**C 3.3b General Requirements**

Sections C3.2 (Emissions to Air, Water and Land) and C3.4a (Emissions Monitoring) of the permit variation application deal with the identification of point source and fugitive emissions from the facility and arrangements that will be implemented to monitor those releases.

Section C2.6, Environmental Risk Assessment, of the permit variation application deals with the environmental risks posed by the proposed development and notes that, whilst the proposed changes will not impact on the nature of the planned point source emissions to air and sewer from the facility as a whole (there are no current or proposed emissions directly to surface water, ground water or land from the facility), the changes will result in the introduction of new point source release points and increased release quantities to air and increased quantities of process derived waste water discharged to sewer.

The extension of the facility will also increase the potential for fugitive releases, including odour and noise generation, simply as a result of the site’s increased production capacity using additional processing plant and equipment.

The main sources of odour potential on site are from the storage of putrescible animal by-product wastes, from fugitive releases of odorous raw materials (eg. ammonia in refrigeration plant) and from fugitive releases of odours from processing / cooking plant.

The main sources of noise potential are from LGV’s delivering raw materials and collecting finished products from the site, from mobile plant operating in the open air and noise breakout from buildings housing processing plant.

Experience from current operations has shown that existing odour and noise prevention and control techniques are effective in preventing odour and noise releases from the site becoming a nuisance.

However, in order to ensure that this would remain the case following implementation of the proposed development, Cranswick engaged expert third party Consultants Sharps Redmore and Redmore Environmental Limited, to undertake noise, odour and air quality impacts assessments during the project concept development stage and in support of the Land use Planning application submitted in connection with the proposed development.

In relation to noise, the Sharps Redmore report concludes:

*“In summary, this technical note assessment indicates that delivery activity and fixed plant equipment noise can be controlled such that the proposal, to extend the existing Cranswick County Foods production facility, would comply with the objectives of paragraph 180 of the NPPF and avoid significant adverse impact”.*

In relation to odour and air quality, the Redmore Environmental reports conclude:

*“Based on the findings of the Risk Assessment, overall odour effects associated with the proposed development are predicted to be not significant …….. The Risk Assessment predicted the odour effect significance to be slight at two receptors and negligible at ten locations. The IAQM guidance17 states that only if the impact is greater than slight, the effect is considered significant. As such, impacts are considered not significant, in accordance with the stated methodology”,* and

“*During the construction phase of the development there is the potential for air quality impacts as a result of fugitive dust emissions from the site. ……. Assuming good practice dust control measures are implemented, the residual significance of potential air quality impacts from dust generated by earthworks, construction and trackout activities was predicted to be not significant.*

 *During the operational phase of the development there is the potential for air quality impacts as a result of combustion emissions associated with the operation of proposed energy plant. A risk assessment was therefore undertaken. ………. The results of the assessment indicated the predicted effect significance was negligible at sensitive locations. Following consideration of the relevant factors, overall effects as a result of combustion emissions associated with the operation of proposed energy plant were predicted to be not significant.*

*During the operational phase of the development there is also the potential for air quality impacts as a result of road vehicle exhaust emissions associated with traffic generated by the scheme. Information provided by the applicant indicated staff car and HGV flows from the site will be unchanged as a result of the proposals. Impacts were therefore considered to be not significant, and no further assessment was required”.*

Full copies of the Noise, Odour and Air Quality Impacts reports (references 4181-1r1 - Odour Assessment, 4181-2r1 - Air Quality Assessment and TN1(final) 16.12.20) are provided in this (C3.3b) supporting document folder.

In addition to the above third-party assessments, the risk assessment tables provided in Section C2.6 consider, amongst other things, the potential impacts of releases into air (including odour and noise), and to sewer.

In relation to odour, the risk assessment tables record the mitigated risk rating for releases from diffuse sources (eg. the outlets from air extraction fans providing ventilation in processing plant working areas) as being low and the mitigated risk rating for fugitive releases (eg. from building openings) as being very low. The mitigated risk ratings take into account the nature, frequency and intensity of the potential odour sources present, the receptors which may be affected and their sensitivities, the pathways by which the sources may impact the receptors and the release prevention, control and mitigation measures in place. In relation to odour due to significant ammonia releases from refrigeration plant, the risk assessment tables record the mitigated risk rating as low/medium.

In relation to noise from LGV’s arriving at and leaving the site, mobile plant used on site and plant and equipment operated at the site, the risk assessment tables record the mitigated risk rating as low. The mitigated risk ratings take into account the nature, frequency and timing of the noise sources present, the receptors which may be affected and their sensitivities, and the noise prevention, control and mitigation measures in place.

The risk assessment outcomes are consistent with experience gained from operating the existing processes at the site which has not been a cause for odour or noise complaints since it first began operating.

Section C3.3 / C3.3a1 of the permit variation application deals with the operating techniques which are implemented at the facility. The operating techniques ensure, amongst other things, that emissions are controlled so as to meet as a minimum any limits specified in the environmental permit and, in particular in relation to fugitive emissions, to ensure that releases are prevented where possible and otherwise reduced to the lowest level achievable using best available techniques. An assessment of operating techniques implemented at the facility against the requirements of BAT as defined in the relevant parts of the BAT reference document for the Food, Drink and Milk Industries (and the now withdrawn technical guidance EPR 6.10 (The Food and Drink Sector)) has been undertaken. A record of the assessment is provided in Section C3.3 / C3.3a1 (Operating Techniques and Technical Standards) of the permit variation application.

Notwithstanding the implementation of these operating techniques or the fact that risk assessment shows the site to pose a low level of odour and/or noise risk to potential receptors, the Operator recognises that the activities to be undertaken at the site have some albeit limited potential to give rise to odour and /or noise and that these matters merit attention to prevent the facility from becoming the source of odour or noise nuisance at receptors in the vicinity of the site.

Consequently, whilst specific odour and noise management plans are not required, existing odour and noise monitoring protocols in place in relation to current permitted operations at the site have been amended to take into account the proposed facility extension and will be implemented during commissioning and prior to the commencement of normal operations at the extended facility and continue in place thereafter as key elements in the sites documented management systems.

In brief both the odour and noise monitoring protocols include:

* Identification of potential receptors
* Identification of potential odour / noise sources under normal and abnormal operating conditions
* Identification of monitoring regimes to determine whether or not measures in place are effective under prevailing conditions
* Identification of actions to be taken should monitoring reveal abnormal odour / noise releases or releases otherwise likely to give rise to unacceptable effects at the identified receptors
* Identification of measures in place to ensure that odour / noise reduction actions in place, either as proactive continuous improvement actions or reactive incident / monitoring response actions, are carried through to completion and their efficacy verified.
* Identification of arrangements in place to ensure that those responsible for working in accordance with the odour and noise management plans and monitoring protocols are competent to do so.

Copies of odour and noise monitoring protocols (document references EMS-023-A and EN-025-A respectively) are provided in this supporting document folder, C3.3b.

In addition, the Operator recognises that process upsets, accidents and emergencies have the potential to result in significant unplanned emissions including odour and noise. As described in Section C3.3a / C3.3a1 of the permit variation application, processing plant and equipment is designed to operate with a high degree of automation which has the benefit of avoiding process upsets due to operator error. In addition, automated process monitoring and control may provide early warning of impending process upsets and in many cases initiate automated response actions include process interruption / shutdown where necessary. Despite the high degree of automation, it is accepted that human intervention is necessary on some occasions and that a planned response to process upsets, accidents and incidents is required to assist operating staff to respond to abnormal situations in a logical and controlled manner. The site therefore has in place an Accident Management Plan which identifies foreseeable significant accident scenarios, potentially harmful substances etc which may be released during an accident and sets out immediate and longer-term actions which may be required to bring an event under control, undertake investigations and restore the site to normal operation. A copy of the Accident Management Plan, document reference EN 030, amended to reflect the changes brought about by the proposed development, is provided in this supporting document folder C3.3b.