Section III: Supporting Information

This part of the application provides detailed responses to questions in Section I: Application Forms, where further space is required to provide the necessary information.

Responses are provided only where further information is required, and the questions numbers are as stated in the application forms.

The information provided in this section should be viewed in parallel with:

- Section I: Application Forms
- Section II: Technical Description

Form B2

3 Your ability as an operator

3d Management systems

Mondelez has an established environmental management system (EMS) which comprises a series of corporate-level documented 'standards' (common to all Mondelez sites) supplemented by site-specific documented procedures which describe how the Mondelez standards are implemented at a site level. The EMS forms part of an integrated Health, Safety and Environmental (HSE) Management System. The site has a certified ISO 50001 Energy Management System. Detailed information about the Mondelez Environmental, Social and Governance (ESG) Strategy is found in the sustainability report available on the Mondelez website (www.mondelezinternational.com). This includes a summary of ESG priorities and report on progress against targets.

A copy of Mondelez Environmental Policy is provided in Appendix 3. Evaluation of how the site management system complies with BAT 1 requirements is found in Appendix 4.

A summary of the management system covering the points in Environment Agency guidance 'Develop a management system: environmental permits'[1] is provided in Table 4 below.

Table 4 Summary of Mondelez Sheffield Management system

EA requirement	Summary
Site infrastructure plan	Site plans, including site layout plan, plan showing emissions points and drainage plan are provided in Section IV of this document. Other plans, for instance plans showing the location of materials storage areas, location of hazardous chemicals, emergency response facilities and equipment, effluent pre-treatment plant facilities etc, are included within management system documentation where appropriate.
Site operations	Standard Operating Procedures (SOPs) are provided for all significant operational activities on site. Topic-specific procedures, for instance related to emergency response and fire risk assessments, prevention and management plans, are also in place.
Site and equipment maintenance plan	A planned preventative maintenance system is operated to ensure that equipment and infrastructure is maintained in good condition and that the likelihood of equipment failure, with potential environmental consequences, is minimised. The planned maintenance system, including calibration schedule, is controlled and managed at a site level either via the SAP system (for manufacturing equipment) or an alternative computerised maintenance management system for utilities / facilities items (managed and operated by the site facilities management team). Significant plant performance or maintenance concerns are reviewed on a daily basis during production meetings until the issue is resolved. Any breakdown or failure that could result in a significant environmental effect would be prioritised.

1 https://www.gov.uk/guidance/develop-a-management-system-environmental-permits

EA requirement	Summary
Contingency plans	Contingency plans are in place to respond to emergencies arising from breakdowns, enforced shutdowns, abnormal circumstances such as flooding as well as major fire and spill/loss of containment events. This includes: • Sheffield emergency response procedure; • Sheffield emergency response plan; • Sheffield fire strategy; • Sheffield fire risk assessment. Appropriate site security is provided including fencing/walls around the entire perimeter, automatic control systems for entrance gates, permanently monitored CCTV with recording facilities and security personnel on site 24 hour per day, 7 days per week.
Accident prevention and management plan	An accident management plan is provided in Appendix 10.
A changing climate	The management system includes an assessment and plan for climate change adaptation. This is included in Appendix 9.
Complaints procedure	The Mondelez incident classification system establishes requirements for accident and incident management (including complaints). Minor incidents and complaints are managed locally using the daily management system (DMS) reporting and management structure. This includes reporting to site management and subsequent follow up managed via daily DMS meetings and logs. For more significant incidents and complaints Mondelez utilises the Enablon online system to report, record, manage and assess incidents and accidents. In the event of a significant incident or complaint a root cause analysis is conducted. Actions are identified, reported, recorded and communicated to prevent reoccurrence.
Managing staff competence and training records	A site-specific induction training pack is maintained which addresses key environmental issues. This induction training is provided to all employees and contractors. Individual and job role training needs are evaluated with training provided to staff as necessary via toolbox talks or more formal classroom training, depending on the requirement. The system of contractor controls in operation ensures that pre-requisites such as evidence of contractor competencies are obtained and reviewed in advance of any work being started and this is supplemented by specific risk assessments and method statements for each individual task, controlled via a permit system. Training records are retained on site.
Keeping records	Management system records are maintained on site. A number of systems are in use, depending on the topic. This includes electronic retention on the intranet system for general management system records, electronic planned maintenance system and electronic Enablon system for monitoring data.
Review your management system	A range of internal audit and inspections are undertaken on site. This includes site inspections, known as Gemba walks, which comprise a rotating programme of inspections across different departments and both internal and external areas of the site. In addition to these site-based inspections, an annual self-assessment against all Mondelez HSE standards is undertaken. Any issues or concerns

EA requirement	Summary
	identified by this assessment are recorded in the Enablon system and an action plan is created. On a three yearly basis, cross audits are undertaken whereby trained auditors from other Mondelez sites complete an audit against Mondelez HSE standards. This covers the same content as the annual self-inspections but is more in depth and provides an independent assessment. The management system will be updated to include environmental permit requirements (once issued) and will be included in future audits and reviews.
Site closure	The Site Condition Report (Appendix 5) provides details of potential sources of contamination and site operational controls to protect the land and groundwater during site operations. Upon definitive cessation of activities on site a surrender site condition report will be prepared to demonstrate that site does not pose a pollution risk and is in a satisfactory state.
Make sure people understand what you do	Training and communication systems are in place to ensure staff have the necessary competences to undertake their role and are aware of relevant environmental requirements. Once the permit is issued, this will be updated to ensure that permit compliance requirements are integrated into existing systems.

5 Supporting information

5b Site condition report

A site condition report (SCR) has been prepared and is provided in Appendix 5.

6 Environmental risk assessment

A screening assessment for environmental risks within scope of this permit application has been carried out. This review follows EA guidance on risk assessments for environmental permits[2] and adopts the approach outlined below:

- Identify receptors at risk from activities within the scope of this application (Table 5)
- Identify and consider risks, and the sources of the risks (Table 6).
- Assess whether there is a possible pathway from the sources of the risks to the receptors (Table 6).
- Assess whether the identified risks require further assessment or can be screened out (Table 6).
- Where those risks cannot be screened out, undertake the necessary technical assessments (qualitative or quantitative) to determine their level of significance. In undertaking the technical assessments:
  - Identify the receptors at risk (people, habitats, property, and anything else that could be affected by the hazard) and the potential pathways through which the risks could be realised.
  - Where risks are potentially significant, identify measures to control and mitigate these risks, including preparation of a management plan where appropriate.

Table 5 Identification of potential receptors

Receptor type	Receptor description and distance
Residential housing	• North: Nearest residential properties located approximately 370 m to the north and 300 m to the northeast. • East: Nearest residential properties, a traveller's site on Club Mill Road, is located approximately 120 m from the site. • West: Nearest residential properties which front on to the main A61 trunk road located approximately 185 m from the site. • South: Land use to the south is largely industrial and commercial, with nearest residential property located approximately 750 m from the site.
Public amenity areas	Owlerton stadium (greyhound racing) is located immediately to the south of the site, Hillsborough sports centre is located adjacent to the site to the West and Parkwood Springs open land area is located to the east. Hillsborough Park is located approximately 265 m to the west and Hillsborough Stadium (Sheffield Wednesday football club) is located 470 m to the northwest, on the far side of the A61 trunk road.
Schools	The nearest schools are located approximately 240 m to the south, 550 m to the northeast and 420 m to the west.
Hospitals / healthcare facilities	The nearest healthcare facilities are approximately 1km to the south and west of the site.
Industrial/commercial sites	The site is located in a predominantly industrial / commercial location with industrial sites in close proximity and bordering the site in all directions.
Habitat sites – statutory designations	The following European designated habitat sites have been identified approximately 7.5km to the west of the site (at the nearest point):

2 https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit (accessed October 2025)

Receptor type	Receptor description and distance
	• South Pennine Moors SAC; and • Peak District Moors SPA. There are three Sites of Special Scientific Interest (SSSIs) within 2km of the site, however these are all geological designations: • Neepsend Railway Cutting SSSI; • Neepsend Brickworks SSSI; and • Wadsley Fossil Forest SSSI.
Habitat sites – non statutory designations	The following non-statutory designation habitat sites have been identified within 2km of the site: • Local Nature Reserves (LNR) Roe Woods and Crabtree Ponds; Loxley and Wadsley Common • Local Wildlife Sites (LWS) Middle River Don: Hillsborough to City Centre; Wardsend Cemetery; Scraith Wood & Rawson Spring; Upper River Don: Deepcar to Hillsborough; Parkwood Springs; Malin Bridge to River Don; Oxspring Dam; Bagshaw Wood, Wadsley Bridge; Busk Meadow Woodland; Birley Edge & Back Edge; Wadsley Park (formerly Middlewood Hospital); Lower Rivelin Valley; Broadhead Dam to Malin Bridge; Roe Wood & Little Roe Wood; Norwood Allotments Woodlands; Walkley Bank Plantation; Loxley & Wadsley Commons; Blake Street Nature Park; Bole Hills, Walkley; Parson Cross Park; Crabtree Pond & Wood; Kelham Island; River Don (City Centre to Blackburn Meadows). • Ancient Woodland Roe Wood; Beeley Wood West • The River Don, running through the site, is identified as a protected fish migratory route.
Ground / groundwater	Underlying groundwater is classed as a Secondary A aquifer within superficial deposits and within bedrock geology; groundwater sensitivity is considered to be Moderately High. The installation is not located within a groundwater Source Protection Zone although there is an active groundwater abstraction located approximately 90 m to the west.
Surface water	The River Don splits the installation, and a tributary of the River Don is present adjacent to the north eastern boundary. A culverted watercourse is present beneath the yard in the west of the installation, the culvert conveys water overflow from a pond located in Hillsborough Park approximately 300 m to the west. Surface water sensitivity is considered to be High. There is likely to be hydraulic continuity between underlying groundwater and the surface water features.
Atmosphere	Local, regional and global atmosphere. The site is located within Sheffield Citywide Air Quality Management Area (AQMA), which covers the entire eastern part of the city containing the major built-up areas.

Table 6 Identification of environmental risks, pathways and screening

Identified risk area	Potential Receptors	Assessment of risk including consideration of sources of the risk and whether there are potential pathways	Further Assessment?
 **Emissions to Sewer**	Surface waters Designated habitat sites (statutory and non statutory designations) (if located downstream of Yorkshire Water Blackburn Meadows WwTW discharge point).	All process effluent (other than a very small proportion, which is tankered off-site) as well as some surface water runoff (for instance from areas where there is a risk of contamination) is discharged to sewer (Yorkshire Water Blackburn Meadows WwTW) following on site pre-treatment (effluent balancing and pH adjustment). Treated effluent is then discharged to the River Don. Further assessment of impacts is required. Refer to Appendix 7 H1 assessment of emissions to sewer.	✓
 **Emissions to Air (including deposition to land)**	Residential housing Public amenity areas Schools Hospitals / healthcare facilities Industrial / commercial sites. Designated habitat sites (statutory and non statutory designations) Local, regional and global atmosphere.	There are a large number of point source emissions to air. This includes emissions from combustion processes e.g. steam raising boilers as well as emissions from manufacturing processes such as heat treatment of products (e.g. stoving, graining, cooking), flash off vessels, air handling systems and filtration. *Emissions from manufacturing processes and raw materials handling*: There is some potential for dust emissions from raw materials handling and processing activities. This includes explosion panels at locations where powdered material is stored or may build up; there are no emissions from these sources under normal circumstances. Extraction vents for areas where powdered materials are handled and generated e.g. flour, starch, powdered sugar and powdered coconut handling, and sugar and coconut grinding are provided with bag filters/dust collection units (listed in Table 10). These are maintained in accordance with manufacturer's recommendations and therefore the potential for dust emissions is limited. There are no applicable BAT AELs, monitoring of dust emissions has not been carried out historically and no further assessment of dust emissions is proposed. Emissions from other sources such as stoving ovens (jellies manufacturing) and other product heating and cooking vessels is not considered to be significant, there are no applicable BAT AELs and further assessment is not proposed. *Combustion sources*: Appendix 6 Air Emissions Impact Assessment provides an assessment of potential impacts associated with operation of steam raising boilers.	✓ (further assessment of emissions to air from boilers)

Identified risk area	Potential Receptors	Assessment of risk including consideration of sources of the risk and whether there are potential pathways	Further Assessment?
		Other combustion sources are smaller scale or only used for emergency or testing purposes i.e. gas fired space heating (graining room) and diesel-fired firewater pumps (see Section II: Technical Description for further details).	
 **Emissions to Water**	Surface water Designated habitat sites (statutory and non-statutory designations) (if located downstream of any discharge point).	There are no direct discharges to water, other than clean rainwater runoff. Further assessment is not required.	✗
 **Emissions to land**	Ground / groundwater Surface water (if there is hydraulic continuity with affected ground / groundwater). Designated habitat sites (statutory and non-statutory designations) (if there is hydraulic continuity with affected ground / groundwater).	There are no emissions to land, including to groundwater. Further assessment is not required.	✗
 **Odour**	Residential housing Public amenity areas Schools Hospitals / healthcare facilities Industrial / commercial sites.	Confectionery manufacturing operations have the potential to generate odours, for instance associated with heating processes; these manufacturing odours are generally characterised as having a positive hedonic score (i.e. are considered 'pleasant'). There is a slight odour of mints and/or sugar internally, however this is generally not discernible external to the building. The site does not have a history of odour issues or odour complaints. Further assessment of odour impacts is not required.	✗
 **Noise and vibration**	Residential housing Public amenity areas Schools Hospitals / healthcare facilities Industrial / commercial sites.	Noise sources from the site include refrigeration / cooling equipment, boilers, deliveries and despatch activities and breakout of noise from internal production areas. The site does not have a history of noise issues or noise complaints. As part of the enhanced pre-application screening undertaken by the Environment Agency (included in Appendix 1), it has been confirmed that a noise impact assessment	✓

Identified risk area	Potential Receptors	Assessment of risk including consideration of sources of the risk and whether there are potential pathways	Further Assessment?
		is not required but that a qualitative assessment of noise should be provided (refer to the assessment against BAT 14 requirements provided in Section 6-3 below and Appendix 8).	
 **Fugitive emissions (other) including dust, litter, bioaerosols**	Residential housing Public amenity areas Schools Hospitals / healthcare facilities Industrial / commercial sites Designated habitat sites (statutory and non-statutory designations) Surface water Local atmosphere	Risks associated with fugitive emissions including litter, dust and bioaerosols is negligible. Key points are as follows: There are no waste treatment activities undertaken on site, other than pH adjustment of wastewater prior to off-site treatment and disposal. As a food processing site, hygiene standards are high and measures are taken to prevent litter and pests. Due to the nature of the process and food hygiene requirements, manufacturing activities are all carried out internally and these areas are sealed with any emissions being discharged via point sources (which are considered separately above) rather than as fugitive emissions.	✗
 **Visible plumes**	Residential housing Public amenity areas Schools Hospitals / healthcare facilities Industrial / commercial sites	There is some potential for visible plumes from product cooking / heating operations. However, these are small scale and readily dissipate e.g. steam from flash off vessels. Boilers are gas fired; no fuel oil is in use and therefore visible plumes from these sources is unlikely. The site is located within a predominantly industrial / commercial area.	✗
 **Accidental Releases**	Residential housing Public amenity areas Schools Hospitals / healthcare facilities Industrial / commercial sites Designated habitat sites (statutory and non-statutory designations) Ground / groundwater Surface water Atmosphere	There is potential for releases to air, water or land due to a wide range of incidents and accidents. Further assessment of accidents risks is required. Refer to Appendix 10 Accident Management Plan.	✓

6-1: Assessment of emissions to sewer

The potential effect of releases of effluent to sewer on the River Don have been assessed using the H1 software tool, taking account of the treatment provided on site and at YW WwTW. The H1 methodology applies a sequence of tests to screen environmental releases and establish whether those releases are 'insignificant', or whether they require more detailed assessment.

The results of the H1 assessment indicates that, for the determinands considered, the discharge of effluent from the Mondelez Sheffield site has been assessed to have no significant impact on the water quality of the River Don. This conclusion concurs with published data on discharges of treated effluent from Blackburn Meadows WwTW, which shows that the final treated effluent is of a good quality. On this basis no further assessment of emissions to sewer is proposed.

Full details of the H1 assessment of emissions to sewer is provided in Appendix 7.

6-2: Assessment of emissions to air

A detailed assessment of emissions to air from steam raising boilers, provided in Appendix 6, has been carried out using atmospheric dispersion modelling, with due consideration to the relevant Environment Agency air quality risk assessment guidance (Environment Agency, 2024) and air dispersion modelling reporting guidance (Environment Agency, 2024).

This report has assessed the potential air quality impacts associated with the operation of the combustion plant at the Mondelez Sheffield site, required for the first time due to the site coming under EPR as a Part A(1) food and drink operation. The predicted impacts were assessed against the relevant air quality standards and guidelines for the protection of human health and for the protection of sensitive vegetation and ecosystems (referred to as EQSs).

The assessment considered historical and current operating scenarios as there has recently been a major programme of investment in replacement boilers; this is as requested by the Environment Agency in order to demonstrate the benefits that the boiler upgrade programme has brought in terms of local air quality. It should be noted that historical and new current boiler plant (where required) is already permitted as standalone MCP and operating in compliance with permitted ELVs.

Two variants of the current scenario have been assessed, a worst-case full load scenario (Current) and a part load scenario (Current PL). 'Current' represents a very considerable overestimate of the likely boiler duty, but as this provides maximum flexibility for operation Mondelez re seeking permitting on this basis. The Current PL case is more representative and is included for context in the assessment and to more accurately reflect potential 'real world' effects.

The detailed assessment indicates that, even applying the worst-case full load 'Current' scenario, the predicted NO_2 and CO concentrations at sensitive human receptors do not exceed any relevant long-term or short-term EQSs. The impact can be described as 'insignificant' for both short-term average NO_2 concentrations and 'not significant' for long-term average NO_2. The impact can be described as 'insignificant' for both 1 hour and 8 hour CO averaging periods. Assessment of the more realistic Current PL scenario indicates that for all determinands considered over all averaging periods, potential effects can be described as 'insignificant'.

The context of this assessment should be considered when reviewing these findings and predicted effects, i.e. that larger, lower efficiency, higher emission boilers have recently been replaced with smaller, higher efficiency, lower emission units (and that both the Historical and Current cases were/are currently permitted under the EPR as compliant MCP).

The site is within the Sheffield Citywide AQMA; whilst the assessment indicates that the Mondelez operations will not be a significant contributor to background levels of NO_2 (under either Historical or Current cases) nonetheless, the reduction in emissions associated with the boiler plant project supports the objectives of the AQMA in delivering improvements in local air quality.

For ecological receptors, the detailed assessment indicates that the predicted NOx concentrations, and nitrogen and acid deposition, at the Peak District Moors SAC/SPA and local nature sites is 'insignificant' for Current operating cases.

Based on the above assessment, it is concluded that the Historical operating case was, and Current operating cases are acceptable from an air quality perspective. Notwithstanding the fact that the Historical scenario was permitted, compliant and considered acceptable from an air quality perspective, the Current and Current PL cases represent a beneficial reduction in predicted ground level concentrations and deposition rates of the assessed pollutants. This finding supports the conclusion that the current boiler plant represents Best Available Techniques (BAT).

6-3: Assessment of noise and vibration risks

As part of pre-application discussion, the Environment Agency (EA) carried out a qualitative noise screening assessment for the Mondelez Sheffield site. This concluded that a noise impact assessment does not need to be provided with this permit application. However, noise should still be considered qualitatively in the risk assessment and Mondelez must meet the requirements of BAT 14.

A qualitative assessment of noise and vibration risks is provided in Appendix 8. This assessment provides a description of the site setting, history of noise complaints and summary of noise sensitive receptors. A qualitative assessment of risks posed by the principal noise sources on site has been undertaken, taking account of the probably of exposure and the consequence of the impact. This assessment concludes that, for all principal noise sources on site, the overall risk is low.

A summary of compliance with BAT 14 requirements (in so far as they are applicable) is provided in Table 7 below.

Table 7 BAT 14 review

Technique and description	Applicability	Comments
14(a) Appropriate location of equipment and buildings Noise levels can be reduced by increasing the distance between the emitter and the receiver, by using buildings as noise screens and by relocating buildings' exits or entrances.	For existing plants, the relocation of equipment and buildings' exits or entrances may not be applicable due to lack of space and/or excessive costs.	The Mondelez Sheffield site has a long operational history (having been founded in 1842). Whilst the site and surrounding land use have developed considerably over the years there is limited opportunity to undertake any re-design of site buildings or operations. Notwithstanding this fact, manufacturing activities are undertaken in internal areas. There is no history of noise complaints associated with site operations.
14(b) Operational measures These include: (i) improved inspection and maintenance of equipment; (ii) closing of doors and windows of enclosed areas, if possible; (iii) equipment operation by experienced staff; (iv) avoidance of noisy activities at night, if possible; (v) provisions for noise control, e.g. during maintenance activities.	N/A	Site operations are undertaken internally; windows and doors are kept closed at all times (a food hygiene requirement). Site staff are experienced and appropriate training programmes are provided to ensure that staff are aware of the requirements of their job, including environmental risks and requirements. A planned preventative maintenance system is operated on site to ensure that equipment and infrastructure is maintained in good condition and that the likelihood of equipment failure, with potential environmental consequences, is minimised.
14(c) Low-noise equipment This includes low-noise compressors, pumps and fans	N/A	Low noise equipment is employed where required. However, it is noted that this is not a noise sensitive site and there is no history of noise complaints.
14(d) Noise control equipment This includes: (i) noise reducers; (ii) insulation of equipment; (iii) enclosure of noisy equipment; (iv) soundproofing of buildings.	May not be applicable to existing plants due to lack of space.	Noise control equipment is employed where required. However, it is noted that this is not a noise sensitive site and there is no history of noise complaints.
14(e) Noise abatement Inserting obstacles between emitters and receivers (e.g. protection walls, embankments and buildings).	Applicable only to existing plants, as the design of new plants should make this technique unnecessary. For existing plants, the insertion of obstacles may not be applicable due to lack of space.	The site is located within a predominantly industrial / commercial area and there is no history of noise complaints. Use of obstacles for noise abatement is not deemed necessary.

6-4: Accidental releases

An accident management plan is provided in Appendix 10. The accident management plan includes identification of potential incidents which could result in pollution and/or not being able to comply with permit conditions. A qualitative risk assessment is undertaken for these incidents, taking into account measures in place to manage and mitigate accident risks. For all identified incidents the overall risk was assessed to be moderate/low risk or less.

Form B3

1 What activities are you applying for?

Table 8 Types of activities

Installation name	Schedule 1 references	Description of the Activity	Activity Capacity	Annex I (D codes) and Annex II (R codes) and descriptions	Hazardous waste treatment capacity	Non-hazardous waste treatment capacity
Mondelez Sheffield site	Section 6.8 A(1)(d)(iii)	Treatment and processing, other than exclusively packaging, of animal and vegetable raw materials	286 tonnes per day[3]	N/A	N/A	N/A
	Section 5.4(a)(ii)	Disposal of non-hazardous waste involving physico-chemical treatment	455 m^3 per day[4]	N/A	N/A	N/A
Directly associated activities						
Steam raising boilers		Operation of combustion plant: 3 x 5.5 MWth input capacity natural gas fired boilers				
Refrigeration and cooling		Use of refrigerants in cooling and chilling systems at the installation				
Raw materials storage and handling		Storage and handling of raw materials used within the process at the installation				
Waste storage and handling		Storage and handling of waste materials arising from the process at the installation				

[3] Production capacity provided here is the theoretical maximum production capacity of all production units combined, based on continuous 24 hours per day production (excluding essential daily cleaning activities).
[4] Based on the volumetric limit included within the main Yorkshire Water discharge consent reference: 3390775

2 Point source emissions to air, water and land

Point source emissions to air

There are a large number of air emissions points present at the Mondelez Sheffield site. In preparing the inventory of emissions to air it has been necessary to establish some principles for which emissions points to include, and which can be reasonably excluded. Table 9 below provides a summary of the rationale for inclusion and exclusion that has been applied in establishing the air emissions inventory (Table 10).

Table 9 Point source emissions to air

Included within the inventory	Excluded from the inventory
• Combustion process emissions points.	• Mobile combustion sources e.g. vehicles, maintenance tools/equipment.
• External emissions points with the potential to release dust / particulates (either under normal or accident/emergency scenarios) including silo vents and explosion panels.	• Emissions points that discharge to internal areas (i.e. within a building).
• External emissions points with emissions abatement plant (e.g. bag filters).	• Non-food contact steam releases e.g. steam from boiler hotwell, boiler pressure relief valves.
• External emissions points associated with product heating or other vapours (either under normal or accident/emergency scenarios).	• Extraction vents from areas of the site where no manufacturing processes take place e.g. toilets/washrooms and canteen area.

The inventory of point source emissions to air is detailed in Table 10 below. No air emissions monitoring has been undertaken, and none is proposed. The location of point source emissions to air are shown in Section IV Figure 3.

Table 10 Point source emissions to air

Mondelez reference	Source	Floor level	Grid reference	Emission description	Abatement
58	CLP	Ground	433820, 390265	Steam extract above extruder heads	None
59	CLP	Ground	433818, 390265	Extract fan from chug line Votator / extruder	None
62	CLP	Ground	433816, 390265	Extract fan from rock line Votator	None
69	CLP	Ground	433797, 390261	From CLP workshop	None
70	CLP	Ground	433799, 390261	From CLP mixing area	None
72	CLP	Ground	433826, 390266	CLP premix extract	None
115	CLP	Roof	433840, 390262	Prebreaker wash area extract	None

Mondelez reference	Source	Floor level	Grid reference	Emission description	Abatement
116	CLP	Roof	433841, 390255	Premix extract	None
726	CLP	3rd	433848, 390267	Flour hopper explosion panel	No emissions under normal circumstances
28	Jellies	2nd	433727, 390335	Jellies deposit floor dust collection unit extraction vent	Bag filter (approximately 30,000 m^3/hr)
158	Jellies	Roof	433728, 390295	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
159	Jellies	Roof	433734, 390296	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
163	Jellies	Roof	433745, 390296	Line 3 deposit dryer exhaust	Filter (due to presence of starch)
168	Jellies	Roof	433715, 390291	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
180	Jellies	Roof	433761, 390311	Line 6 deposit dryer exhaust	Bag filter
185	Jellies	Roof	433744, 390319	Above boiling Line 3 extract vent	None
187	Jellies	Roof	433738, 390320	Above boiling Line 3 hot water plant extract vent	None
188	Jellies	Roof	433727, 390318	CFA lab fume extraction	Filter
189	Jellies	Roof	433732, 390315	CFA lab fume extraction	Filter
190	Jellies	Roof	433726, 390316	CFA lab fume extraction	Filter
191	Jellies	Roof	433726, 390317	CFA lab fume extraction	Filter
194	Jellies	Roof	433715, 390308	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
196	Jellies	Roof	433716, 390308	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
198	Jellies	Roof	433729, 390310	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
200	Jellies	Roof	433730, 390310	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
202	Jellies	Roof	433730, 390311	Jellies stove extract	Panel filters in stove wall (due to presence of starch)

Mondelez reference	Source	Floor level	Grid reference	Emission description	Abatement
204	Jellies	Roof	433728, 390311	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
207	Jellies	Roof	433750, 390311	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
227	Jellies	Roof	433740, 390287	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
230	Jellies	Roof	433742, 390286	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
233	Jellies	Roof	433744, 390287	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
234	Jellies	Roof	433746, 390287	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
237	Jellies	Roof	433750, 390288	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
238	Jellies	Roof	433752, 390288	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
241	Jellies	Roof	433755, 390289	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
242	Jellies	Roof	433756, 390289	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
245	Jellies	Roof	433757, 390289	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
246	Jellies	Roof	433760, 390290	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
249	Jellies	Roof	433762, 390290	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
250	Jellies	Roof	433765, 390290	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
253	Jellies	Roof	433767, 390291	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
256	Jellies	Roof	433769, 390291	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
450	Jellies	Roof	433706, 390326	Jellies stove extract	Panel filters in stove wall (due to presence of starch)

Mondelez reference	Source	Floor level	Grid reference	Emission description	Abatement
451	Jellies	Roof	433707, 390324	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
452	Jellies	Roof	433707, 390322	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
453	Jellies	Roof	433707, 390319	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
459	Jellies	Roof	433709, 390328	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
460	Jellies	Roof	433709, 390325	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
461	Jellies	Roof	433710, 390322	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
462	Jellies	Roof	433710, 390320	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
468	Jellies	Roof	433711, 390329	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
469	Jellies	Roof	433712, 390325	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
470	Jellies	Roof	433713, 390323	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
471	Jellies	Roof	433713, 390320	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
477	Jellies	Roof	433714, 390329	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
478	Jellies	Roof	433715, 390326	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
479	Jellies	Roof	433715, 390323	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
480	Jellies	Roof	433716, 390321	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
486	Jellies	Roof	433717, 390329	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
487	Jellies	Roof	433718, 390326	Jellies stove extract	Panel filters in stove wall (due to presence of starch)

Mondelez reference	Source	Floor level	Grid reference	Emission description	Abatement
488	Jellies	Roof	433718, 390324	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
489	Jellies	Roof	433718, 390321	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
495	Jellies	Roof	433720, 390330	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
496	Jellies	Roof	433720, 390327	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
497	Jellies	Roof	433721, 390324	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
498	Jellies	Roof	433721, 390322	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
504	Jellies	Roof	433722, 390331	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
505	Jellies	Roof	433723, 390327	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
506	Jellies	Roof	433724, 390325	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
507	Jellies	Roof	433724, 390322	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
513	Jellies	Roof	433725, 390331	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
514	Jellies	Roof	433726, 390328	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
515	Jellies	Roof	433726, 390325	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
516	Jellies	Roof	433727, 390323	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
522	Jellies	Roof	433731, 390332	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
523	Jellies	Roof	433732, 390329	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
524	Jellies	Roof	433732, 390326	Jellies stove extract	Panel filters in stove wall (due to presence of starch)

Mondelez reference	Source	Floor level	Grid reference	Emission description	Abatement
525	Jellies	Roof	433733, 390324	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
531	Jellies	Roof	433734, 390333	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
532	Jellies	Roof	433735, 390329	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
533	Jellies	Roof	433735, 390327	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
534	Jellies	Roof	433736, 390325	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
540	Jellies	Roof	433737, 390333	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
541	Jellies	Roof	433737, 390330	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
542	Jellies	Roof	433738, 390327	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
543	Jellies	Roof	433738, 390325	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
549	Jellies	Roof	433740, 390334	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
550	Jellies	Roof	433740, 390330	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
551	Jellies	Roof	433741, 390328	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
552	Jellies	Roof	433741, 390326	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
558	Jellies	Roof	433742, 390334	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
559	Jellies	Roof	433743, 390331	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
560	Jellies	Roof	433743, 390328	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
561	Jellies	Roof	433744, 390326	Jellies stove extract	Panel filters in stove wall (due to presence of starch)

Mondelez reference	Source	Floor level	Grid reference	Emission description	Abatement
567	Jellies	Roof	433745, 390335	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
568	Jellies	Roof	433746, 390331	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
569	Jellies	Roof	433746, 390329	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
570	Jellies	Roof	433746, 390327	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
576	Jellies	Roof	433748, 390335	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
577	Jellies	Roof	433748, 390332	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
578	Jellies	Roof	433749, 390329	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
579	Jellies	Roof	433749, 390327	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
585	Jellies	Roof	433750, 390336	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
586	Jellies	Roof	433751, 390332	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
587	Jellies	Roof	433751, 390330	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
588	Jellies	Roof	433752, 390328	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
594	Jellies	Roof	433753, 390336	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
595	Jellies	Roof	433754, 390333	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
596	Jellies	Roof	433754, 390330	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
597	Jellies	Roof	433755, 390328	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
603	Jellies	Roof	433756, 390337	Jellies stove extract	Panel filters in stove wall (due to presence of starch)

Mondelez reference	Source	Floor level	Grid reference	Emission description	Abatement
604	Jellies	Roof	433756, 390333	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
605	Jellies	Roof	433757, 390331	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
606	Jellies	Roof	433757, 390329	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
612	Jellies	Roof	433759, 390337	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
613	Jellies	Roof	433759, 390334	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
614	Jellies	Roof	433760, 390331	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
615	Jellies	Roof	433760, 390329	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
621	Jellies	Roof	433761, 390338	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
622	Jellies	Roof	433762, 390334	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
623	Jellies	Roof	433762, 390332	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
624	Jellies	Roof	433763, 390330	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
630	Jellies	Roof	433764, 390338	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
631	Jellies	Roof	433765, 390335	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
632	Jellies	Roof	433765, 390332	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
633	Jellies	Roof	433765, 390330	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
639	Jellies	Roof	433767, 390339	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
640	Jellies	Roof	433767, 390335	Jellies stove extract	Panel filters in stove wall (due to presence of starch)

Mondelez reference	Source	Floor level	Grid reference	Emission description	Abatement
641	Jellies	Roof	433768, 390333	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
642	Jellies	Roof	433768, 390331	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
648	Jellies	Roof	433770, 390338	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
649	Jellies	Roof	433770, 390336	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
650	Jellies	Roof	433770, 390333	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
651	Jellies	Roof	433771, 390331	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
657	Jellies	Roof	433772, 390340	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
658	Jellies	Roof	433773, 390336	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
659	Jellies	Roof	433773, 390334	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
660	Jellies	Roof	433773, 390332	Jellies stove extract	Panel filters in stove wall (due to presence of starch)
701	Jellies	Ground	433822, 390280	Jellies packing extraction system	Bag filter (4,200 m^3/hr)
703	Jellies	Roof	433758, 390319	Line 6 sugar hopper explosion panel	No emissions under normal circumstances
704	Jellies	Roof	433760, 390320	Line 6 sugar hopper	Bag filter
705	Jellies	Roof	433745, 390316	Line 3 sugar hopper explosion panel	No emissions under normal circumstances
706	Jellies	Roof	433747, 390317	Line 3 sugar hopper	Bag filter
707	Jellies	Roof	433747, 390308	Line 1 sugar hopper explosion panel	No emissions under normal circumstances
708	Jellies	Roof	433747, 390306	Line 1 sugar hopper	Bag filter
713	Jellies	Roof	433703, 390307	Sugar silo explosion panel	No emissions under normal circumstances
719	Jellies	Ground	433823, 390279	Jellies central extraction system explosion panel	No emissions under normal circumstances

Mondelez reference	Source	Floor level	Grid reference	Emission description	Abatement
15	Soft mints	1st	433715, 390259	Driam panning dust extraction unit explosion panel– Driam 1	No emissions under normal circumstances
117	Soft mints	Roof	433725, 390247	Soft mints air handling unit heat exhaust	Panel filters
171	Soft Mints	Roof	433729, 390265	Pre-pan WIP dehumidifier exhaust	None
172	Soft Mints	Roof	433728, 390265	Dehumidifier exhaust	None
173	Soft Mints	Roof	433725, 390264	Dehumidifier exhaust	None
175	Soft Mints	Roof	433721, 390264	Dehumidifier exhaust	None
214	Soft mints	1st	433716, 390255	Dust control unit explosion panel – Driam 2	No emissions under normal circumstances
215	Soft mints	1st	433716, 390251	Dust control unit explosion panel – Driam 3	No emissions under normal circumstances
216	Soft mints	1st	433717, 390247	Dust control unit explosion panel – Driam 4	No emissions under normal circumstances
714	Soft mints	Roof	433784, 390261	Steam flash off from case cooker	None
715	Soft mints graining	Roof	433654, 390508	Graining store gas heater 1	None other than plant maintenance activities
716	Soft mints graining	Roof	433633, 390495	Graining store gas heater 1	None other than plant maintenance activities
720	Soft mints	1st	433773, 390259	Soft mints day hopper explosion panel	No emissions under normal circumstances
1	Hard mints	1st	433825, 390234	Hard mints dryer dust collection unit explosion panel	No emissions under normal circumstances
3	Hard mints	1st	433831, 390235	Rework dust extraction explosion panel	No emissions under normal circumstances
4	Hard mints	Roof	433824, 390234	Hard mints dryer oven exhaust	Bag filter (4200 m^3/hour)
5	Hard mints	3rd	433820, 390233	Sugar mill area explosion panel	No emissions under normal circumstances
6	Hard mints	3rd	433807, 390231	Sack tip area explosion panel	No emissions under normal circumstances
8	Hard mints	Ground	433819, 390231	Dryer area dust extraction explosion panel	No emissions under normal circumstances
95	Hard mints	Roof	433821, 390250	Hard mints air handling unit heat exhaust	None

Mondelez reference	Source	Floor level	Grid reference	Emission description	Abatement
97	Hard mints	Roof	433802, 390245	Hard mints air handling unit heat exhaust	None
99	Hard mints / CLP	Roof	433821, 390241	Hard mints and CLP central vacuum system	Bag filter
100	Hard mints / CLP	Roof	433824, 390237	Hard mints and CLP sugar mill explosion panel	No emissions under normal circumstances
101	Hard mints / CLP	Roof	433823, 390241	Hard mints and CLP sugar mill explosion panel	No emissions under normal circumstances
114	Hard mints / CLP	Roof	433846, 390241	Sugar silo explosion panel	No emissions under normal circumstances
700	Hard Mints	Ground	433798, 390229	Steam vent	None
722	Hard mints	Ground	433817, 390232	Candy cleaner dust collector exhaust	Bag filter (4,200 m^3/hr design capacity)
723	Hard mints	2nd	433830, 390235	Starch vent exhaust	Bag filter
724	Hard mints	Roof	433843, 390246	Central vacuum system exhaust vent	Bag filter
725	Hard mints	Roof	433845, 390246	Central vacuum system explosion panel	No emissions under normal circumstances
727	Hard mints / CLP	Roof	433845, 390243	Sugar silo vent	Bag filter
721	Mints packing	1st	433738, 390228	Mints packing extraction vent	Bag filter
10	Mints packing	Ground	433740, 390228	Explosion panel	No emissions under normal circumstances
710	Services	Roof	433784, 390341	Boiler stack 3	None other than plant maintenance activities
711	Services	Roof	433789, 390342	Boiler stack 2	None other than plant maintenance activities
712	Services	Roof	433795, 390343	Boiler stack 1	None other than plant maintenance activities
717	Services	Ground	433709, 390337	Firewater sprinkler engine exhaust	Emergency use / testing purposes only Routine maintenance
718	Services	Ground	433941, 390229	Standby generator exhaust	Emergency use / testing purposes only Routine maintenance

Point source emissions to air - boilers

The three steam raising boilers are newly installed on site (commissioned in 2025). Emissions monitoring was carried out as part of the commissioning checks and stack emissions testing was completed in February 2026. Concentrations of CO and NO_x recorded are provided in Table 11 below.

Table 11 Boiler emissions summary

Emission point reference	Source	Parameter	Quantity*	Unit	Monitoring standard
710	Boiler stack 3	NO_x (as NO_2)	52.6	mg/m^3	EN 14792
		CO	3.0	mg/m^3	EN 15058
711	Boiler stack 2	NO_x (as NO_2)	59.5	mg/m^3	EN 14792
		CO	82.4	mg/m^3	EN 15058
712	Boiler stack 1	NO_x (as NO_2)	54.2	mg/m^3	EN 14792
		CO	3.1	mg/m^3	EN 15058

*Data taken from single monitoring event undertaken in February 2026, corrected to reference conditions: 273K, 101.3kPa, dry gas, 3% oxygen

Point source emissions to water (other than sewers)

Point source emissions directly to water comprise only clean surface water runoff. The site is intersected by the River Don; surface water runoff is discharged to the river in multiple locations via the drainage system as it passes through the site. Emissions points to water are listed in Table 12 below and with locations shown on Section IV Figure 4

Table 12 Point source emissions to water

Emission point reference	Grid reference	Source	Parameter	Quantity	Unit
W1	433774, 390345	Surface water runoff (uncontaminated) from roofs and roadways	Discharges comprise clean surface water runoff. No monitoring is undertaken nor is proposed.		
W2	433818, 390352				
W3	433821, 390354				
W4	433919, 390304				
W5	433939, 390246				
W6	433834, 390372				
W7	433821, 390373				
W8	433817, 390377				
W9	433614, 390477				

The Mondelez Sheffield site holds three consents to discharge to the River Don related to previously operated process outfalls; these are listed in 0 below. These consents exist for historic purposes and are no longer required due to changes on site; Mondelez requests that these are surrendered as part of this application.

Table 13 Summary of discharge consents for surrender

Consent reference	Grid reference of discharge	Comments
NE/WRA7289/001	SK 33900 90300	This consent is dated 28/1/1997 and is no longer required.
NE/WRA6752/001	SK 33710 90350	This consent is dated 25/9/1992 and is no longer required.
NE/3181/003	SK 33800 90400	This consent (version 001) is dated 17/11/1976 and is no longer required.

Point source emissions to sewers, effluent treatment plants or other transfers off site

All process effluent generated by site activities is discharged to YW STW, with the exception of small volumes of wastewater from the hard mints manufacturing plant, which is separately tankered off site. There are three emissions points to sewer (S1, S2 and S3) and four YW trade effluent discharge consents covering site activities. There are four effluent monitoring locations: treated effluent (C1), CLP sump (C2), soft mints sump (C3) and hard mints sump (C4). Discharge points, effluent monitoring locations and effluent consents are summarised in Table 14 and Table 15 below and are shown on Section IV Figure 4. Process effluent comprises the following:

- Process effluent from CLP, soft mints and jellies manufacturing areas is discharged from site via emission point S1. Prior to discharge, this effluent is pumped from collection sumps at each manufacturing area, via overland pipes, to an on-site effluent pre-treatment plant (ETP) for partial treatment comprising effluent balancing and pH correction. Details of ETP operation is provided in Section II: Technical Description.
- Smaller quantities of other process effluent (e.g. small volumes of general cleaning effluent from 'dry' processing areas such as packing areas) as well as surface water runoff from some hardstanding areas of the site (e.g. areas where raw materials are handled and stored) is also separately discharged from site via emissions point S1 and S2 without receiving pre-treatment at the ETP.
- Wastewater from the hard mints manufacturing plant generated during weekly cleaning is a lower volume (approximately 800-900 litres/week), is collected in a dedicated sump and is removed from site by tanker for off-site treatment and disposal. The hard mints sump is also provided with flow meter. This effluent monitoring location is referred to as C4 and is shown in Section IV Figure 4. Off-site treatment has been selected for this effluent stream as it was not economically viable to install effluent pumping and transfer facilities due to the very low volumes of effluent generated.

In case of an emergency (e.g. pumping failure) effluent from the jellies sump, CLP sump, soft mints sump and hard mints sump can weir over to discharge directly to sewer (thereby bypassing the ETP / tankered effluent route). This does not occur in normal circumstances but the facility to do so has been retained in case of emergency circumstances. This prevents the sumps from overtopping which would otherwise have the potential to lead to contamination of surface water drains or the River Don.

In addition to process effluent, domestic type effluent from toilets and washrooms is discharged to the public sewer via S2 and S3. Other discharge points to sewer are not listed in Table 14 below where these comprise only domestic type effluent and are therefore outside of the scope of this permit application.

Table 14 Point source emissions to sewers, effluent treatment plants or other transfers off site

Emission point reference	Grid reference	Source	Parameter	Quantity (average of available data)	Unit
S1	433700, 390245	• Combined treated process effluent from jellies, soft mints and CLP sumps (monitoring carried out at C1). • Small volumes of process effluent including cleaning / washwater. • Uncontaminated surface water runoff.	Volume	283	m^3/day
			Discharge rate	7.4	l/s
			pH	6-9 (min and max)	units
			BOD	2,412	mg/l
			COD (settled)	10,853	mg/l
			Suspended solids	735	mg/l
			Settleable solids	280	mg/l
			Ammoniacal N, as N	0.16	mg/l
			Total N	0.13	mg/l
			Chloride	62.6	mg/l
			Orthophosphate, as P	1.69	mg/l
S2	433707, 390237	• Small volumes of process effluent including cleaning / washwater. • Uncontaminated surface water runoff. • Wastewater from staff toilets / washrooms.. • Effluent (untreated) from CLP, soft mints and hard mints sumps (sumps C2, C3 and C4) may be discharged via this route in emergency circumstances only.	Discharges comprise surface water runoff and some process effluent including some small volumes of washwater. Effluent from the main processing areas is discharged via S1 or in the case of hard mints is tankered off site. Sumps C2, C3 and C4 are discharged via this route in emergency circumstances only (e.g. pump failure, or in the case of C4 abnormally high effluent volumes between scheduled emptying). Monitoring at this discharge point is not normally undertaken, either by YW or Mondelez, and therefore no data is available.		

Emission point reference	Grid reference	Source	Parameter	Quantity (average of available data)	Unit
S3	433976, 390215	• Uncontaminated surface water runoff. • Wastewater from staff toilets / washrooms.	Discharges comprise uncontaminated surface water runoff and wastewater from staff toilets / washrooms. No monitoring is undertaken nor is required.		

Mondelez holds four YW trade effluent discharge consents. These are listed in Table 15 below.

Table 15 Summary of trade effluent discharge consents

Consent reference	Emission point	Description
3390775	S1	Primary trade effluent consent. Discharge of combined pre-treated effluent. Monitoring location at jellies sump (monitoring location C1).
3390785	S2	Discharge of effluent from CLP plant. Monitoring location at CLP sump (monitoring location C2). Effluent is not normally discharged to sewer from this location; the consent is retained for emergency circumstances only.
339008	S2	Discharge of effluent from soft mints plant. Monitoring location at soft mints sump (monitoring location C3). Effluent is not normally discharged to sewer from this location; the consent is retained for emergency circumstances only.
3390082	S2	Discharge of effluent from hard mints plant. Monitoring location at hard mints sump (monitoring location C4). Effluent is not normally discharged to sewer from this location; the consent is retained for emergency circumstances only.

Point source emissions to land

There are no point source emissions to land or groundwater from the installation.

3 Raw materials

3c Types and amounts of raw materials

Typical raw materials used on site are provided in Table 16 below.

Materials used on site are industry standard including product ingredients (foods / food grade), packaging and a limited amount of ancillary materials including industry standard cleaning chemicals, boiler and water treatment chemicals and engineering items. Safety data sheets for the principal chemicals used on site are provided in Appendix 11.

Waste generation is minimised at Mondelez Sheffield site. Production waste is a key performance indicator across the Mondelez group and is continually monitored and tracked, with deviations investigated and addressed. All production plants incorporate product rework facilities to allow production waste to be recycled back into the product wherever possible. Where waste generation is unavoidable, materials are treated in accordance with the waste management hierarchy in order to minimise materials sent for disposal.

Table 16 Types and amounts of raw materials

Description of raw material and composition	Maximum amount stored (tonnes)	Annual throughput[5] (tonnes each year)	Unit of measurement	Description of the use of the raw material including any main hazards
Section 6.8 A(1)(d)(iii): Food manufacturing				
Product ingredients				
Sugar (granulated, caster, fine)	116	10,010	Tonnes	Granular food product ingredient
Glucose syrup	268	9,515	Tonnes	Semi liquid food product ingredient
Wheat flour	400	312,618	Kgs	Powdered food product ingredient
Desiccated coconut	13,075	130,011	Kgs	Granular food product ingredient
Gelatine	19,000	931,264	Kgs	Granular food product ingredient
Xanthan gum	480	991	Kgs	Powdered food product ingredient
Glazing agent	1,400	13,559	Kgs	Liquid food product ingredient
Sorbitol	6,500	47,200	Kgs	Liquid food product ingredient
Polydextrose	13,500	141,076	Kgs	Liquid food product ingredient
Modified and unmodified starches (e.g. potato, tapioca etc)	44,000	1,353,467	Kgs	Powdered food product ingredient
Vegetable-based carrier oils	1,535	6,970	Kgs	Liquid food product ingredient
Molasses treacle	45,000	756,357	Kgs	Semi liquid food product ingredient
Acetic acid 80% solution	4,300	39,356	Kgs	Liquid food product ingredient
Citric acid 50% solution	16,250	121,311	Kgs	Liquid food product ingredient

[5] Based on 2024 data. Exact use will vary depending on year-on-year changes in production levels, product mix and recipes.

Description of raw material and composition	Maximum amount stored (tonnes)	Annual throughput[5] (tonnes each year)	Unit of measurement	Description of the use of the raw material including any main hazards
Malic acid 40% solution	14,080	143,743	Kgs	Liquid food product ingredient
Blue and pink pareils	16,422	33,205	Kgs	Food product ingredient - spherical granules
Carnauba wax	500	660	Kgs	Powdered food product ingredient
Sugar malic acid blend	50,000	634,551	Kgs	Granular food product ingredient
Black colouring	800	5,429	Kgs	Paste food product ingredient
Anthocyanin colouring	800	1,180	Kgs	Powdered food product ingredient
Burnt sugar caramel colouring	600	17,897	Kgs	Liquid food product ingredient
Lutein colouring	800	3,221	Kgs	Liquid food product ingredient
Paprika colouring	1,200	6,041	Kgs	Liquid food product ingredient
Turmeric colouring	300	167	Kgs	Liquid food product ingredient
Caramel sugar colouring	300	1,591	Kgs	Liquid food product ingredient
Redbeet colouring	250	1,500	Kgs	Liquid food product ingredient
Cranberry red colouring	3,600	17,969	Kgs	Liquid food product ingredient
Yellow colouring	400	2,783	Kgs	Liquid food product ingredient
Liquorice flavouring	1,000	2,000	Kgs	Powdered food product ingredient
Aniseed oil flavouring	400	193	Kgs	Liquid food product ingredient
Apple flavouring	400	476	Kgs	Liquid food product ingredient
Banana flavouring	400	220	Kgs	Liquid food product ingredient
Blackcurrant flavouring	1,200	4,196	Kgs	Liquid food product ingredient

Description of raw material and composition	Maximum amount stored (tonnes)	Annual throughput[5] (tonnes each year)	Unit of measurement	Description of the use of the raw material including any main hazards
Lemon oil flavouring	400	3,670	Kgs	Liquid food product ingredient
Lime flavouring	400	1,787	Kgs	Liquid food product ingredient
Orange oil flavouring	400	253	Kgs	Liquid food product ingredient
Orange flavouring	800	3,774	Kgs	Liquid food product ingredient
Pear flavouring	400	300	Kgs	Liquid food product ingredient
Pineapple flavouring	400	982	Kgs	Liquid food product ingredient
Spearmint oil flavouring	400	1,727	Kgs	Liquid food product ingredient
Tropical cocktail flavouring	400	108	Kgs	Liquid food product ingredient
Apricot flavouring	800	465	Kgs	Liquid food product ingredient
Lime flavouring	400	1,293	Kgs	Liquid food product ingredient
Cherry flavouring	400	132	Kgs	Liquid food product ingredient
Cola flavouring	400	423	Kgs	Liquid food product ingredient
Strawberry flavouring	400	1,739	Kgs	Liquid food product ingredient
Peppermint oil flavouring	800	8,459	Kgs	Liquid food product ingredient
Raspberry flavouring	800	6,933	Kgs	Liquid food product ingredient
Berry blend fruit juice	400	21,126	Kgs	Liquid food product ingredient
Citrus blend fruit juice	400	28,071	Kgs	Liquid food product ingredient
Apple fruit juice	400	12,310	Kgs	Liquid food product ingredient
Product packaging				

Description of raw material and composition	Maximum amount stored (tonnes)	Annual throughput[5] (tonnes each year)	Unit of measurement	Description of the use of the raw material including any main hazards
Aluminium foil and paper packaging	1,789,873	3,579,749	metres	Aluminium foil and paper wrap
Plastic stretch wrap packaging	128,828	1,987,224	metres	Plastic
Plastic shrink wrap packaging	51,360	479,821	metres	Plastic
Plastic packaging - film	254,933	1,319,505	metres	Plastic
Plastic packaging - film	8,000	2,020,047	pieces	Plastic
Plastic packaging - wrap	59,472	88,818	pieces	Plastic
Plastic packaging - bags (various designs)	21,884,012	109,871,140	pieces	Plastic
Cardboard packaging - cartons (various designs)	702,000	5,645,376	pieces	Cardboard
Cardboard packaging - boxes (various designs)	589,600	13,971,197	pieces	Cardboard
Product packaging - labels (various designs)	5,195,000	12,496,501	pieces	Paper labels (adhesive backed)
Paper packaging - wrap (various designs)	2,879,713	51,987,661	pieces	Paper
Glue	2,800	57,175	Kgs	Glue (solid)
Cleaning chemicals				
Drain cleaner	1,375	1,875	Kgs	Contains sodium hydroxide and sodium hypochlorite. Hazardous liquid with corrosive and toxic properties. Safety data sheet provided in Appendix 11.
CIP	2,600	13,800	Kgs	Contains sodium hydroxide. Hazardous liquid with corrosive properties. Safety data sheet provided in Appendix 11.

Description of raw material and composition	Maximum amount stored (tonnes)	Annual throughput[5] (tonnes each year)	Unit of measurement	Description of the use of the raw material including any main hazards
CIP Booster	1,000	7,425	Kgs	Contains hydrogen peroxide. Hazardous liquid with corrosive and irritant properties. Safety data sheet provided in Appendix 11.
Traywashing detergent	1,500	5,125	Kgs	Alkaline liquid detergent with no specific hazardous properties. Potentially polluting to watercourses. Safety data sheet provided in Appendix 11.
Floor Cleaner	1,000	3,700	Kgs	Contains iso tridecanol alcohol ethoxylate and sodium hydroxide. Hazardous liquid with corrosive properties. Safety data sheet provided in Appendix 11.
Food contact cleaning	1,375	2,500	Kgs	Contains tetrasodium EDTA. Hazardous liquid with corrosive and toxic properties. Safety data sheet provided in Appendix 11.
Foam Cleaning	100	100	Kgs	Contains sodium hydroxide. Hazardous liquid with corrosive properties. Safety data sheet provided in Appendix 11.
Acid Descale	50	25	Kgs	Contains nitric acid and phosphoric acid. Hazardous liquid with corrosive properties. Safety data sheet provided in Appendix 11.
Ancillary materials				
Boiler water treatment	379	2555	Litres	Contains sodium bisulfite and cobalt sulfate. Hazardous liquid with toxic properties. Safety data sheet provided in Appendix 11.

Description of raw material and composition	Maximum amount stored (tonnes)	Annual throughput[5] (tonnes each year)	Unit of measurement	Description of the use of the raw material including any main hazards
Boiler water treatment	379	730	Litres	No specific hazardous properties. Potentially polluting to watercourses. Safety data sheet provided in Appendix 11.
Boiler water treatment	379	1642	Litres	Contains sodium hydroxide and potassium hydroxide. Hazardous liquid with corrosive and toxic properties. Safety data sheet provided in Appendix 11.
Salt (water softener)	1,500	16,000	Kgs	Stored as liquid brine solution. Potentially polluting to watercourses
Monopropylene glycol refrigerant	22,500	500	Litres	Low toxicity and readily biodegradable. Safety data sheet provided in Appendix 11.
Biocide for cooling tower	300	200	Litres	Contains sodium hydroxide and sodium hypochlorite. Hazardous liquid with corrosive and toxic properties. Safety data sheet provided in Appendix 11.
Corrosion inhibitor for cooling tower	300	100	Litres	Contains phosphoric acid, sodium bisulfite and hydrogen peroxide. Hazardous liquid with corrosive properties. Safety data sheet provided in Appendix 11.
Section 5.4 A(1) (a)(ii): Effluent treatment plant				
Sodium hydroxide (effluent pH correction)	5,000	19,000	Litres	Sodium hydroxide 32% solution. Hazardous liquid with corrosive properties and respiratory hazard. Safety data sheet provided in Appendix 11.
Suphuric acid (effluent pH correction)	5,000	300	Litres	Sulphuric acid 98% solution. Hazardous liquid with corrosive properties. Safety data sheet provided in Appendix 11.

4 Monitoring

4a Describe the measures you use for monitoring emissions by referring to each emission point

Emissions monitoring - air

No monitoring is proposed in respect of emissions air other than monitoring at the boiler stacks in accordance with requirements specified in the Medium Combustion Plant Directive (MCPD). Proposed boiler stack emissions monitoring is shown in Table 17 below.

No other air emissions monitoring is undertaken or is proposed. BAT 5 does not include any air emissions monitoring requirements for this food and drink industry sector.

Table 17 Air emission monitoring

Emission point	Grid reference	Emission	Frequency	Limit	Technique
Boiler stack 3 (710)	433784, 390341	NO_x	Every 3 years	100 mg/Nm^3	MCERTS BS EN 14792
		CO		No limit	MCERTS BS EN 15058
Boiler stack 2 (711)	433789, 390342	NO_x	Every 3 years	100 mg/Nm^3	MCERTS BS EN 14792
		CO		No limit	MCERTS BS EN 15058
Boiler stack 1 (712)	433795, 390343	NO_x	Every 3 years	100 mg/Nm^3	MCERTS BS EN 14792
		CO		No limit	MCERTS BS EN 15058

Emissions monitoring - water

No monitoring is proposed for direct emissions to water; direct emissions to water comprise only clean rainwater runoff.

Emissions monitoring - sewer

Existing arrangements for monitoring of emissions to sewer is shown in 0 below. This is undertaken by YW for the purpose of monitoring trade effluent discharge consent compliance. No monitoring of emissions to sewer is proposed as part of the installation environmental permit.

Table 18 Wastewater monitoring –Monitoring discharges to sewer

Monitoring location	Location (grid ref)	Emission	Frequency	Limit[6]	Technique
C1 Treated effluent (jellies sump)	433703, 390322	Volume	Monitoring undertaken by Yorkshire Water. Frequency is variable.	455 m^3/day	In line magnetic flow meter
		pH		5.5 – 10	Flow weighted composite and/or spot sample
		COD (settled)		50,000 mg/l	Flow weighted composite and/or spot sample
		COD load (settled)		8,640 kg/day	Calculated
		Settleable solids		3,000 mg/l	Flow weighted composite and/or spot sample
		Settleable solids load		580 kg/day	Calculated

Arrangements for process monitoring associated with wastewater pre-treatment is shown in Table 19 below.

Table 19 Wastewater monitoring – ETP process monitoring

Monitoring location	Location (grid ref)	Emission	Frequency	Limit	Technique
Jellies sump (untreated)	433703, 390322	Volume	Continuous	N/A	In line magnetic flow meter
CLP sump (untreated) (C2)*	433809, 390265	Volume	Continuous	N/A	In line magnetic flow meter
Soft mints sump (untreated) (C3)*	433713, 390240	Volume	Continuous	N/A	In line magnetic flow meter
Hard mints sump (untreated) (C4)**	433794, 390221	Volume	Continuous when effluent is generated	N/A	In line magnetic flow meter
Balance tank 1	433717, 390369	pH	Continuous	N/A	In line probe
Balance tank 2	433717, 390369	pH	Continuous	N/A	In line probe
Balance tank outlet	433717, 390369	Volume	Continuous	N/A	In line magnetic flow meter

6 Limits provided in this table are taken from Yorkshire Water consent reference 3390775

Monitoring location	Location (grid ref)	Emission	Frequency	Limit	Technique
ETP outlet (downstream of chemical dosing)	433717, 390369	Volume	Continuous	N/A	In line magnetic flow meter
		pH	Continuous	N/A	In line probe
CLP sump overflow (untreated) (C2)*	433809, 390265	Volume	Continuous if overflow occurs	N/A	In line magnetic flow meter
		pH	Continuous if overflow occurs	N/A	In line probe
		An automatic effluent sampler is also provided to collect a flow-weighted sample in the event of an overflow to sewer, which may subsequently be analysed if required.			
Soft mints sump overflow (untreated) (C3)*	433713, 390240	Volume	Continuous if overflow occurs	N/A	In line magnetic flow meter
		pH	Continuous if overflow occurs	N/A	In line probe
		An automatic effluent sampler is also provided to collect a flow-weighted sample in the event of an overflow to sewer, which may subsequently be analysed if required.			
Hard mints sump overflow (untreated) (C4)**	433794, 390221	Volume	Continuous if overflow occurs	N/A	In line magnetic flow meter
		pH	Continuous if overflow occurs	N/A	In line probe

4b Point source emissions to air only

Stack emissions monitoring at the boiler stacks in accordance with Environment Agency requirements, in particular BS EN 15259: Air quality — Measurement of stationary source emissions — Requirements for measurement sections and sites and for the measurement objective, plan and report, has not previously been carried out nor has been required by regulatory authorities as the site has not previously held an installation permit. Emissions monitoring ports are installed in the boiler stacks at an accessible location on the boiler house roof. Prior to carrying out stack emissions monitoring, as may be required under the future environmental permit conditions, an assessment of the suitability of the existing sampling locations against BS EN 15259 will be carried out and any necessary modification will be made. Refer to proposed improvement programme.

6 Resource efficiency and climate change

6a Describe the basic measures for improving how energy efficient your activities are

Mondelez operates an energy management system certified to ISO 50001, has a Climate Change Agreement in place and participates in ESOS and historically under UK ETS prior to boiler downsizing. Energy efficiency and CO_2 emissions reduction are key elements of the Mondelez ESG (Environmental, Social, Governance) strategy. As such, energy use monitoring and investment in projects targeting energy efficiency improvements are implemented where opportunities are identified.

Mondelez Sheffield has made significant investments to improve energy efficiency for the Sheffield site. Significant recent energy efficiency projects include:

- A boiler upgrade programme has seen the replacement of four historical boilers with three natural gas-fired boilers. The total combined thermal input capacity is being reduced from 29.54 MWth to 16.5 MWth, reflecting lower site steam demand as a result of production efficiency gains. The boilers include high efficiency sequential controllers and economisers. Boiler blowdown (to sewer) is initiated on total dissolved solids (TDS) minimising boiler blowdown and chemical addition rates.
- As part of the boiler upgrade programme a new boiler hotwell has been installed and condensate recovery has been significantly increased. Heat is also recovered to the boiler hotwell from the air compressor water cooling system. A programme of work to target further condensate recovery opportunities and increase the proportion of steam returned to the hotwell is ongoing during 2026/27.
- Within the last 2-3 years a number of large chillers on site have been replaced with newer more energy efficient alternatives, which use very low global warming potential (GWP) refrigerant gas.
- Three new industrial VSD (variable speed drive) oil-free compressors were installed during 2024 to replace 25 year old units, bringing significant energy efficiency benefits.
- A programme to replace all site lighting with energy efficient LED alternatives was completed in 2025.
- Old electrical transformers have been replaced by new transformers which use amorphous metal transformer (AMT) technology, providing energy efficiency benefits due to reduced energy loss during operation. Five transformers on site have been replaced so far, with a further three new transformers scheduled to be installed during 2026/27.
- A programme of work to replace larger sized motors with energy efficient alternatives is ongoing. This work began approximately two years ago and to date has resulted in replacement of approximately 50% of larger motors.
- Energy metering is in place for boilers, compressors and all sub-stations. A programme of work to roll out further energy sub-metering is in progress.

0 below describes the measures taken on site to minimise energy use.

Table 20 Energy efficiency measures

Common technique	Status	Commentary
Burner regulation and control	✓	Modern boiler sequencing controls installed.
Cogeneration	✗	Gas-fired CHP and biogas generation from anaerobic digestion have previously been considered at Sheffield. These projects have not been taken forward at this stage. Future opportunities will remain under review.
Energy-efficient motors	✓	Energy efficiency is a consideration when specifying new motors for use at the installation, in line with requirements of Ecodesign regulations. VSD and direct drive motors are utilised where appropriate. Replacement of belt drives with chain and sprocket across the site has allowed for motor size reduction.
Heat recovery with heat exchangers and/or heat pumps (including mechanical vapour recompression)	✓	Condensate is recovered from all process areas of the site and returned to the boiler hotwell. A programme of work to target further condensate recovery opportunities and increase the proportion of steam returned to the hotwell is ongoing during 2026/27. Heat recovery is in place on the compressor cooling circuits. Economisers are fitted to the new boilers, which recover heat from exhaust gases to preheat feed water.
Lighting	✓	LED / low energy lighting is used throughout the site. PIR controls are in place where appropriate.
Minimising blowdown from the boiler	✓	A new boiler house feedwater reverse osmosis plant has been installed, to increase the purity of top-up water, thus reducing blowdown requirements. Recovered condensate is used as boiler feedwater. Boiler blowdown control is automated, based on TDS.
Optimising steam distribution systems	✓	Modern boiler sequencing controls provide precise control of steam supply for the installation, operating at the main header pressure. Boiler logs are maintained via automated PLC, recording hours of operation, gas use, feed water make-up and steam output. Installation of water and steam flowmeters in the boiler house and at main distribution headers enable the site to calculate the efficiency of each boiler, monitor steam usage and improve boiler management.
Preheating feed water (including the use of economisers)	✓	Boilers are of a high efficiency design and include economisers.
Process control systems	✓	PLC control system; Modern boiler sequencing controls installed
Reducing compressed air system leaks	✓	New energy efficient compressors have recently been installed on site to replace 25 year old units. Annual compressed air leak surveys are carried out, with leaks repaired as required. Site engineering teams have equipment on site to enable additional condition-based monitoring to be carried providing a more frequent and responsive investigation and repair programme.

Common technique	Status	Commentary
Reducing heat losses by insulation	✓	Insulation is used widely throughout the installation on all hot processes. Recent upgrades include installation of a new boiler hotwell, with cladding and insulation and upgraded heating system. Damaged insulation is identified and repaired as required.
Variable speed drives	✓	The majority of motors within the installation are now VSD. The opportunity for variable speed drive technology is considered when specifying new motor driven plant (pumps, fans, drives etc). The recently installed air compressors are VSD.
Multiple-effect evaporation	✗	Not applicable to site operations
Use of solar energy	✗	Not presently utilised at the installation. Use of solar has been considered but not deemed financially viable at present.

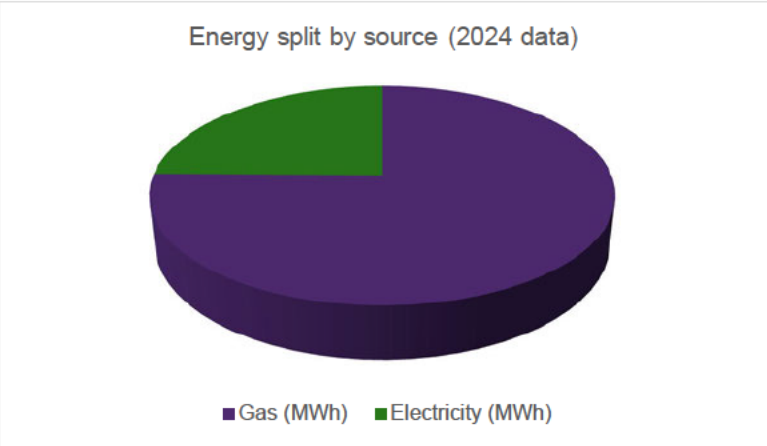
6b Provide a breakdown of any changes to the energy your activities use up and create

Site energy sources comprise electricity and natural gas from the public supply, as shown in Table 21 and Figure 6. In addition to mains electricity and gas, a very small quantity of diesel is used in the firewater sprinkler engine and standby generator (under normal circumstances for equipment testing purposes only).

Table 21 Typical annual energy use

Energy Source	Energy Consumption MWh[7]	% of total (primary)
Electricity (delivered)	16,541	25
Natural Gas	50,232	75
Diesel	Insignificant usage for testing purposes only	
Totals	66,773	100.00

Figure 6 2024 energy by source



[7] Figures presented are based on data gathered for 2024 (whole year data). This includes some gas utilisation by the legacy boilers. Exact use will vary depending on year-on-year changes in production levels and product mix.

Global warming potential (GWP)

There are direct CO_2 emissions as a result of combustion of natural gas in the boilers as well as indirect emissions of CO_2 resulting from the use of imported electricity. The CO_2 equivalent (CO_2e) emissions for the installation are set out in Table 22, together with overall GWP calculation.

Table 22 Global warming potential

Substance	Energy source	Energy Consumption in 2024 – delivered (MWh)	CO_2 emission factor (T/MWh) [8]	Mass CO_2 released (tonnes/yr)
Carbon dioxide	Electricity (mains) imported	16,541	0.177	2,928
	Natural gas	50,232	0.202	10,147
Total GWP				13,075

6d Explain and justify the raw and other materials, other substances and water that you will use

Materials used on site are industry standard including product ingredients (foods / food grade), packaging and ancillary materials including industry standard cleaning chemicals, boiler and water treatment chemicals and engineering items. A list of raw materials is provided in response to Q3c. Safety data sheets for principal chemicals used on site are provided in Appendix 11.

Water use and water minimisation

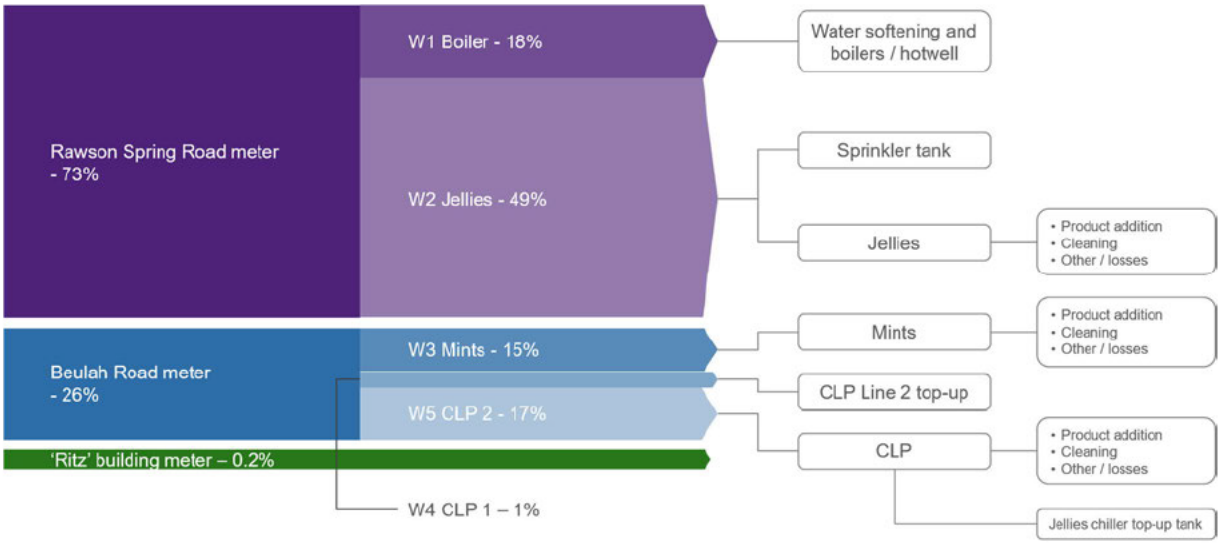
Water is sourced from mains public supply only. Based on 2026 data (January to May inclusive), site annual water consumption, excluding the canteen and amenities block, was approximately 101,182 m^3. This is based on sub-meters in each process area and is shown in Table 23 and Figure 7 below.

Table 23 Typical water consumption by sub-metered area

Site area	Water Use (m^3/year) [9]	% of total (rounded)
Boilers (W1 water meter)	18,223	18
Jellies (W2 water meter)	49,848	49
Mints (W3 water meter)	14,882	15
CLP 1 (W4 water meter)	1,225	1
CLP 2 (W5 water meter)	16,805	17
'Ritz' warehouse building meter	168	0.2
Totals	101,182	100

[8] Factors from https:// www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2025
[9] Figures presented are based on data gathered for 2026 (January to May inclusive).

Figure 7 Typical water consumption by sub-metered area



Water use within the installation is used for equipment cleaning, cooling, steam generation, seal flushes, domestic use and product addition (approximately 5% of potable water used on site is used for product addition). Further process details, including details of cleaning techniques and steam raising boilers is provided in Section II.

Measures are in place to ensure that water is used only where necessary. This is summarised in Table 24 below. A water audit was carried out in August 2025 which identified a number of opportunities to reduce water usage on site. Mondelez Sheffield has prepared a roadmap for water minimisation, which includes a series of specific water reduction measures including short term improvements and longer-term investments to reduce water use and wastewater generation from site activities (significant projects are subject to detailed engineering feasibility assessments). Refer to the proposed improvement programme.

Table 24 Measures to reduce water consumption and the volume of waste water discharged (BAT 7)

Common techniques	Status	Commentary, including examples and upgrades applied at the installation
Water recycling and/or reuse	✗	CIP systems and automatic washers do not currently incorporate water recycling. In some cases this is due to the infrequent nature of washing activities (and safety / hygiene considerations associated with grey water storage). However, it is recognised that there may be opportunities to improve cleaning systems on site to increase the degree of automation and system efficiency and reduce water consumption. These have been incorporated into the water minimisation roadmap. Refer to proposed improvement programme.
Optimisation of water flow	✓	Water flows are optimised to specific process requirements. However, as part the water minimisation roadmap further opportunities are being reviewed and identified.

Common techniques	Status	Commentary, including examples and upgrades applied at the installation
Optimisation of water nozzles and hoses	✓	Water nozzles on hoses are optimised to specific process requirements. However, it has been identified that some hoses use ball valves rather than low pressure trigger-operated spray guns which can reduce water use during cleaning activities. This has been incorporated into the water minimisation roadmap. Refer to proposed improvement programme.
Segregation of water streams	✓	In most areas uncontaminated roof water and surface water runoff from the site is separated from process effluent and discharged directly to the River Don. Process effluent and surface water runoff from areas of the site where there is a risk of contamination are discharged to public sewer under the conditions of the YW trade effluent discharge consents. The site has a long history of industrial development and the site layout has developed over a considerable period of time, which restricts opportunities for further water segregation and reuse.
Dry cleaning	✓	Dry cleaning e.g. sweeping is used in general production areas to remove gross debris prior to wet cleaning. A programme of staff training to raise awareness and optimise staff behaviours has been incorporated into the water minimisation roadmap. Refer to proposed improvement programme.
Pigging system for pipes	N/A	Not applicable due to nature of product (high viscosity) and due to the layout of activities on site.
High-pressure cleaning	N/A	High pressure cleaning not applicable due to health and safety considerations.
Optimisation of chemical dosing and water use in cleaning-in-place (CIP)	✗	It is recognised that there may be opportunities to improve CIP systems on site to increase the degree of automation and system efficiency and reduce water consumption. These have been incorporated into the water minimisation roadmap. Refer to proposed improvement programme.
Low-pressure foam and/or gel cleaning	✓	Low pressure manual cleaning takes place as necessary, using wipes and direct application cleaning products.
Optimised design and construction of equipment and process areas	✓	The Sheffield installation dates back to the 1930s, with process layouts having evolved over a long period of time through gradual changes and upgrades. Key process areas have been optimised and redesigned during process upgrades including the jellies Line 6 project and the boiler house which have both recently been upgraded.
Cleaning of equipment as soon as possible	✓	Food safety and HACCP requirements dictate that residue build up is avoided to reduce risks to product quality and safety (for example through encouraging the presence of vermin or fire risk). Operation of the plant is determined upon quality assigned timers i.e. tanks have to be cleaned within a certain time period.

6e Describe how you avoid producing waste in line with Council Directive 2008/98/EC on waste

A summary of waste generated as a result of activities undertaken on site is provided in Table 25 below. Normal treatment / disposal routes are outlined; Mondelez work with waste management contractors to ensure that waste generated as a result of site activities is managed in line with the waste hierarchy, with recycling and recovery routes used where possible. Product waste that is still suitable for human consumption is collected and used for rework usually as a component in the darker

coloured or stronger flavoured product runs. As product waste may contain gelatine, the Animal By-Products Regulations (ABPR) prohibit the recovery of waste for use in animal feeds; instead residual wastes (including starch) are sent off-site as a feedstock for anaerobic digestion, with energy recovery.

Table 25 Waste streams

Waste Type	Nature of material	Storage arrangements	Treatment/disposal method	Annual production (tonnes)*
General waste	Non-hazardous	Dedicated skips and smaller containers in the western yard, eastern yard and south of Ritz building	Energy from waste	415
Food waste (product)	Non-hazardous	Stored in covered skips in the western yard and central yard	Recovery (anaerobic digestion)	1,579
Paper and cardboard	Non-hazardous	Dedicated skips and smaller containers in the western yard, eastern yard and south of Ritz building	Recycle (or if contaminated may be energy from waste)	80
Plastic	Non-hazardous	Dedicated skips and smaller containers in the western yard, eastern yard and south of Ritz building	Recycle	9
Wood	Non-hazardous	Stored in designated skip in the eastern yard	Recycle (or if contaminated may be energy from waste)	30
Metals	Non-hazardous	Stored in designated skip in the eastern yard	Recycle	41
Oil	Hazardous	Stored within an IBC on a drip tray in the western yard	Recycle	18
Waste electrical equipment (WEEE)	Hazardous / non-hazardous	Within a designated container in the western yard	Recovery	2
Other hazardous waste	Hazardous	Stored in a dedicated hazardous waste area south of the Ritz building in multiple containers and IBCs	Recovery	15
Hard mints cleaning effluent	Non-hazardous	Generated during weekly cleaning and stored in hard mints sump (location C4 shown in Section IV Figure 4)	Treatment at WwTW	11 m^3

*2024 data

Form B6

3b What is the maximum volume of effluent you will discharge in a day?

The maximum daily effluent discharge, as specified by volumetric limits in the YW trade effluent consents, is 640 m^3/day. This represents the total volumetric flow permitted via all trade effluent discharge consents combined. However, under normal circumstances discharges of trade effluent are only made via emission point S1 (consent reference 3390775) and therefore 455 m^3/day is the normal maximum volume of effluent discharged from site. This is summarised in Table 26 below.

Table 26 Summary of permitted discharge volumes via Yorkshire Water trade effluent consents

Consent reference	Discharge location	Maximum permitted volume of discharge	Comments
3390775	S1	455 m^3/day	Discharge of combined treated effluent. Monitoring location at jellies sump (monitoring location C1).
3390785	S2	140 m^3/day	Discharge of effluent from CLP plant. Monitoring location at CLP sump (monitoring location C2). Effluent is not normally discharged to sewer from this location; the consent is retained for emergency circumstances only.
339008	S2	40 m^3/day	Discharge of effluent from soft mints plant. Monitoring location at soft mints sump (monitoring location C3). Effluent is not normally discharged to sewer from this location; the consent is retained for emergency circumstances only.
3390082	S2	5 m^3/day	Discharge of effluent from hard mints plant. Monitoring location at hard mints sump (monitoring location C4). Effluent is not normally discharged to sewer from this location; the consent is retained for emergency circumstances only.
Total volume		640 m3/day (455 m3/day under normal circumstances)	

3c What is the maximum rate of discharge?

The maximum rate of discharge, as specified by limits in the YW trade effluent consents, is 28.2 l/s. This represents the maximum discharge rate permitted via all trade effluent discharge consents combined. However, under normal circumstances discharges of trade effluent are only made via emission point S1 (consent reference 3390775) and therefore 11.2 1/s is the normal maximum rate of effluent discharged from site. This is summarised in Table 27 below.

Table 27 Summary of permitted discharge rate via Yorkshire Water trade effluent consents

Consent reference	Discharge location	Maximum permitted volume of discharge	Comments
3390775	S1	11.2 l/s	Discharge of combined treated effluent. Monitoring location at jellies sump (monitoring location C1).
3390785	S2	7 l/s	Discharge of effluent from CLP plant. Monitoring location at CLP sump (monitoring location C2). Effluent is not normally discharged to sewer from this location; the consent is retained for emergency circumstances only.
339008	S2	5 l/s	Discharge of effluent from soft mints plant. Monitoring location at soft mints sump (monitoring location C3). Effluent is not normally discharged to sewer from this location; the consent is retained for emergency circumstances only.
3390082	S2	5 l/s	Discharge of effluent from hard mints plant. Monitoring location at hard mints sump (monitoring location C4). Effluent is not normally discharged to sewer from this location; the consent is retained for emergency circumstances only.
Total volume		28.2 l/s (11.2 l/s under normal circumstances)	

3d What is the maximum volume of non-rainfall dependent effluent you will discharge in a day?

Discharges to sewer principally comprise process effluent. However, the discharge does also include some rainwater runoff from areas of the site where there is potential for the runoff to become contaminated. Rainwater runoff is not separately measured and therefore non rainfall dependant effluent cannot be provided. It is noted however that rainfall runoff is expected to be a very small proportion of total effluent discharged from the site; uncontaminated rainwater runoff is discharged directly to the River Don from a number of locations on site.

5 Should your discharge be made to the foul sewer

All process effluent generated by activities undertaken at the Mondelez Sheffield site is discharged to foul sewer. Question 5 is not applicable.

7a and 7b Is your effluent treated?

Effluent generated from CLP, jellies and soft mints plants is discharged from site for treatment at YW STW. Prior to sewer discharge, process effluent from CLP, soft mints and jellies manufacturing areas is conveyed to an on-site effluent pre-treatment plant (ETP) for partial treatment comprising effluent balancing and pH correction.

Wastewater from the hard mints manufacturing plant is a lower volume generated during weekly cleaning and is collected in a dedicated sump and is removed from site by tanker for off-site treatment and disposal.

7g Details of effluent discharge quality?

An inventory of point source emissions to sewer is provided in response to Form B3, Question 2. This includes details of the effluent discharge quality.

8b, c, d, e, f Are any of the specific substances, as defined in the above guidance, added to or present in the effluent as a result of activities on site?

Process effluent is discharged to sewer and treated at YW STW prior to discharge to the River Don. The only direct discharges to surface water comprise clean rainwater runoff. A review of activities carried out on site, and materials used and stored on site indicates that hazardous and priority substances are not present in effluent generated by the Mondelez Shefield site, due to:

- None of the listed specific substances are listed as conditions in the site Trade Effluent Discharge Consent;
- None of the listed specific substances are intentionally released to sewer in effluent generated by site activities. Raw materials used on site are provided in Section III: Supporting information in response to Form B3, Question 3.

For questions 8e and f, there is no direct discharge to surface and groundwater and therefore it is assumed that these questions are not relevant.

10b, d Grid reference of effluent sample and flow monitoring points

Refer to Section II: Supporting information, Form B3, Question 4 for further information regarding effluent monitoring arrangements.

Effluent monitoring location	Description	Grid reference
C1	Jellies sump (treated effluent)	433703, 390322
C2	CLP sump	433809, 390265
C3	Soft mints sump	433713, 390240
C4	Hard mints sump	433794, 390221

Proposed improvement programme

Proposed improvements are summarised in Table 28 below.

Table 28 Proposed improvement programme

Relevant reference	Proposed improvement	Proposed completion date
BAT 7	A water audit was carried out in August 2025 which identified a number of opportunities to reduce water usage on site. Mondelez Sheffield have prepared a roadmap for water minimisation, which includes a series of specific water reduction measures including short term improvements and longer-term investments to reduce water use and wastewater generation from site activities.	Timescales provided for individual actions. Actions will be completed over a three-year timescale.