



## **Additional Technical Information**

**IEL Reg. No. P1069-01**

**William Connolly & Sons Unlimited  
Company**

**Grange Lower, Goresbridge, Co.  
Kilkenny**



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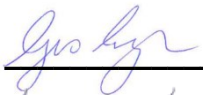


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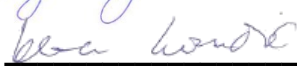
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**IEL Reg. No. P1069-01**  
**William Connolly & Sons Unlimited Company**  
**Grange Lower, Goresbridge, Co. Kilkenny**

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## 1 INTRODUCTION

This technical report has been prepared by MOR Environmental (MOR) on behalf of William Connolly & Sons Unlimited Company (Red Mills) to supplement the technical documents that were submitted to the EPA for IE licence application (P1069-01) via Eden by the agreed deadline of 30<sup>th</sup> November 2021, that included:

1. Cover Letter;
2. Non-Technical Summary;
3. Emissions to Air Assessment;
4. Attachment 7-5-1 Noise Impact Assessment;
5. IE Consulting Ltd. Integrated Constructed Wetland (ICW) System;
6. Natura Impact Assessment;
7. Attachment 6-1 Stakeholder Engagement;
8. Attachment 7-1 Emissions – Overview;
9. Attachment 7-7 Discharges to Storm Water;
10. Attachment 7-4-1 Emissions to Air – Main;
11. Attachment 7-5 Noise Emissions;
12. D1 - Red Line Boundary;
13. D2 - Existing Drainage P705 P705A;
14. D2 - Proposed Drainage P710 P710A;
15. D3 – NSLs; and
16. D4 – Emissions to Air.

In preparing this technical report, the MOR team have taken cognisance of the following items:

1. EPA's NOTICE in accordance with Regulation 19(2) of the EPA (Industrial Emission) (Licensing) Regulations 2013 as amended, dated 16 December 2021.
2. EPA Memo dated 10<sup>th</sup> December 2021, RE: Recommendation to consider the following IED licence application to have been abandoned: William Connolly & Sons Unlimited Company, Grange Lower, Goresbridge, Kilkenny (P1069-01), publicly available at:  
  
[https://epawebapp.epa.ie/licences/lic\\_eDMS/090151b2807ed5bc.pdf](https://epawebapp.epa.ie/licences/lic_eDMS/090151b2807ed5bc.pdf).
3. Points raised during a remote Microsoft Teams meeting that took place on the 21<sup>st</sup> December 2021 between representatives of the EPA, Red Mills and MOR.

It is important to appreciate that this is an extremely complex facility that has been in operation for decades with a number of different processes, and numerous emission points; therefore, we fully expected that the Agency would have sought clarifications based on the amount of new technical information submitted at the end of November 2021 that included site assessments, ambient and point source monitoring of air, water and noise, desk-based assessments and computer modelling and reporting. We therefore welcome this opportunity to clarify the points raised by the EPA.

In order to simply matters, we have endeavoured to structure this technical report to deal with the queries raised by the EPA in a factual and concise manner under the following headings:

- Overview of current site operations.
- Proposed Licence Boundary for the Site.

- Overview of ongoing alterations to the Site to be completed before Harvest Season 2022.
- Overview of proposed future alterations to the Site.
- Response to technical queries raised on Air Emissions.
- Response to technical queries raised on Water Emissions.
- Response to technical queries raised on Noise Emissions.
- Response to technical queries raised on the Natura Impact Statement.
- Cross check against each of the items raised from the EPA's Request for Information dated 20<sup>th</sup> November 2018.
- Proposed Next Steps.

Please note that in the preparation of this report we have taken cognisance of legal advice obtained from Arthur Cox. As requested by the EPA at our recent meeting a copy of this correspondence is included in Appendix A.

## 2 OPERATIONS AT THE SITE

Red Mills site has been the home of the Connolly family business since 1908 in Grange Lower, Goresbridge, Co. Kilkenny (the Site). The processing of cereals for animal consumption began in 1963 and today Red Mills products are sold in over 40 countries worldwide and they employ over 350 people. It is therefore a major employer in the region.

There are three distinct operations at the Red Mills Site, see sections 2.1, 2.2 and 2.3 below. In summary, grain intake and drying occurs during the Harvest season. Following drying, grain is aerated and stored onsite in Grain Stores. The dried and aerated grain together with other raw materials undergo mechanical processes within the Feed Mill to produce peak performance nutrition for animals locally and worldwide. Seed is also taken in onsite and utilised in seed dressing, which occurs primarily in the Seed Plant.

### 2.1 Feed Mill

Feed Mill produces feed for various animals (such as horses, sheep, chicken), both in bulk and bagged. This is the main activity at the Site.

In general, the Feed Mill operates 24/5, year-round. The Feed Mill does not operate at the weekends most of the time; however, there are occasions due to seasonal demands when it is required to operate the Feed Mill at weekends.

Also, there are two boilers at the Feed Mill, currently fuelled by diesel, planned to be converted to LPG by May 2022.

*Please note that Dryer 2 is physically located in the area of the Feed Mill.*

### 2.2 Dryers

This is a grain drying process which only happens during the harvest season. This is the secondary operation at the Site; however, the operations during the Harvest season represent the worst-case scenario in terms of potential environmental impacts, certainly in terms of emissions to air and noise.

Dryers operate during the harvest season that is typically mid-July to mid-September; however, the timing and duration can vary on an annual basis depending on the weather and success of the harvest (i.e. amount of grain harvested). Typically, it will be a period of 6 weeks, but in very rare circumstances it could be for up to 8 weeks.

During Harvest 2021, there were a total of five (5No.) dryers operating at the Site:

- Dryers 2, 4A and 4B. These are specialist seed dryers, that produces seed for planting. Separate dryers must be used for seed and grain, in order to avoid the potential for cross-contamination.
- Dryer 5 and Dryer 6. These dryers are used to dry grain for production of animal feed.

Dryer 6 was a flat bed dryer that could not be accurately monitored. Therefore, following the Harvest season 2021, this dryer was decommissioned. A new, modern dryer, with point source emissions was purchased as a direct replacement and is currently being installed with works scheduled to be completed by the end of January 2022.

### 2.3 Seed Plant

The Seed Plant is a process where seed is cleaned, dressed and then bagged to make a final product. This is also a seasonal process, where seed is produced for spring and autumn planting. There are two major emissions to air points associated with this process. In terms of emissions and potential environmental impacts, this is a relatively minor process at the Site.

### 3 PROPOSED LICENCE BOUNDARY

For clarification purposes we have outlined in Figure 3-1 the proposed licence boundary that should be subject to any licence determination issued by the EPA. All the lands currently included in the red line are in the ownership of Red Mills. We consider it necessary to set an accurate IEL site boundary that includes all relevant operational areas and excludes areas that are not relevant to licensed operations. The recently submitted red line [D1 - Red Line Boundary](#), shown in Figure 3-1 below, covers an area of ca.18hectares (ha) and takes cognisance of the recently permitted linkway Road to the north of the Site. The previous red line boundary submitted in 2018 varied; depending on scale, also incorrectly incorporated one<sup>1</sup> or two<sup>2</sup> public roads.

Figure 3-1: Red Line Boundary



<sup>1</sup> [https://epawebapp.epa.ie/licences/lic\\_eDMS/090151b280675ca8.pdf](https://epawebapp.epa.ie/licences/lic_eDMS/090151b280675ca8.pdf)

<sup>2</sup> [https://epawebapp.epa.ie/licences/lic\\_eDMS/090151b280675ca7.pdf](https://epawebapp.epa.ie/licences/lic_eDMS/090151b280675ca7.pdf)



## 4 ONGOING DEVELOPMENT WORKS AT THE SITE

As an active commercial business, the facility needs to be flexible to meet market demands. As such, the business is constantly seeking innovative ways to grow and expand the business to meet their customer demands. As communicated to the EPA at the recent meeting, Red Mills are also committed to making significant investment to improve the environmental performance at the Site. We have outlined below a brief overview of the principal site improvement works that are ongoing at the Site and also as requested by the EPA, the planning status of these works:

Shut-off valve and monitoring chamber to be installed at the outlet from the expanded ICW. To be completed by February 2022. Works covered under Planning Permission 19/235.

Reconfiguration of onsite drainage network to ensure all stormwater from the Site will drain into the expanded ICW. This will include the installation of a new large-scale interceptor that will replace two existing interceptors, and as such will only further improve the quality of the stormwater discharging to the wetlands. Works are ongoing and scheduled to be completed by end of April 2022. Works are either covered under Planning Permission 19/235 or were deemed exempted works. (CLASS 21 (a) (ii) the provision, rearrangement, replacement or maintenance of sewers, mains, pipes, cables or other apparatus).

Decommissioning and removal of Dryer 6 – completed. Decommissioning of plant and equipment is a standard and necessary activity at any industrial facility that occurs on regular basis.

Installation of replacement Dryer 6. Works are ongoing and the main installation works are scheduled to be completed by end of January 2022. Works were deemed to be exempted development under CLASS 21 of the Planning and Development Regulations. CLASS 21 (a)— (iii) the installation or erection by way of addition or replacement of plant or machinery, or structures of the nature of plant or machinery. Provided

- Any such development shall not materially alter the external appearance of the premises of the undertaking.
- The height of any plant or machinery, or any structure in the nature of plant or machinery, shall not exceed 15 metres above ground level or the height of the plant, machinery or structure replaced, whichever is the greater.

The maximum height of the dryer and the associated structures including the conveyors / enclosures, elevator and headhouse that need to be replaced is 24.8m. The maximum height of the replacement dryer and associated structures including the stacks will be 24.5m.

Conversion from oil to LPG is undoubtedly a welcome environmental improvement at any Site, resulting in reduced emissions to air, reduced GHG emissions, and most importantly removes a risk of spills and contamination. This is Exempted Development.

The installation of two new soya filters and the new blow system for the minerals bins. To be completed by January 2022. This is Exempted Development.

Ongoing upgrade and abatement works related to emissions to air to be completed prior to Harvest 2022, which do not require planning, and are specified in the Air Dispersion Modelling Report submitted to the EPA on 30<sup>th</sup> November 2021, Section 9.1:

- Installation of ports and access at all emission points where these are not currently in place: A2-12 (Cyclone GVRSA and GVRSB); A2-21 (main grain intake); A2-13 (fines); A2-26(Flaker Clean 1); and A2-17(Soya Cyclone –Bin Filling);

- New abatement to be installed at Dryers 4A and 4B, as these dryers do not currently have dust abatement equipment. It is proposed to install a similar type of cyclones that are currently installed on Dryer 5. With such abatement, it is expected that very low emissions will be achieved, similar to Dryer 5.

Ongoing upgrade and abatement works related to noise emissions to be completed prior to Harvest 2022:

- Grain Dryer 6 replaced with a modern Panford twin column vertical Dryer;
- Dryer 6 Intake to be mitigated by 12dB;
- Dryer 4 stacks to be mitigated by 15dB;
- Dryer 5 stacks to be mitigated by 5dB;
- Dryers 4a/4b and Dryer 5 pre-cleaners / doors to be mitigated by 5dB;
- Boilers flues to be mitigated by 10dB; and
- Seed Plant to be mitigated by 10dB.

We trust the Agency appreciate that as per any industrial site, that there will always be small scale ongoing improvement works being undertaken at the Site, hence the above list details the principal works ongoing.

#### 4.1 Proposed Future Works

Based on current available information, we have outlined below proposed future works to be carried out at the Site.

- Construction of new access road. Planning consent obtained, Ref. No. 21/633.
- Closing of public road. Planning consent obtained, Ref No. 21/633.
- The construction of the two new grain stores: this expansion will hugely benefit fugitive dust emissions, as described in the Air Dispersion Modelling report, as well as avoiding unnecessary waste due to rotting grain. It will also reduce emissions to air, GHG emissions, congestion and nuisance due to removing the need for off-site grain storage and transport between the Site and off-site storage locations. Finally, indoors grain storage is in line with BAT requirements for storage of dusty materials. Planning application has been submitted on 2<sup>nd</sup> July 2021, Planning Ref. No. 21/573. Construction works will commence as soon as the relevant planning consent is obtained that is expected by the end of March 2022. The objective would be to have the stores in use for the 2022 harvest season.
- Upgrades to the Grinders, Seed Plant, Dryers and the associated filter systems. Upgrades to A2-49 (Seed Plant, Pre-Cleaner); A2-48 (Seed Plant, Screening and Dressing Seeds). Design works and abatement are ongoing and scheduled to be completed by the end of January 2022. Subject to the completion of the design works, the proposed improvements will need to be validated in the air dispersion model which will be completed by March 2022. At that juncture the proposed works will need to be evaluated from a planning perspective to determine whether they would be exempted works or whether planning consent will need to be obtained. The works would then need to be regulated under the IE licence. Hence it would be premature to commit to any definitive programme of works at this juncture, other than to state that Red Mills are committed to implementing these works and they are ongoing.
- The installation of two new dryers – these proposals, that are subject to an active planning application, have been deferred taking on board the Agency's advice that they could be addressed as part of a future review of the IE Licence. They remain very much part of the future plans for the facility, but they will now need to be subject to a separate statutory approvals process.

- The new Oat Cleaning Process is a minor process to be installed within the existing Feed Mill building. This is Exempted Development.

Please note that Red Mills have to be flexible to respond to market demands, particularly in current times to remain a viable commercial business as such other proposals may arise but going forward the Agency will be kept fully updated of any such plans.

## 5 AIR EMISSIONS

### 5.1 Replacement Dryers 1 and 3 and Oat Cleaning Process

Red Mills have decided to retract replacement Dryers 1 and 3 from the Planning Application (refer to Section 4.1), and from the IE Licence at this point in time, as we have decided to focus on licencing the current operations at the Site.

In addition, Red Mills have decided to retract Oat Cleaning Process and related major emission point from the IE Licence at this point in time, as it is considered that this can be added into the licence via a Technical Amendment.

This will result in a total of six (6 No.) emission points redundant in the IE Licence at this point, as shown in Table 5-1 below.

**Table 5-1: Redundant Emissions to Air Points associated with replacement Dryers 1 and 3 and Oat Cleaning Process**

Emission Point Ref	Emission Point Name	Minimum Discharge Height (m)	Volumetric Flow (Nm <sup>3</sup> /hr)	Total Particulates Mass Emissions
A2-50A	Replacement Dryer 1	24	136,000	1.36 kg/hr
A2-50A	Replacement Dryer 1	24	136,000	1.36 kg/hr
A2-51A	Replacement Dryer 3	24	136,000	1.36 kg/hr
A2-51B	Replacement Dryer 3	24	136,000	1.36 kg/hr
A2-52	Replacement Dryer 1/3 Pre-cleaner	24	20,000	0.2 kg/hr
A2-53	Oat Mill Cleaner	30	27,000	5 mg/Nm <sup>3</sup>

These emission points are included in Scenario 4 in the Air Dispersion Model submitted on 30<sup>th</sup> November 2021, and therefore Scenario 4 is no longer applicable. Scenario 4 is the only Scenario presented in the Air Dispersion Model, where replacement Dryers 1 and 3 and Oat Cleaning Process, as well as associated 6 emission points were included.

These emission points are also listed in the following documents submitted on 30<sup>th</sup> November 2021:

1. Non-Technical Summary;
2. Attachment 7-1 Emissions – Overview;
3. Attachment 7-4-1 Emissions to Air – Main; and
4. D4 – Emissions to Air.

For the deadline of 7<sup>th</sup> of January, it was not possible to edit and re-issue the above documents. As the additional air dispersion modelling is required, Attachment 7-4-1 Emissions to Air – Main; and D4 – Emissions to Air will be reviewed and re-issued together with an additional Air Dispersion Modelling Report.

### 5.2 Existing Major Emissions to Air

A full list of major emission points at the Site and a detailed Air Dispersion Modelling Report has been prepared and provided to the EPA in response submitted on 30 November 2021, which can be found on the EPA website at: [Air Dispersion Modelling Report \(epa.ie\)](https://www.epa.ie).

Details of all major emission points were provided in the EPA Application Form 7.4.1. Emissions-to-Atmosphere, also submitted on 30 November 2021. Information in this Form supersedes all previously provided information, as it provides a complete list of all major emission points at the Site.

Please note the applicable revision of these documents as per point 5.1 above.

The above two documents address all questions raised in the EPA's RFI from 20<sup>th</sup> November 2018, point 6.a. to j.

It should be noted that this Site is an existing facility that has been in operation since 1963, and some of the equipment still in operation is more than 30 years old. Therefore, best available information that could be reasonably obtained at this time is provided in the above reports, and certain data gaps exist, e.g. thermal input rating for the boilers. This specific data gap is explained in Section 2.2. of the Air Dispersion Modelling Report. Nonetheless, ELVs are proposed based on relevant legislation – Medium Combustion Plant Directive.

Another data gap is efficiency rating/performance specifications for all air abatement equipment. This data gap exists because the equipment is old, and such specification cannot be found. Ultimately, it is important to assess emissions at the point of discharge, and that has been completed. The Air Dispersion Modelling report proposes ELVs which are significantly more stringent than BAT, resulting in no breaches of relevant AQS's. Therefore, this data gap is not relevant for issuing the licence.

### **5.3 Burners and NO<sub>x</sub> Modelling**

Results of NO<sub>x</sub> modelling of boilers was provided in the Air Dispersion Model, Section 6.

In the Teams meeting on the 21<sup>st</sup> December 2021, the EPA raised the question of assessing NO<sub>x</sub> arising from the dryer burners. This was excluded from the Air Dispersion model due to the following reasons:

- Typically, these burners have a rating below 1MW thermal input, and for such combustion sources, in accordance with Medium Combustion Plant Directive (MCPD), ELVs are not applicable.
- This is also the case for some of the other licensed Feed Mills in Ireland.
- These burners are only operating for 6 weeks of a year, and are fuelled by LPG, which is a cleaner fuel compared to any liquid or solid fuel.

Since the meeting on 21<sup>st</sup> December, MOR and Red Mills have undertaken a review of the existing burners at the Site, and contacted the supplier of the replacement Dryer 6, which is currently being installed.

Preliminary assessment shows that only the 4No. burners required for the replacement Dryer 6 will be significant sources (i.e. over 1MW thermal input). All other burners have thermal input well below 1MW. In addition, there are no specifications on emissions from these burners and MCPD limits are not applicable.

MOR proposes to update NO<sub>x</sub> model with 4No. replacement Dryer 6 burners, refer to section 10 below.

### **5.4 Operational Hours: Actual vs. Modelled**

At the time of writing this report, there were a total of 22 existing major emissions points to air emitting dust associated with the Feed Mill.

As a worst-case scenario, air dispersion model was run with all 22 major emissions points to air operating simultaneously (Scenario 2), 365/24/7 (equivalent to 8760 hours per year), as the Site needs to be able to operate any process within the Feed Mill as and when required. However, exact number of operating hours was analysed for the past five years, and on

average over the 5 years, various Feed Mill processes operate between ca. 7% and 56% of the modelled 8760 hours per year. The most operating hours in any year by any process were recorded for Press line 1 in 2018, at 62.3% of the modelled 8760 hours. The number of these operating hours varies for different processes, from year to year, from week to week, based on the market demand for various animal feed.

In a typical year, the period with higher number of operating hours across production lines is between 1 October and 30 April, when there are operations in 3 x 8-hour shifts, with potential for all process lines and emission point operating concurrently. During the summer, 1 May to 30 September, typically, operations are lower, approximately at 50%, running in 2x 8 hr shifts. However, in the summer of 2018, this was not the case as due to drought the demand for animal feed was very high. As providing animal feed in a timely manner is a matter of animal welfare, any limitation of operating hours is not possible for the Red Mills business.

For dryers, as a worst-case scenario, the air dispersion model was run with all dryers operating simultaneously, 24/7 from 1 July to 30 September (equivalent to 2184 hours), as the start and end of Harvest season, and amount of drying required due to moisture content and quality of grain is impossible to predict. However, the running time for the dryers was analysed for the past five years, and the maximum operating time for any of the modelled dryers was 2017 hours or 92% of the modelled 2184 hours.

As a worst-case scenario, the air dispersion model was run with the Seed Plant operating 365/24/7 (equivalent to 8760 hours per year). In reality, for the past five years, and the maximum operating time was 2081 hours per year, which amounts to 24% of the modelled 8760 hours per year.

The above discussion shows that the number of operating hours for all emission points in the Air Dispersion Modelling Report submitted to the EPA on 30<sup>th</sup> November 2021 was significantly overestimated in order to assess an absolute worst-case scenario and not impose any operating time/season restrictions on Red Mills. Although the facility typically only operates less than 60% of the modelled hours, the exact operational hours cannot be predicted as this is subject to many variables such market demand, seasonal constraints, weather etc. Moreover, sometimes there is a requirement to operate at very short notice or on the weekends. Any licence to be issued by the EPA would need to provide for such flexibility as failure to do so could result in impacts on animal welfare, as occasionally there are shortages of animal feed, resulting in orders which need to be fulfilled immediately.

In conclusion, any impacts on air quality presented in the Air Dispersion Modelling Report submitted to the EPA on 30<sup>th</sup> November 2021 are significantly overestimated. Additional modelling will be provided to the EPA, to demonstrate likely compliance, refer to section 10 below.

## 6 SURFACE WATER EMISSIONS

The Agency have raised a number of queries in regard to the current and proposed storm water drainage arrangements.

Just to confirm that there is no process effluent arising from the facility, hence all run-off is stormwater from the yards and buildings.

### 6.1 Current Stormwater Emissions at the Site

As of January 2022, storm water drainage discharges from the Site via 5No. separate discharge locations, as follows:

- There are 3No. discharges into the culverted Mill Race (SW2, SW3, SW4).
- There are 2No. discharges into adjoining field drains (SW5 and SW6).
- There is 1No. discharge that connects into the ICW (SW1).

The exact locations of these discharges were presented to the EPA in Drawing Ref No.'s P705/705A and P710/710A, provided to the EPA on 30<sup>th</sup> November 2021:

- Drawing 2: Existing Drainage ([Link](#)); and
- Drawing 2: Proposed Drainage ([Link](#)).

These discharges to surface water were described in several documents provided to the EPA on 30<sup>th</sup> November 2021:

MOR [Non-Technical Summary \(epa.ie\)](#);  
[ICW Report](#); and  
[Natura Impact Assessment](#), Section 5.5.

In compliance with the requirements of Planning Ref: 19/235 works are ongoing to reconfigure the site drainage to ensure that all of the Site will drain to the River Barrow via the ICW. As part of these works all of the historic storm water discharges to the mill race and field drain in the southern area of the site (SW2, SW3, SW4, SW5, SW6 shown on Existing Drainage Drawing) will be decommissioned and they will be diverted to the expanded ICW. It is also proposed to install a silt buster and a modern Class 1 by-pass interceptor to treat the stormwater before it discharges to the ICW which will only further improve the quality of the stormwater being discharged to the ICW. The proposed interceptor complies with the code BS EN 858-1 and Environmental Agency Pollution Prevention Guidelines PPG3. The proposed interceptor will have peak flow capacity of 1000L/s, silt storage capacity of 10,000 litres, storage capacity for oil of 1500 litres and will be fitted with an oil alarm system.

### 6.2 Design and Capacity of the ICW at the Site

#### 6.2.1 Existing ICW (Cells 1 to 4)

We have been advised that following historic issues with the discharge arisings from the Site, planning permission was sought and obtained from Kilkenny County Council to construct an Integrated Constructed Wetland (ICW) that would treat the stormwater run-off arising from a portion of the Site before it discharged to the River Barrow.

The design and performance of ICW is detailed in the ICW Report, available here [090151b2807e8531.pdf \(epa.ie\)](#).

The current operational ICW was initially constructed in 2014 and comprised of four separate Cells (1 – 4) covering an area of ca. 8,714m<sup>2</sup>. The maximum design holding capacity will be ca. 8,714 m<sup>3</sup> (based on 1m depth of water). The surface area of the Site that is connected into this wetland covers an area of 12,300m<sup>2</sup>, the effective catchment area once infiltration coefficients are taken into account is ca.10,081m<sup>2</sup> which is only ca. 19% of the overall site

area, that is currently operational. Refer to Appendix B for compartmentalisation of drainage of the Site, which demonstrates which area is currently draining into ICW.

The Agency have queried the lack of discharge arising from the current ICW. Based on the investigation undertaken by MOR it would appear that although the ICW was designed to allow for a discharge, an actual discharge very rarely arises, due to the fact that it is only currently connected to less than 20% of the overall Site area and as such only receives a relatively small volume of stormwater compared to capacity of wetlands. The stormwater that enters the wetland is retained for significant durations, where it is subject to both evaporation and evapotranspiration. As an example and in order to demonstrate ICW stormwater retention capacity vs. potential rainfall event, 10 year 24hr rainfall event was evaluated. Such an event would generate 52.7mm of rain and ca. 531 m<sup>3</sup> of stormwater would reach the ICW which would be significantly below the total capacity of 8,714 m<sup>3</sup>.

We have been advised that the integrity of the ICW was validated back in 2014 by IE Consulting upon completion of the construction works and prior to planting. Copies of these records were not available to be submitted as part of this report due to programme constraints but will be furnished separately to the EPA.

Red Mills have been undertaking a regular monitoring programme, the results of which are submitted to Kilkenny County Council. Samples were collected by Red Mills from Cell 1 near the inlet to the ICW and in the absence of a discharge from the field drain that adjoins the ICW, refer to Appendix C. Although this data does not specifically confirm the operational efficiency of the ICW, it does confirm the integrity of the ICW.

### 6.2.2 ICW Extension

In January 2020, planning permission was granted for a 0.78ha (7,800 m<sup>2</sup>) (cell base area) extension to the ICW (Planning Ref: 19/235). The ICW was expanded to include three additional cells (5 to 7). The ICW was expanded so that it would be able to cater for the drainage from the entire Site.

Currently, ca. 54,000m<sup>2</sup> of yard and roof areas do not drain to the ICW but drain largely unattenuated to the Mill Race and a field drain. It is proposed to redirect this drainage via a proposed oil/water interceptor to the ICW. The diversion of the runoff from this area has been taken into account in the calculations included with the [IE Consulting Report submitted to the EPA on 30<sup>th</sup> November 2021](#).

The maximum design capacity of the expanded ICW (Cells 1 to 7) will be 10,270m<sup>3</sup>, as detailed in the [IE Consulting Report submitted to the EPA on 30<sup>th</sup> November 2021](#).

As an example, and in order to demonstrate entire ICW stormwater retention capacity vs. potential rainfall event, a 10 year 24hr rainfall event was evaluated. Such an event would generate 52.7mm of rain and ca. 3,628 m<sup>3</sup> of stormwater will reach the ICW. As the entire ICW system will have capacity of 10,270m<sup>3</sup>, it will provide significant retention capacity to manage various storm water runoff volumes ensuring the protection of the receiving waters.

Discharge will only occur from one cell to another when the Soil Moisture Deficit (SMD) is met plus 300-350mm depth of water is exceeded in an ICW cell. Evapotranspiration is a primary controlling factor in SMD. During the warmer, sunnier months evapotranspiration is higher and therefore flows from the ICW during the summer and harvest season have been predicted to be negligible, if any.

A monitoring chamber and an emergency shut off valve will be installed in advance of the discharge point being commissioned, refer to Proposed Drainage Drawing for further details and Appendix A of the ICW Report. The expanded wetlands (Cells 5 to 7) are still not in use due to:

- Final integrity testing needs to be undertaken.



- The onsite drainage reconfiguration works need to be completed or there will be no storm water ingress into Cells 5 to 7.
- There is a need to give the plants some time to become fully established; and

As the Wetland will serve as an abatement system for the stormwater from the yard, removing silt and nutrients, we do not propose a monitoring location into the ICW. We propose monitoring before the final discharge point into the receiving water, River Barrow, as shown in Appendix A of ICW Report.

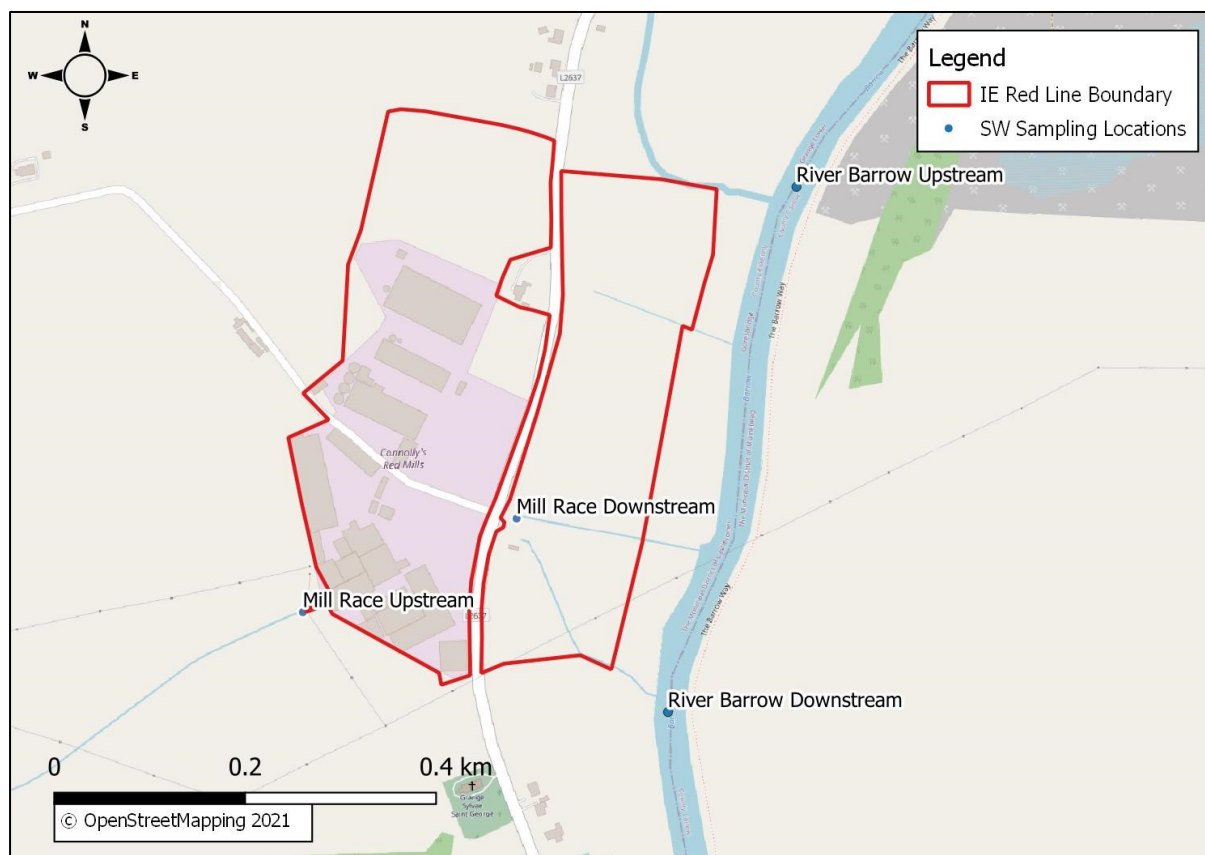
### **6.3 Stormwater Monitoring at the Site**

As the EPA are aware, MOR were retained by Red Mills during May 2021. During the multiple site visits undertaken by MOR personnel that primarily occurred during the harvest season we did not witness any discharge from the current operational ICW. This is consistent with the observations of the site personnel compiled over many years who have advised MOR that they never witnessed a discharge from the ICW. This is due to the fact as explained above that the current ICW is only connected to less than 20% of the overall site.

A number of the existing discharge locations, namely SW3, SW5 and SW6 could not be sampled as these locations could not be accessed in a safe manner. SW4, whilst somewhat accessible; requires a forklift to lift a metal grate in order to take grab sample, hence seeking to collect a sample from this location was not straightforward. Regardless no flow was observed from SW2, SW4 or the ICW inlet during any of the monitoring events; samples were therefore not collected by MOR personnel from these locations.

In the absence of being able to collect direct surface waters samples, MOR focused on collecting samples from the receiving waters to determine whether stormwater emissions arising from the Site were having any impact on the receiving environment. In order to evaluate a worst-case scenario three separate monthly samples were collected during peak harvest season i.e. July, August and September 2021 at representative locations both upstream and down of discharge points on the receiving Mill Race and the River Barrow. Please see Figure 6-1 below which identifies the monitoring locations.

**Figure 6-1: SW Monitoring Locations**



As can be clearly determined based on a review of Figure 8-1, the monitoring locations were selected to target areas immediately up and downgradient of the Site. In keeping with the robust assessment that was undertaken by MOR the downgradient sample location on the River Barrow was immediately down gradient of the confluence of the River Barrow and a field drain that bisects Red Mills lands, that is in proximity to the wastewater treatment facility that serves the facility. This location was selected to determine whether any potential impacts could be arising from this treatment facility. Hence this just reaffirms the overall objective of presenting a robust scientific data set to the Agency

Table 6-1 below shows the surface water monitoring results for the Mill Race upstream and downstream.

**Table 6-1: Mill Race Monitoring Results**

Laboratory Report No.		21/10812	21/13178	21/14819	21/10812	21/13178	21/14819
Sample Date		15/07/2021	25/08/2021	22/09/2021	15/07/2021	25/08/2021	22/09/2021
Parameters	Unit	Culverted Stream / Mill Race (Upstream)			Culverted Stream / Mill Race (Downstream)		
<b>Field Parameters &amp; Observations</b>							
pH	pH units	7.99	7.92	7.59	8.11	8.32	8.22
Electrical Conductivity	µS/cm	660.77	649.28	670.81	710.47	649.11	697.94
Dissolved Oxygen	%	84.4	86.82	87.43	81.36	93	93.69
Dissolved Oxygen	mg/l	8.31	8.66	8.95	8.07	8.88	9.58
Temperature	°C	16.56	16.02	14.8	18.24	18.15	15.01
Oxidation Reduction Potential	mV	76.5	110.9	42.1	89.2	98.9	39.9
Colour	N/A	Clear	Clear	Clear	Clear	Clear	Clear
<b>Chemical Parameters</b>							
Biochemical Oxygen Demand (BOD)	mg O <sub>2</sub> /l	<1	<1	<1	<1	<1	<1
Ammonia (mg N/l)	mg N/l	0.05	0.5	<0.03	0.07	0.04	0.03
Nitrate as NO <sub>3</sub>	mg/l	18.4	18.6	19.3	18.9	18.6	19.3
Oils, Fats and Grease	mg/l	<4	<4	<4	<4	<4	<4
Orthophosphate as P	mg P /l	<0.03	0.07	<0.03	<0.03	0.05	<0.03
Total Phosphorous	µg/l	56	62	50	64	74	53
Total Suspended Solids	mg/l	<10	<10	<10	<10	<10	<10
EPH (C8-C40)	µg/l	<10	<10	<10	<10	<10	<10

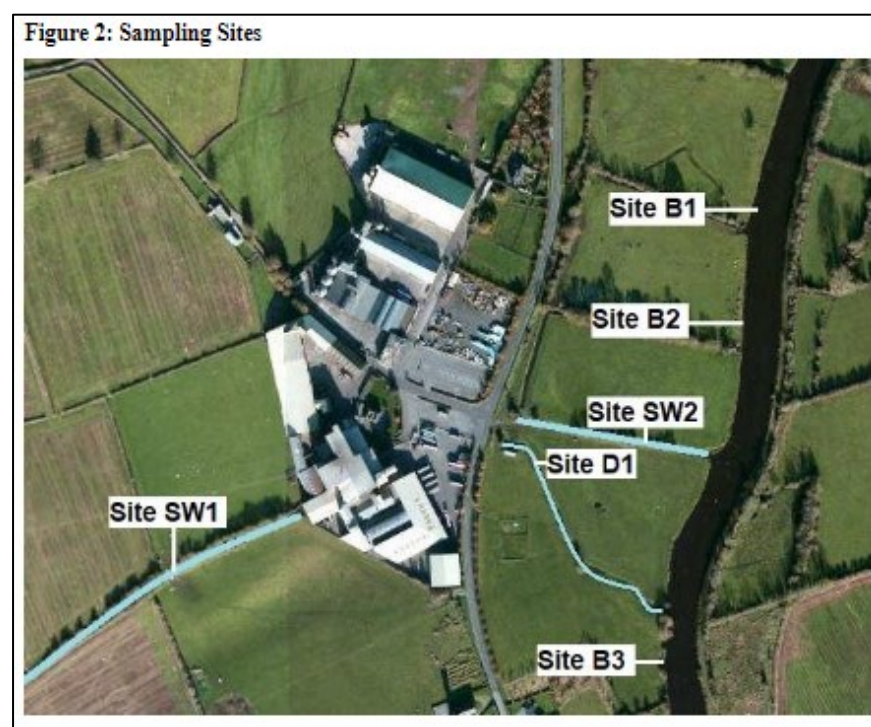
The results for River Barrow also confirmed no impact on these receiving waters, refer to Table 6-2 below.

**Table 6-2: Surface Water Results Upstream and Downstream River Barrow**

Parameter	Units	EQS*	River Barrow Downstream				River Barrow Upstream			
			17/05/2021	15/07/2021	25/09/2021	22/09/2021	17/05/2021	15/07/2021	25/09/2021	22/09/2021
<b>Sampling Date:</b>			17/05/2021	15/07/2021	25/09/2021	22/09/2021	17/05/2021	15/07/2021	25/09/2021	22/09/2021
pH	~	6.0 < pH < 9.0	~	7.92	8.43	8.19	~	8.41	8.49	8.13
Dissolved O2	%	>80% ≤120% saturation (95%ile)	~	98.71	120.91	95.23	~	104.45	107.73	99.56
Biochemical Oxygen Demand (BOD)	mg O <sub>2</sub> /l	≤1.5 mean or ≤2.6 (95%ile)	2	<1	<1	<1	4	<1	1	<1
Ammonia (mg N/l)	mg N/l	≤0.065 (mean) and ≤0.14 (95%ile)	0.033	0.04	0.03	0.04	<0.025	0.11	0.03	<0.03
Oils, Fats and Grease	mg/l	N/A	<4	<4	<4	<4	<4	<4	<4	<4
Orthophosphate as P	mg P /l	≤0.035 (mean) and ≤0.075 (95%ile)	<0.02	<0.03	0.03	<0.03	<0.02	<0.03	<0.03	<0.03
Total Phosphorous	µg/l	≤ 0.025 (mean)	<4	43	42	30	-	23	118	10
Total Suspended Solids	mg/l	N/A	<10	<10	<10	<10	<10	<10	48	<10

In addition to undertaking physical / chemical testing of the quality of the receiving waters, MOR also commissioned Sweeney Consultancy to undertake biological monitoring of the receiving waters. Biological monitoring was undertaken on two separate occasions during July and August 2021, again during the peak harvest season. The location of this monitoring data is presented in Figure 2 of [Appendix B of the NIS](#) submitted on 30<sup>th</sup> November 2021, refer to Figure 6-2 below.

**Figure 6-2: Extract (Figure 2) from Appendix B of the submitted NIS**



The findings of this monitoring for Sites B1, B2 and B3 are as follows:

*“The aquatic invertebrate fauna shows the biological water quality of the stretch of the river Barrow, from upstream to downstream of the Redmills plant, to be unsatisfactory. However, as the faunal composition at all three sites is very similar and the same Q-value was recorded at all three, there is no indication of any significant impact on ecological quality by discharges from the Redmills plant”.*

The findings for the Mill Race (Site SW1 and SW2) are as follows:

*“Neither Site SW1 or Site SW2 exhibit signs of significant organic contamination or nutrient enrichment”.*

The findings for the Site D1 are as follows:

*“The flow at Site D1 is very slow, through dense emergent vegetation (Photo 6, Appendix 3). The range of invertebrates found here is quite typical of the habitat and does not indicate significant organic contamination or nutrient enrichment”.*

In summary, physical, biological and chemical monitoring results collected during the peak harvest season from the receiving waters both upstream and downstream of the Site confirm that the storm water emissions arising from the Site were not having any significant negative impacts on the receiving environment. Going forward this situation will only further improve as all of the storm water run-off arising from the Site will be discharged via a new interceptor and the expanded ICW. While the ICW is designed on the basis that there will be a discharge, a minimum retention time of 20 days within the ICW, combined with the new interceptor will greatly protect the receiving waters as it will ensure that any sediment such as grain that may enter the drainage system will have readily settled out prior to reaching the River Barrow.

## **7 NOISE EMISSIONS**

### **7.1 Background Information**

Following the submission of the noise report by JRE Ltd. dated 16<sup>th</sup> March 2018, the subsequent RFI dated 20<sup>th</sup> November 2018 requested a response to Item 12 which requested that the applicant ‘provide measures taken or planned in the future to limit noise emissions at the installation’. A detailed response to Item 12 of the RFI was submitted by JRE Ltd. dated 31<sup>st</sup> November 2019. This response is incorporated in the mitigation and noise management procedures as outlined in Section 4.5 of the Noise Impact Assessment submitted on the 30<sup>th</sup> November 2021.

### **7.2 Noise Impact Assessment**

A comprehensive noise impact assessment including a baseline noise survey was undertaken by MOR during peak noise emissions, i.e. the 2021 Harvest Season when onsite plant and equipment including seasonal dryers were operational.

The noise assessment was managed by Kenneth Goodwin who has over 15 years of experience in acoustics. Kenneth is a member of the Institute of Acoustics (IOA) and the Associated of Acoustic Consultants of Ireland (AACI). Kenneth was supported by Gus Egan, who has over 5 years in acoustic monitoring. Gus is also a member of the IOA and is an associate member of the AACI.

A comprehensive baseline survey and source assessment was undertaken and a noise model (61 modelled emissions) was developed, and different scenarios were modelled utilising recognised environmental noise modelling software ‘Predictor’. The noise model included the entire Facility including future mitigation works and the operational phase of the two proposed new Dryers (1 and 3), Grain Stores and associated plant and vehicle movements (grain delivers, onsite JCB) during the Harvest Season (peak noise emissions). For the vast majority of the year the Facility does not operate the grain dryers onsite (non-harvest season). In

addition, weather conditions within the noise model allow for the spread of the noise emissions in all directions equally, which is not realistic, as typically conditions will favour one orientation over another. In summary the input parameters used in the noise model that has been presented to the EPA was extremely conservative and very much a worst-case scenario.

The report details in Section 4.4.2 the noise sources which were incorporated and/or mitigated. These values are a worst-case scenario during the Harvest Season. General plant emissions are modelled as working 24-hours a day, at duty capacity and at the same time, however this is not typical even during Harvest Season. Therefore, as per the noise model, there is no discernible difference between day, evening or night-time emissions with the exception of vehicle movements onsite.

The report also recommends that a Noise Management Plan be implemented for the Site.

For the majority of the year, it has been concluded that the facility would be compliant with typical EPA noise limits.

It is recommended that the Site utilises four (4No.) local NSLs. This will enable a stronger criterion for assessing any change that could occur during works onsite.

MOR propose that Table 7-1 below be incorporated into the IE Licence in Schedule B:4 Emission Limits.

**Table 7-1: Proposed B.4 Noise Emission Limits**

Receptor	Daytime	Evening-time	Night –time
	L <sub>Ar</sub> ,(30 minute) 07:00 to 19:00 hours	L <sub>Ar</sub> ,(30 minute) 19:00 to 23:00 hours	L <sub>Aeq</sub> ,(15 minute) 23:00 to 07:00 hours
NSL	55	50	45
There shall be no clearly audible tonal or impulsive component in the noise emission from the Site, audible at any <b>Noise Sensitive Location (NSL)</b> .			

MOR propose that a condition of similar standard wording as outlined below, be included within the licence:

*‘The licensee shall carry out a noise survey of the site operations annually. The survey programme shall be undertaken in accordance with the methodology specified in the ‘Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) as published by the Agency.’*

### 7.3 Additional Information

Following a meeting on the 21<sup>st</sup> December 2021, the following items were requested by the EPA to be clarified:

#### 7.3.1 Use of L<sub>A90,T</sub> v L<sub>Aeq,T</sub>

The EPA’s Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4, January 2016) gives definitions for commonly used parameters, which includes:

**L<sub>Aeq,T</sub>** -This is the equivalent continuous sound level. It is a type of average and is used to describe a fluctuating noise in terms of a single noise level over the sample period (T). The closer the LAeq value is to either the LAF10 or LAF90, it indicates the relative impact of the intermittent sources and their contribution. The relative spread between the values determines the impact of intermittent sources, such as traffic, on the background.

**L<sub>AF90</sub>** - Refers to those A-weighted noise levels in the lower 90 percentile of the sampling interval. It will therefore exclude the intermittent features of traffic and is used to describe a background level. Measured using the “Fast” time weighting.

Typically the EPA state the L<sub>AR,T</sub> parameter for noise compliance, The L<sub>Ar,T</sub> indicia is defined within the NG4 glossary as:

*‘The rating level (L<sub>Ar,T</sub>) is calculated by adding a penalty to the measured equivalent continuous A-weighted sound pressure level (L<sub>Aeq,T</sub>)’.*

The purpose of the rating level is to arrive at a better estimate of the potential community response to the measured noise. However, in certain acoustic environments such as that encountered at Red Mills the L<sub>Aeq,T</sub> is not representative of site specific noise (which is the sound pressure level produced by the specific sound source at the assessment location over a given reference time interval, T) due to stated influences such as passing traffic on the local roads, bird call, bird song and dog barking. To remove undue influences, the L<sub>A90,T</sub> was used to assess Site specific noise such as the acoustically steady state dryers onsite.

In Section 3.7.1 of the submitted Noise Impact Assessment (30<sup>th</sup> November 2021) the rationale regarding the use of the L<sub>A90,T</sub> parameter was stated:

*‘As a result of the steady nature of the source noise onsite (e.g. Dryers etc.), and the strong influence of local proximity sources (the traffic on local roads, birdsong, bird call, animal call and offsite human activities), the L<sub>A90,T</sub> was considered to be a more representative parameter.’*

The L<sub>A90,T</sub> parameter utilised in the assessment is further underpinned as a relevant parameter as at the four NM locations there was little variation from daytime, evening and night-time values. This is evident in particular at NM4 where the dominant steady noise was from dryer activity during the daytime, evening time and night-time, refer to Table 7-2 below.

**Table 7-2: Harvest Season Noise Results**

Location		Start Time	L <sub>Aeq,T</sub>	L <sub>A90,T</sub>	L <sub>AF max</sub>
			(dB)	(dB)	(dB)
NM1	Day 1	17/8/2021 12:00	61	45	87
	Day 2	17/8/2021 13:00	51	43	77
	Day 3	17/8/2021 15:00	59	51	73
	Evening	17/8/2021 21:34	49	47	59
	Night 1	17/8/2021 23:00	49	46	56
	Night 2	17/8/2021 23:15	55	46	78
NM2	Day 1	17/8/2021 12:10	56	49	78
	Day 2	17/8/2021 12:41	53	47	75
	Day 3	17/8/2021 13:19	53	47	71
	Evening	17/8/2021 22:48	49	45	66
	Night 1	17/8/2021 23:19	47	44	65
	Night 2	17/8/2021 23:35	45	44	54
NM3	Day 1	17/8/2021 14:19	69	47	91
	Day 2	17/8/2021 14:51	70	47	108
	Day 3	17/8/2021 15:22	67	46	87
	Evening	17/8/2021 20:07	66	42	96
	Night 1	18/8/2021 00:35	49	38	77
	Night 2	18/8/2021 00:53	40	38	61
NM4	Day 1	17/8/2021 12:22	63	55	91
	Day 2	17/8/2021 12:55	58	55	80
	Day 3	17/8/2021 13:28	59	54	87
	Evening	17/8/2021 20:44	58	56	66
	Night 1	17/8/2021 23:56	60	59	65
	Night 2	18/8/2021 00:14	59	58	67

The noise model results were presented in L<sub>Aeq,T</sub> and as all operations (with the exception of HGV and machinery onsite) were modelled for 100% of the time, the decibel unit was relative for 1minute, 5 minutes, 15 minutes, 60 minutes or the overall period (day, evening or night).



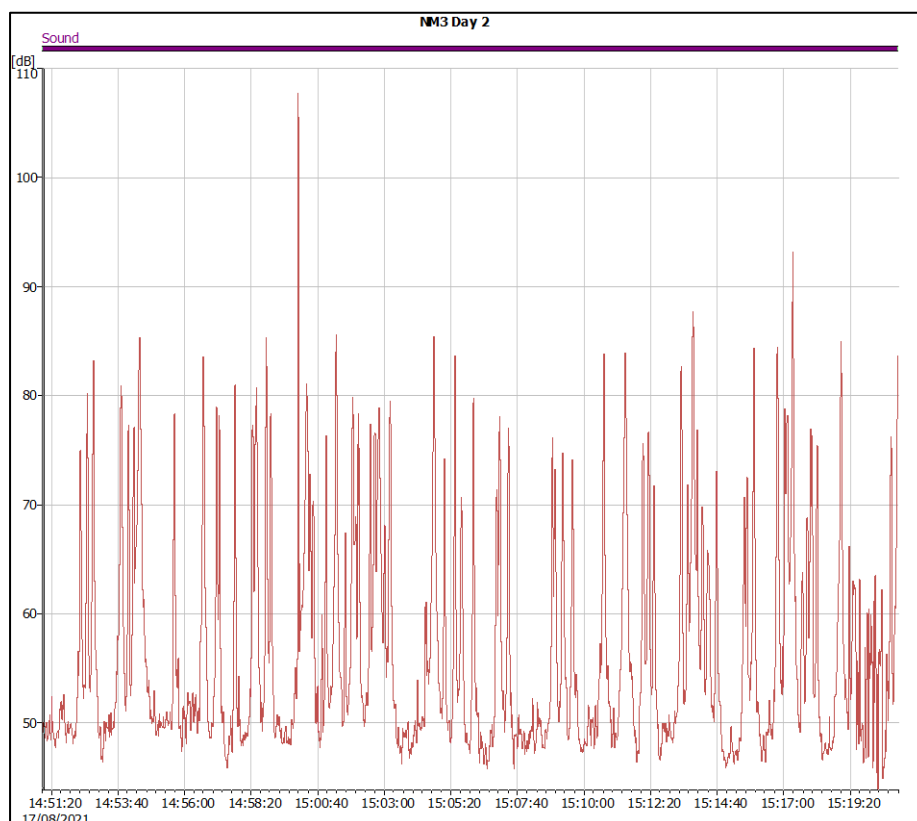
### 7.3.2 Reference to $L_{AFmax}$ peak events

The EPA's Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4, January 2016) defines the  $L_{AFmax}$  as:

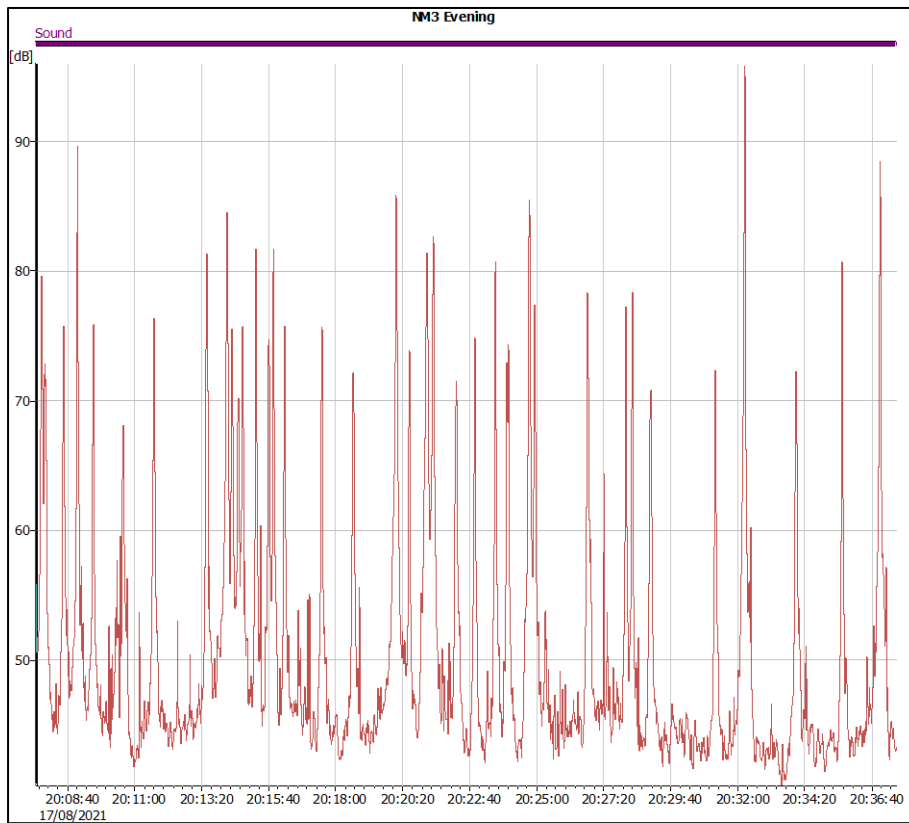
**$L_{AFmax}$**  - The maximum RMS A-weighted sound pressure level occurring within a specified time period. Measured using the "Fast" time weighting.

The  $L_{AFmax}$  levels measured were not due to onsite impulsive activity. At NM3 and NM4 the peak events ( $L_{AFmax}$ ) arose due to passing traffic. Representative  $L_{AFmax}$  time-history graphs for monitoring location NM3 (day 2, evening and night-time 1) showing passing traffic are presented below in Graphs 1 to 3.

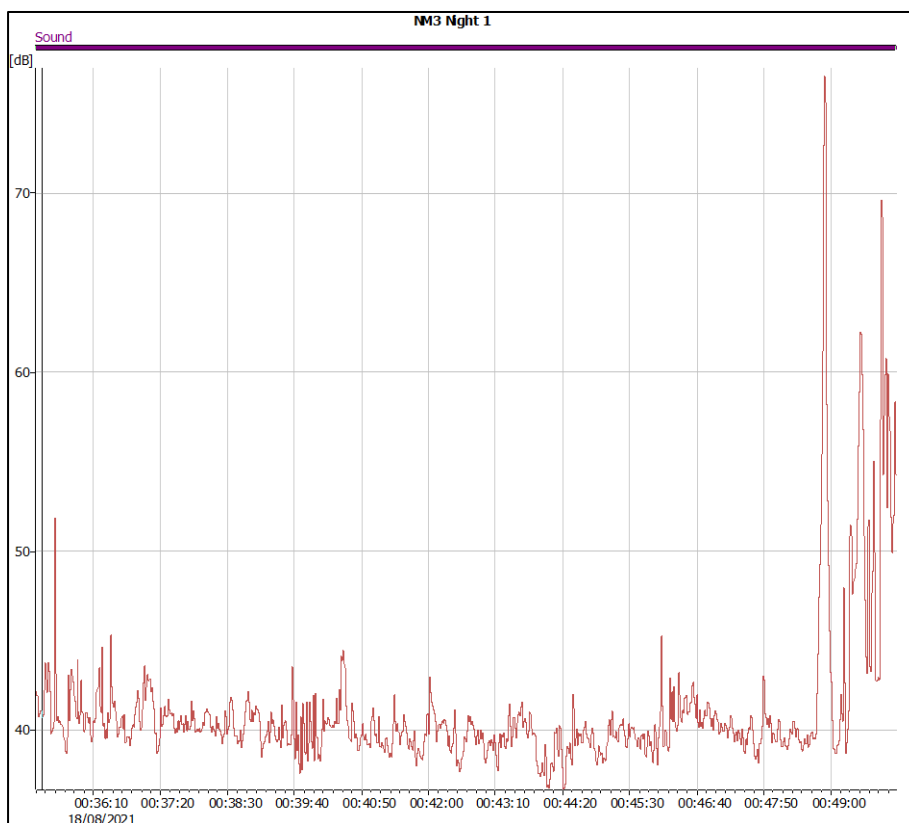
**Graph 1: NM3 Day 2**



**Graph 2: NM3 Evening**



**Graph 3: NM3 Night 1**



The audio file associated with this clearly presents vehicle passing as the cause. This is further supported by the acoustician's field notes for the period. Due to the typical blunt nature of



$L_{AFmax}$ , it is not a widely utilised parameter in acoustic control, except in selected scopes of work, such as road traffic or nuisance complaints where impulsivity or 'loud' events are identified. As such it has not been brought forward as a meaningful interpretation of site-specific noise at Red Mills.

### **7.3.3 Use of a 15-minute interval during night-time monitoring**

The Facility is currently not under an IE Licence. The Facility's current compliance criteria in relation to noise is stated in Section 2.3 of the submitted Noise Impact Assessment (30<sup>th</sup> November 2021):

Condition 6 of Planning Reference 17/641 states:

*'The developer shall ensure that all operations on site during both the construction and operational phase of the development are carried out in a manner such that noise, air emissions and/or odours do not result in significant impairment of, or significant interference with, amenities or the environment beyond the site.'*

This Planning condition does not prescribe a specific limit value, interval nor a methodology or guidance document to be followed.

A baseline noise survey of the Facility was undertaken during the Harvest Season for daytime, evening and night-time periods to quantify the existing noise environment in the vicinity of the nearest NSLs.

A monitoring period of 30 minutes was utilised for the daytime and evening time surveys. The daytime was repeated twice giving 90 minutes of data. The evening time was undertaken once (30 minutes) and the night-time interval was 15 minutes and repeated once (30 minutes).

NG4 references a 15-minute interval for baseline surveys in Appendix III. Section 7.2 of the NG4 document also states:

*'Sampling period is to be the time period T stated within the relevant licence. Typically this will be either 15 minutes or 30 minutes in duration. This applies to day, evening and night time periods.'*

Section 7.2 further states that:

*'Night-time measurements should normally be made between 23:00hrs and 04:00hrs, Sunday to Thursday, with 23:00hrs being the preferred start time.'*

Section 7.8 states:

*'The use of pausing techniques and short-term sampling intervals may also help to ascertain the noise attributable to the source of interest.'*

Therefore, to achieve a complete baseline survey during which the Facility was operational throughout the daytime, evening time and night-time periods with similar meteorological conditions, the 15-minute interval was utilised during the night-time to enable the survey to be completed before 04:00, based on methodology detailed in NG4, as well as experience and expertise of MOR consultants.

We also note that the EPA often stipulate 15-minute intervals for night-time monitoring in IE licences that have been issued; some examples would include:

- 1) Glanbia Ireland, Portlaoise Mill (P1028-01) which indicates 15minutes or 30mintues at night;
- 2) Pfizer Ireland (P0652-01)  $L_{Aeq,15minutes}$  day and night;
- 3) PPI Adhesive Products Ltd. (P0093-01)  $L_{Aeq,15minutes}$  day and night<sup>3</sup>;

In addition, some sites include only additional conditions such as:

*'Noise from the activity shall not give rise to second pressure levels ( $L_{eq, \tau}$ ) measured at noise sensitive locations which exceed the limit values by more than 2 dB(A).'<sup>4</sup>*

The main justifiable exceptions for a longer night-time monitoring period arise, where either:

- A) The facility operates a complex night shift, including various night-time source emissions which may not be picked up or averaged sufficiently within 2 x 15-minute periods, and a longer monitoring period is therefore justified; or
- B) The locality presents a complex acoustic environment within which the facility noise can be difficult to determine and requires longer periods of monitoring to provide a statistically reliable data set.

Such exceptions did not apply to the specific circumstances encountered at Red Mills and as such were not warranted for the production of a comprehensive assessment.

### 7.3.4 Noise Model Mitigation / Abatement

Section 4.4.1 of the submitted Noise Impact Assessment detailed future noise emission sources and/or mitigation utilised in the noise model:

- 2No. Modern Grain Store buildings under Planning Ref: 21/573;
- 2No. Modern Grain Dryers 1 & 3 under Planning Ref: 21/573;
- Grain Dryer 6 replaced with a modern Panford twin column vertical Dryer;
- Dryer 6 Intake mitigated by 12dB;
- Dryer 4 stacks mitigated by 15dB;
- Dryer 5 stacks mitigated by 5dB;
- Dryers 4a/4b and Dryer 5 pre-cleaners / doors mitigated by 5dB;
- Boilers flues mitigated by 10dB; and
- Seed Plant mitigated by 10dB.

Section 5.2 of the submitted Noise Impact Assessment states:

*'The engineering works required to achieve these reductions are subject to more detailed design and will be agreed with the Agency prior to installation. In all cases, individual assessments, industry standards, best practice and techniques will be assessed.'*

### 7.3.5 Noise Model Results at NSL4

NSL4 utilising the noise model results indicate a potential exceedance at night-time of ca.4dBA. The submitted report, chapter 4 details the reasoning for the noise model as a worst-case scenario, and specifically how this should be interpreted regarding compliance, refer to Section 5.2 of the submitted Noise Impact Assessment.

<sup>3</sup> [https://epawebapp.epa.ie/licences/lic\\_eDMS/090151b280753734.pdf](https://epawebapp.epa.ie/licences/lic_eDMS/090151b280753734.pdf)

<sup>4</sup> [https://epawebapp.epa.ie/licences/lic\\_eDMS/090151b2805ddd7.pdf](https://epawebapp.epa.ie/licences/lic_eDMS/090151b2805ddd7.pdf)

The Facility's Noise Management Procedures, as outlined in Section 4.5 of the submitted Noise Impact Assessment, detail the measures which will be implemented to improve acoustic awareness and measures to reduce noise emissions within the Site. The noise model presented, was based upon site specific measurements at sources – as such the implementation of the noise management measures outlined will significantly reduce noise levels when compared to the modelled results for all NSLs including NSL4.

The Noise Impact Assessment submitted as part of this licence application in section 5.2 states that for Harvest season 2022 NSL4 will likely be compliant with typical EPA limits during the short-term Harvest Season which stated:

*'Noise prediction modelling indicates no potential impact at the closest NSR, NSR04 during the daytime and evening time based on the compliance with the emission limits. A potential impact at NSR04 during the night-time period of ca. 4dB may occur. However, it is noted that the noise model is a worst-case scenario...'*

*'Furthermore, the model does not incorporate the additional benefits of the noise management plan principles outlined in section 4.5 above. Taking into account the above, the noise emission audible at NSR04 is likely to be compliant at all times.'*

*'Therefore, the predicted impact, from the proposed Future Model 1. For the Facility is deemed negligible to local receptors. The management at the Facility are committed to implementing these measures as much as practicable prior to the commencement of the 2022 harvest season.'*

The noise model incorporated Dryers 1 and 3. Red Mills have decided to defer the replacement of Dryers 1 and 3 from the IE Licence application at this point in time, to focus on licencing the current operations at the Site. Therefore, this will result in further decreasing noise levels that were presented in the previous noise model.

### **7.3.6 Noise Impact on the SAC**

Elevated noise can potentially result in adverse effects on species such as disturbance, behavioural impacts, stress and displacement from feeding grounds.

As current operations onsite and the proposed upgrade works do not and will not involve in-river works, effects on designated fish and crustacean species associated with noise can be dismissed, as the physical interaction of sound in air makes it unlikely any noise associated with the facility will enter the water body. However, as otters can disperse from the River Barrow, they were given further consideration within the submitted Natura Impact Statement.

The noise monitoring locations NM1, NM2 and NM3 were in proximity NSLs. In addition, these locations were also in proximity to the border of the adjacent SAC.

The Site has been in operation since 1908 with a seasonal Harvest Season operating each year. Therefore, the current SAC conditions are indicative of any potential impact of noise on the SAC. The L2639 roadway bisects the Site where noise emissions occur and the SAC. The roadway is represented by NM3 which was in proximity to the road. Road traffic noise is typically associated with the statistical parameter  $L_{A10}$ . The  $L_{A10}$  values at NM3 ranged from 41dB to 71dB which were not attributable to the Site but due to passing traffic.

Evidence of otter activity was identified near the Site, which would suggest that this species is not experiencing adverse effects from current noise emissions and is likely to be habituated to the current operations at the facility. This is further supported with noted findings of otter activity within urban environments in Ireland and in proximity to roads and other notably high

noise environments, refer to Tullow Grain Store Depot, Carlow County Council Planning Reference 20/207<sup>5</sup>.

The 2021 otter survey took place during the harvest season when the facility operates on a 24-hour basis. As otters are a crepuscular species, meaning they are most active at dawn, dusk or after dark, the identification of a recent otter spraint and prints along the River Barrow, indicates that otters are active along the River Barrow whilst the onsite Dryers were operational.

It can be concluded that any species utilising this section of the River Barrow and SAC would have become habituated to elevated levels of human activity, with particular reference to the adjacent roadway to the SAC and to operations at the facility. Red Mills are committed to implementing acoustic mitigation measures which will further decrease the noise levels associated with the Site at the SAC.

The findings of the NIS submitted to the EPA in November 2021 was underpinned by robust acoustic data.

#### **7.4 Noise Emissions Summary**

For the majority of the year, it is likely that the Facility would be compliant with typical EPA noise limits at the nearest receptors.

The baseline survey undertaken by MOR during Harvest season 2021 indicated a slight breach of noise limit of ca.1dBA during the night-time at NM1. Exceedances were also identified at NM4 during the evening and night-time during the Harvest season 2021. A source assessment was also undertaken, and a worst-case future noise model developed. Red Mills are committed to making the necessary investments in abatement equipment to ensure that such exceedances will not be repeated during the 2022 Harvest season.

The modelled data presented to the EPA was very much a worst-case scenario. The predicted noise levels during the Harvest season 2022 will be further reduced by the decision of Red Mills to defer the installation of replacement Dryers 1 and 3 and Oat Cleaning Process and related major emission point from the IE Licence at this point in time. This deferral will provide additional time to implement other acoustic abatement measures at the Site.

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<sup>5</sup> <http://www.eplanning.ie/CarlowCC/AppFileRefDetails/20207/0>

## 8 NATURA IMPACT STATEMENT

The expanded ICW has full Planning Permission details of which have already been submitted to the EPA.

Separate NIS's were prepared and submitted for both Planning Applications. The expanded ICW is an environmental improvement for the Site, which will benefit the receiving waters, an SAC, by providing better silt/nutrient control for all stormwater discharges, as well as protection in case of an accidental spill at the Site.

In their Planners Report dated 12<sup>th</sup> December 2019 Kilkenny County Council concluded the following:

Having regard to the NIS submitted, referral reports received from Inland Fisheries and the Environment Section of Kilkenny County Council The Planning Authority agrees with the assessment and the conclusions in the NIS submitted with this application and following an examination, analysis and evaluation of the relevant information including in particular the nature of the predicted impacts from the proposed development and with the implementation of the mitigation measures outlined in the NIS that the proposed development will not adversely affect (either directly or indirectly) the integrity of any European site either alone or in combination with other plans or projects. There will be no significant effect to the integrity of the River Barrow and River Nore SAC.

Kilkenny County Council as the competent authority in granting planning permission for the construction and operation of the expanded ICW that included for a discharge into the River Barrow, have already completed an Appropriate Assessment of the wetlands including any possible discharge from same.

An updated NIS prepared by MOR was submitted to the EPA as part of the submission made at the end of November 2021. This included assessment of the effects of discharges to both the wetlands and the River Barrow. This assessment was informed by the following scientific data that was compiled during the 2021 harvest season:

1. Baseline noise monitoring data.
2. Predicted acoustic modelling.
3. Baseline PM10 monitoring.
4. Predictive air modelling.
5. Biological water monitoring results from the River Barrow.
6. Biological water monitoring results from the Mill Race and adjoining drainage ditches.
7. Physical and Chemical Water monitoring results from the River Barrow.
8. Physical and Chemical Water monitoring results Mill Race and adjoining drainage ditches.
9. Specialist Ecological survey results.
10. Detailed drainage design drawings.
11. Detailed design details of the ICW provided by the specialist designers.

All of this scientific data has been submitted to the EPA. The NIS submitted by MOR to the EPA in November concluded the following:

*"It can be concluded that the ongoing operation onsite and the proposed upgrade works, alone or in-combination with other projects, will not adversely affect the integrity, and conservation status of any of the qualifying interests of the River Barrow and River Nore SAC. Accordingly, progression to Stage 3 of the Appropriate Assessment process (i.e. Assessment of Alternatives Solutions) is not considered necessary".*

We wish to confirm that this conclusion was underpinned by very robust scientific evidence which we trust will satisfy the EPA.

In summary, very few industrial sites in this country will have the level of mitigation measures as part of their storm water drainage system that the Red Mills Site will have, when all of the current works are completed. This combined with the fact that the high-risk period for sediment run-off from the Site i.e. the harvest season will coincide with the time of the year when there will be maximum storage capacity available in the ICW, will thereby further reduce the potential for any discharges to occur during this high risk period. The purpose of all the measures currently being installed will be to ensure that discharges from the Site will not significantly affect any Natura sites. These measures will significantly improve current arrangements that were scientifically proven during 2021 not to have had a significant impact on the River Barrow SAC. The AA submitted in support of the permitted wetlands concluded that any possible discharge from the wetlands would not have a significant adverse effect on the environment. This AA was premised on the fact that all the surface water drainage from the site would enter the wetlands.

Based on legal advice obtained from Arthur Cox, the effects of discharges from the wetlands were previously subjected to AA by Kilkenny County Council when they were authorised. The reconfiguration of the onsite drains and a replacement interceptor was deemed to be exempted development under Class 21 of the Exempted Development Regulations.

## 9 REQUEST FOR FURTHER INFORMATION (RFI) DATED 20<sup>TH</sup> NOVEMBER 2018

In paragraphs below, each point from the EPA's Request for Information dated 20<sup>th</sup> November 2018 is listed and response provided together with links to relevant documents on the external EPA website.

1. Provide a copy of the Planners Report and Final Decision for Planning Ref: 17/641. Provide clarification from Kilkenny County Council as to whether an EIS or EIAR was required. (Regulation 9(2)(e)).

Provided to the EPA in 2019:

Planning Report [090151b28071bbec.pdf \(epa.ie\)](#)

Final Decision – <http://idocsweb.kilkenny.ie/ViewFiles.aspx?docid=261698&format=jpeg>

Clarification from KCC re EIAR -

<https://planning.kilkennycoco.ie/AppFileRefDetails/17641/0>

2. Resubmit the installation boundary map to include the existing constructed wetland (and future wetland if proposed) and the sanitary effluent wastewater treatment system. Provide the area in hectares for the revised boundary (Regulation 9(2)(m)).

Total site area in hectares – 18 hectares (ha).

- Refer to Section 3 above; and
- D1 -Red Line Boundary - [Link](#) .

3. Clarify whether animal raw material is used in the process and whether there is any proposal to use it in the future (Regulation 9(2)(f)).

See NTS MOR [Non-Technical Summary \(epa.ie\)](#). Section 1.3 states “small amounts of animal products may be occasionally used”.

Please note that in previous response to this RFI, prepared by JRE, dated 23/10/2019, it is stated that no animal products are used or will be used, which is incorrect.

4. Typical operating hours are provided as 12 hours/day pre-harvest and 24 hours post-harvest. Clarify what months are pre and post-harvest. (Regulation 9(2)(i)).

See NTS MOR [Non-Technical Summary \(epa.ie\)](#). Also see above, section 2 and section 5.4.

5. Complete Table G.1 to include amount of materials stored and annual use (Regulation 9(2)(f)).

Previous response in 2019 [090151b28071bbec.pdf \(epa.ie\)](#)

An updated Table will be provided to the EPA, refer to Section 10 'Proposed Next Steps' below.

6. In relation to air emissions (Regulation 9(2)(i)):
  - a. Provide the rated thermal input (in MegaWatts) for the two boilers associated with emission points A1-1 and A-2.

The thermal input for the two boilers is not available, however, it can be estimated between 3MW and 10MW, i.e. subject to Medium Combustion Plant Directive, for existing boilers, well below Large Combustion Plant threshold. Please Refer to Air Dispersion Modelling Report for further details - [Air Dispersion Modelling Report \(epa.ie\)](#)

- b. Provide a description of boiler operation and purpose (for generation of water or steam etc.) for which the stages of the process.

Operated in duty and stand-by mode, for generation of steam for use in cubers and flakers, in the Feed Mill.

- This response provided in 2019 [Link](#);
- Air Dispersion Modelling Report has additional information on boilers - [Air Dispersion Modelling Report \(epa.ie\)](#)

- c. Clarify whether the dryers have an emission point for combustion gases and provide details in Section 7.4.1 Emissions to Air, where relevant.

- Response provided in 2019 [Link](#);
- Additional information on burners is provided in section 5.3 above, and specifications will be provided as an additional response, refer to section 10 below.

- d. Provide maximum emission values (including flow rates in m<sup>3</sup>/hour and m<sup>3</sup>/day) for the boiler emission points. Have regard to the *European Union (Medium Combustion Plants) Regulations 2017 (S.I. 595 of 2017)*, where applicable.

Air Dispersion Modelling Report provides this information - [Air Dispersion Modelling Report \(epa.ie\)](#). Also provided in Attachment 7-4-1 Emissions to Air – Main, submitted to the EPA on 30<sup>th</sup> November 2021. [Link](#)

- e. Provide the flow rates (in m<sup>3</sup>/hour and m<sup>3</sup>/day) for all main emissions to air.

Information provided in:

- Air Dispersion Modelling Report: [Link](#) ;and
- Air Emissions Application form: [Link](#)

Please refer to section 5 above for more detail. Scenario 4 in Air Dispersion Model and a total of 6 emission points (Table 5-1 above) proposed in these documents are to be excluded from the IEL at this point.

- f. For the air monitoring reports submitted clarify the emission point reference numbers (A2-1, A2-2 etc). (Regulation 9(2)(j)).

Information provided in:

- Air Dispersion Modelling Report: [Link](#) ;and
- Air Emissions Application form: [Link](#)



- g. Assess the impact of emissions to air using air dispersion modelling having regard to 'Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)' (EPA). You may also have regard to 'Process Guidance Note 6/26 (13) Statutory guidance for animal feed compounding' (DEFRA, UK). (Regulation9(2)(k)).
- I. Include all main process emission points and A1-1 and A1-2 for all relevant parameters.
  - II. The modelling report shall include tabulated input data of flow rates, concentrations, mass emissions, temperature and efflux velocities.

Please refer to the [Air Dispersion Modelling Report \(epa.ie\)](#);

Please refer to section 5 above for more detail. Scenario 4 in Air Dispersion Model and a total of 6 emission points (Table 5-1 above) proposed in these documents are to be excluded from the IEL at this point.

Also, please refer to section 10 below; additional air dispersion modelling to be provided in accordance with the EPA request verbally discussed during 21<sup>st</sup> December 2021.

- h. Show the location of all main emission points to air on a site drawing.

Please refer to Drawing 4: [090151b2807e853c.pdf \(epa.ie\)](#)

- i. Detail the abatement systems (cyclone/bag filters) on the main emissions to air. Provide the efficiency rating/performance specifications for all air abatement equipment.

Please refer to the submitted [Air Emissions \(epa.ie\)](#)

Efficiency rating/performance specifications for all air abatement equipment are not available, as this equipment is old equipment. For any new equipment such information can be provided once the equipment has been sourced.

- j. Resubmit the table 'Waste Gas - Abatement /Treatment Control' for the air abatement systems and include details of measures in place to prevent and identify abatement failure e.g. Bag filter integrity, air flow, differential pressure gauges. (Regulation9(2)(g)).

Please refer to the submitted [Air Emissions \(epa.ie\)](#)

7. In relation emissions to water and storm water discharges (Regulation9(2)(k)):
- a. Part of the application e.g. Non-Technical Summary (NTS) states that all storm water discharges via oil separators to the constructed wetland, clarify if this is correct. Provide a clear description of the drainage system.

Refer to section 6 on Surface Water Emissions above.

See NTS MOR [Non-Technical Summary \(epa.ie\)](#)

Refer to Existing drainage drawings: [Link](#); and

Refer to Proposed drainage drawings [Link](#)

- b. In the assessment of the storage BREF it states that all grain is stored in storage sheds, clarify if this is the case.

See NTS MOR [Non-Technical Summary \(epa.ie\)](#)

- c. Provide a drainage drawing to include the following:
- All oil interceptors and areas draining to these; areas draining to the constructed wetland and other areas e.g. hardcore.

Refer to Existing drainage drawings: [Link](#); and

Refer to Proposed drainage drawings [Link](#)

- Storm water drainage pipelines discharge locations to surface water and grid reference coordinates (6E, 6N).

Please refer to the following:

- Refer to Existing drainage drawings: [Link](#);
- Refer to Proposed drainage drawings [Link](#); and
- Refer to Attachment 7.7 Discharges to Storm Water – Attachment [Link](#).

The above drawings of the existing and proposed drainage layout which includes coordinates of both the existing and proposed discharge locations and monitoring location. This has been updated from the version submitted in October 2019 following inspection in 2021. Some of these works are ongoing at this time, refer to section 4 above.

- d. Specify the type of oil separators in place (Class I or II and full retention or bypass). Clarify if there are any silt traps in place and provide their locations.

See NTS MOR [Non-Technical Summary \(epa.ie\)](#) and [Existing and Proposed Drainage Drawings](#)

Two existing by-pass interceptors are located in the southern area of the site which receives drainage from yard. An existing Class I full retention interceptor serves the truck refuelling area. An existing silt trap is located in the northern portion of the site in front of the Lab building.

A Class I by-pass interceptor is proposed to be installed before influent point into the Integrated Constructed Wetlands (ICW) inlet. All stormwater from the Site will pass through this interceptor before entering ICW. The ICW is designed to remove sediment and silt from storm water drainage as per IWC report.

- e. Clarify if the storm water discharge outfall pipe from the southern area of the site is accessible for monitoring.

Refer to Section 6 above.

- See NTS MOR [Non-Technical Summary \(epa.ie\)](#);

- [ICW Report 090151b2807e8531.pdf \(epa.ie\); and](#)
- [Existing and Proposed Drainage Drawings.](#)
- f. Provide a monitoring location for both the discharge from the grain yard area to the wetland and the discharge from the wetland to the watercourse.

[See Proposed Drainage Drawings](#)

As the Wetland will serve as an abatement system for the stormwater from the yard, removing silt and nutrients, we do not propose monitoring location into the Wetland. We propose monitoring before the final discharge point into the receiving water, River Barrow, as shown in *Appendix A of ICW Report*.

- g. The NTS refers to the water treatment system and a fish tank for assessment of treated water, clarify how this relates to the installation. Also, provide further details on the separation tank, its location and purpose.

The fish tanks is a hobby fish farm for restocking of the River Barrow for the purposes of sport fishing. It has not been used in a number of years and does not form part of this application. If this is ever recommissioned a separate permission for discharge will be sought or the discharge will be removed off site to a suitably licenced or permitted waste management facility.

- h. Regarding the surface water laboratory reports, show monitoring locations on a drawing and clarify if they correspond with Locations 1-7 on drawing IE1540-001.

[Refer to Section 6 above.](#)

- i. Submit Appendices A, D and E of the 2013 ICW planning report.

[These appendices were submitted in October 2019. Link](#)

- j. Confirm whether the truck wash and water treatment system on the site plan are operational.

[Refer to JRE REFI 2019 Response](#)

As stated in the response submitted in October 2019; the truck wash and associated water treatment system are no longer operational.

- k. Provide details of any water treatment for abstracted water (softening etc.).

[See response submitted in October 2019. JRE REFI 2019 Response](#)

- l. Provide a copy of the discharge licence for the fish farm.

[Refer to JRE REFI 2019 Response](#)

See response submitted in October 2019 for a copy of the discharge licence. As noted previously, the fish farm is a hobby fish farm for restocking of the River Barrow for the purposes of sport fishing. It has not been in use and does not form part of this application.

8. Provide the following information for the constructed wetland (Regulation 9(2)(k)):
- Provide available monitoring data for the wetland inlet and outlet during and outside the harvest period and an interpretation of the results.

Refer to ICW Report [090151b2807e8531.pdf \(epa.ie\)](#)

Refer to Section 7 and Appendix C of this report.

- Provide an assessment of the performance in terms of removal efficiency (for parameters including BOD, COD, suspended solids, ammonia, orthophosphate) of the wetland since its installation.

See ICW Report [090151b2807e8531.pdf \(epa.ie\)](#)

- Clarify whether the wetland is desludged, how frequently, and provide details of the destination and method of recovery or disposal for the sludge and the waste code, where applicable.

Not applicable. See ICW Report [090151b2807e8531.pdf \(epa.ie\)](#)

9. Confirm whether there are any wastes or residues arising from processing of raw materials and provide details of quantities, waste codes and destinations. (Regulation 9(2)(t)).

As detailed in the [Waste Generated Section 8.1](#) and [Waste Hierarchy 8.2](#) submitted to the EPA on the 16<sup>th</sup> March 2018, Red Mills provided details on the waste generated by on-site activities. The wastes generated through the production processes are dealt with in a variety of ways. Waste management is based on a hierarchy of Prevention.

Wastes or residues arising from the production process of raw materials typically do not occur. Process controls minimise product loss and therefore little or no waste is generated from the production process. In the event wastes or residues occur during the production process, this waste will be managed in accordance with the waste hierarchy and in accordance with all relevant Irish and EU waste management legislation.

10. The Baseline Report (Screening) refers to a 5,000 litre diesel tank, however the site plan shows several fuel tanks. Provide details on the fuels stored, purpose and the capacity of each tank. In Section 4.6 a fuel type is listed as other (401m<sup>3</sup>/year), clarify the fuel type. (Regulation 9(2)(r)).

Refer to NTS MOR [Non-Technical Summary \(epa.ie\)](#)

Prior to harvest season 2021, all dryers were running on oil, and therefore there is a tank associated with each dryer. Currently, only Dryer 2 and Boilers are running on oil,

and this will be converted to LPG by May 2022. Therefore, tanks for Dryers 4A and B, 5 and 6 were decommissioned, but will be kept for firefighting water.

Remaining diesel tank serving Dryer 2 and boilers will be decommissioned following conversion to LPG in 2022.

Also, there is a diesel tank associated with truck refuelling which will stay in place.

11. Provide a Baseline Report having regard to European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EC on industrial emissions (2014/C 136/03) published on 6th May 2014. (Regulation 9(2)(r)).

See response submitted in October 2019. [Link](#).

12. In relation to the requirement to limit, reduce or abate emissions (Regulation 9(2)(k));
  - a. Provide measures taken or planned in the future to limit noise emissions at the installation;

Please refer to section 7 above and Attachment 7-5-1 Noise Impact Assessment provided to the EPA on 30th November 2021.

- b. Provide measures taken or planned to minimise dust deposition levels at the installation.

Please refer to the Air Dispersion Modelling Report (epa.ie); Scenarios 2 and Scenario 3 list a number of mitigation measures. These are also presented above in section 4.

13. A screening for Appropriate Assessment was undertaken on 20th November 2018 and the Agency determined that an Appropriate Assessment of the activity is required. You are thereby required to submit a Natura Impact Statement, as defined in Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations 2011 as amended. The NIS shall address all emissions from the installation.

Please refer to section 8 above, and also to Natura Impact Statement provided to the EPA on 30<sup>th</sup> November 2021. [Link](#).

## 10 PROPOSED NEXT STEPS

We trust that the EPA will appreciate that given the short duration of time allocated that we have used our best endeavours to address all of the queries raised by the EPA. Unfortunately, it has not been practicable to address all of the queries due to the recent unprecedented impacts arising from the most recent wave of Covid-19 combined with the annual Christmas holiday period.

We appreciate the urgency of ensuring the EPA have the necessary technical information to allow the issuing of a proposed licence determination. Therefore, as agreed at our recent meeting we have outlined below a programme of works to address what we consider would be to provide any final outstanding information to the EPA.

### 1. Updated Attachments - end of January 2022

To include updates to:

- Raw Materials, Intermediates and Products – Attachment; and
- Waste Generated Attachment.

With regards to updated fertiliser stocks onsite, LPG and wastes.

### 2. Integrity test results of the ICW cells - end of January 2022

Information regarding the integrity of the ICW cells will be provided.

### 3. Revised Air Dispersion Model and Report - end of March 2022

A proposal will be submitted to the Agency for approval by the end of January 2022. Subject to receipt of approval works will be undertaken in February / March 2022. Preliminary proposal, based on the feedback received on 21<sup>st</sup> December from the EPA, includes:

Revised NO<sub>x</sub> model to include Dryer 6 burners;  
Sensitivity modelling to include 75% volumetric flow for all sources for Scenario 2;  
Realistic operating hours for Scenario 2 (exact approach to be provided in the Proposal);  
For all scenarios, results for SAC boundary adjacent to the Site boundary will be included.

### 4. Revised Noise Model and Impact Assessment Report - end of March 2022

A proposal will be submitted to the Agency for approval by the end of January 2022. Subject to receipt of approval works will be undertaken in February / March 2022.

The preliminary proposal includes:

Removal of Dryers 1 and 3;  
Removal of Oat Cleaning Stack;  
Cognisance of above Air Model, where applicable;  
Revised operational hours, where applicable; and  
Results for SAC boundary will be included.

# Appendices

# Appendix A



7 January 2022

**BY EMAIL ONLY** - KOREgan@mores.ie

Dear Kevin,

Just to address your concerns before you submit the further information to the EPA on 7 January 2022.

1. *Abandonment of the application.* In our opinion, the EPA could not legally conclude that the application was abandoned. We are instructed that there is no intention to abandon that application and that this has been conveyed to the EPA. The EPA's decision to have recent meetings with your client on the 8th July 2021 and on the 21st December 2021 to discuss the on-going application and agreeing different deadlines for the submission of information of the 30th November 2021 and 7th January 2022 stops them from now concluding that the application is abandoned. There are other reasons too but we are so confident in this opinion that we do not feel further research is justified.
2. *Re the re-configuration of onsite drainage network to ensure all storm water from the Site will drain into the expanded ICW and the installation of a new large scale interceptor to replace two existing interceptors to improve the quality of the storm water discharging to the wetlands.* We consider that those works are exempted works under the Planning and Development Regulations 2001-2021 provided the limitations on the exemption are satisfied under (CLASS 21 (a) exempts works constituting (ii) *the provision, rearrangement, replacement or maintenance of sewers, mains, pipes, cables or other apparatus*).

The replacement of the interceptors is doubly exempted under Class 21(a) being the provision or replacement of plant and *apparatus*. *Apparatus* is defined as equipment.

The limitations on these exemptions are:

- Any such development shall not materially alter the external appearance of the premises of the undertaking.

# ARTHUR COX

- The height of any plant or machinery, or any structure in the nature of plant or machinery, shall not exceed 15 metres above ground level or the height of the plant, machinery or structure replaced, whichever is the greater.

Since we are instructed that the drainage works are largely underground and the interceptors less than 15 metres high, it is clear that these limitations are observed.

We are instructed that the storm water will be discharged to the wetlands and not discharged to any European site and that the effects of possible discharges of storm waters *from* the wetlands to the protected river have been subjected to an appropriate assessment by the planning authority and deemed not to have a significant adverse effect on the integrity of any European site by Kilkenny County Council. [See Planning Register No 19/235.]

In addition, these drainage works were envisaged in the application for planning permission for the wetlands and in the planning permission for them granted. See Planning Register No 19/235. Condition 6(d) of this planning permission provides “*No discharges of environmental significance shall be made from the development during the operational phases to the surface water drains or to the River Barrow.*” Consequently, discharges *from* the wetlands are regulated and have been subject to AA.

3. *Re the decommissioning and removal of Dryer 6. Decommissioning of plant and equipment is a standard activity at any industrial facility and planning permission is not required for this normal industrial activity. If it were, industrialists would have to apply for planning permission to remove plant and equipment.*
4. *Installation of replacement Dryer 6.* We understand that works are ongoing and scheduled to be completed in the next few weeks. These works are exempted development under CLASS 21 of the Planning and Development Regulations 2001-2021 provided the limitations on the exemption are satisfied. . CLASS 21 (a) — (iii) *the installation or erection by way of addition or replacement of plant or machinery, or structures in the nature of plant or machinery.*  
Provided:

- Any such development shall not materially alter the external appearance of the premises of the undertaking.
- The height of any plant or machinery, or any structure in the nature of plant or machinery, shall not exceed 15 metres above ground level or the height of the plant, machinery or structure replaced, whichever is the greater.

# ARTHUR COX

We are instructed that the maximum height of the former dryer and associated structures including the conveyors / enclosures that need to be replaced is 24.9M and that the maximum height of the replacement dryer and associated structures including the stacks will be 24.5M i.e. not higher than the replaced structure. The height limitations on the exemption would be met in this case also.


5. It should also be noted that the legislation is in place that would allow the EPA during the licencing process to improve the environmental performance of an activity without obliging the licensee to get a new planning permission if some development is proposed during the licensing process which is not exempted or covered by a planning application or permission. See Scannell Environmental and Land Use Law (2006), at para 11-123. Any development required by such a condition in an EPA licence is exempted development under Regulation 7(1) of the Planning and Development Regulations 2001-21. Given the complexities of upgrading such an historic site, this may be an option that would be worthwhile to engage with the EPA on. Regulation 7(1) provides that the following are exempted development:

7. (1) Works consisting of or incidental to the carrying out of development referred to in section 86(4) of the Environmental Protection Agency Act, 1992 (No. 7 of 1992) for the purpose of giving effect to a condition attached to a licence or revised licence granted by the Environmental Protection Agency under Part IV of the said Act shall be exempted development.

Development referred to in section 86(4) includes “*(d) in addition to conditions that may be, or are required to be, attached to a licence or revised licence by reason of the foregoing or any other provision of this Part, enable the Agency to attach to a licence or revised licence in respect of a specified class or classes of activity such conditions as the Agency considers appropriate in the circumstances*”.

If you have any other matters for consideration, contact me by phone. Good luck with the application.

Best wishes,



Dr Yvonne Scannell

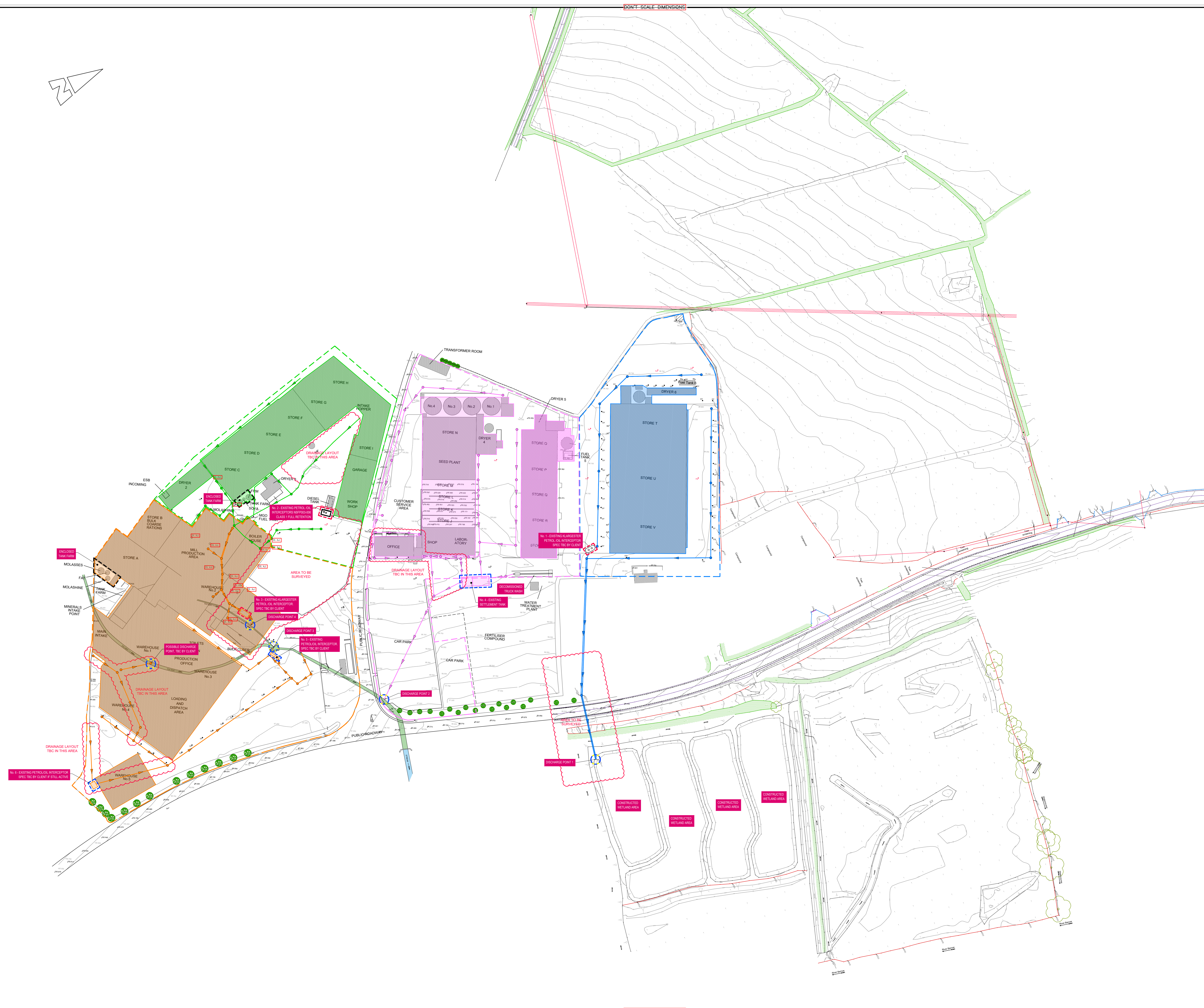
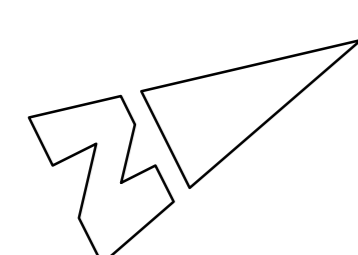
Environmental and Planning Group, Arthur Cox, Solicitors

Ph: 087 903 9666

# Appendix B



DON'T SCALE DIMENSIONS



**Health and Safety:**  
THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, THE SPECIFICATION AND THE SAFETY AND HEALTH PLAN.  
THE APPOINTMENT OF THE PROJECT SUPERVISOR DESIGN PROCESS IS THE CLIENT'S RESPONSIBILITY.  
TEMPORARY WORKS PROPOSALS AND/OR METHOD STATEMENTS TO BE SUBMITTED TO THE PSOP AND THE PSOS FOR WORKS WHICH INVOLVE PARTICULAR RISKS.

**Notes:**  
1. NO PART OF THIS DRAWING MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR STORED IN ANY RETRIEVAL SYSTEM OF ANY NATURE WITHOUT THE WRITTEN PERMISSION OF MALONE O'REGAN CONSULTING ENGINEERS AS COPYRIGHT HOLDER EXCEPT AS AGREED FOR USE ON THE PROJECT FOR WHICH THE DRAWING WAS ORIGINALLY ISSUED.  
2. THE APPOINTMENT OF THE PROJECT SUPERVISOR DESIGN PROCESS IS THE CLIENT'S RESPONSIBILITY.  
3. ALL DIMENSIONS IN mm UNLESS NOTED OTHERWISE.  
4. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION; DISCREPANCIES SHALL BE REPORTED TO THIS OFFICE IN WRITING.  
5. THIS DRAWING TO BE READ IN ACCORDANCE WITH ALL RELEVANT ENGINEERS' DRAWINGS AND SPECIFICATIONS.

**ZONE LEGEND**

OUTLINE OF ZONE 1 SHOWN THUS:	---
OUTLINE OF ZONE 2 SHOWN THUS:	---
OUTLINE OF ZONE 3 SHOWN THUS:	---
OUTLINE OF ZONE 4 SHOWN THUS:	---

**DRAINAGE LEGEND**

DRAINAGE ZONE 1 SHOWN THUS:	→
DRAINAGE ZONE 2 SHOWN THUS:	→
DRAINAGE ZONE 3 SHOWN THUS:	→
DRAINAGE ZONE 4 SHOWN THUS:	→

**LEGEND**

OUTLINE OF ENCLOSED TANK FARM:	---
DISCHARGE POINTS:	○
EXISTING KLARGESTER PETROL/OIL INTERCEPTORS OUTLINED IN RED:	---
EXISTING SUBSTANDARD PETROL/OIL INTERCEPTORS OUTLINED IN BLUE:	---

**NOTE:**  
DRAINAGE LINES BASED ON SURVEY DATA PROVIDED BY CAROLAN SURVEYORS.  
DRAWING REFERENCE: 17-121-01  
DATE: 11/09/2017

**PRELIMINARY**  
21/09/21

Rev	Description	By	Date	Checked	Appr

THIS DRAWING TO BE USED FOR PRELIMINARY PURPOSES ONLY

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Client: **CONNOLLY REDMILLS**

Project: **EXISTING DRAINAGE ZONE OVERVIEW**

Job No	Orig No	Stage	Elevation	Scale
W21084	F710	P01	P01	1:250 A1 S15

DON'T SCALE DIMENSIONS



# Appendix C

**2021 ICW Monitoring Results****ICW Inlet**

Sample Date	BOD (mg/l)	COD (mg/l)	Ammonia (mg/l)	Ortho-P (mg/l)	Suspended Solids (mg/l)	Comments
17/09/2021	4340.00	9820.00	72.37	39.25	938.00	No flow in Inlet Pipe
10/09/2021	6312.00	7820.00	0.28	33.98	2276.00	No flow in Inlet Pipe
03/09/2021	124.00	503.00	61.10	31.83	460.00	Small flow in Inlet Pipe
23/08/2021	758.00	1553.00	55.78	17.07	762.00	No flow in Inlet Pipe
06/08/2021	1433.00	2300.00	23.04	10.91	880.00	No flow in Inlet Pipe
23/07/2021	127.00	430.00	84.13	5.80	584.00	No flow in Inlet Pipe

**ICW Outlet**

Sample Date	BOD (mg/l)	COD (mg/l)	Ammonia (mg/l)	Ortho-P (mg/l)	Suspended Solids (mg/l)	Comments
17/09/2021	2.00	18.00	0.09	0.03	11.00	No flow from Outlet Pipe
10/09/2021	3.00	14.00	0.61	0.12	11.00	No flow from Outlet Pipe
03/09/2021	4.00	16.00	0.61	0.13	9.00	No flow from Outlet Pipe
23/08/2021	2.00	4.00	0.16	0.13	<1	No flow from Outlet Pipe
06/08/2021	1.00	7.00	0.09	0.01	21.00	No flow from Outlet Pipe
23/07/2021	1.00	2.00	0.13	0.03	6.00	No flow from Outlet Pipe

**2020 ICW Monitoring Results****ICW Inlet**

Sample Date	BOD (mg/l)	COD (mg/l)	Ammonia (mg/l)	Ortho-P (mg/l)	Suspended Solids (mg/l)	Comments
18/09/2020	1819.00	3100.00	159.61	33.49	16598.00	
11/09/2020	4673.00	13040.00	248.76	96.55	920.00	
04/09/2020	4385.00	6880.00	62.99	31.38	1178.00	
28/08/2020	2664.00	4304.00	31.84	18.01	274.00	
07/08/2020	139.00	292.00	5.97	1.64	86.00	
23/07/2020	202.00	526.00	14.31			

**ICW Outlet**

Sample Date	BOD (mg/l)	COD (mg/l)	Ammonia (mg/l)	Ortho-P (mg/l)	Suspended Solids (mg/l)	Comments
18/09/2020	7.00	50.00	0.76	0.51	49.00	
11/09/2020	2.00	17.00	0.13	0.13	100.00	
04/09/2020	5.00	35.00	0.51	0.09	37.00	
28/08/2020	1.00	7.00	0.99	0.33	10.00	
07/08/2020	3.00	19.00	0.18	0.18	5.00	
23/07/2020	28.00	100.00	0.54			