

## Environment Agency permitting decisions

### Bespoke permit

We have decided to grant the permit for Kettering Site operated by Alpro (UK) Limited.

The permit number is EPR/MP3031WD.

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.

### Description of the main features of the Installation

The Kettering Site is located at Latimer Business Park in Burton Latimer, Northamptonshire at approximate National Grid Reference 489460, 275770. The site is set on an industrial park and is bound to the north by the Kettering bypass, and to the east, south and west by industrial units. The town centre of Burton Latimer is located approximately 1.3km to the south east of the installation.

This Environment Permit is for the following schedule 1 activity: *Section 6.8 Part A(1)(d)(ii) Treatment and processing, other than exclusively packaging, of only vegetable raw materials with a finished product production capacity greater than 300 tonnes per day.* In addition, all process effluent is pre-treated on site at the waste water treatment plant prior to discharge to the public foul sewer under a trade effluent discharge consent from Anglian Water. Therefore the permit includes the additional schedule 1 activities: *Section 5.4 Part A(1)(a)(i) Disposal of non-hazardous waste in a facility with a capacity exceeding 50 tonnes per day by biological treatment* and *Section 5.4 Part A(1)(a)(ii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment.*

The facility operates six product lines producing soya and non-soya based drink products. The plant has a capacity to produce approximately 600m<sup>3</sup> per day. The site is currently in operation however expansion has meant that the production capacity now exceeds the threshold where a permit is required. Total production capacity is increasing to 247 tonnes per day for soya and 260 tonnes per day for non-soya.

Soya beans are delivered to the site and blown into storage silos. On the soya drink product lines, soya beans are transported from the bean cleaning room to the soya milk factory via pipe work. The soya beans are blanched and ground, then passed through a centrifuge to extract protein from the bean. The resultant milk is then homogenised and cooled prior to being stored in a base milk storage tank. The process for the production of non-soya based drinks is similar; however base mixes are delivered to the site as formulation pastes. Additives and water are added to the soya milk or to the formulation pastes in the formulation tanks. The resultant formula is then pasteurised and sterilised prior to being cooled and then homogenised. The formula is then fed to filling machines, where the packaging cartons are

assembled, sterilised and filled. The product is then packed prior to being stored in a refrigerated or ambient warehouse depending on the packaging used.

Other activities on site include a gas fired boiler operated on site for the generation of steam. Other associated activities include warehousing and storage of raw materials, and general waste management (storage and limited preparatory treatments such as compacting and baling). There are no discharges to surface water from the site.

One site designated as a Ramsar and Special Protection Area, Upper Nene Valley Gravel Pits, is located 7.5km to the southeast of the site. A Site of Special Scientific Interest is located 950m to the east of the site at Southfield Farm Marshes.

ALPRO (UK) Limited, have developed and implemented an environmental management system (EMS) to the ISO 14001:2004 standard. The EMS is subject to third party audits to ensure continued compliance to the standards requirements.

## **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**

- Key issues; Point source emissions; Odour; Site Condition Report
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

## Key issues of the decision

### Point source emissions

#### Emissions to Air

The combined thermal input capacity of the two natural gas fired boilers is 13.5 MWth. The Environment Agency does not normally set Emission Limit Values (ELVs) for boilers of this size. The Combustion Sector Guidance Note (SGN) EPR 1.01 identifies benchmarks for boilers of <100MW thermal input, but these are not generally applied to small boilers such as these. Due to this, and the results from the operator's H1 air screening that showed no significant adverse effect on the environment from the simultaneous operation of all combustion units, the Environment Agency has decided not to set ELVs for emissions from the boilers (emission points A1 and A2). This decision is in line with the approach taken at similar permitted installations.

One site designated as a Ramsar and Special Protection Area (SPA), Upper Nene Valley Gravel Pits, is located 7.5km to the southeast of the site. A Site of Special Scientific Interest (SSSI) is located 950m to the east of the site at Southfield Farm Marshes.

No assessment was required on sites of heritage, landscape or nature conservation, and/or protected species or habitat due to the size of the combustion plant. The combined thermal input of 13.5 MWth is below the 20 MWth threshold and therefore the relevant distance criteria of 500 metres was applied for a European site in accordance with AQTAG014 "Guidance on identifying 'relevance' for assessment under the Habitats regulations for installations with combustion processes". This installation is therefore not considered 'relevant' for assessment under the Agency's guidance. There are no other air emissions from the installation, thus no detailed assessment of the effect of the releases from the installation on SPAs and Ramsar sites is required.

The same criteria can be applied to SSSI's and non statutory sites therefore no further assessment is required. An Appendix 11 was completed and sent to Natural England for Information only. An Appendix 4 was also saved to our Electronic Document and Records Management system (EDRM) for audit purposes.

#### Emissions to Sewer

All process effluent is pre-treated on site at the effluent treatment plant prior to discharge to the public foul sewer under a trade effluent discharge consent from Anglian Water, a copy of which was submitted with the application. The discharge consents impose limits on temperature, pH, suspended solids, chemical oxygen demand (COD), sulphate and total non-volatile matter content. We have considered the types of raw materials and chemicals that the operator has listed as being used at the installation and which have the potential to contain *Hazardous Pollutants* as listed in our H1 Annex D

guidance. We are satisfied that the release of any such substances, for example, mercury in the caustic soda used for cleaning purposes, will be appropriately controlled via the conditions of the water company trade effluent consent. There are three drainage systems in place on the site; surface, foul, and effluent treatment plant drainage. Entry points to each of the systems (grates, manholes, etc.) are colour coded to enable easy identification and to aid in prioritising spill responses.

All internal production areas, the energy centre, and high risk external areas, such as the waste handling area, are connected to the effluent treatment plant. Surface water drains serve the remaining external areas of the site. Foul drains serve the outflow for the effluent treatment plant and office areas. Prior to being fed into the effluent treatment plant the process effluent is directed to a below ground storage sump. The sump is approximately 3.5m in diameter and 5m in depth and is constructed from reinforced concrete.

Inspections of the site drainage systems are completed every two years by an external company, the results of which will inform the reactive and preventative maintenance plan.

## Odour

The activities on site have the potential to be odorous. There are commercial industrial receptors as close as 50m from the site boundary. The closest residential receptors are 150m north of the site boundary.

The operator has provided a comprehensive Odour Management Plan (OMP) for the facility (report reference: *5311-006 Odour Management Plan: Alpro (UK) Limited. ECUS Limited. 13<sup>th</sup> March 2015*).

### Sources

Table 001 in the OMP identifies the potential odour sources and release points on site. In summary, the following parts of the activity have been identified as having the greatest potential to generate odour:

- Raw materials – bulk storage of materials;
- Production of soya-based products – soya beans; additives and other ingredients;
- Production of non soya-based products – formulation pastes and additives;
- Production processes - raw materials and associated vapours from production;
- Waste – process effluent; putrescible wastes within residual waste stream.

### Odour controls

Table 003 in the OMP summarises the operational control measures undertaken on site to minimise odour from all identified release points on site. The measures described include, but are not limited to the following:

Managing inventory of raw materials	<ul style="list-style-type: none"> <li>Majority are not considered to be odorous (e.g. sugar, calcium, stabilisers)</li> <li>All subject to quality assessment prior to acceptance to ensure they are received in a suitable condition</li> <li>Raw materials which may be odorous (e.g. fruit concentrate, coco powder) are stored in palletised sealed drums or sealed bags</li> <li>At point of deliver all materials are loaded directly from the vehicle into an internal warehouse or silo</li> <li>Stock rotation ensures the oldest products are used first</li> <li>Storage conditions are optimised, avoiding direct sunlight and controlling temperatures</li> </ul>
Containment and abatement	<ul style="list-style-type: none"> <li>Used for odour management at the waste water treatment plant</li> <li>Areas likely to give rise to odour (e.g. DAF plant, anaerobic tanks, balancing tank) are sealed with air extracted to abatement plant prior to exhausting to atmosphere</li> <li>Inspection and maintenance regime in EMS</li> </ul>
Controlling evaporation	<ul style="list-style-type: none"> <li>All raw materials are stored out of direct sunlight</li> <li>Liquid concentrates and formulation pastes are stored in sealed containers</li> <li>Formulated products are stored in chilled containers</li> <li>Transfer of raw materials into the pre-mix area is undertaken in sealed containers</li> </ul>
Dispersion	<ul style="list-style-type: none"> <li>Venting of air from production areas occurs via several extract fans to the side and roof of the building at 10m</li> <li>Steam from blanching process is vented to atmosphere at 12m high</li> <li>Local dust extraction exhaust at 10m high</li> <li>Silo venting is short bursts and sporadic</li> <li>Air is vented from bulk silos and process waste storage silos with vents at 12m high</li> <li>Odorous elements of the effluent treatment are enclosed. Emissions from the abatement system are dispersed by a 12m stack</li> </ul>
Reducing impacts	<p>Control measures in place include:</p> <ul style="list-style-type: none"> <li>P-095-5-KET Waste Water Treatment Plant</li> <li>P-095-06-KET Waste Management Procedure</li> <li>P-095-04-KET Communications Procedure [to manage odour complaints]</li> </ul>
General operational controls	<ul style="list-style-type: none"> <li>Daily cleaning regimes to remove product which is not fit for sale and any other accumulation of wastes from production areas</li> <li>Secure external storage area for production waste which is frequently serviced by external contractors</li> </ul>

	<ul style="list-style-type: none"> <li>• Provision of equipment for cleaning in the waste management area</li> <li>• Frequent removal of sludges arising from waste water treatment from the site by road tanker</li> </ul>
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We are satisfied that the OMP is sufficient to minimise the potential for odour emissions from the facility to cause nuisance outside the installation boundary. The Operator is required to operate at all times in accordance with the site OMP to prevent pollution arising from odours and implement all mitigation measures in line with the plan.

We, the Environment Agency, have reviewed and approved the Odour Management Plan and consider it complies with the requirements of our H4 Odour management guidance note. We agree with the scope and suitability of key measures but this should not be taken as confirmation that the details of equipment specification design, operation and maintenance are suitable and sufficient. That remains the responsibility of the operator.

## Site Condition Report

A Site Condition Report (SCR) has been submitted as part of the application. Historical maps for the period 1885-2014 indicate the site has been used predominantly for agricultural purposes until 2006 when a factory was built. There have been no recorded pollution incidents on the site and in addition no recorded land pollution incidents adjacent to the site. During a site walkover (November 2014) no obvious evidence of historic or current contamination was noted.

The entire site area is covered in impermeable concrete pavement that has a gradient toward the surface water drainage system. The concrete is in good condition and subject to routine inspection and maintenance.

Limited records of intrusive investigations are noted to an area at the northern boundary in connection with the construction of the Kettering By-Pass. However, these investigations do not provide soil or groundwater analysis. Ground investigations were undertaken during April 2014, prior to the construction of the extension to the factory. The results of these investigations indicate that there is no evidence of pollution in the soil beneath the site.

There are no anticipated emissions to ground, surface water or groundwater. All surface water runoff and process effluent is discharged to sewer.

Interceptors are present on the surface water system, which are inspected and maintained on an annual basis. High risk external areas (such as the waste management area) are drained to the onsite waste water treatment plant. All internal drainage (i.e. everything within production / building areas) flows to the onsite waste water treatment plant which also features a buffer

tank to hold out of specification effluents. An inflatable drain block is located on the surface water drainage discharge point from the site. This can be inflated should an incident occur to stop the release of effluent to the surface water drainage system.

All tanks or containers with the potential to cause pollution are located on hard standing. Liquid process chemicals are all contained within impermeable bunds. All bulk liquid chemicals such as caustic and nitric acid are stored in tanks located in areas with secondary containment. Bulk delivery of chemicals is undertaken in accordance with standard operating procedure to avoid emergency situations.

Taking these points into consideration and the low likelihood that land pollution will occur during the future operation of the site we are satisfied that the site description and baseline data is representative of the site.

## Annex 1: decision checklist

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

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>Receipt of submission</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 commercial confidentiality.	✓
<b>Consultation</b>		
Scope of consultation	<p>The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.</p> <p>For this application we consulted the following bodies:</p> <ul style="list-style-type: none"> <li>• Health and Safety Executive</li> <li>• Kettering District Council – Planning department</li> <li>• Kettering District Council – Environmental Health</li> <li>• Public Health England</li> <li>• Director of Public Health</li> </ul>	✓
Responses to consultation and web publicising	<p>The web publicising and consultation responses (Annex 2) were taken into account in the decision.</p> <p>The decision was taken in accordance with our guidance.</p>	✓
<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 the facility after the grant of the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator.	✓
<b>European Directives</b>		
Applicable directives	All applicable European directives have been considered in the determination of the application.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>The site</b>		
Extent of the site of the facility	<p>The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility including discharge points.</p> <p>A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.</p>	✓
Site condition report	<p>The operator has provided a description of the condition of the site.</p> <p>We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED–guidance and templates (H5).</p> <p><b>Further details are given in the Key Issues – emissions to air section.</b></p>	✓
Biodiversity, Heritage, Landscape and Nature Conservation	<p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.</p> <p>A full assessment of the application and its potential to affect the site has been carried out as part of the permitting process. We consider that the application will not affect the features of the site.</p> <p>An Appendix 11 Form for recording likely significant effect (Stage 2) was completed and sent to Natural England for information. The application screens out from requiring further assessment in accordance with AQTAG014.</p> <p>As a result of this risk assessment, the Environment Agency can conclude that there is No Likely Significant Effect and no consultation is necessary.</p> <p><b>Further details are given in the Key Issues – emissions to air section.</b></p>	✓
<b>Environmental Risk Assessment and operating techniques</b>		
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	<p>The operator's risk assessment is satisfactory.</p> <p>The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant.</p> <p><b>Further details are given in the Key Issues section.</b></p>	
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes - How to comply with your environmental permit and additional guidance for the food and drink sector (EPR 6.10).</p> <p>Key operational techniques proposed by the operator include:</p> <ul style="list-style-type: none"> <li>• Use of high efficiency natural gas fired boilers;</li> <li>• Production equipment volumes are calibrated and controlled using high and low level sensors, which supply information to the production control system;</li> <li>• Process effluent is pre treated on site at the waste water treatment plant before discharge into the public foul sewer under discharge consent from Anglian Water;</li> <li>• Operational controls are in place for the operation, controlled shutdown and emergency response for the waste water treatment plant, and are documented within the management system;</li> <li>• Water is re-used in the cleaning in place systems, water towers and ammonia closed loop;</li> <li>• Routine preventative maintenance checks.</li> <li>• All tanks or containers with the potential to cause pollution are located on hard standing. Liquid process chemicals are all contained within impermeable bunds. All bulk liquid chemicals such as caustic and nitric acid are stored in tanks located in areas with secondary containment.</li> </ul> <p>The proposed techniques / emission levels for priorities for control are in line with the benchmark levels contained in the Technical Guidance Note and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs and BAT Conclusions, of the installation concerned.</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>The permit conditions</b>		
Reporting	<p>We have specified reporting in the permit.</p> <p>Annual reporting is required for annual production, energy usage and water.</p> <p>We made these decisions in accordance with SGN EPR 6.10 for the Food and Drink sector.</p>	✓
Emission limits	<p>We have decided that emission limits should not be set for the parameters listed in the permit.</p> <p><b>Further details are given in the Key Issues section.</b></p>	✓
<b>Operator Competence</b>		
Environment management system	<p>There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.</p>	✓
Relevant convictions	<p>The National Enforcement Database has been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found. The operator satisfies the criteria in RGN 5 on Operator Competence.</p>	✓
Financial provision	<p>There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.</p>	✓

## Annex 2: External Consultation and web publicising responses

Summary of responses to consultation and web publication and the way in which we have taken these into account in the determination process.

Response received from
Public Health England – 8 <sup>th</sup> September 2015
Brief summary of issues raised
Initial H1 screening indicated that emissions of oxides of nitrogen may require more detailed assessment, residential properties relatively close to the site are potentially downwind, and potentially affected locations may have background concentrations of nitrogen dioxide higher than indicated by Defra’s modelled 1km x 1km background concentrations. Therefore, although the aggregated thermal input of the boilers is <20MW, it would be prudent to carry out further monitoring to better characterise emissions and/or further screening or modelling of emissions to ensure that health-based air quality standards will not be exceeded at nearby residential locations.
Summary of actions taken or show how this has been covered
We have carried out a full assessment of the operators H1 screening and can conclude there will be no adverse effect from the gas fired boiler air emissions from the site.

Response received from
Kettering Borough Council – Environmental Health - 7 <sup>th</sup> September 2015
Brief summary of issues raised
<p><i>Odour</i></p> <p>Between 2004 and 2010 my office received 248 odour complaints. Looking at our investigation records the odour was reported by several households in the area, and witnessed by officers only on an intermittent basis. It was not assessed to be a statutory odour nuisance under the Environmental Protection Act 1990. The odour seemed to be related to an uncovered settlement tank that was eventually covered over. There is also reference to a cockle shell abatement system being installed.</p> <p>Looking at the application information I note that now all external tanks are sealed/covered and that there is a process in place for process controls such as preventing anaerobic digestion, managing spillages, accidents etc. On this basis and the lack of complaints since 2010 I am satisfied that there are sufficient controls in place to control odour provided that the permit conditions reflect the information provided in the application.</p> <p><i>Noise</i></p> <p>The area whilst industrialised does have local noise sensitive receptors on its boundaries. Noise has been mentioned briefly in the application but I am unable to see any further noise assessment that sets out the impact of the installation on the local community, particularly for an installation that works</p>

throughout the night and has external plant. My office has only received 4 complaints of noise from the installation which were not witnessed by officers.

**Summary of actions taken or show how this has been covered**

The Environment Agency notes the concerns with regards to noise and odour emissions. Likely impacts have been assessed during the determination as unlikely to have a significant impact and therefore we have included standard conditions which require the operator to action any emissions management plan should a substantiated negative impact be notified. The management plan may then require monitoring to be implemented.

Conditions 3.3, and 3.4, concerning odour and noise are included in the permit.

The operator has provided an odour management plan for the site that we have assessed with reference to our H4 odour guidance (see above odour section for more details).

With regards to noise, we are satisfied the site poses a low risk of exposure to the local community, as per the risk assessment included in the application. Once permitted, if the site receives substantiated noise complaints Condition 3.4 will require the operator to produce and implement a comprehensive noise management plan.

**Response received from**

Kettering District Council – Planning department – 23<sup>rd</sup> September 2015

**Brief summary of issues raised**

The local planning authority has no comments or objections to make.

**Summary of actions taken or show how this has been covered**

No action taken.

We also consulted with the following bodies but no comments were received:

- Health and Safety Executive
- Director of Public Health

This proposal was also publicised on the Environment Agency's website between 21/08/2015 and 21/09/2015, but no representations were received during this period.