

- 4. Provide details of the complete industrial process that takes place within the installation boundary, to include specifics as to what air emissions go to what air abatement. (Regulation (9)(2)(g)).**

## **Waterford Proteins Process Description**

The activities at Waterford Proteins comprise the processing/rendering of Category 1, 2 and 3 animal by-products, arising from the slaughtering and meat processing industry as well as fallen animals, producing tallow, and meat & bone meal (MBM).

ABP Waterford Proteins sources its raw materials from abattoirs and fallen animal licensed collectors. These raw materials are transported to the site in sealed vehicles as soon as is practical after slaughtering and are received into a purpose-built raw materials intake building. This is a sealed building with automatically controlled entrance doors, which help to minimise the time the doors are left open during the delivery stage. The air from the intake building is ventilated via stainless steel ducting to a bio-filter. When the vehicle arrives in the building, it's load is tipped onto the floor and loaded into the intake hopper with a loader. After the load is tipped, the vehicle is washed and disinfected before leaving the building.

The rendering process involves two stages: Stage 1 involves the crushing of the raw materials via a crusher, to achieve the required size reduction.

In Stage 2, the mix is cooked in a continuous cooker prior to separation of the solid and liquid phases in presses. During the cooking stage, the product is heat treated to remove the moisture and this also allows the liquid fraction to be separated from the solid fraction. The solid phase is pressed to produce Meat and Bone Meal (MBM). The liquid fraction (tallow) is separated after cooking and passed through decanters which removes finer particles. Tallow and MBM are sterilised on-site prior to dispatch.

The air abatement system at Waterford Proteins consists of a thermal oxidiser (Ref: AEP 2) to treat vapour emissions from the cooker, presses and MBM sterilisers. A woodchip biofilter (Ref: AEP 1) is used to treat odour emissions from the building, MBM, tallow steriliser and storage areas (blood and raw material effluent).

The thermal oxidiser can operate on gas, diesel, or tallow. Heat recovered from the thermal oxidiser is used to generate steam for the rendering process.

Process wastewater is treated in the ABP Waterford Wastewater treatment plant. There are no emissions to ground from the Waterford Proteins site.

## **Process Vapour Treatment**

**Raw material vapour** – Extracted to biofilter.

**Crushing vapour** – Extracted to biofilter.

**Cooker vapour** – Extracted to thermal oxidiser.

**Pressing vapour** – Extracted to thermal oxidiser.

**Decanter vapour** – Extracted to biofilter.

**MBM steriliser vapour** – Extracted to thermal oxidiser.

**Tallow steriliser vapour** – Extracted to biofilter.

**MBM storage vapour** – Extracted to biofilter.

**Tallow storage vapour** – Extracted to biofilter.

**MBM off-loading vapour** – Extracted to biofilter.

**Tallow off-loading vapour** – Extracted to biofilter.

**Blood and effluent storage tanks** – Extracted to the biofilter.

**Combustion air to TO** – Process air from cooker area.