

# Permitting decisions

## Bespoke permit

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We have decided to grant the permit for **Tring Flour Mill** operated by **Heygates Limited**.

The permit number is **EPR/TP3339DX**.

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:

- describes the main features of the installation
- 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.

### Main features of the installation

Tring Flour Mill is a flour manufacturing facility located in Tring, Hertfordshire (centred at NGR SP 92446 13021) which produces a range of flour products suitable for consumption without further processing operated by Heygates Limited. The site has been in operation since 1945 and was previously regulated under the LAPPC regime but now requires an environmental permit following the 2013 update to the Environmental Permitting Regulations, which implemented the Industrial Emissions Directive, and redefined permit thresholds for the food and drink sector based on the maximum production capacity of the installation:

*Section 6.8 Part A(1)(d)(ii) - Treatment and processing of vegetable raw materials with a finished product production capacity greater than 300 tonnes per day or 600 tonnes per day where the installation operates for a period of no more than 90 consecutive days in any year.*

The installation primarily mills British wheat but can also receive European and North American wheat in order to manufacture a range of flour products to meet customer demands (over 80 grades of flour can be produced). The main product is bakers' flour, but other products include wholemeal for biscuits and bran for breakfast cereals. Wheatfeed by-product is forwarded into the animal feed sector. Flours are often fortified with calcium, iron, thiamine and niacin (except wholemeal) as required by regulation. Products are exported in bags and in bulk.

In its simple terms the process is a grind and sift until ready process. As such, the installation houses two Mills (A & B), each with a series of roller mills, sifters, purifiers, etc. that repeatedly operate in sequence to prepare the final product. Mill A can manufacture a range of products whereas Mill B is normally dedicated to white flour production. The stages are receipt and storage of raw materials, conditioning, cleaning, breaking, sifting and scalping, purifying, grinding, dressing and bran finishing. Once processed the products are stored and bagged prior to despatch.

The main emissions to air arise from 21 point source emissions at various stages of the process, each abated by filter sleeves (reverse jet filters). The filter sleeves of the large capacity filters are made of cloth whilst with the small capacity filters they are made of paper (cartridge type). The efficiency of the larger filters is shown by a pressure differential meter on each filter.

Surface water run-off (site drainage) and waste water from the laboratory sinks are discharged to the Thames Water combined sewer for treatment at Crossness Sewage Treatment Works. There are no routine direct discharges to water from this site.

There are two Sites of Special Scientific Interest (SSSI) within 2km of the installation; Tring Reservoirs SSSI (approx. 240m) and Pitstone Quarry SSSI (approx. 1.5km) and one SAC/SPA/Ramsar within 10km; Chilterns Beechwoods Special Area of Conservation (approx. 2.5km).

The site sits in a predominately residential area, and is sited on the banks of the Grand Union Canal (Wendover Arm).

## Key issues of the decision

The application submission contains a number of supporting documents that describe the controls and operating techniques at the installation, having regard for Best Available Technique (BAT) requirements, as specified in our guidance, and to ensure compliance with the environmental permit conditions. These key controls and techniques are described in the following sections.

### General Management

Heygates Limited does not currently operate a formal Environmental Management System (EMS) at their Tring facility but has developed systems and procedures that seem consistent with the principles of our requirements on Environmental Management. The installation has a developed a Quality Management System that is industry specific. The quality management system is substantial and extensive in order to accommodate the very large number of management schemes and codes of practice that are required either by regulation or to support the supply of products into the food chain.

The company will produce a formal EMS in accordance with our guidance, as required by the conditions of the environmental permit. This requirement has been included as an improvement condition.

### Accident Management

There is the potential for an impact upon the adjacent Grand Union Canal from accidents at the site. The operator has produced an Accident Management Risk Assessment and Plan which demonstrates that the potential site specific risks have been considered and mitigated against, as far as reasonably practicable, such as:

- Vehicle strikes with wheat silos.
- Tank failure of wheat silos.
- Overfilling of wheat silos.
- Abatement equipment failure on any vents in close proximity to the Grand Union Canal.
- Electrostatic explosion.
- Fire (and firefighting water containment).
- Flooding.
- Provisions for specialist clean up should spillages to Canal occur.

The Risk Assessment and Plan now form part of the permit as an Operating Technique.

## **Odour**

The installation has the potential to cause odorous emissions primarily through the milling process and storage of odorous raw materials (such as wheat, gluten, vitamins). The final products themselves are not significantly odorous. However, there are no known odour complaints about this site, despite its proximity to residential properties.

At this time we are satisfied that a site specific Odour Management Plan (OMP) is not required beyond the controls detailed in the management systems. However, the permit conditions contain a provision for the Environment Agency to request the applicant to produce and implement an OMP should the activities give rise to pollution caused by odour beyond the installation boundary.

## **Noise & Vibration**

The installation has the potential to emit noise from the operations undertaken on site and the plant used. However, there are no known noise complaints about this site, despite its proximity to residential properties.

As part of the ongoing operating and maintenance procedures implemented by the applicant, ongoing day to day assessments for key operational equipment are undertaken and corrective actions taken in the event that a specific item of equipment is emitting an abnormal noise.

At this time we are satisfied that a site specific Noise Management Plan (NMP) is not required beyond the controls detailed in the management systems. 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 pollution caused by noise and/or vibration beyond the installation boundary.

## **Fugitive emissions**

### Emissions to air

The applicant has identified potential sources of fugitive emissions to air from the installation could include the silo intake area, open windows and general waste storage areas. In general, fugitive losses are minimised by careful process control. Storage, handling and process plant is enclosed and fitted with LEV/bag filters as appropriate. Buildings are maintained to ensure that they remain dust tight and closed. All other operations are managed such that losses of both raw materials and products are avoided.

### Emissions to water, sewer and groundwater

The applicant states that the site has been designed to limit the risk of substances inadvertently entering surface water, foul drainage systems or groundwater. Liquids are stored in appropriate containers (such as the supplier's primary packaging or bulk storage tanks) in bunded areas or on hardstanding in designated storage areas. Spill kits are available in the unlikely event that an environmental incident may occur. Wheat and bulk product are stored in silos.

Whilst we agree with the principle of the risk assessment submitted, no details of the most recent tank and bund integrity checks were provided. On that basis, we have added an improvement condition to the permit to ensure that the tanks and bunds are fit for purpose by requesting integrity testing, undertaken by a suitably qualified engineer.

## **Point source emissions**

### Emissions to air

As stated above, the emissions to air comprise 21 vents at various locations around the mill installation. These emission points vent dust from the process into the atmosphere, via appropriate abatement. The applicant has stated that the concentration of dust (particulate matter) is below 5mg/m<sup>3</sup>, which is well below the Benchmark of 50mg/m<sup>3</sup> cited in our sector specific guidance (EPR 6.10)

The applicant initially undertook an assessment of the point source emissions to air using the H1 'screening step' methodology, which concluded that Short Term and Long Term total particulate matter emissions exceed the relevant screening criteria (as PM<sub>10</sub>) and initially could not be screened out as insignificant.

The applicant provided some justification by stating that *"estimates of the PM<sub>10</sub> fraction being approximately 0.2 of that for total particulate suggest that Long Term emissions achieve the PC/AQO for PM<sub>10</sub> and may be screened out as insignificant. However Short Term PC/AQO for PM<sub>10</sub> cannot be [screened] out as*

*insignificant. More detailed assessment indicates that Long Term PM<sub>10</sub> may be screened out at insignificant. Short Term PM<sub>10</sub> may be screened out when based on actual stack height".*

It was our view that, given the number of assumptions made by the applicant as part of this assessment, without sufficient justification, the applicant needed to undertake a further review and provided a more detailed assessment of the aerial particulate emissions by undertaking detailed modelling.

The applicant undertook detailed modelling using AERMOD and provided us with a modelling report and associated modelling files for audit.

The results of the dispersion modelling indicate that:

- the predicted impacts of annual average PM<sub>10</sub> exceed >10% of the Air Quality Objective (AQO) at specific discrete receptor locations but the resultant PEC is well below the AQO;
- the predicted impacts of 90.41 percentile 24-hr average PM<sub>10</sub> exceed >25% of the AQO at specific discrete receptor locations but the resultant PEC is well below the AQO; and
- the predicted impacts of annual average PM<sub>2.5</sub> exceed >4% of the AQO at specific discrete receptor locations but the resultant PEC is well below the AQO.

Although we do not necessarily agree with the consultant's absolute numerical predictions, considering expected modelling uncertainties, we agree with their conclusions that the installation is not likely to cause exceedances of the environmental standards for particulates at human receptors. We are also satisfied that the emission concentrations and abatement techniques represent BAT.

#### Emissions to water

The installation does not generate a significant amount of process effluent. Flour milling only uses water in initial conditioning (around 8,000 m<sup>3</sup>/pa) that remains with the product. Equipment cleaning is normally dry. There are no direct discharges to controlled water from this installation. All water including surface water and foul water is discharged into the Thames Water municipal combined sewer system that crosses under the site. Surface water (site drainage) is collected into one of two interceptors located within the site yard or flows directly into one of several drainage gullies. From the lower part of the yard (north end) the water is pumped up into the combined sewer. From the upper part of the yard (south end) water enters drain gullies connected directly into the combined sewer. Ongoing housekeeping and environmental incident programmes minimise the potential for the surface water discharge from the site to contain any environmentally damaging materials, such as:

- As part of the general housekeeping procedures used, the external cleanliness of the site is maintained through daily inspections and dry cleaning, when required.
- Third party raw material deliveries or product collections are supervised by company site personnel, who are able to respond quickly to environmental incidents in the unlikely event of occurrence.

There are no direct or indirect process emissions to groundwater from the activities operated at the installation.

#### **Efficiency**

##### Raw materials

The applicant purchases raw materials from reputable suppliers and specifies the quality control procedures that the suppliers must utilise to ensure that the materials provided to the installation are within defined quality standards. Raw materials used to produce flour & flour products are regulated by legislation. Compliance with this legislation is monitored and enforced by Defra and overseen by the Food Standards Agency. The efficient use of raw materials is a key element of process control and product yield is close to 100% on a dry mass basis. An integral part of the day-to-day supervision of production (both manual and via the automated control system), and of the planned maintenance programme, is the monitoring of the process to ensure that the installation operates effectively and efficiently with minimal process losses.

##### Waste handling

The installation generates and subsequently handles only small quantities of waste. As part of the management system these wastes are appropriately handled, segregated and stored on site according to type. The waste storage areas are appropriately designed and maintained. These areas have adequate capacity for the quantity of wastes generated.

### Waste recover/disposal

In order to maximise production yields, the installation recovers/reworks all out of specification work-in-progress product. Appropriately licensed third parties are contracted to collect and dispose of and/or recover, off site, all of the site's waste.

### Energy

The applicant has a Climate Change Levy Agreement (CCA) in place for the installation and detailed energy efficiency data is recorded. The applicant is committed to the implementation of appropriate cost-effective energy efficiency measures and, as part of a trade body initiative, has implemented an energy efficiency plan.

## 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.   |
| <b>Consultation</b>                  |   |
| Consultation                         | <p>The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.</p> <p>The application was publicised on the GOV.UK website.</p> <p>We consulted the following organisations:</p> <ul style="list-style-type: none"> <li>- Dacorum Borough Council Planning Department</li> <li>- Dacorum Borough Council Environmental Health</li> <li>- Director of Public Health</li> <li>- Public Health England</li> <li>- Health and Safety Executive</li> <li>- Thames Water</li> <li>- Canal and Rivers Trust</li> </ul> <p>The comments and our responses are summarised in the <a href="#">consultation section</a>.</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 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               | <p>We considered the extent and nature of the facility/facilities at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN 2 'Defining the scope of the installation' and Appendix 1 of RGN 2 'Interpretation of Schedule 1'.</p> <p>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.</p>  |
| <b>The site</b>                      |   |
| Extent of the site of the facility   | The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility. The plan is included in the permit.   |

| Aspect considered  | Decision   |
|--|--|
| 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, 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>We have assessed the application and its potential to affect all known sites of 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. A CRoW Act Appendix 4 form was completed and saved for information and audit. A Stage 1 HRA form was also completed and sent to Natural England for information only. The decision to do this was taken in accordance with our guidance.</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> <p>The assessment shows that, applying the conservative criteria in our guidance on environmental risk assessment or similar methodology supplied by the operator and reviewed by ourselves, all of the emissions, except emissions to air, may be categorised as environmentally insignificant.</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 do not screen out as insignificant | <p>Emissions of particulate matter (dust) cannot be screened out as insignificant. We have assessed the detailed modelling report submitted in support of the application and whether the proposed techniques are BAT.</p> <p>The proposed techniques/emission levels for emissions that do not screen out as insignificant are in line with the techniques and benchmark levels contained in the technical guidance and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs and BAT Conclusions, and ELVs deliver compliance with BAT-AELs.</p> <p>The conclusions of the modelling report also demonstrate that there is no risk of an exceedance in the relevant Environmental Standards. This is discussed in the <a href="#">key issues</a> section of this document.</p>  |

| Aspect considered          | Decision  |
|----------------------------|---|
| <b>Permit conditions</b>   |   |
| 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>• A formal Environment Management System is produced and implemented.</li> <li>• Routine visual checks of filter replacements are undertaken.</li> <li>• Containment measures on site are fit for purpose.</li> </ul> <p>These requirements have been set based on the supporting information provided with the application submission.</p>   |
| Emission limits            | <p>We have decided that emission limits are not required in the permit.</p> <p>ELVs for flour mills are not required providing that the operator has the following minimum standard of measures in place:</p> <ul style="list-style-type: none"> <li>• Documented performance checks comprising of visual check of emission points (once per shift) and pressure detection for dust abatement systems (weekly).</li> <li>• Planned maintenance programme for dust filters to include a visual check shortly after filter replacement to ensure correct installation and operation (integrity of seals etc).</li> </ul> <p>These requirements are set in the permit as process monitoring or as improvement conditions, as appropriate.</p> <p>This decision has been made in accordance with 'Revision to Agency guidance for flour millers – particulate limits/monitoring' dated 10 September 2008.</p> |
| Monitoring                 | <p>We have decided that process monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>These monitoring requirements have been imposed in order to meet our requirements for flour mills when ELVs are not set.</p> <p>We made these decisions in accordance with our guidance.</p>  |
| Reporting                  | <p>We have specified reporting in the permit.</p> <p>These monitoring requirements are imposed to record annual production, energy and water usage.</p> <p>We made these decisions in accordance with our guidance.</p>   |
| <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>   |



| Aspect considered                               | Decision  |
|---|---|
| Relevant convictions                            | <p>The Case Management System 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 our guidance on operator competence.</p>   |
| Financial competence                            | <p>There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.</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 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 and 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

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| <b>Response received from</b>  |
| Public Health England (dated 02/08/2017)   |
| <b>Brief summary of issues raised</b>  |
| <p>The regulator needs to be satisfied that the modelling results are sufficiently robust and you may wish to consider recommending actual environmental monitoring is undertaken by the operator to ensure the predicted modelling concentrations are accurate.</p> <p>Recommend that the regulator ensures that the proposed control measures, as described in the management plans, are sufficient to keep fugitive emissions to air to a minimum.</p> <p>Overall, compliance with the legislation, together with good management, should ensure that the site will present a low risk to local human receptors. Based on the application, this development does not present any obvious cause for concern.</p> |
| <b>Summary of actions taken or show how this has been covered</b>  |
| Our assessment of the modelling results and the key measures in place to control fugitive emissions are detailed in the 'Key Issues' section above.  |

No responses were received from:

- Local community via web consultation tool
- Dacorum Borough Council Planning Department
- Dacorum Borough Council Environmental Health
- Director of Public Health
- Health and Safety Executive
- Thames Water
- Canal and Rivers Trust