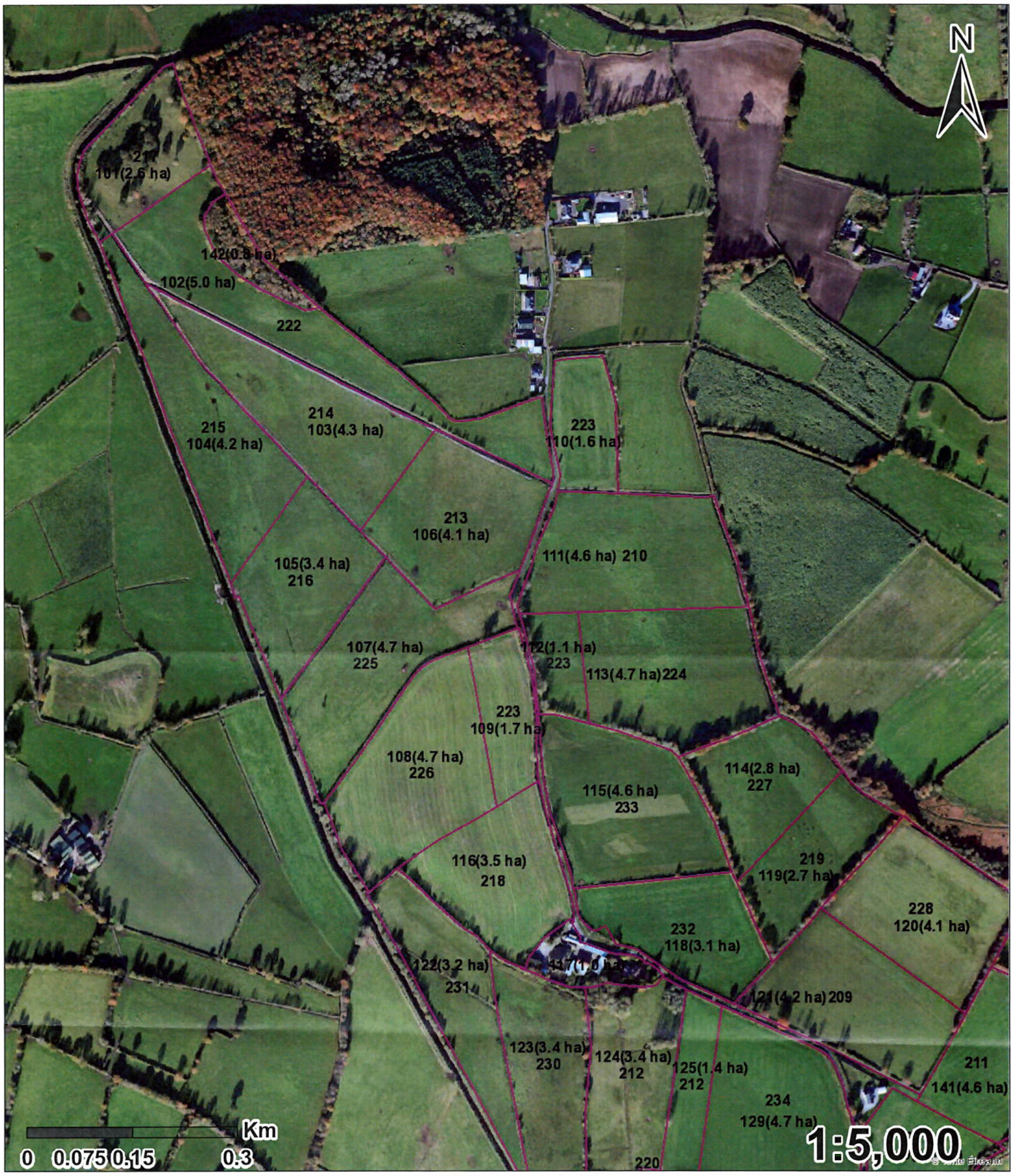


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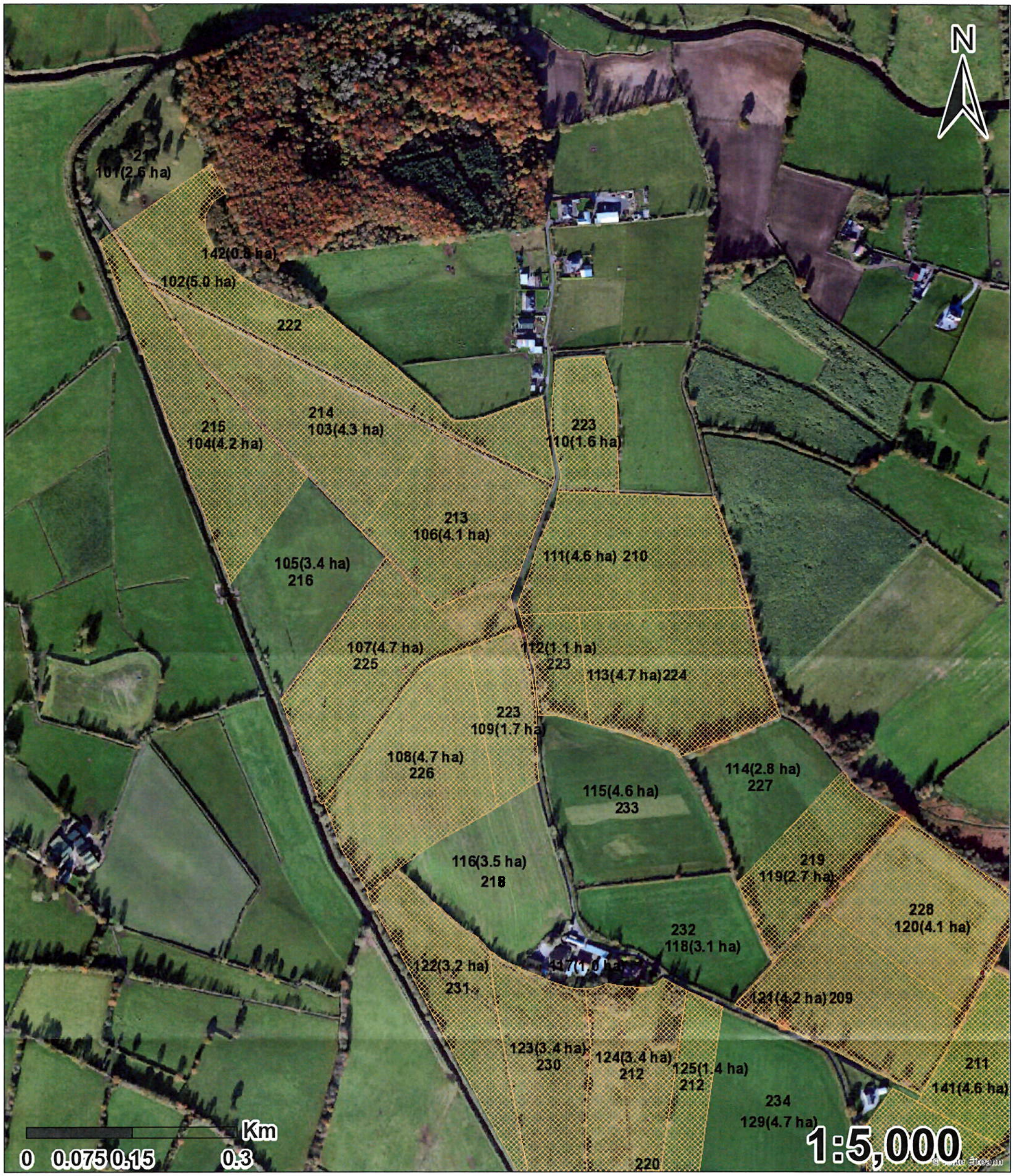


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# Farmer Full - Fertiliser Plan 2024 Dempsey Agri

| | |
|---|---|
| **Name** | Ger, Bernard & Mark Rochford |
| **Address** | LOWER FOREST MOUNTMELLICK |
| **County (Zone)** | Laois (K) |
| **Herd No.** | K1403065 |

Dempsey Agri

This report contains the following:

1.)- Cover Page
2.)- Farm Summary of Soil fertility and fertiliser requirements
3.)- Lime Report
4.)- Fertiliser Plan for the farm
5.)- Summary of All Livestock on the holding
6.)- Soil Sample Results
7.)- Manures Produced on Holding and Storage Facilities on Farm
8.)- Summary of Land areas, Cropping and max fertiliser allowances
9.)- Concentrate feed usage on the farm in 2023
10.)- Cereal crop yields where relevant
11.)- Plan Notes – where relevant

# Farm & Soil fertility Summary

| Fertiliser Plan Summary | Ger, Bernard & Mark Rochford | 2024 |
|---|---|---|

| | | | | |
|---|---|---|---|---|
| **Herd No.** | K1403065 | **Land Areas** | **Ha** | **%** |
| **Address** | LOWER FOREST MOUNTMELLICK | **NMP Total Nitrates ha** | 432.58 | |
| **County (Zone)** | Laois | Grassland | 432.58 | 100.00 |
| **Weeks Storage.** | 16 Weeks | Arable | 0.00 | 0.00 |
| | | Sampled Areas | 432.58 | 100.00 |

**Closed Periods**

| | |
|---|---|
| **Slurry** | 1 October to 12 January |
| **FYM** | 1 November to 12 January |
| **Chemical** | 15 September to 26 January |

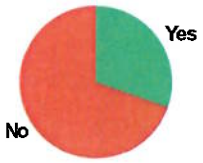
*Derogation Farm – whole farm must be soil tested

**Stocking Rates**

| | |
|---|---|
| **Current Years Net WFSR** | 199.73 kg/Ha |
| **Current Years GSR** | 199.73 kg/Ha |
| **Previous Years GSR** | 202.00 kg/Ha |
| **Grazing Platform SR** | 202 kg/Ha |

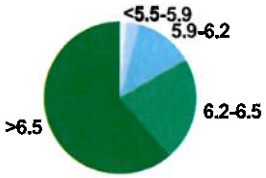
## Soil Fertility Summary

**Overall Fertility Status**
pH > 6.2, P & K index 3 or 4



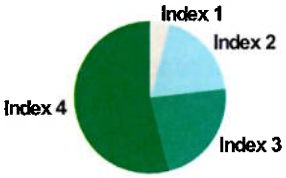

| | Ha's | % |
|---|---|---|
| Yes | 131.49 | 30% |
| No | 301.09 | 70% |

**Lime**
Soil pH > 6.2



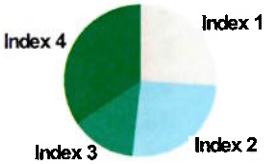

| pH | Ha's | % |
|---|---|---|
| <5.5 | 4.99 | 1% |
| 5.5-5.9 | 13.33 | 3% |
| 5.9-6.2 | 53.99 | 12% |
| 6.2-6.5 | 94.75 | 22% |
| >6.5 | 265.52 | 61% |

**Phosphorus**
P Index




| Index | Ha's | % |
|---|---|---|
| 1 | 18.36 | 4% |
| 2 | 82.12 | 19% |
| 3 | 98.26 | 23% |
| 4 | 233.84 | 54% |

**Potassium**
K Index




| Index | Ha's | % |
|---|---|---|
| 1 | 112.51 | 26% |
| 2 | 111.61 | 26% |
| 3 | 59.33 | 14% |
| 4 | 149.13 | 34% |

**%reduction in farm capacity to perform based on current fertility levels compared to optimal fertility**

| pH, P and K | pH | P | K |
|---|---|---|---|
| 12 | 3 | 3 | 7 |

## Soil pH & Lime

| Lime Planned | |
|---|---|
| **2024** | 0 Tonnes |
| **2025** | 25 Tonnes |
| **2026** | 0 Tonnes |
| **2027** | 0 Tonnes |
| **Four Year Total** | 25 Tonnes |

| Target pH | Grass | Tillage |
|---|---|---|
| **Mineral Soil** | 6.3 | 6.5 |
| **Organic Soil** | 5.5 | 5.5 |

## Organic Manure Plan

## Chemical Fertiliser Advice

**Nutrient Balance**

| | N(kg) | P(kg) | K(kg) |
|---|---|---|---|
| Chemical Recommended | 109,875 | 3,897 (100%) | 16,721 |

**Planned Fertilisers**

| Fertiliser | Tonnes |
|---|---|
| CAN (27%N) | 329.83 |

| | | | |
|---|---|---|---|
| Max Chemical Allowed | 109,875 | 4,929 | ⚠ |
| Chemical Usage | 89,054 | 3,093 | 0 |

| | |
|---|---|
| 16% Super P | 19.33 |

# Lime Requirements

| Plot Name | Crop | Area (Ha) | Soil Sample Id | Sample Date | Soil Sample pH | Lime Req (T/Ha) | Advised Lime 2024 (T/Ha) | 2025 (T/Ha) | 2026 (T/Ha) | 2027 (T/Ha) |
|---|---|---|---|---|---|---|---|---|---|---|
| 55b | Grazing | 4.99 | 167 | 28/01/2022 | 5.4 | 10.0 | 0.0 | 5.0 | 0.0 | 0.0 |
| 83c (Split b) | Grazing | 4.48 | 165 | 28/01/2022 | 5.6 | 7.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82c | Grazing | 4.75 | 187 | 28/01/2022 | 5.7 | 6.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 15e | Grazing | 4.10 | 179 | 28/01/2022 | 5.7 | 6.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 13 | Grazing | 1.41 | 178 | 28/01/2022 | 5.9 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 14 | Grazing | 1.78 | 178 | 28/01/2022 | 5.9 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90 | Grazing | 4.61 | 140 | 28/01/2022 | 5.9 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12a | Grazing | 0.47 | 178 | 28/01/2022 | 5.9 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12b | Grazing | 1.01 | 178 | 28/01/2022 | 5.9 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85b | Grazing | 4.39 | 166 | 28/01/2022 | 5.9 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 22 | Grazing | 4.13 | 175 | 28/01/2022 | 6.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 34 | Grazing | 2.00 | 168 | 28/01/2022 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 23 | Grazing | 0.11 | 175 | 28/01/2022 | 6.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 51 | Grazing | 3.38 | 184 | 28/01/2022 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 27 | Grazing | 3.67 | 173 | 28/01/2022 | 6.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 28 | Grazing | 1.19 | 173 | 28/01/2022 | 6.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 29 | Grazing | 2.15 | 168 | 28/01/2022 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 76 | Grazing | 4.08 | 193 | 28/01/2022 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 91 | Grazing | 2.95 | 141 | 28/01/2022 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 96 | 1 Cut + Grazing | 3.90 | 144 | 28/01/2022 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 15d | Grazing | 4.28 | 182 | 28/01/2022 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 52a | Grazing | 1.34 | 184 | 28/01/2022 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 62b | Grazing | 1.96 | 141 | 28/01/2022 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 57b | Grazing | 4.63 | 159 | 28/01/2022 | 6.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 93ba | 1 Cut + Grazing | 0.55 | 144 | 28/01/2022 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 11 | Grazing | 1.71 | 180 | 28/01/2022 | 6.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 58 | Grazing | 0.07 | 139 | 28/01/2022 | 6.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 59 | Grazing | 0.05 | 139 | 28/01/2022 | 6.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Four Year Total (2024-2027):25 tonnes | | | | | | Annual Totals (tonnes): | 0 | 25 | 0 | 0 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 18 | Grazing | 3.27 | 176 | 28/01/2022 | 6.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 19 | Grazing | 0.31 | 176 | 28/01/2022 | 6.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 36c | Grazing | 0.31 | 163 | 28/01/2022 | 6.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 63b | Grazing | 4.00 | 158 | 28/01/2022 | 6.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87 | Grazing | 2.72 | 139 | 28/01/2022 | 6.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 15b | Grazing | 3.21 | 180 | 28/01/2022 | 6.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80b | Grazing | 4.53 | 192 | 28/01/2022 | 6.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 62a | Grazing | 1.33 | 139 | 28/01/2022 | 6.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Four Year Total (2024-2027):25 tonnes | | | | | | Annual Totals (tonnes): | 0 | 25 | 0 | 0 |

# Fertiliser plan for the Farm

| Manure Allocations | | | |
|---|---|---|---|
| Fertiliser | Estimated T | Applied T | Balance T |
| Cattle Slurry | 7,366 | 8,795 | 0 |
| Farmyard Manure | 259 | 0 | 259 |
| Total P in Manures (Grazing + Non-Grazing 3,883.0) | | | 3,883 |

| Planned Fertilisers | |
|---|---|
| Fertiliser | Tonnes |
| CAN (27%N) | 329.83 |
| 16% Super P | 19.33 |

| Nutrient Balance | N(kg) | P(kg) | K(kg) |
|---|---|---|---|
| Chemical Recommended | 109,875 | 3,897 (100%) | 16,721 |
| Max Chemical Allowed | 109,875 | 4,929 | ⚠ |
| Chemical Usage | 89,054 | 3,093 | 0 |

| Plot | Crop | Area(Ha) | Soil Sample | Index | Nutrients Applied (Kg/Ha) | | | Nutrients Advice (Kg/Ha) | | | Organic Manures | Chemical Fertilisers | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N \| P \| K | N | P | K | N | P | K | Cattle Slurry (M3/Ha) | CAN (27%N) (Kg/Ha) | 16% Super P (Kg/Ha) |
| 1 | 2 Cut + Grazing | 4.82 | 237 | 1 \| 3 \| 2 | 249 | 10 | 70 | 270 | 43 | 200 | 20.0 | 850.0 | 0.0 |
| 10 | Grazing | 1.70 | 242 | 1 \| 4 \| 3 | 230 | 0 | 0 | 275 | 0 | 35 | 0.0 | 850.0 | 0.0 |
| 100 | 2 Cut + Grazing | 4.80 | 241 | 1 \| 4 \| 2 | 243 | 0 | 0 | 270 | 0 | 200 | 0.0 | 900.0 | 0.0 |
| 101 | 2 Cut + Grazing | 2.55 | 217 | 1 \| 1 \| 2 | 189 | 56 | 0 | 270 | 63 | 200 | 0.0 | 700.0 | 350.0 |
| 102 | 2 Cut + Grazing | 5.00 | 222 | 1 \| 3 \| 1 | 239 | 40 | 280 | 270 | 43 | 245 | 80.0 | 600.0 | 0.0 |
| 103 | 2 Cut + Grazing | 4.30 | 214 | 1 \| 2 \| 1 | 266 | 52 | 280 | 270 | 53 | 245 | 80.0 | 700.0 | 200.0 |
| 104 | 2 Cut + Grazing | 4.20 | 215 | 1 \| 2 \| 1 | 229 | 50 | 245 | 270 | 53 | 245 | 70.0 | 600.0 | 200.0 |
| 105 | 2 Cut + Grazing | 3.36 | 216 | 1 \| 4 \| 2 | 203 | 0 | 0 | 270 | 0 | 200 | 0.0 | 750.0 | 0.0 |
| 106 | 2 Cut + Grazing | 4.10 | 213 | 1 \| 2 \| 1 | 266 | 44 | 280 | 270 | 53 | 245 | 80.0 | 700.0 | 150.0 |
| 107 | 2 Cut + Grazing | 4.66 | 225 | 1 \| 1 \| 1 | 239 | 52 | 280 | 270 | 63 | 245 | 80.0 | 600.0 | 200.0 |
| 108 | 2 Cut + Grazing | 4.73 | 226 | 1 \| 2 \| 3 | 252 | 47 | 280 | 270 | 53 | 155 | 80.0 | 650.0 | 170.0 |
| 109 | 2 Cut + Grazing | 1.71 | 223 | 1 \| 3 \| 1 | 239 | 40 | 280 | 270 | 43 | 245 | 80.0 | 600.0 | 0.0 |
| 11 | Grazing | 1.71 | 180 | 1 \| 4 \| 3 | 216 | 0 | 0 | 275 | 0 | 35 | 0.0 | 800.0 | 0.0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 110 | 2 Out + Grazing | 1.63 | 223 | 1 \| 3 \| 1 | 239\|40 \|280 | 270\|43 \|245 | 80.0 | 600.0 | 0.0 |
| 111 | 2 Out + Grazing | 4.61 | 210 | 1 \| 2 \| 1 | 252 47 280 | 270 53 245 | 80.0 | 650.0 | 170.0 |
| 112 | 2 Out + Grazing | 1.11 | 223 | 1 \| 3 \| 1 | 239 40 \|280 | 270\|43 \|245 | 80.0 | 600.0 | 0.0 |
| 113 | 2 Out + Grazing | 4.71 | 224 | 1 \| 2 \| 1 | 266 52 280 | 270 53 245 | 80.0 | 700.0 | 200.0 |
| 114 | 2 Out + Grazing | 2.81 | 227 | 1 \| 4 \| 1 | 243\| 0 \| 0 | 270\| 0 \|245 | 0.0 | 900.0 | 0.0 |
| 115 | 2 Out + Grazing | 4.64 | 233 | 1 \| 4 \| 4 | 243 0 \| 0 | 270 0 \| 0 | 0.0 | 900.0 | 0.0 |
| 116 | 2 Out + Grazing | 3.54 | 218 | 1 \| 4 \| 4 | 243\| 0 \| 0 | 270\| 0 \| 0 | 0.0 | 900.0 | 0.0 |
| 118 | 1 Out + Grazing | 3.10 | 232 | 1 \| 4 \| 2 | 243 0 \| 0 | 270 0 150 | 0.0 | 900.0 | 0.0 |
| 119 | 2 Out + Grazing | 2.70 | 219 | 1 \| 2 \| 1 | 229\|53 \|245 | 270\|53 \|245 | 70.0 | 600.0 | 220.0 |
| 120 | 2 Out + Grazing | 4.08 | 228 | 1 \| 2 \| 1 | 266 52 280 | 270 53 245 | 80.0 | 700.0 | 200.0 |
| 121 | 2 Out + Grazing | 4.18 | 209 | 1 \| 3 \| 1 | 210\|39 \|175 | 270\|43 \|245 | 50.0 | 600.0 | 90.0 |
| 122 | 2 Out + Grazing | 3.22 | 231 | 1 \| 1 \| 2 | 229 62 245 | 270 63 200 | 70.0 | 600.0 | 280.0 |
| 123 | 2 Out + Grazing | 3.36 | 230 | 1 \| 2 \| 2 | 266\|52 280 | 270\|53 \|200 | 80.0 | 700.0 | 200.0 |
| 124 | 2 Out + Grazing | 3.41 | 212 | 1 \| 3 \| 2 | 251 41 175 | 270 43 200 | 50.0 | 750.0 | 100.0 |
| 125 | 2 Out + Grazing | 1.38 | 212 | 1 \| 3 \| 2 | 251\|41 \|175 | 270\|43 \|200 | 50.0 | 750.0 | 100.0 |
| 126 | 2 Out + Grazing | 2.43 | 220 | 1 \| 3 \| 2 | 251 41 175 | 270 43 200 | 50.0 | 750.0 | 100.0 |
| 127 | 2 Out + Grazing | 1.51 | 220 | 1 \| 3 \| 2 | 251\|41 \|175 | 270\|43 \|200 | 50.0 | 750.0 | 100.0 |
| 128 | 2 Out + Grazing | 4.76 | 229 | 1 \| 2 \| 2 | 266 52 280 | 270 53 200 | 80.0 | 700.0 | 200.0 |
| 129 | 2 Out + Grazing | 4.69 | 234 | 1 \| 4 \| 3 | 243\| 0 \| 0 | 270\| 0 \|155 | 0.0 | 900.0 | 0.0 |
| 12a | Grazing | 0.47 | 178 | 1 \| 4 \| 4 | 237 0 \| 0 | 275 0 \| 0 | 0.0 | 876.0 | 0.0 |
| 12b | Grazing | 1.01 | 178 | 1 \| 4 \| 4 | 236\| 0 \| 0 | 275\| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 13 | Grazing | 1.41 | 178 | 1 \| 4 \| 4 | 236 0 \| 0 | 275 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 130 | 2 Out + Grazing | 2.18 | 155 | 1 \| 4 \| 4 | 243\| 0 \| 0 | 270\| 0 \| 0 | 0.0 | 900.0 | 0.0 |
| 14 | Grazing | 1.78 | 178 | 1 \| 4 \| 4 | 236 0 \| 0 | 275 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 140 | 2 Out + Grazing | 3.52 | 221 | 1 \| 3 \| 1 | 251\|41 \|175 | 270\|43 \|245 | 50.0 | 750.0 | 100.0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 141 | 2 Cut + Grazing | 4.56 | 211 | 1 \| 2 \| 1 | 266 \| 52 \| 280 | 270 \| 53 \| 245 | 80.0 | 700.0 | 200.0 |
| 143 | 2 Cut + Grazing | 3.94 | 247 | 1 \| 3 \| 1 | 189 \| 32 \| 0 | 270 \| 43 \| 245 | 0.0 | 700.0 | 200.0 |
| 144 | 2 Cut + Grazing | 3.18 | 248 | 1 \| 2 \| 1 | 266 \| 44 \| 280 | 270 \| 53 \| 245 | 80.0 | 700.0 | 150.0 |
| 146 | Grazing | 2.56 | 246 | 1 \| 4 \| 2 | 189 \| 0 \| 0 | 275 \| 0 \| 65 | 0.0 | 700.0 | 0.0 |
| 148 | Grazing | 2.20 | 246 | 1 \| 4 \| 2 | 189 \| 0 \| 0 | 275 \| 0 \| 65 | 0.0 | 700.0 | 0.0 |
| 15a | Grazing | 2.57 | 181 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 15b | Grazing | 3.21 | 180 | 1 \| 4 \| 3 | 236 \| 0 \| 0 | 275 \| 0 \| 35 | 0.0 | 875.0 | 0.0 |
| 15c | Grazing | 2.05 | 181 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 15d | Grazing | 4.28 | 182 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 15e | Grazing | 4.10 | 179 | 1 \| 3 \| 2 | 181 \| 10 \| 70 | 275 \| 13 \| 65 | 20.0 | 600.0 | 0.0 |
| 16 | Grazing | 4.08 | 177 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 18 | Grazing | 3.27 | 176 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 19 | Grazing | 0.31 | 176 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 20 | Grazing | 1.93 | 174 | 1 \| 4 \| 2 | 236 \| 0 \| 0 | 275 \| 0 \| 65 | 0.0 | 875.0 | 0.0 |
| 22 | Grazing | 4.13 | 175 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 23 | Grazing | 0.11 | 175 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 24a | Grazing | 0.96 | 171 | 1 \| 4 \| 2 | 236 \| 0 \| 0 | 275 \| 0 \| 65 | 0.0 | 875.0 | 0.0 |
| 24b | Grazing | 4.73 | 172 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 27 | Grazing | 3.67 | 173 | 1 \| 4 \| 2 | 236 \| 0 \| 0 | 275 \| 0 \| 65 | 0.0 | 875.0 | 0.0 |
| 28 | Grazing | 1.19 | 173 | 1 \| 4 \| 2 | 236 \| 0 \| 0 | 275 \| 0 \| 65 | 0.0 | 875.0 | 0.0 |
| 29 | Grazing | 2.15 | 168 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 3 | 2 Cut + Grazing | 0.59 | 236 | 1 \| 2 \| 2 | 191 \| 20 \| 105 | 270 \| 53 \| 200 | 30.0 | 600.0 | 80.0 |
| 30 | Grazing | 2.12 | 174 | 1 \| 4 \| 2 | 236 \| 0 \| 0 | 275 \| 0 \| 65 | 0.0 | 875.0 | 0.0 |
| 31 | Grazing | 3.22 | 171 | 1 \| 4 \| 2 | 236 \| 0 \| 0 | 275 \| 0 \| 65 | 0.0 | 875.0 | 0.0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32a | Grazing | 4.17 | 205 | 1 \| 3 \| 4 | 168 \| 10 \| 70 | 275 \| 13 \| 0 | 20.0 | 550.0 | 0.0 |
| 32b | Grazing | 4.37 | 206 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 33a | Grazing | 4.83 | 169 | 1 \| 4 \| 3 | 236 \| 0 \| 0 | 275 \| 0 \| 35 | 0.0 | 875.0 | 0.0 |
| 33b | Grazing | 2.78 | 170 | 1 \| 4 \| 2 | 236 \| 0 \| 0 | 275 \| 0 \| 65 | 0.0 | 875.0 | 0.0 |
| 33c | Grazing | 4.02 | 202 | 1 \| 2 \| 4 | 229 \| 22 \| 245 | 275 \| 23 \| 0 | 70.0 | 600.0 | 30.0 |
| 34 | Grazing | 2.00 | 168 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 35 | Grazing | 4.32 | 204 | 1 \| 4 \| 4 | 197 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 730.0 | 0.0 |
| 36a | Grazing | 3.95 | 207 | 1 \| 2 \| 3 | 229 \| 22 \| 245 | 275 \| 23 \| 35 | 70.0 | 600.0 | 30.0 |
| 36b | Grazing | 3.68 | 203 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 36c | Grazing | 0.31 | 163 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 37a | Grazing | 1.67 | 164 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 37b | Grazing | 4.91 | 198 | 1 \| 3 \| 4 | 181 \| 10 \| 70 | 275 \| 13 \| 0 | 20.0 | 600.0 | 0.0 |
| 38 | Grazing | 2.22 | 200 | 1 \| 3 \| 4 | 19 \| 10 \| 70 | 275 \| 13 \| 0 | 20.0 | 0.0 | 0.0 |
| 40 | Grazing | 2.75 | 201 | 1 \| 2 \| 3 | 177 \| 20 \| 105 | 275 \| 23 \| 35 | 30.0 | 550.0 | 80.0 |
| 41 | Grazing | 2.10 | 160 | 1 \| 4 \| 4 | 221 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 820.0 | 0.0 |
| 42 | Grazing | 2.80 | 160 | 1 \| 4 \| 4 | 221 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 820.0 | 0.0 |
| 43a | Grazing | 3.22 | 164 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 43b | Grazing | 4.52 | 199 | 1 \| 4 \| 4 | 162 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 600.0 | 0.0 |
| 44 | Grazing | 2.35 | 154 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 45 | Grazing | 1.67 | 154 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 46 | Grazing | 2.36 | 153 | 1 \| 4 \| 3 | 236 \| 0 \| 0 | 275 \| 0 \| 35 | 0.0 | 875.0 | 0.0 |
| 47a | Grazing | 0.90 | 154 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 47b | Grazing | 5.00 | 151 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 48 | Grazing | 4.62 | 152 | 1 \| 4 \| 4 | 236 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 49a | Grazing | 0.95 | 150 | 1 \| 2 \| 2 | 220 \| 21 \| 210 | 275 \| 23 \| 65 | 60.0 | 600.0 | 35.0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 49b | Grazing | 1.74 | 153 | 1 \| 4 \| 3 | 236\| 0 \| 0 | 275\| 0 \|35 | 0.0 | 875.0 | 0.0 |
| 5 | 2 Cut + Grazing | 2.21 | 236 | 1 \| 2 \| 2 | 229 30 245 | 270 53 200 | 70.0 | 600.0 | 80.0 |
| 50 | Grazing | 2.67 | 150 | 1 \| 2 \| 2 | 220\|21 \|210 | 275\|23 \|65 | 60.0 | 600.0 | 35.0 |
| 51 | Grazing | 3.38 | 184 | 1 \| 4 \| 4 | 236 0 \| 0 | 275 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 52a | Grazing | 1.34 | 184 | 1 \| 4 \| 4 | 236\| 0 \| 0 | 275\| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 52b | Grazing | 2.06 | 186 | 1 \| 4 \| 4 | 236 0 \| 0 | 275 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 53a | Grazing | 1.36 | 186 | 1 \| 4 \| 4 | 236\| 0 \| 0 | 275\| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 53b | Grazing | 1.70 | 183 | 1 \| 3 \| 3 | 181 10 70 | 275 13 35 | 20.0 | 600.0 | 0.0 |
| 54 | Grazing | 2.90 | 183 | 1 \| 3 \| 3 | 181\| 10 \|70 | 275\|13 \|35 | 20.0 | 600.0 | 0.0 |
| 55a | Grazing | 0.36 | 162 | 1 \| 4 \| 3 | 236 0 \| 0 | 275 0 \|35 | 0.0 | 875.0 | 0.0 |
| 55b | Grazing | 4.99 | 167 | 1 \| 4 \| 4 | 236\| 0 \| 0 | 275\| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 56 | Grazing | 1.90 | 162 | 1 \| 4 \| 3 | 236 0 \| 0 | 275 0 \|35 | 0.0 | 875.0 | 0.0 |
| 57a | Grazing | 2.22 | 161 | 1 \| 4 \| 4 | 236\| 0 \| 0 | 275\| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 57b | Grazing | 4.63 | 159 | 1 \| 4 \| 2 | 236 0 \| 0 | 275 0 \|65 | 0.0 | 875.0 | 0.0 |
| 58 | Grazing | 0.07 | 139 | 1 \| 3 \| 1 | 149\| 0 \| 0 | 275\|13 \|95 | 0.0 | 550.0 | 0.0 |
| 59 | Grazing | 0.05 | 139 | 1 \| 3 \| 1 | 149 0 \| 0 | 275 13 \|95 | 0.0 | 550.0 | 0.0 |
| 6 | 2 Cut + Grazing | 0.98 | 236 | 1 \| 2 \| 2 | 162\|13 \| 0 | 270\|53 \|200 | 0.0 | 600.0 | 80.0 |
| 60 | Grazing | 0.10 | 196 | 1 \| 2 \| 4 | 217 21 210 | 275 23 \| 0 | 60.0 | 590.0 | 35.0 |
| 61a | Grazing | 0.95 | 195 | 1 \| 3 \| 3 | 181\|10 \|70 | 275\|13 \|35 | 20.0 | 600.0 | 0.0 |
| 61b | Grazing | 2.06 | 196 | 1 \| 2 \| 4 | 149 13 \| 0 | 275 23 \| 0 | 0.0 | 550.0 | 80.0 |
| 62a | Grazing | 1.33 | 139 | 1 \| 3 \| 1 | 181\|10 \|70 | 275\|13 \|95 | 20.0 | 600.0 | 0.0 |
| 62b | Grazing | 1.96 | 141 | 1 \| 2 \| 1 | 135 13 \| 0 | 275 23 \|95 | 0.0 | 500.0 | 80.0 |
| 63a | Grazing | 2.75 | 197 | 1 \| 2 \| 4 | 149\|13 \| 0 | 275\|23 \| 0 | 0.0 | 550.0 | 80.0 |
| 63b | Grazing | 4.00 | 158 | 1 \| 3 \| 2 | 181 10 \|70 | 275 13 \|65 | 20.0 | 600.0 | 0.0 |
| 64 | Grazing | 3.64 | 157 | 1 \| 4 \| 3 | 221\| 0 \| 0 | 275\| 0 \|35 | 0.0 | 820.0 | 0.0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 65 | Grazing | 1.47 | 155 | 1 \| 4 \| 4 | 221 \| 0 \| 0 | 275 \| 0 \| 0 | 0.0 | 820.0 | 0.0 |
| 7 | 2 Cut + Grazing | 3.62 | 235 | 1 \| 3 \| 3 | 216\|32 \| 0 | 270\|43 \|155 | 0.0 | 800.0 | 200.0 |
| 75 | Grazing | 1.79 | 191 | 1 \| 4 \| 1 | 236 \| 0 \| 0 | 275 \| 0 \|95 | 0.0 | 875.0 | 0.0 |
| 76 | Grazing | 4.08 | 193 | 1 \| 4 \| 1 | 197\| 0 \| 0 | 275\| 0 \|95 | 0.0 | 730.0 | 0.0 |
| 77 | Grazing | 4.30 | 148 | 1 \| 4 \| 3 | 236 \| 0 \| 0 | 275 \| 0 \|35 | 0.0 | 875.0 | 0.0 |
| 78a | Grazing | 0.59 | 191 | 1 \| 4 \| 1 | 236\| 0 \| 0 | 275\| 0 \|95 | 0.0 | 875.0 | 0.0 |
| 78b | Grazing | 4.91 | 194 | 1 \| 4 \| 1 | 236 \| 0 \| 0 | 275 \| 0 \|95 | 0.0 | 875.0 | 0.0 |
| 79 | Grazing | 2.79 | 137 | 1 \| 2 \| 1 | 181\|21 \|70 | 275\|23 \|95 | 20.0 | 600.0 | 100.0 |
| 80a | Grazing | 4.63 | 145 | 1 \| 4 \| 1 | 203 \| 0 \| 0 | 275 \| 0 \|95 | 0.0 | 750.0 | 0.0 |
| 80b | Grazing | 4.53 | 192 | 1 \| 4 \| 2 | 236\| 0 \| 0 | 275\| 0 \|65 | 0.0 | 875.0 | 0.0 |
| 80c | Grazing | 2.53 | 191 | 1 \| 4 \| 1 | 236 \| 0 \| 0 | 275 \| 0 \|95 | 0.0 | 875.0 | 0.0 |
| 81a | Grazing | 1.58 | 188 | 1 \| 3 \| 4 | 235\|10 \|70 | 275\|13 \| 0 | 20.0 | 800.0 | 0.0 |
| 81b | Grazing | 4.20 | 190 | 1 \| 4 \| 1 | 236 \| 0 \| 0 | 275 \| 0 \|95 | 0.0 | 875.0 | 0.0 |
| 82a | Grazing | 0.98 | 188 | 1 \| 3 \| 4 | 181\|10 \|70 | 275\|13 \| 0 | 20.0 | 600.0 | 0.0 |
| 82b | Grazing | 2.36 | 188 | 1 \| 3 \| 4 | 181 \|10 \|70 | 275 \|13 \| 0 | 20.0 | 600.0 | 0.0 |
| 82c | Grazing | 4.75 | 187 | 1 \| 3 \| 4 | 181\|10 \|70 | 275\|13 \| 0 | 20.0 | 600.0 | 0.0 |
| 82d | Grazing | 4.89 | 189 | 1 \| 3 \| 3 | 235 \|10 \|70 | 275 \|13 \|35 | 20.0 | 800.0 | 0.0 |
| 83a | Grazing | 3.18 | 146 | 1 \| 3 \| 2 | 235\|10 \|70 | 275\|13 \|65 | 20.0 | 800.0 | 0.0 |
| 83b | Grazing | 2.18 | 147 | 1 \| 3 \| 1 | 235 \|10 \|70 | 275 \|13 \|95 | 20.0 | 800.0 | 0.0 |
| 83c (Split b) | Grazing | 4.48 | 165 | 1 \| 4 \| 4 | 236\| 0 \| 0 | 275\| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 85a | Grazing | 5.00 | 208 | 1 \| 1 \| 2 | 216 \|19 \| 0 | 275 \|33 \|65 | 0.0 | 800.0 | 120.0 |
| 85b | Grazing | 4.39 | 166 | 1 \| 4 \| 4 | 236\| 0 \| 0 | 275\| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 86 | Grazing | 3.19 | 138 | 1 \| 4 \| 1 | 236 \| 0 \| 0 | 275 \| 0 \|95 | 0.0 | 875.0 | 0.0 |
| 87 | Grazing | 2.72 | 139 | 1 \| 3 \| 1 | 216\| 0 \| 0 | 275\|13 \|95 | 0.0 | 800.0 | 0.0 |
| 90 | Grazing | 4.61 | 140 | 1 \| 4 \| 1 | 236 \| 0 \| 0 | 275 \| 0 \|95 | 0.0 | 875.0 | 0.0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 91 | Grazing | 2.95 | 141 | 1 \| 2 \| 1 | 216\| 13 \| 0 | 275\|23 \|95 | 0.0 | 800.0 | 80.0 |
| 92 | 1 Cut + Grazing | 4.08 | 142 | 1 \| 3 \| 2 | 208 10 70 | 270 33 150 | 20.0 | 700.0 | 0.0 |
| 93a | 1 Cut + Grazing | 0.75 | 149 | 1 \| 4 \| 2 | 236\| 0 \| 0 | 270\| 0 \|150 | 0.0 | 875.0 | 0.0 |
| 93ba | 1 Cut + Grazing | 0.55 | 144 | 1 \| 3 \| 2 | 189 27 \| 0 | 270 33 150 | 0.0 | 700.0 | 170.0 |
| 93bb | 1 Cut + Grazing | 4.87 | 143 | 1 \| 4 \| 4 | 236\| 0 \| 0 | 270\| 0 \| 0 | 0.0 | 875.0 | 0.0 |
| 94 | Grazing | 1.00 | 149 | 1 \| 4 \| 2 | 236 0 \| 0 | 275 0 \|65 | 0.0 | 875.0 | 0.0 |
| 95 | 1 Cut + Grazing | 3.20 | 149 | 1 \| 4 \| 2 | 203\| 0 \| 0 | 270\| 0 \|150 | 0.0 | 750.0 | 0.0 |
| 96 | 1 Cut + Grazing | 3.90 | 144 | 1 \| 3 \| 2 | 162 27 \| 0 | 270 33 150 | 0.0 | 600.0 | 170.0 |
| 97 | 2 Cut + Grazing | 2.10 | 239 | 1 \| 2 \| 2 | 256\|50 \|245 | 270\|53 \|200 | 70.0 | 700.0 | 200.0 |
| 98 | 2 Cut + Grazing | 3.40 | 238 | 1 \| 4 \| 3 | 189 0 \| 0 | 270 0 \|155 | 0.0 | 700.0 | 0.0 |
| 99 | 2 Cut + Grazing | 2.43 | 240 | 1 \| 3 \| 4 | 256\|35 \|245 | 270\|43 \| 0 | 70.0 | 700.0 | 0.0 |
| 9a | 2 Cut + Grazing | 2.93 | 243 | 1 \| 1 \| 1 | 252 47 280 | 270 63 \|245 | 80.0 | 650.0 | 170.0 |
| 9b | Grazing | 3.86 | 244 | 1 \| 4 \| 2 | 216\| 0 \| 0 | 275\| 0 \|65 | 0.0 | 800.0 | 0.0 |

# Summary of All Livestock on the holding

## Total Nitrogen and Phosphate produced

| Animal | No. Animals | N/head | N Total | P /head | P Total |
|---|---|---|---|---|---|
| Cattle (1-2 year old) | 100 | 57.0 | 5,700.0 | 8.0 | 800.0 |
| Cattle (0-1 year old) | 200 | 24.0 | 4,800.0 | 3.0 | 600.0 |
| Dairy cow 92kg N/hd (4,500 - 6,500kgs) | 825 | 92.0 | 75,900.0 | 13.6 | 11,220.0 |
| | | Total N | 86400 | Total P | 12620 |

## Animal Breakdown

| Animal Category | N Total | P Total |
|---|---|---|
| Grazing | 86400 | 12620 |
| Non-Grazing | 0 | 0 |

## Projected Exports

| Manure Type | Date of Export | Quantity (t) | Total N (kg) | Total P (kg) |
|---|---|---|---|---|
| No data available in table | | | | |

## Projected Imports

| Manure Type | Date of Import | Quantity (t) | Total N (kg) | Total P (kg) |
|---|---|---|---|---|
| No data available in table | | | | |

## Total Nitrogen &Phosphorus to be applied on the holding (kg)

| N Total Value | P Total Value |
|---|---|
| 86,400.0 | 12,620.0 |

## Stocking Rates (kg/ha)

| Net Whole Farm Stocking Rate (kg/ha after Imports and Exports) | Grassland Stocking Rate Current Year | Grassland Stocking Rate Previous Year |
|---|---|---|
| 199.73 | 199.73 | 202.00 |

# Soil Samples Results

| | Sample Id | Sample Code | Sample Date | Sampled Area (ha) | pH | Lime Req | P Value | K Value | Trace Elements | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Soil Type | Mg | Cu | ER Mn | Zn | Bo | Co | Tot. Mn |
| | 248 | null | 13/02/2024 | 3.18 | 7.5 | 0.0 | 4.0 | 50.9 | Clay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 247 | null | 13/02/2024 | 3.94 | 6.3 | 0.0 | 5.6 | 87.3 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 246 | null | 13/02/2024 | 4.76 | 7.2 | 0.0 | 12.1 | 61.7 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 244 | null | 08/02/2024 | 3.86 | 7.1 | 0.0 | 8.4 | 63.5 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 243 | null | 08/02/2024 | 2.93 | 6.7 | 0.0 | 1.6 | 48.9 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 242 | null | 08/02/2024 | 1.70 | 6.6 | 0.0 | 12.2 | 107.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 241 | null | 08/02/2024 | 4.80 | 7.7 | 0.0 | 8.1 | 96.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 240 | null | 08/02/2024 | 2.43 | 7.6 | 0.0 | 7.5 | 155.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 239 | null | 08/02/2024 | 2.10 | 7.8 | 0.0 | 5.0 | 85.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 238 | null | 08/02/2024 | 3.40 | 7.8 | 0.0 | 10.8 | 125.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 237 | null | 08/02/2024 | 4.82 | 7.5 | 0.0 | 6.6 | 68.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 236 | null | 08/02/2024 | 3.78 | 7.0 | 0.0 | 4.6 | 61.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 235 | null | 08/02/2024 | 3.62 | 7.4 | 0.0 | 6.5 | 107.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 234 | null | 08/02/2024 | 4.69 | 6.7 | 0.0 | 8.8 | 103.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 233 | null | 08/02/2024 | 4.64 | 6.8 | 0.0 | 15.4 | 198.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 232 | null | 08/02/2024 | 3.10 | 6.8 | 0.0 | 10.2 | 54.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 231 | null | 08/02/2024 | 3.22 | 7.5 | 0.0 | 1.0 | 65.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 230 | null | 08/02/2024 | 3.36 | 7.1 | 0.0 | 5.0 | 90.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 229 | null | 08/02/2024 | 4.76 | 6.3 | 0.0 | 4.2 | 82.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 228 | null | 08/02/2024 | 4.08 | 6.8 | 0.0 | 4.4 | 32.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 227 | null | 08/02/2024 | 2.81 | 7.2 | 0.0 | 8.6 | 45.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 226 | null | 08/02/2024 | 4.73 | 6.2 | 0.0 | 5.0 | 101.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 225 | null | 08/02/2024 | 4.66 | 6.6 | 0.0 | 2.3 | 29.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 224 | null | 08/02/2024 | 4.71 | 7.3 | 0.0 | 5.0 | 47.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 223 | null | 08/02/2024 | 4.45 | 7.3 | 0.0 | 6.0 | 41.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 222 | null | 08/02/2024 | 5.00 | 7.2 | 0.0 | 6.2 | 39.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 221 | null | 08/02/2024 | 3.52 | 6.7 | 0.0 | 7.0 | 35.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 220 | null | 08/02/2024 | 3.94 | 7.1 | 0.0 | 6.3 | 68.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 219 | null | 08/02/2024 | 2.70 | 6.6 | 0.0 | 4.2 | 36.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 218 | null | 08/02/2024 | 3.54 | 7.1 | 0.0 | 13.6 | 157.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 217 | null | 08/02/2024 | 2.55 | 7.1 | 0.0 | 2.9 | 56.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 216 | null | 08/02/2024 | 3.36 | 7.6 | 0.0 | 8.1 | 56.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 215 | null | 08/02/2024 | 4.20 | 7.8 | 0.0 | 4.5 | 36.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 214 | null | 08/02/2024 | 4.30 | 7.7 | 0.0 | 3.2 | 35.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 213 | null | 08/02/2024 | 4.10 | 7.6 | 0.0 | 4.2 | 48.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 212 | null | 08/02/2024 | 4.79 | 7.4 | 0.0 | 5.4 | 96.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 211 | null | 08/02/2024 | 4.56 | 6.5 | 0.0 | 4.1 | 34.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 210 | null | 08/02/2024 | 4.61 | 7.5 | 0.0 | 5.0 | 49.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 209 | null | 08/02/2024 | 4.18 | 7.4 | 0.0 | 7.7 | 36.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 208 | null | 08/02/2024 | 5.00 | 7.1 | 0.0 | 3.0 | 73.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 207 | null | 08/02/2024 | 3.95 | 7.3 | 0.0 | 3.4 | 103.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 206 | null | 08/02/2024 | 4.37 | 6.6 | 0.0 | 9.2 | 193.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 205 | null | 08/02/2024 | 4.17 | 6.7 | 0.0 | 7.9 | 228.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 204 | null | 08/02/2024 | 4.32 | 6.5 | 0.0 | 11.6 | 347.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 203 | null | 08/02/2024 | 3.68 | 6.7 | 0.0 | 15.5 | 342.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 202 | null | 08/02/2024 | 4.02 | 6.5 | 0.0 | 4.2 | 212.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 201 | null | 08/02/2024 | 2.75 | 6.2 | 0.0 | 4.0 | 145.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 200 | null | 08/02/2024 | 2.22 | 6.2 | 0.0 | 6.2 | 230.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 199 | null | 08/02/2024 | 4.52 | 7.2 | 0.0 | 9.0 | 207.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 198 | null | 08/02/2024 | 4.91 | 6.2 | 0.0 | 5.7 | 192.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 197 | null | 08/02/2024 | 2.75 | 6.7 | 0.0 | 4.0 | 169.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 196 | null | 08/02/2024 | 2.16 | 6.9 | 0.0 | 3.3 | 178.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 195 | null | 08/02/2024 | 0.95 | 6.7 | 0.0 | 5.1 | 140.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 194 | null | 28/01/2022 | 4.91 | 6.5 | 0.0 | 8.5 | 49.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 193 | null | 28/01/2022 | 4.08 | 6.1 | 2.5 | 8.8 | 40.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 192 | null | 28/01/2022 | 4.53 | 6.2 | 1.3 | 11.3 | 97.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 191 | null | 28/01/2022 | 4.91 | 6.3 | 0.0 | 11.3 | 37.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 190 | null | 28/01/2022 | 4.20 | 6.5 | 0.0 | 9.7 | 31.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 189 | null | 28/01/2022 | 4.89 | 6.6 | 0.0 | 5.4 | 101.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 188 | null | 28/01/2022 | 4.92 | 6.5 | 0.0 | 7.9 | 168.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 187 | null | 28/01/2022 | 4.75 | 5.7 | 6.3 | 6.5 | 221.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 186 | null | 28/01/2022 | 3.42 | 6.4 | 0.0 | 8.6 | 267.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 184 | null | 28/01/2022 | 4.72 | 6.1 | 2.5 | 8.3 | 217.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 183 | null | 28/01/2022 | 4.60 | 6.4 | 0.0 | 7.2 | 137.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 182 | null | 28/01/2022 | 4.28 | 6.1 | 2.5 | 11.0 | 237.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 181 | null | 28/01/2022 | 4.62 | 6.4 | 0.0 | 25.7 | 406.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 180 | null | 28/01/2022 | 4.92 | 6.2 | 1.3 | 13.8 | 244.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 179 | null | 28/01/2022 | 4.10 | 5.7 | 6.3 | 5.4 | 167.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 178 | null | 28/01/2022 | 4.67 | 5.9 | 3.8 | 10.2 | 329.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 177 | null | 28/01/2022 | 4.08 | 6.3 | 0.0 | 14.5 | 347.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 176 | null | 28/01/2022 | 3.58 | 6.2 | 1.3 | 21.2 | 481.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 175 | null | 28/01/2022 | 4.24 | 6.0 | 2.5 | 18.4 | 463.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 174 | null | 28/01/2022 | 4.05 | 6.4 | 0.0 | 14.4 | 164.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 173 | null | 28/01/2022 | 4.86 | 6.0 | 2.5 | 14.0 | 154.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 172 | null | 28/01/2022 | 4.73 | 6.5 | 0.0 | 20.5 | 268.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 171 | null | 28/01/2022 | 4.18 | 6.6 | 0.0 | 18.6 | 125.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 170 | null | 28/01/2022 | 2.78 | 6.6 | 0.0 | 20.4 | 136.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 169 | null | 28/01/2022 | 4.83 | 6.6 | 0.0 | 13.2 | 219.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 168 | null | 28/01/2022 | 4.15 | 6.1 | 2.5 | 26.9 | 578.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 167 | null | 28/01/2022 | 4.99 | 5.4 | 10.0 | 19.8 | 536.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 166 | | 28/01/2022 | 4.39 | 5.9 | 3.8 | 17.7 | 437.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 165 | null | 28/01/2022 | 4.48 | 5.6 | 7.5 | 21.7 | 524.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 164 | | 28/01/2022 | 4.89 | 6.7 | 0.0 | 19.9 | 226.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 163 | | 28/01/2022 | 0.31 | 6.2 | 1.3 | 22.5 | 286.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 162 | | 28/01/2022 | 2.26 | 6.3 | 0.0 | 10.9 | 104.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 161 | | 28/01/2022 | 2.22 | 6.3 | 0.0 | 11.1 | 161.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 160 | | 28/01/2022 | 4.90 | 6.4 | 0.0 | 12.3 | 202.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 159 | | 28/01/2022 | 4.63 | 6.0 | 2.5 | 8.2 | 71.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 158 | | 28/01/2022 | 4.00 | 6.2 | 1.3 | 7.6 | 88.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 157 | | 28/01/2022 | 3.64 | 6.4 | 0.0 | 13.9 | 133.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 155 | | 28/01/2022 | 3.65 | 6.5 | 0.0 | 16.0 | 157.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 154 | | 28/01/2022 | 4.92 | 6.5 | 0.0 | 9.1 | 204.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 153 | | 28/01/2022 | 4.10 | 6.4 | 0.0 | 13.0 | 150.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 152 | | 28/01/2022 | 4.62 | 6.7 | 0.0 | 15.6 | 189.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 151 | | 28/01/2022 | 5.00 | 6.6 | 0.0 | 11.6 | 173.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 150 | | 28/01/2022 | 3.62 | 6.8 | 0.0 | 4.9 | 52.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 149 | null | 28/01/2022 | 4.95 | 6.3 | 0.0 | 14.0 | 134.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 148 | null | 28/01/2022 | 4.30 | 6.6 | 0.0 | 11.6 | 109.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 147 | null | 28/01/2022 | 2.18 | 6.4 | 0.0 | 7.8 | 99.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 146 | null | 28/01/2022 | 3.18 | 6.5 | 0.0 | 6.1 | 127.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 145 | null | 28/01/2022 | 4.63 | 6.6 | 0.0 | 9.4 | 80.0 | Peat | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 144 | | 28/01/2022 | 4.45 | 6.1 | 2.5 | 6.1 | 76.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 143 | | 28/01/2022 | 4.87 | 6.8 | 0.0 | 8.9 | 162.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 142 | | 28/01/2022 | 4.08 | 6.7 | 0.0 | 6.1 | 67.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 141 | | 28/01/2022 | 4.91 | 6.1 | 2.5 | 3.8 | 30.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 140 | | 28/01/2022 | 4.61 | 5.9 | 3.8 | 8.4 | 49.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 139 | | 28/01/2022 | 4.17 | 6.2 | 1.3 | 7.8 | 35.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 138 | | 28/01/2022 | 3.19 | 6.8 | 0.0 | 8.4 | 50.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 137 | | 28/01/2022 | 2.79 | 6.6 | 0.0 | 3.4 | 31.0 | Loam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

# Manures Produced on Holding and Storage Facilities on Farm

## Slurry Produced

### From Animals

| Animal | No. on Slurry | Weeks slurry produced | Weeks slurry required | Total Slurry Produced (m3) | Storage requirement (m3) |
|---|---|---|---|---|---|
| Cattle (18-24 months old) | 211 | 16 | 16 | 877.8 | 877.8 |
| Cattle (6-12 months old) | 314 | 16 | 16 | 753.6 | 753.6 |
| Dairy cow 92kg N/hd (4,500 - 6,500kgs) | 670 | 16 | 16 | 3,537.6 | 3,537.6 |

| | | | | |
|---|---|---|---|---|
| **Total Slurry Produced** | 5,169.0 | $m^3$ | | Gallons |
| **Total Storage Required** | 5,169.0 | $m^3$ | | Gallons |

### From Dirty Yards

#### Rectangular Areas

| Yard | Length (m) | Width (m) | Area (m2) |
|---|---|---|---|
| 25 | 10.8 | 13.1 | 141.0 |
| 26 | 10.8 | 14.3 | 153.7 |
| 27 | 12.0 | 16.0 | 191.9 |
| 28 | 11.6 | 15.0 | 173.1 |

#### Circular Areas

| Yard | Diameter (m) | Area (m2) |
|---|---|---|
| No data available in table | | |

| | | | | |
|---|---|---|---|---|
| **Total Storage Required for Dirty Yards** | 232.2 | $m^3$ | | Gallons |

From FYM Seepage

| | | | | |
|---|---|---|---|---|
| **Under Animals** | 0.0 | $m^3$ | | |
| **From Uncovered FYM Heaps** | 0.0 | $m^3$ | | |
| **Total FYM Seepage to be Stored** | 0.0 | $m^3$ | | Gallons |

From Dairy Washings

| | | | | |
|---|---|---|---|---|
| **Total Storage Required for Dairy Washings to be stored with Slurry** | 1,252.7 | $m^3$ | | Gallons |

## Slurry Storage

| Storage Type | Location Name | Width | Length | Diameter | Depth | Net Capacity |
|---|---|---|---|---|---|---|
| Covered(Rectangle) | 1 | 3.5 | 80.5 | | 2.4 | 619.8 |
| Covered(Rectangle) | 2 | 3.5 | 21.2 | | 2.0 | 133.6 |
| Uncovered(Rectangle) | 5 | 10.0 | 16.6 | | 1.2 | 91.0 |
| Covered(Rectangle) | 7a | 2.1 | 29.0 | | 1.2 | 60.9 |
| Covered(Rectangle) | 7b | 3.5 | 29.0 | | 2.1 | 193.4 |
| Lagoon(Geo-Membrane) | 16 | 27.3 | 65.0 | | 4.0 | 4,869.4 |
| Covered(Rectangle) | 17 | 2.9 | 15.7 | | 2.1 | 88.3 |
| Covered(Rectangle) | 18 | 5.8 | 15.7 | | 2.1 | 176.7 |
| Covered(Rectangle) | 19 | 2.9 | 15.7 | | 2.1 | 88.3 |
| Covered(Rectangle) | 22 | 3.2 | 27.1 | | 1.8 | 141.4 |
| Covered(Rectangle) | 23 | 3.2 | 27.1 | | 1.8 | 141.8 |
| | | | | | Net Capacity | 6,933.0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Covered(Rectangle) | 24 | 4.1 | 19.8 | | 2.4 | 182.7 |
| Uncovered(Rectangle) | 25 | 4.1 | 19.8 | | 2.4 | 145.9 |
| | | | | | Net Capacity | 6,933.0 |

## Slurry Storage Balance

| Farm Slurry Storage Balance | Total Slurry to be stored on Farm | | Volume of Cattle Slurry for Spreading | |
|---|---|---|---|---|
| Slurry Produced (Animals) | 5,169.0 | $m^3$ | 5,169.0 | $m^3$ |
| Cattle Slurry Imported | | | 0.0 | $m^3$ |
| Cattle Slurry Exported | | | 0.0 | $m^3$ |
| Slurry Produced (Dirty Yards) | 232.2 | $m^3$ | 232.2 | $m^3$ |
| Slurry Produced (FYM Seepage) | 0.0 | $m^3$ | 0.0 | $m^3$ |
| Slurry Produced (Dairy Washings) | 1,252.7 | $m^3$ | 1,252.7 | $m^3$ |
| Slurry Produced (Rainfall in open tanks - 16 weeks) | | | 711.8 | $m^3$ |
| Total Slurry Produced | 6,653.9 | $m^3$ | 7,365.6 | $m^3$ |
| | | Gallons | | Gallons |
| Dilutes Added to Slurry | | | 2,196.7 | $m^3$ |
| Dilution factor | | | 70.2 | % |
| Total Available Net Storage | 6,933.2 | $m^3$ | | |
| Surplus Storage Available | 279.3 | $m^3$ | | |

| Farm Soiled Water Storage Balance | | | | |
|---|---|---|---|---|
| Soiled Water Produced (Dairy Washings) | 0.0 | $m^3$ | | Gallons |
| Soiled Water Produced (Yards) | 0.0 | $m^3$ | | Gallons |
| Total Available Net Soiled Water Storage | | | | |

| | | | | |
|---|---|---|---|---|
| | 0.0 | $m^3$ | | Gallons |
| **Additional Storage Required** | 0.0 | $m^3$ | | Gallons |

### FYM Production

| Animal | No. on FYM | Straw Usage | Weeks FYM Production | Weeks FYM Storage | Total FYM Produced (m3) | Total FYM Storage (m3) | Seepage Produced (m3) | Total Straw Usage (kg) |
|---|---|---|---|---|---|---|---|---|
| Dairy cow 92kg N/hd (4,500 - 6,500kgs) | 30 | H | 16 | 16 | 336.0 | 336.0 | 0.0 | 26,400.0 |

| | | | | |
|---|---|---|---|---|
| **Total Straw Usage** | 26,400.0 | kg | | |
| **Seepage Produced** | 0.0 | $m^3$ | | |
| **Total FYM Produced** | 336.0 | $m^3$ | | tonne |
| **Total FYM Storage** | 336.0 | $m^3$ | | |

## FYM Under Animals

| Storage Type | Location Name | Width | Length | Diameter | Depth | Net Capacity |
|---|---|---|---|---|---|---|
| Covered(Rectangle) | 3 (Under Animals) | 6.0 | 12.0 | | 0.6 | 43.2 |
| Covered(Rectangle) | 4 (Under Animals) | 6.0 | 12.0 | | 0.6 | 43.2 |
| Covered(Rectangle) | 8 (Under Animals) | 6.0 | 29.0 | | 0.6 | 104.4 |
| Covered(Rectangle) | 9 (Under Animals) | 10.8 | 14.0 | | 0.6 | 90.7 |
| Covered(Rectangle) | 10 (Under Animals) | 6.7 | 14.0 | | 0.6 | 56.3 |
| Covered(Rectangle) | 12 (Under Animals) | 5.2 | 15.6 | | 0.6 | 48.7 |
| | | | | | Net Capacity | 386.0 |

## FYM Storage Balance

## Seepage Produced

| | | | | |
|---|---|---|---|---|
| Under Animals | 0.0 | $m^3$ | | Gallons |
| From Uncovered FYM Heaps | 0.0 | $m^3$ | | Gallons |
| Total FYM Seepage to be Stored | 0.0 | $m^3$ | | Gallons |

## FYM Storage Balance

| | | |
|---|---|---|
| Total FYM Storage Required | 336.0 | $m^3$ |
| Nutrient Adjustment Factor | 45.0 | % |

### FYM Storage Available

| | | |
|---|---|---|
| Storage Available Under Animals | 386.5 | $m^3$ |
| Storage Available As Covered FYM Stores | 0.0 | $m^3$ |
| Storage Available As Uncovered FYM Stores | 0.0 | $m^3$ |
| Total FYM Storage Available | 386.5 | $m^3$ |

### FYM Storage Balance

| | | |
|---|---|---|
| Surplus Storage Available | 50.5 | $m^3$ |

## Summary of Land areas, Cropping and max fertiliser allowances

**Note: Derogation Bands 171-210, 211-250, >250 applied**

| | N | P Index 1 | P Index 2 | P Index 3 | P Index 4 |
|---|---|---|---|---|---|
| Max Grassland Allowance (Previous Year Grassland SR202.00 kg/Ha ) | 254 | 36 | 26 | 16 | 0 |

### Available N Allowance

| Name | Crop Area(Ha) | N Index 1 | | | N Index 2 | | | N Index 3 | | | N Index 4 | | | Total N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area(Ha) | N Allowed | Total N | Area(Ha) | N Allowed | Total N | Area(Ha) | N Allowed | Total N | Area(Ha) | N Allowed | Total N | |
| Grazing | 273.49 | 273.49 | 254 | 69,466.5 | | | | | | | | | | 69,466.5 |
| 1 Cut + Grazing | 20.45 | 20.45 | 254 | 5,194.3 | | | | | | | | | | 5,194.3 |
| 2 Cut + Grazing | 138.64 | 138.64 | 254 | 35,214.6 | | | | | | | | | | 35,214.6 |
| Non- Farmed Area | 1.89 | 1.82 | 0 | 0.0 | | | | 0.07 | 0 | 0.0 | | | | 0.0 |
| Farmyard and Roads | 3.49 | 1 | 0 | 0.0 | | | | 2.49 | 0 | 0.0 | | | | 0.0 |
| Forestry | 0 | 0 | 0 | 0.0 | | | | | | | | | | 0.0 |

### Available P Allowance

| Name | Crop Area(Ha) | P Index 1 | | | P Index 2 | | | P Index 3 | | | P Index 4 | | | Total P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area(Ha) | P Allowed | Total P | Area(Ha) | P Allowed | Total P | Area(Ha) | P Allowed | Total P | Area(Ha) | P Allowed | Total P | |
| Grazing | 273.49 | 5 | 36 | 180.0 | 26.95 | 26 | 700.7 | 49.04 | 16 | 784.6 | 192.5 | 0 | 0.0 | 1,665.3 |
| 1 Cut + Grazing | 20.45 | | | | | | | 8.53 | 16 | 136.5 | 11.92 | 0 | 0.0 | 136.5 |
| 2 Cut + Grazing | 138.64 | 13.36 | 36 | 481.0 | 55.17 | 26 | 1,434.4 | 40.69 | 16 | 651.0 | 29.42 | 0 | 0.0 | 2,566.4 |
| Non- Farmed Area | 1.89 | | | | | | | | | | 1.89 | 0 | 0.0 | 0.0 |
| Farmyard and Roads | 3.49 | | | | | | | | | | 3.49 | 0 | 0.0 | 0.0 |
| Forestry | 0 | | | | | | | | | | 0 | 0 | 0.0 | 0.0 |

| N allowance | (Kgs) |
|---|---|
| Maximum total available N | 109,875.3 |
| - Available N produced on holding (0 from Grazing from 2018) | 0.0 |
| - Available N in manures Imported | 0.0 |
| + Available N in manures Exported (Max 10,634.0) | 0.0 |
| **Maximum Chemical N fertiliser allowed** | **109,875.3** |

| P allowance | (Kgs) |
|---|---|
| Maximum total available P | 4,368.2 |
| - Total P in Manures produced on holding (0 from Grazing from 2018) | 0.0 |
| + Manure P not available (Applied to index 1 & 2) | 1,486.4 |
| - Total P in manures Imported | 0.0 |
| + Total P in manures Exported (Max 3,883.0) | 0.0 |
| Total P in Concentrate Feeds Used | 2,322.3 |
| Discounted P in feeds (up to 300kg) | 1,396.8 |
| - Net P in concentrate feeds used | 925.5 |
| **Maximum Chemical P fertiliser allowed** | **4,929.2** |

# Concentrate Feeds

| | | | | |
|---|---|---|---|---|
| **Straight Feed Accounting Method** | Book Value | **Last years total organic N** | 85,670 | kg |
| **Compound Feed Accounting Method** | Default(5kg) | **Total P Fed to Grazing Livestock** | 2,322.3 | kg |
| | | **Total P to be discounted** | 1,396.8 | kg |
| | | **Net P contributing to Available Allowance** | 925.5 | kg |

| Name | Quantity (t) | P Content Data Source | P Content | Total P (kg) |
|---|---|---|---|---|
| Glanbia | 180.3 | Default(5kg) | 5.0 | 901.3 |
| Grennans | 174.5 | Default(5kg) | 5.0 | 872.6 |
| Liffey Mills | 109.7 | Default(5kg) | 5.0 | 548.4 |
| | 464.5 | | | |

# Cereal crop yields

| Crop |
| --- |

# Plan Notes