

# Permitting decisions

## Bespoke permit

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We have decided to grant the permit for Wisbech Potato Products Plant operated by Lamb-Weston/Meijer UK Limited.

The permit number is EPR/MP3038JY.

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 provides a record of the decision making process. It:

- highlights [key issues](#) in the determination
- summarises the decision making process in the [decision checklist](#) to show how all relevant factors have been taken into account
- shows how we have considered the [consultation responses](#).

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

Read the permitting decisions in conjunction with the environmental permit. The introductory note summarises what the permit covers.

# Key issues of the decision

## Main features of the installation

The Wisbech Potato Products plant receives and process approximately 140,000 tonnes of raw potatoes per annum for the production of par-fried frozen potato products, primarily french-fries, and associated co-products such as grey starch and peel mash. The site requires a Part A environmental permit, under the following regulations:

*Section 6.8 Part A (1) d) (ii) - Treatment and processing, other than exclusively packaging, of vegetable raw materials with a finished product production capacity greater than 300 tonnes per day*

Lorries arrive and the load is weighed at the weighbridge. Random samples are examined for quality checks. Acceptable loads are transported to the loading bays. The potatoes are directed to either the chip line or flake line, depending on the size and type of potato. The initial soil vine and sizing is done using a mechanical grader. The undersize from this can then be sent to an optical sorter to sort longer tubers to be returned to the main stream. The process removes soil clods, stones and foreign materials, and magnetically screened to remove metal objects.

The potatoes are washed in a barrel washer and then fed through to the steam peeler. The high-pressure steam treatment (typically 16 bar) causes the water under the skin of the potatoes to boil very quickly, and the skin to separate from the flesh. After peeling the potatoes are preheated to improve cut quality in the cutting process. Potatoes are pumped in water at high velocity through a series of knife blades set to the required cutting size. Potatoes are oriented in such a way that they are cut longitudinally, obtaining maximum length and minimum waste. Also, for some cut sizes (e.g. crinkle cut) mechanical cutters are used. Defects are detected with a camera and blown off with an air jet. The defect part is cut off and the chips re-enter the process.

Potato strips are subsequently blanched in hot water. After blanching the product is sprayed with a solution to stop discolouration, dextrose can also be added to ensure finished fry colour is achieved.

Pre-drying in hot air prior to the frying step improves texture and reduces oil uptake. By removing surface water the beginning of a crust is made. Oil absorption is reduced because the proportion of open pores is decreased during pre-drying due to shrinkage.

There is a coating step before par frying, if the product is a coated product. The fryer is a 2- stage fryer, with filter systems to remove fryer debris, i.e. carbonised starch which is compacted to remove oil which is reusable. After frying excess oil is removed from the product by means of blower and shaking.

After par-frying; oil adhering to the surface is removed by a vibrating belt to minimise oil uptake. The product is subsequently cooled and frozen with cold air in a number of steps. After freezing the product is graded again to remove any short strips or broken strips.

The following sections have been compared against the Best Available Techniques (BAT) Reference Document in the Food, Drink and Milk Industries, Industrial Emissions Directive, 2010/75/EU (Integrated Pollution Prevention and Control) Final Draft (October 2018) and the Environment Agency produced guidance on How to comply with your environmental permit Additional guidance for: The Food and Drink Sector (EPR 6.10) and have been found to meet BAT unless otherwise identified.

## General Management

Lamb Weston operate under an in-house Environmental Management System. The system is in place to ensure continual improvement and minimise impacts to the environment. The management system details the procedures of how the permitted operations are to be controlled and the procedures to be implemented if an emergency or pollution incident occurs.

## Odour

The food and drink processes from this site have the potential to emit volatile organic compounds (VOCs) and odour, for example, from peeling, blanching, cooking and frying processes. Emissions of dust and particulate can also be a factor from feedstock cleaning of incoming raw materials.

An odour management plan was requested as there have been previous odour complaints during 2017/18 from nearby neighbours. However Fenland Council have confirmed that despite odours being detected on occasion they are not considered to constitute statutory nuisance.

The odour management plan provided with the original application was reviewed and it was determined that the plan required additional information. A Schedule 5 notice was issued to address the missing information.

The revised odour management plan was updated in consideration of the comments raised and the methodologies presented aimed to take full account of Environment Agency guidance documentation and published Best Available Techniques (BAT) as detailed in:

- Technical Guidance Note IPPC H4, Horizontal Guidance for Odour
- Best Available Techniques in the Food, Drink and Milk Industries, Integrated Pollution Prevention and Control Reference Document, August 2006
- Best Available Techniques (BAT) Reference Document in the Food, Drink and Milk Industries, Industrial Emissions Directive, 2010/75/EU (Integrated Pollution Prevention and Control) Final Draft (October 2018)

The Applicant has identified the key risks and has mitigation measures in place to minimise the impacts. Despite meeting the criteria for an odour management plan, an improvement condition has been included to address the outstanding issues regarding contingency measures and day to day odour management.

## **Noise and Vibration**

As part of the ongoing operating and maintenance procedures implemented by the applicant, noise assessments for key operational equipment are undertaken and corrective action is taken in the event that a specific item of equipment is emitting an abnormal noise. The site is not considered to be the source of any significant off-site noise and have only received a couple of noise reports relating to faulty valves.

At this time we are satisfied that a site specific Noise Management Plan (NMP) is not required. However, the permit conditions contain a provision for the Environment Agency to request the applicant to produce and implement a NMP should the activities give rise to noise and/or vibration beyond the installation boundary.

## **Fugitive emissions**

All equipment is of suitable construction for the materials contained. Equipment is operated, inspected and maintained in accordance with the manufacturers' recommendations, in order to minimise fugitive emissions.

## **Point Source Emissions**

### Atmospheric emissions

The Applicant provided a quantitative risk assessment for the emissions of NO<sub>x</sub> from the combustion plant.

We audited the H1 Risk assessment, and whilst our outputs did not directly match the consultant's outputs, this did not affect the conclusion in that the emissions could not be screened out at insignificant using our conservative screening methodology.

The Applicant therefore provided an air dispersion modelling report to further assess the emissions. We have audited this modelling report, which was completed using ADMS 5.2. Again, although we could not directly replicate the emissions parameters used in the model, our outputs did not alter the conclusion. On that basis, we agree with the conclusions of the modelling assessment in that the emissions will not lead to significant pollution at nearby sensitive human receptors. The greatest impacts are localised to the Installation.

It should also be noted that the Installation is in close proximity to designated Air Quality Management Zones. We have had regard for the impacts of the emissions on these designations, and can conclude that

due to the siting of the emission point and the concentration of pollutants emitted, the Installation is unlikely to have any significant impact on the objectives of the AQMA.

### Surface Water/Sewer Discharges

Treated effluent is discharged to sewer under an Anglian Water Trade Effluent Discharge Consent. Due to the capacity of the system, this is also a listed activity in its own right:

*Section 5.4 Part A (1) a) ii) Disposal, recovery or a mixture of disposal and recovery of non- hazardous waste with a capacity exceeding 50 tonnes per day by physicochemical treatment*

All effluent and surface water drainage from within the production area boundary is channelled to the effluent treatment plant and does not discharge into the surface water drainage system.

Gross fat, oil, and grease may be released to wash-water in the fryer area. Following solids removal (tank over weir, and gravity settlement), all water from this area is directed to a DAF separator unit to remove fats, oil, and greases before entering into the main site drainage system to the effluent treatment plant.

There are four surface water emission points for run-off from areas outside the production area. Roof water is collected and discharges directly to the internal drainage board drain. The drainage from the car parks outside the production is collected and discharges to off-site drains, via an interceptor for oil water separation.

## **Resource Efficiency and Waste management**

### Raw materials

The primary raw materials used in the process are the incoming unprocessed vegetables and water, as well as auxiliary chemicals such as cleaning chemicals and refrigerants. Relevant data on product input, production quantities, product wastes such as soil and stones and exported animal feed, and water consumption are maintained such that product recovery and losses can be computed and tracked.

Mass balance calculations indicate a product conversion ratio (product or co-product output / raw materials processed) of 89%.

### Waste handling

The total waste produced at the site is typically 6,800,000 kg / annum which corresponds to 50 kg/tonne of product produced.

### Waste recover/disposal

Of the incoming raw materials, 90% is recovered as product or co-product, 5% is discharged as total organic carbon to effluent, and the remaining 5% is solid waste (DAF and ETP sludge, with a low toxicity and various commercial uses, or packaging/receiving wastes, such as cardboard containers, wooden crates, pallets and plastic packaging/wrap material).

### Energy usage

Electrical energy is used for processing equipment, boilers, refrigeration, lighting, computers, printers and a range of other office equipment. Natural Gas is used to fire boilers for creating steam and heating. Boiler 1 is a Cochran Thermax Single boiler generating 15 MW thermal input and Boiler 2 is a Cochran Thermax Twin boiler generating 22 MW thermal input.

The plant operates in accordance with an ISO 50001 Energy Management System (EMS) to enable the organisation to develop and implement an energy policy and related objectives, taking into account legal and other requirements to which the organisation subscribes to, and information relating to significant energy aspects. The scope of EMS extends to all site operations and products and operating the on-site wastewater treatment.

SMART (Simple, Measurable, Accurate, Realistic, Time-bound) Key Performance Indicators (KPI) are developed and applied to measure and monitor the organisation's environmental impacts. KPIs are recorded/maintained by the Engineering Manager - Utilities & Energy, or a member of staff designated by the Engineering Manager - Utilities & Energy, on a periodic basis and regularly reviewed by senior management

as a basis to monitor significant environmental impacts. There is an annual Corporate Sustainability Report which sets the sustainability targets for LWM as a total for all sites. These targets are built into the site targets for KPI's. LWMs KPI's cover the following significant environmental impacts:

- Production efficiency;
- Electricity consumption;
- Gas consumption;
- Water usage.

Achievement and progress of KPIs are recorded/maintained by the Engineering Manager - Utilities & Energy on a monthly basis and annually by senior management.

#### Water Use

Water meters have been installed on individual equipment and also groups of equipment to determine where the high usage areas are. The site water team has a program of installation and optimisation of water meters, valves, software and automation. Water usage is monitored on a daily and weekly basis via the SCADA system. Water meters are also read on a daily basis. The data is also cross checked with supplier invoices.

Water consumption is routinely monitored and compared against internal benchmarks for specific water consumption. The average calculated water consumption rate over that period is 4.3 m<sup>3</sup>/tonne, which is within the industry benchmark for potato processing published in the BREF document which is 5.1 m<sup>3</sup>/t for a well-managed plant (4.5 – 6 m<sup>3</sup>/t).

A counter-flow reuse system, in which the water flows counter-current to the product is utilised. The water flows sequentially through unit processes counter-current to the product flow. The product comes into contact with subsequently higher quality water until the final step where highest quality water is used.

Water is in a closed loop to the balance tank which is topped up as required based on pH and odour / visible water quality. All tanks refreshed approximately once every two days. All water from balance tank is directed to a vacuum based starch extraction machine to generate starch co-product, and water is then returned to the ETP.

All condensate from factory returned to de-aerator for re-use.

## Decision checklist

Aspect considered	Decision
<b>Receipt of application</b>	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.  The decision was taken in accordance with our guidance on confidentiality.
<b>Consultation</b>	
Consultation	The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.  The application was publicised on the GOV.UK website.  We consulted the following organisations: <ul style="list-style-type: none"> <li>• Local Authority - Fenland District Council</li> <li>• Health and Safety Executive</li> <li>• Sewerage Undertaker</li> <li>• Public Health England</li> </ul> The comments and our responses are summarised in the <a href="#">consultation section</a> .
<b>Operator</b>	
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.
<b>The facility</b>	
The regulated facility	We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN 2 'Defining the scope of the installation'.  The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.
<b>The site</b>	
Extent of the site of the facility	The operator has provided plans which we consider are satisfactory, showing the extent of the site of the facility. The plan is included in the permit.
Site condition report	The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports.
Biodiversity, heritage,	We have assessed the application and its potential to affect all known sites of

Aspect considered	Decision
landscape and nature conservation	<p>nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process.</p> <p>We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.</p> <p>We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.</p> <p>This installation is not considered '<i>relevant</i>' for assessment under the Agency's procedures which cover the Conservation (Natural Habitats &amp;c.) Regulations 1994 (Habitats Regulations). This was determined by referring to the Agency's guidance 'AQTAG014: Guidance on identifying '<i>relevance</i>' for assessment under the Habitats Regulations for installations with combustion processes.' There are no other emissions from the installation, thus no detailed assessment of the effect of the releases from the installation on SACs, SPAs and Ramsar sites is required.</p>
<b>Environmental risk assessment</b>	
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p>
<b>Operating techniques</b>	
General operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.</p> <p>The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.</p>
Operating techniques for emissions that screen out as insignificant	<p>Emissions of NO<sub>x</sub> from the combustion plant has been screened out as insignificant. We have audited the supplied modelling report, which was completed using ADMS 5.2. Further details are outlined further in the <a href="#">key issues</a> section.</p>
Odour management	<p>We have reviewed the odour management plan in accordance with our guidance on odour management.</p> <p>We consider that the odour management plan is satisfactory however have included an improvement condition outlined further in the <a href="#">key issues</a> section.</p>
<b>Permit conditions</b>	
Use of conditions other than those from the template	<p>Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.</p>
Raw materials	<p>We have not specified limits and controls on the use of raw materials and fuels.</p>

Aspect considered	Decision
Emission limits	<p>We have decided that emission limits are not required in the permit.</p> <p>A requirement to ensure no visible oil and grease is necessary for the car park runoff to remain uncontaminated.</p>
Reporting	<p>We have specified reporting in the permit.</p>
Improvement programme	<p>Based on the information on the application, we consider that we need to impose an improvement programme.</p> <p>We have imposed an improvement programme to ensure that:</p> <ul style="list-style-type: none"> <li>• The operator shall further develop the existing odour management plan (OMP) for approval in writing by the Environment Agency. The revised plan shall ensure the following are robustly addressed: <ul style="list-style-type: none"> <li>- Determine at which point the contingency measures come in to place and appropriate timescales</li> <li>- Outline the day to day measures for identifying odour and contingency measures</li> <li>- Outline the additional measures in place in the event of an incident to prevent plant shutdown and minimise odour</li> <li>- Ensure that the odour management plan is in an accessible format to be used day to day by plant operatives</li> </ul> </li> <li>• The operator shall carry out a comprehensive energy efficiency audit at the installation and use the results to devise a programme of quantitative improvements to demonstrate BAT.</li> <li>• The operator shall submit an assessment of Stages 1 – 3 within the EC Commission Guidance on baseline reports to determine whether baseline reference data is required for ‘relevant hazardous substances’ (RHS).</li> </ul>
<b>Operator competence</b>	
Management system	<p>There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.</p> <p>The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.</p>
Relevant convictions	<p>The Case Management System been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.</p>
<b>Growth Duty</b>	
Section 108 Deregulation Act 2015 – Growth duty	<p>We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to</p>



<b>Aspect considered</b>	<b>Decision</b>
	<p>development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</p> <p>We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.</p>

## Consultation

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public and the way in which we have considered these in the determination process.

### Responses from organisations listed in the consultation section

<b>Response received from</b>
Public Health England
<b>Brief summary of issues raised</b>
<p>It was noted that whilst the site is not located within an AQMA, it lies 500-600 metres distant from two AQMAs declared for PM10 (Wisbech AQMA 2) and NO2 (Wisbech AQMA 3). We request that the regulator is reassured that cumulative air quality impacts have been taken into consideration from other industry in the vicinity.</p> <p>The nearest residential receptors are within 100m north-west of the site. The applicant has not included an assessment of noise. We request the regulator is reassured that noise has been suitably assessed and that an investigation and complaints procedure is in place. We would expect that if any complaints have been raised regarding this matter, that they have been logged by the local authority.</p>
<b>Summary of actions taken or show how this has been covered</b>
<p>Please refer to the <a href="#">key issues</a> section regarding air quality assessments.</p> <p>Following a qualitative noise assessment, it was determined that a noise management plan and noise impact assessment are not required.</p>

<b>Response received from</b>
Anglian Water
<b>Brief summary of issues raised</b>
<p>The company currently discharge a significant trade effluent flow into Anglian Water's West Walton WwTW (serving the Wisbech, Cambs area). The environmental permit for this works includes numeric conditions for both BOD and COD – both concentration standards and minimum percentage removal rates, these are set under the UWWTD. The impact on compliance with these conditions must be considered by the Environment Agency when permitting this installation, for example any potential increase in hard COD (not readily degradable) must be considered in the context of meeting the COD removal requirements. There may also be issues with elevated levels of ammonia and phosphorous in the treated trade effluent.</p> <p>I understand that the company is currently engaging Anglian Water regarding flow. Any increase in flow can obviously only be accommodated if there is capacity within the sewerage network and at West Walton WwTW. This work is ongoing.</p> <p>We have no comments to make regarding water resources or any designated site that Anglian Water may have an interest in.</p>
<b>Summary of actions taken or show how this has been covered</b>
No action required – There is no increase in discharge as a result of this permit determination.

<b>Response received from</b>
Fenland District Council
<b>Brief summary of issues raised</b>
This response is to advise the EA of odour complaints during 2017/18 from nearby neighbours. Although odours from Lambweston have been detected on occasions at neighbouring properties (those on Malt Drive Wisbech and roads off) we have not determined these events to constitute statutory nuisance.

<b>Summary of actions taken or show how this has been covered</b>
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No action required. The Senior Environmental Health Officer at Fenland Council reported on 27 November 2019 that they have received odour complaints in November 2019 which were investigated but the complaints were not considered to constitute statutory nuisance.
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No other responses were received.