Tomlinson’s Dairies Limited Minera Dairy

Decision Document

Application for a Bespoke Permit

The application number is: PAN-001236

The permit number is: EPR/BB3399FV

The Applicant is: Tomlinson's Dairies Limited

The Installation is located at: Minera Dairy, Five Crosses Industrial Estate, Coedporth, Minera, Wrexham, LL11 3RD

We have decided to grant the permit for Minera Dairy operated by Tomlinson's Dairies Limited.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

Unless the decision document specifies otherwise we have accepted the Applicant's proposals.

Structure of this document

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- Key issues
- Annex 1 Pre-operational conditions
- Annex 2 Improvement conditions
- Annex 3 the consultation and web publicising responses

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Key issues of the decision

1 Our decision

Based on the information currently available to us we are minded to grant a permit to the Applicant. This would, if granted, allow it to operate the Installation, subject to the conditions in the Permit.

We consider that, in reaching that decision, we have taken into account all relevant considerations and legal requirements and that the permit will ensure that a high level of protection is provided for the environment and human health.

This Application is to operate an installation which is subject principally to the Environmental Permitting Regulations 2016 (EPR) and is subject to the Industrial Emissions Directive (IED).

The permit contains many conditions taken from our standard Environmental Permit template including the relevant Annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the Environmental Permitting Regulations and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the permit, we have considered the Application and accepted the details are sufficient and satisfactory to make the standard conditions appropriate.

This document should be read in conjunction with the application and supporting information and permit.

2 How we reached our decision

2.1 Receipt of Application

The Application was accepted as duly made on 01 March 2017. This means we considered it was in the correct form and contained sufficient information for us to begin our determination, but not that it necessarily contained all the information we would need to complete that determination.

The Applicant made no claim for commercial confidentiality. We have not received information in relation to the Application that appears to be confidential in relation to any party.

2.2 Consultation on the Application

The consultation requirements were identified and implemented. The decision was taken in accordance with EPR RGN 6 “Determinations involving Sites of High Public Interest”, our Public Participation Statement and our Working Together Agreements.

We advertised the Application by a notice placed on our website, which contained all the information required by the IED.

A copy of the Application and all other documents relevant to our determination are available for the public to view. Anyone wishing to see these documents can arrange for copies to be made.

We sent copies of the Application to the following bodies, which includes those with whom we have Working Together Agreements.

- Wrexham County Borough Council Planning Department
- Wrexham County Borough Council Environmental Protection Department
- Dwr Cymru Welsh Water (DCWW)
- Betsi Cadwaldr University Health Board
- Public Health Wales

These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly.

Further details along with a summary of consultation comments and our response to the representations we received can be found in Annex 3. We have taken all relevant representations into consideration in reaching our determination.

2.3 Requests for Further Information

In order for us to be able to consider the Application duly made, we needed more information. We requested further information relating to resource efficiency and climate change. Upon receipt of this information we were able to consider the application Duly Made.

Further information was also requested by way of a Schedule 5 Notice requiring details of site drainage, storage for milk and oils, secondary containment in place, emissions from site boilers and for a noise assessment to be carried out. The Schedule 5 Notice was sent on 19 July 2017 with a response date of 25 August 2017. The Applicants response to the Schedule 5 Notice was provided on the 14 and 21 August 2017. The additional information supplied did not satisfy the requirements of the Schedule 5 notice and feedback was provided to the Applicant on 30 October 2017. Further responses were provided by the Applicant on the 08, 09 and 28 November 2017. A noise survey was carried out in April 2018 and a report provided on 12 June 2018.

A second Schedule 5 Notice was sent on 04 June 2018 requesting that a full drainage survey be carried out. We did not consider that information previously provided accurately reflected current on-site drainage. Additional information was also requested about the number and location of emission points from site and the capacity and construction method of the two surface water lagoons. A response was provided on 24 July 2018, but a survey had not been undertaken. An as built drainage plan was provided but it was not clear if this was a reflection of the final drainage layout for the site. Other queries about the drainage were not fully answered and some details still required clarification.

Feedback was provided on the Applicant's response to both Schedule 5 Notices on 20 December 2018. Following a discussion with the Applicant, a more detailed

response about the site drainage was provided by them on 10 January 2019. Comments on the noise survey and an updated Noise Management Plan (NMP) were provided on 14 January 2019.

A copy of the information notices and e-mails requesting further information were placed on our public register as were the responses when received.

3 The Legal Framework

All applicable European directives have been considered in the determination of this application.

NRW is satisfied that this decision is consistent with its general purpose of pursuing the sustainable management of natural resources in relation to Wales, and applying the principles of sustainable management of natural resources.

We consider that, in granting the Permit a high level of protection will be delivered for the environment and human health through the operation of the Installation in accordance with the permit conditions.

4 The Installation

4.1 Description of the Installation and related issues

4.1.1 The permitted activities

The Installation is subject to the EPR because it carries out an activity listed in Part 2 of Schedule 1 of the EPR:

- Section 6.8 Part A(1)(e) – Treating and processing milk, the quantity of milk received being more than 200 tonnes per day (average value on an annual basis).

An installation may also comprise “directly associated activities”, which at this Installation includes:

- 2 x steam/heat raising boilers

- Bottle making plant

Together, these listed and directly associated activities comprise the Installation.

4.1.2 The Site

The site is located in Minera approximately 5km North West of Wrexham at grid reference SJ 27757 52279. The site boundary encompasses an area of approximately 4 acres including the dairy, car parking, surface water lagoons and external storage areas such as milk silos and oil tanks.

The Applicant has provided a plan which we consider is satisfactory, showing the extent of the facility.

A plan is included in the permit and the Applicant is required to carry on the permitted activities within the site boundary.

4.1.3 What the Installation does

Tomlinson's Dairy has been operating for a number of years under the threshold for requiring an Environmental Permit but due to an expansion of the site, and increase in their operating capacity, now require one. The Applicant aims to produce 300,000,000 litres of milk annually. Raw milk is delivered to site by tanker and fed into silos. Milk is then sent for heat treatment (pasteurisation), separation and homogenisation before being chilled and bottled in plastic poly bottles, which are made on site. Chilled milk is then taken off site and delivered to retailers and distribution centres. The site operates 24 hours a day, seven days a week.

4.1.4 Key Issues in the Determination

Milk has a very high oxygen demand, and releases into the water environment can potentially be serious. This can happen as a result of spills, process leaks, vessels being overfilled, containment failing, wrong drainage connections and blocked drains. Containment, drainage and accident management procedures will therefore be key issues considered. The dairy sector uses large amounts of energy and water so resource efficiency is also considered.

4.2 The site and its protection

4.2.1 Proposed site design: potentially polluting substances and prevention measures

The yard and storage areas are laid with concrete. All storage vessels have secondary containment. To the rear of the dairy building there are 13 silos for the storage of milk and hot water. The silos have a combined capacity of 1,253,000 litres, the largest silos being 200,000 litres. All of the silos are in a bund which consists of a reinforced concrete slab and walls. The Applicant has confirmed that the bund is CIRIA C736 compliant. The bund has a total capacity of 313,520 litres, 25% of the total silo capacity. The silos and bunded area will be subject to regular inspections by the Operator.

There are three oil interceptors in the drainage system – two on the foul line (one at the west side of the dairy and one in front of the workshop building) and a new one on the surface water system adjacent to the new attenuation lagoon. The interceptors will be subject to regular inspections and maintenance by the Operator.

We have set an Improvement condition (IC1) which requires the Applicant to line the two surface water lagoons to make them fully impermeable. A proposed method statement and liner specification shall be submitted to NRW for approval before the work commences. Surface water management is discussed in further detail in section 5.3.

The Applicant has a duty to ensure that soil and groundwater are protected in order to meet the requirements of Articles 14 (1)(b), 14(1)(e) and 16(2) of the IED. Permit condition 3.1.3 requires periodic soil and groundwater monitoring based on systematic appraisal of the risk of contamination.

4.2.2 Site Condition Report

The Applicant has provided a site condition report as part of their application which sets out baseline conditions at the time of applying. We consider that the description is satisfactory.

At the definitive cessation of activities, the Applicant has to satisfy us that the necessary measures have been taken so that the site ceases to pose a risk to soil or groundwater, taking into account both the baseline conditions and the site's current or approved future use. To do this, the Applicant has to apply to us for surrender, which we will not grant unless and until we are satisfied that these requirements have been met.

4.3 Operation of the Installation – general issues

4.3.1 Administrative issues

The Applicant is the sole Operator of the Installation. We are satisfied that the Applicant is the person who will have control over the operation of the Installation if the Permit were to be granted; and that the Applicant will be able to operate the Installation so as to comply with the conditions included in the Permit. The decision was taken in accordance with EPR RGN 1 "Understanding the Meaning of Operator".

We are satisfied that the Applicant's submitted OPRA profile is accurate. The OPRA score is 61. The OPRA score will be used as the basis for subsistence and other charging, in accordance with our Charging Scheme. OPRA is Natural Resources Wales method of ensuring application and subsistence fees are appropriate and proportionate for the level of regulation required.

4.3.2 Relevant Convictions

NRW's COLINS Database has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found. The Operator satisfies the criteria in RGN 5 on Operator Competence.

4.3.3 Financial Provision

There is no known reason to consider that the Applicant will not be financially able to comply with the permit conditions. The decision was taken in accordance with EPR RGN 5 on Operator Competence.

4.3.4 Management

The Applicant has stated in the Application that they will implement an Environmental Management System (EMS) that will meet the requirements for an EMS in our “How to comply with your environmental permit guidance”. The Applicant submitted a summary of the EMS with their application.

Permit condition 1.1.1a requires that the Applicant will manage and operate the activities on site in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the Applicant as a result of complaints. The EMS should be subject to regular review by the Operator.

We are satisfied that appropriate management systems and management structures will be in place for this Installation, and that sufficient resources are available to the Applicant to ensure compliance with all the Permit conditions.

4.3.5 Accident management

The Applicant has written procedures in place for actions to be taken in the event of a flood or fire. Spill procedures are in place for both milk products and hazardous substances. In the event of milk entering surface water drains as a result of a spill, a bung will be used to try and prevent milk entering the surface water lagoons. In the event it does, outlet valves from the lagoons will be shut off as soon as possible. We are satisfied with these arrangements and consider that the lining of the surface water lagoons will provide further protection in the event of a spill on site.

4.3.6 Site security

There is only one entrance/exit to the site, secured by lockable gates. The perimeter of the site is secured by palisade fencing. Regular checks are made of the fencing and gates by the Operator.

Having considered the information submitted in the Application, we are satisfied that appropriate infrastructure and procedures will be in place to ensure that the site remains secure.

4.3.7 Operating techniques

When any milk tankers arrive on site they will follow the one way system around the premises to the raw milk unloading area, at the back of the dairy building, and park in one of two offloading bays. The raw milk is tested for antibiotics, freezing point, butter fat and sensory analysis. No offloading will take place until all tests have been completed satisfactorily. Transfer of the raw milk to storage silos is controlled by an automatic SCADA system. Deliveries will be supervised by the driver. Silos have high level alarms fitted to prevent over filling.

Milk is the main raw material used in the dairy. Sodium Hydroxide and other cleaning chemicals are used in the process. The Applicant states that there is little choice over alternative raw materials to use in the process due to food standards and British Retail Consortium requirements.

The Applicant has stated in their application that they will use the Technical Standards in *How To Comply with your Environmental Permit – Dairy and Milk Processing Sector (EPR 6.13).* We have specified that the applicant must operate in accordance with descriptions in the application, including all additional information received as part of the determination process. These are specified in the Operating Techniques table in the permit.

The new food and drink and milk industries Best Available Techniques Reference Document (BRef) will be published later this year. As an existing site the Applicant will have to carry out an assessment demonstrating how they meet all of the relevant BAT criteria. For those they do not yet meet, they will have four years to become compliant, from the date of publication of the BRef.

4.3.8 Energy efficiency

The Applicant is required to report energy usage under condition 4.2.2 and Schedule 4. This will enable Natural Resources Wales to monitor energy recovery efficiency at

the Installation. Condition 1.2.1 requires that energy usage is regularly reviewed and appropriate measures taken to reduce it where possible.

Limited information was provided in the application about energy efficiency and usage. We have included an improvement condition in the permit for the Operator to carry out a full review of energy and water usage at the Installation (IC5), identifying any improvements that can be made and a proposed timescale for implementation, within a year of permit issue.

4.3.9 Water Use

The facility uses about 318m^3 of water a day. Approximately 10% (30,000L) of water used in the homogeniser is recycled a day to reduce input.

The Applicant is required to report water usage under condition 4.2.2 and Schedule 4. Condition 1.2.1 requires that water usage is monitored, regularly reviewed and appropriate measures taken to reduce it where possible. We have included an improvement condition in the permit for the Operator to carry out a full review of energy and water usage at the Installation (IC5), identifying any improvements that can be made and a proposed timescale for implementation, within a year of permit issue.

4.3.10 Avoidance, recovery or disposal of wastes produced by the activities

This requirement addresses wastes produced at the facility.

We have included an improvement condition within the permit (IC4) requiring that the Operator shall produce a written procedure for assessing milk wastage for all parts of the Installation and to identify any possible improvements. This is to be completed within 12 months of permit issue.

Other wastes produced on site will be segregated and appropriately stored. Records will be kept of all waste removed from site. Having considered the information submitted in the Application, we are satisfied that the waste hierarchy referred to in Article 4 of the WFD will be applied to the generation of waste and that any waste generated will be treated in accordance with this Article.

We are satisfied that waste from the Installation that cannot be recovered will be disposed of offsite using a method that minimises any impact on the environment. Permit condition 1.4.1 will ensure that this position is maintained, and condition 1.4.2 that is it reviewed.

5 Minimising the Installation's environmental impact

Regulated activities can present different types of risk to the environment, these include odour, noise and vibration; accidents, point source releases to air, discharges to ground or groundwater and generation of waste. All these factors are discussed in this and other sections of this document.

For an installation of this kind, the principal emissions are of process effluent from the milk production process.

The next sections of this document explain how we have approached the critical issue of assessing the likely impact of emissions from the Installation on human health and the environment and what measures we are requiring to ensure a high level of protection.

5.1 Assessment of Impact on Air Quality

This section of the decision document deals primarily with the assessment of the potential impact of emissions to air from the site and the impact on local air quality. There are two emission points to air from two natural gas fired boilers which are used for steam and heat generation. The boilers each have a capacity of 2.5MW. There are no other emissions to air from the activities on site.

The Applicant carried out a H1 assessment of predicted emissions to air against the relevant air quality standards. A revised H1 was provided by the Applicant in response to the Schedule 5 notice issued on 19 July 2017, as the boilers were not initially included. Emissions of Oxides of Nitrogen (No and NO_2 expressed NO_2) (NO_x) and Carbon Monoxide (CO) were assessed. The short term Process Contribution (PC) for both NO_x and CO was less than 10% of the relevant short term environmental standards so short term emissions are considered insignificant.

There is no long term annual environmental standard for CO, so no further assessment of this parameter was required.

The long term PC for Nitrogen Dioxide was 1.68%, greater than 1% of the long term environmental standard so did not screen out as insignificant. The Applicant did not carry out the second stage of the screening, calculating the Predicted Environmental Contribution (PEC) which takes into account background levels. We have calculated this ourselves by using 2015 background mapping data available from the DEFRA website. The nearest data is for a location approximately 400 metres North West of the emission points on site at grid reference 327500, 352500. The background concentration of NOx at this point is 8.3 $\mu g/m^3$. Using this data to complete the H1, the long term PEC is less than 70% of the long term environmental standard and therefore screens out from further assessment. As such, detailed dispersion modelling of NO_x was not requested from the Applicant, and we are satisfied that the long term air quality objective for NO_x is unlikely to be exceeded.

5.2 Assessment of odour impact

The Applicant has carried out an assessment of the potential risk of odour being generated by activities on site, by identifying potential sources, pathways and receptors and deemed the risk to be low as long as on-site procedures are followed. The Applicant has produced an Odour Management Plan (OMP) which will be regularly reviewed. The OMP has been incorporated into the operating techniques table in the Permit and is therefore enforceable. Our standard odour condition has also been included in the Permit.

5.3 Assessment of impact to surface and ground water

Following pollution incidents at the site and observations made by NRW officers, we did not consider that the drainage information provided with the application accurately reflected what was on site. A request for a full drainage survey to be carried out was made via a Schedule 5 Notice on 04 June 2018. Additional information was also requested to clarify the number and location of emission points from site to surface water and/or land and the capacity and construction method of the two surface water lagoons.

Following discussions with the Applicant on 02 January 2019 It was agreed that as long as a drainage plan was provided that clearly showed the existing site drainage, and all existing emission points, without any proposed drainage that has not yet been constructed then a full drainage survey would not be required. Drainage plan ref 14150 600 L provided on 10 January 2019 has been used as the basis for assessing the drainage on site.

The development on site was planned in different phases. Phases one and three have been completed, whilst phase two has been put on hold. Phase two will include the surfacing of the car park area and connection of this area of site to the surface water drainage system. When phase two has been completed some of the emission points currently on site will no longer exist. As there is no known timescale for this work, the Applicant was advised to include all emission points in their application, even if they are deemed as temporary. When work has been completed on site, any redundant emission points can be removed from the permit, via a variation. We have included a pre-operational condition for future development within the permit (PO1), requiring the Applicant to provide a written proposal and method statement for the Phase two works, for NRW approval before any work can commence on this stage of the drainage development. An updated as-built drainage plan must be provided to NRW once the Phase two work has been completed.

There are currently four emission points to land, draining to roadside ditches and two going to surface water. All are discharges of clean uncontaminated surface water only. This includes temporary emission points referred to above, which will likely be removed from the permit at a later date.

The new surface water lagoon has a storage capacity of 810m^3 (810,000 litres). There are currently three inputs into it, two of which will be removed once the Phase two drainage works have been completed. To the north of the lagoon is an underground cellular attenuation system with a storage capacity of 835m^{3,} to decrease the rate of flow into the surface water lagoon. The outflow from the cellular storage will run to the new lagoon, which will remain in place following the completion of all drainage works. The outfall from the lagoon will be regulated with a hydrobrake of 12 litres/second.

The existing surface water lagoon, alongside the entry road, has a storage capacity of 179m^3 (179,000 litres). There is one input into the lagoon from the drainage line that runs along the entrance road. The capacity has been calculated from land survey information. The flow from the outfall is regulated at a manhole fitted with a hydrobrake of 5l/s.

The outfalls from the two surface water lagoons join at grid reference 327898, 352138 before crossing via a pipe, under Gwernygaseg Road. This connects to a stream which is a tributary of the River Gwenfro, approximately 600 metres south-east of the site.

The surface water lagoons were constructed using on-site sub soil materials, as such they are not considered to be impermeable. The Applicant has proposed, on 10 January 2019 that they line both lagoons using a waterproof liner system to ensure that they are fully impermeable. This has been added to the permit as an improvement condition for completion by the end of June 2020. This will ensure that surface water is only released from the lagoons in a controlled manner via the hydro brakes and in the event of a milk spillage, or accident on site all fluids can be contained in the lagoons.

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent pollution of ground and surface water.

5.4 Emissions to sewer

All process effluent and foul water is discharged to foul sewer under a Welsh Water Trade Effluent consent. As such there is no effluent treatment plant on site. We have not imposed any emission limits or monitoring requirements for emission to sewer on the Applicant, as these will be controlled by the Trade Effluent consent.

5.5 Noise Assessment

Through our consultation process we were made aware of potential noise issues from the facility by the local authority. Their Environmental Protection team previously identified a statutory nuisance being caused by the blue box chiller units on the site (which provide cooling to the pasteurised milk). An abatement notice was issued which

the Company duly complied with by relocating the chiller units, after several noise mitigation solutions had been tried. The Council's Planning department advised that there are noise conditions attached to all of the operational planning permissions and that planning permissions issued in 2015 and 2016 are subject to requirements for noise mitigation measures including bunding and additional acoustic fences to be provided prior to first use of the development on site.

Following contact from two local residents who expressed concerns about the site, they were given the opportunity to provide comments on the application in August 2017, after our consultation period. They consider that noise issues are ongoing at the site during both day and night. Further information about the concerns raised can be found in Annex 3. The nearest residential properties are approximately 35 metres to the east and 70 metres to the west of the site.

We requested via the Schedule 5 notice issued on 19 July 2017 that Tomlinson's carry out a current noise assessment of operations on site, in line wit*h BS 4142:2014 Methods for rating and assessing industrial and commercial sound*, and that a Noise Management Plan (NMP) be produced. The Applicant provided an Environmental Noise Assessment of the Phase 1 and Phase 2 cold store extension and blow moulding building extension dated 29 July 2016, on 14 August 2017. This document was written for the local authority at the planning stage and was completed prior to the extension works being carried out on site. The Applicant was advised that we required an assessment of the current noise levels on site and that this would still have to be completed.

A noise management plan was provided on 14 August 2017. A full review of this was not carried out until the results of the noise survey had been provided.

A proposed methodology for carrying out the noise assessment was provided by AIRO Ltd on 19 December 2017. This methodology was reviewed internally and a meeting held with AIRO on 11 January 2018 to discuss any concerns. Feedback was provided to AIRO in writing on 18 January 2018 and they provided an updated methodology on 05 February 2018.

The noise assessment was rescheduled several times due to unsuitable weather conditions, and was carried out from 11-13 April 2018. A written report was provided by AIRO on 12 June 2018. We assessed the report, along with the report previously provided, based on the assessment carried out in 2016.

Appendix C, of the proposed methodology provided on 05 February 2018 stated that measurements would be made at four different locations. If permission to measure at nearby residential properties was not given, alternate locations as close as possible to the properties and at no greater distance from the dairy were to be adopted. A plan was included showing proposed measuring points. However, no indication was given in the report provided on 12 June 2018 as to what locations were actually used during the survey. The transcript of observations provided in Appendix B of the report lists eight different positions, the locations of which were not provided. Information about the monitoring locations used was subsequently provided on 14 January 2019.

During the survey, the dairy was partially shut down for one half hour period in the night (03:30-04:00) and one in the day (14:00-14:30) in order to establish residual and subsequent specific noise levels at receptors. No indication as to what the partial shutdown entailed was provided. There is considerable variation in sound levels over both the daytime and night-time periods so it is unlikely that a single partial shutdown of just thirty minutes is representative of the residual sound level in the absence of the site operating. During the meeting held with AIRO on 11 January 2018 it was requested that operations should be shut down for at least an hour during both daytime and night time.

Based on the location of the site we do not agree with the context argument in AIRO's report that the residential properties identified as sensitive receptors lie within a predominantly industrial area. The dairy lies on the north-east side of Five Crosses Industrial Estate, with open countryside to the east. For example, monitoring location 4 lies on the periphery of the industrial area and is immediately adjacent to the rural area with no other obvious industrial sound sources. There is no indication that rating penalties for intermittency and impulsivity as defined in BS4142:2014 have been considered and/or applied. Based on definitions in BS4142:2014, we would expect that corrections for specific sound characteristics could be applied to sources

associated with operations at the dairy, or as a minimum, +3dB for "…specific sound features characteristics that are neither tonal nor impulsive, though otherwise are readily distinctive against the residual acoustic environment." There is also no indication as to whether other businesses on the industrial estate operate on a 24-hour basis.

Using BS4142:2014 a difference of around 5+dB between the rating level and measured background sound level is likely to be an indication of an adverse impact, depending on the context. On the basis of the results presented in Table 1 of the 2018 Environmental Noise Assessment report by AIRO Ltd it cannot be concluded that the dairy will not have an adverse impact on sensitive receptors located nearby. Furthermore in Table 1 of the 2018 report, the specific sound levels are reported as an upper limit, middle estimate and lower limit. This approach adds a further layer of uncertainty to the results, when in fact BS4142:2014 simply requests the specific sound level and rating levels to be expressed as a "equivalent continuous A-weighted sound pressure level…" and for the rating level to be expressed as the "specific sound level plus any adjustments for the characteristic features of the sound".

Feedback was provided to AIRO on 20 December 2018, detailing how we do not consider that the noise survey undertaken in April 2018 meets the requirements of BS 4142:2014.

A response was received from AIRO on 14 January 2019. A plan was provided showing the location of where noise measurements were made. It was confirmed that during the temporary and partial shutdown of the dairy between 03:30-04:00 and 14:00-14:30 on the 12 April 2018, vehicle movements ceased and bottle shredding stopped in the blow moulding building. The dairy itself was not shut down. AIRO does not consider that tonal penalties should have been applied based on the contextual location of the survey points. They believe the bakery that operates on the industrial estate is also a 24/7 operation.

We contacted Wrexham County Borough Council (WCBC) on 18 June 2018 having been advised by a local resident that the Council had recently carried out some noise monitoring at a residential property to the north-west of the site. We requested a copy

of the results and these were provided. We assessed the data from the Council's monitoring exercise in conjunction with the AIRO report. A comparison of measurements made by WCBC from 3 - 11 May 2018 with measurements included in AIRO's 2018 report indicate night time ambient sound level mode values of 44dB compared to 39dB whilst daytime mode values were 48dB compared with 47dB. In summary, levels recorded by WCBC were higher than those recorded by AIRO, particularly at night-time.

Based on the above discussions of this issue, we consider that there is insufficient information in the 2018 environmental noise assessment provided by AIRO to conclude that the dairy has a low noise impact at nearby residential receptors. There is also insufficient information provided in the original 2016 report to derive a robust residual sound level at residential receptors prior to the expansion of the site taking place. At present we also consider that there is insufficient evidence to demonstrate that the site is causing an unacceptable level of noise. We have received complaints about noise from the site, but to date none have been substantiated.

A site meeting was held at Tomlinson's Dairy on 25th April 2019 to discuss potential issues of concern in relation to noise complaints. Observations and measurements, using a sound level meter were taken by NRW Regulatory Officers during a site walk to allow an assessment of current site operations with respect to potential for off-site impacts. On the basis of observations made, and measurements taken as well as the noise assessments discussed above it has been decided that an improvement condition relating to noise should be included in the Permit (IC2).

The Operator shall use Best Available Technique (BAT) so as to prevent or where that is not practicable to reduce emissions of noise and vibration from the installation. As part of the improvement condition, Tomlinson's are required to identify and rank all sound sources and characteristics on site (including tonality, impulsivity, intermittency), both in terms of dB(A) and character at complaint, site boundary or other reference positions against existing background levels. Noise control options must be identified and a schedule of noise reduction versus cost drawn up.

The permit also includes our standard noise condition (3.4.1) requiring activities on site to not cause noise pollution outside of the site boundary. This will be used to drive

improvements if it is deemed that the site is causing unacceptable noise levels once the permit has been issued. The NMP provided on 14 January 2019 has also been reviewed and has been incorporated into Table S1.2 of the Permit as an operating technique, so is enforceable. Following the completion of IC2 referred to above, the Applicant is required to review and update the NMP (IC3) and submit it to NRW for review.

5.6 Impact on Habitats sites, SSSIs, non-statutory conservation sites etc.

Screening of the local area shows the following designated sites within the relevant distances for an EPR installation with discharges to air.

European Protected Sites (within 10km)
SAC - Berwyn and South Clwyd Mountains – 1.3km away
SAC - Johnstown Newt Sites - 5km away
Ramsar - Midland Meres & Mosses (Phase 2) - 8km away

SSSIs (within 2km)
Ruabon/Llantysilio Mountains and Minera - 1.3km away

Local Wildlife sites (within 2km)
Roseburn Fields – 0.3km away
The Smelt – 0.5km away
Plas Mostyn Mawr – 0.4km away
Cae Plas Mostyn Bach – 0.7km away
Pen-Y-Nant, Minera – 0.9km away
Afon Gwenfo – 2km away
Glascoed Wood – 1.2km away
New Brighton – 1.2km away
Graig Fawr, Minera – 1.3km away
Mount Zion – 1.6km away
Bwlchgwyn Quarry – 1.8km away
Nant y Frith – 2km away
Old Farm – 1.7km away

There are no National nature reserves or Local Nature reserves within the screening distance.

Ancient woodland

Twenty Two areas have been identified within a 2km radius, the nearest being 0.5km away.

A full assessment of the application and its potential to affect the sites listed above has been carried out as part of the permitting process. We consider that the application will not affect the features of the sites.

The Applicant submitted a H1 risk assessment, as discussed in section 5.1. However this did not include an assessment of NOx emissions against the relevant environmental quality standards for designated sites. When these ecological standards are added to the H1 assessment the short term PC is greater than 10% of the short term environmental standard, and the long term PC is greater than 1% of the long-term environmental standard for protected conservation areas. On this basis detailed modelling is required for the predicted releases of NOx against short term Critical Levels (CLes) set for the protection of vegetation and ecosystems for the SACs, RAMSAR and SSSI that fall within the relevant screening distances.

We have checked the background concentration of NOx at Ruabon/Llantysilio Mountains and Minera SSSI, which underpins the Berwyn and South Clwyd Mountains SAC, using data from DEFRA's website. At grid reference 326500, 351500 on the eastern edge of the protected site the figure is 6.6 $\mu g/m^3$. Using this figure the potential short term impacts of NOx do not screen out. However, DEFRA background data is based on monitoring from 2015. The dairy was already operational at this time so emissions from the boilers will be included in the background data and there is an element of double counting. If the background concentration figure is used as the PEC then the potential impacts do screen out. H1 is also considered conservative in its assessment of potential impacts.

The prevailing wind direction in the UK is from the south west. As Ruabon/Llantysilio Mountains and Minera SSSI is located to the south west of the installation, under the

prevailing wind conditions releases from the Tomlinson's site would be blown away from the SSSI.

The other SACs and RAMSAR sites are 5km and 8km away and it is considered that potential short term impacts of emissions at these sites will be insignificant based on the distance from the dairy and the small size of the boilers.

Both of the boilers are of small capacity, and fuelled by natural gas. There are no other air emissions from the site. We have decided not to ask the Applicant to undertake detailed modelling of short term impacts on this occasion based on the above.

The long term PEC for NOx is less than 70%, therefore detailed modelling is not required for long term CLes at Natura 2000 sites as an exceedance of the CLes is considered unlikely. No further assessment is required.

For the non-statutory sites (ancient woodlands and local wildlife sites) the short and long term PCs for NOx are less than 100% of the Cle so we are satisfied that the operation of the Installation will not cause significant pollution at these sites.

Assessment of Likely Significant Effect:

The project has been screened for likelihood of significant effects and, taking account of the advice received from protected sites advisors, is considered not likely to have a significant effect on any Natura 2000/Ramsar site.

6 Setting ELVs and other Permit conditions

6.1 Emission Limits

We have decided not to set emission limits in the permit. The boilers now both fall under the requirements of the Medium Combustion Plant (MCP) Directive, but as existing plant i.e. they were in operation prior to the 20 December 2018, they are not

required to be permitted as MCPs until 01 January 2029. At this time emission limits and monitoring requirements will be added to the permit.

Emissions to surface water and land are of clean, uncontaminated water only. All emissions to sewer will be in line with the site's Trade Effluent Consent.

6.2 Reporting

We have specified the reporting requirements in Schedule 4 of the Permit to ensure data is reported to allow timely review by Natural Resources Wales. This will enable us to ensure compliance with permit conditions and to monitor the efficiency of material use and waste recovery at the installation.

ANNEX 1: Pre-Operational Conditions

We have included a pre-operational condition for future development in the permit. Further drainage works are planned on site but timescales are currently unknown.

PO1	Phase 2 drainage works	At least two months prior to Phase 2 drainage works being carried out on site, a proposal and method statement must be submitted to Natural Resources Wales for approval. On completion of the works the as built site drainage plan shall be updated.

ANNEX 2: Improvement Conditions

We have included the five improvement conditions below, in the permit.

IC1	The two surface water lagoons shall be lined using a waterproof liner system to ensure that they are both fully impermeable. Before this work is carried out a proposed method statement and liner specification must be submitted to Natural Resources Wales for approval.	Method statement to be submitted within four months of permit issue All work to be completed by 30/06/2020
IC2	The Operator shall use Best Available Techniques (BAT) so as to prevent or where that is not practicable to reduce emissions of noise and vibration from the installation, in particular by identifying contributory site sound sources and characteristics (including tonality, impulsivity, intermittency) and ranking the sources – both in terms of dB(A) and character at complaint, site boundary or other reference positions against existing background levels. Based on the above, the Operator shall: • Identify **all** potential noise sources within the dominant machine/process • Rank these sources – dB(A) and character • Establish the noise control options for the dominant source; repeat for the next most dominant sources… • Draw up a proposed schedule of noise reduction v cost and timescales for implementation. A written report demonstrating how this has been achieved shall be submitted to NRW for review and approval.	Within six months of permit issue
IC3	The Operator shall carry out a review of their Noise Management Plan (NMP) following completion of IC2 and make any necessary updates to it. The revised NMP shall be submitted to NRW for review.	Within two months of completion of IC2
IC4	The Operator shall produce a written procedure for assessing milk wastage for all parts of the Installation and to identify any possible improvements. A written report shall be provided to NRW outlining the procedure and any improvements identified, including a proposed timescale for implementation.	Within 12 months of permit issue
IC5	The Operator shall carry out a full review of energy and water usage at the Installation, which shall identify any improvements that can be made and a proposed timescale for implementation. A written report shall be submitted to NRW for approval.	Within 12 months of permit issue

ANNEX 3: Consultation Reponses

A) Advertising and Consultation on the Application

The Application has been advertised and consulted upon in accordance with Natural Resources Wales Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our draft decision is summarised in this Annex. Copies of all consultation responses have been placed on Natural Resources Wales public register.

1) Consultation Responses from Statutory and Non-Statutory Bodies

Response Received from Wrexham County Borough Council (WCBC)	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
Environmental Protection (EP) previously identified a statutory nuisance being caused by the Blue Box Chiller Units on the site (which provide cooling to the pasteurised milk). An abatement notice was issued which the Company duly complied with after several noise mitigation solutions were tried. The units in question ended up being relocated to a different area of the site where the noise output is directed across an open field away from noise sensitive properties. This relocation was sufficient to abate the nuisance caused to the occupiers of the property known as The Chase. The EP Section is currently investigating a further noise complaint alleging nuisance caused by air handling plant at the site. The EP Section requests that design and operational BAT requirements for all noise sources on the site should be incorporated into any Permit that	We requested that the Applicant carry out a full noise survey which is discussed in detail in section 5.5 Noise Assessment. The Applicant has provided a Noise Management Plan which has been incorporated into the operating techniques section of the permit. This will be regularly reviewed by the Applicant and used by NRW to assess compliance. The permit contains noise conditions 3.4.1 and 3.4.2. We have included an improvement condition, IC2, in the permit, as detailed in Annex 2.

may be issued in order to minimise the noise impact on nearby noise sensitive properties.	
Planning Control The site benefits from a number of planning permissions – both for the original dairy and for subsequent additional development, most recently in 2016. The main issue with the site is one of noise. Chiller plant initially installed at the site cause significant noise nuisance and was subject to a noise abatement notice. The occupiers of one nearby property have had constant concerns about noise and have made a number of complaints. There are noise conditions attached to all of the operational planning permissions and the three recent planning permissions are subject to requirements for noise mitigation measures (bunding and additional acoustic fences) to be provided prior to first use.	We requested that the Applicant carry out a full noise survey which is discussed in detail in section 5.5 Noise Assessment. The Applicant has provided a Noise Management Plan which has been incorporated into the operating techniques section of the permit. This will be regularly reviewed by the Applicant and used by NRW to assess compliance. The permit contains noise conditions 3.4.1 and 3.4.2. We have included an improvement condition, IC2, in the permit, as detailed in Annex 2. The implementation of any noise abatement measures imposed by planning permissions are within the remit of the Local Authority.

2) Consultation Responses from Members of the Public and Community Organisations

a) Representations from Local MP, Assembly Member (AM), Councillors and Parish / Town / Community Councils

Response Received from None received	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
N/A	N/A

b) Representations from Community and Other Organisations

Response Received from None received	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
N/A	N/A

c) Representations from Individual Members of the Public

Response Received from 2 x local residents	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
Response 1 "Tomlinson's Dairies Ltd are in breach of a number of planning conditions for example: Delay in creating bunds and erecting fencing despite phase one being in operation. A condition to allow car access was the reduction from 60 to 40mph on Gwern Y Gaseg Road. We understand and have for several months accepted the noise and inconvenience construction brings but the issues we are experiencing are all operational. Constant noise both day and night. A large number of refrigeration units start stopping independently. The machine which tows the trailers to the loading bays ending with a loud bang which echoes around the area. Vehicles and trailers left running parked on the access road again with no sound protection, as both the current fencing and laurel hedge are too low. Raised voices trying to be heard over the machinery. A pungent smell coming from the culvert which borders the site access. We are aware that Tomlinson's Dairies Ltd have submitted a noise	Planning conditions and any failure to comply with them are not within NRWs remit under EPR. The Local Authority is the current regulator for any noise issues at the site. Without an Environmental Permit in place we have no regulatory control over the site. We requested that the Applicant carry out a full noise survey which is discussed in detail in section 5.5 Noise Assessment. The Applicant has provided a Noise Management Plan which has been incorporated into the operating techniques section of the permit. This will be regularly reviewed by the Applicant and used by NRW to assess compliance. The permit contains noise conditions 3.4.1 and 3.4.2. We have included an improvement condition, IC2, in the permit, as detailed in Annex 2.

plan but the onus appears to be on the workforce, drivers and visitors – using signage all being reminded to keep noise to a minimum. Does not appear to take into consideration the impact on neighbouring properties impacted by the drone reverberating constantly".	
Response 2 "Firstly the noise emanating from the factory is continuous and of such a level that it is causing daytime and sleep disturbance. We have resided here for twelve months and it would appear that the noise has increased in volume during this time. The best way I can describe the noise is as a constant hum. I have recently parked at Tomlinson's boundary, between the factory and our home and the same noise is audible but actually seemed quieter here (at the rear car park) than it is at home. This was at 0715hrs, I can confirm that it is the same noise that we are experiencing at our property. As for whether this is 24/7 is difficult to say as building work is still progressing in the daytime, but in the evenings and early hours the noise is present. Secondly some of the external lighting positions are directly affecting us".	The Local Authority is the current regulator for any noise issues at the site. Without an Environmental Permit in place we have no regulatory control over the site. We requested that the Applicant carry out a full noise survey which is discussed in detail in section 5.5 Noise Assessment. The Applicant has provided a Noise Management Plan which has been incorporated into the operating techniques section of the permit. This will be regularly reviewed by the Applicant and used by NRW to assess compliance. The permit contains a noise condition. Any issues caused by lighting would fall under the remit of the Planning Control team at WCBC.