

FUGITIVE EMISSIONS REPORT

**Kellogg's Company of Great
Britain Ltd**

Wrexham

Date: January 2019

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1. Introduction

This document presents the report relating to the Fugitive Emissions for the Kellogg's manufacturing facility in Wrexham in accordance with the Operating Permit BV8016ID which it is submitted to the Regulatory Body Natural Resources Wales (NRW).

"The Operator shall review fugitive emissions, having regard to the application of Best Available Techniques (BAT), or such other period as shall be agreed in writing by the Regulating Agency and a summary report of this review shall be sent to the Agency detailing such releases and the measures taken to minimise / reduce them."

For the purpose of this report, fugitive emissions are taken as:

"Fugitive emissions" means emissions to air or water (including sewer) from the Permitted Installation which is not controlled by an emission or background concentration limit under the Permitting Conditions".

Neighbouring Communities, other Fugitive Emissions Sources and Sensitive Receptors

The Kellogg manufacturing facility is located at the Northern edge of the Wrexham Industrial Estate (WIE) approximately 3 km East of Wrexham town centre (Grid Reference 338780, 350500). The site covers datum approximately 18 hectares and has an approximate elevation of 30 m above Ordnance Datum (mAOD). The topography of the site is generally flat, although in the region the ground falls to the South East towards the River Dee.

Neighbouring the manufacturing facility and beyond is a small residential area. The closest residential receptor is located approximately 400 m to the North East boundary of the plant facility. Neighbouring the site to the South is a Waste Transfer Station which also has a potential dust, odour, and noise source in this area.

2. Evaluation of Fugitive Emissions

This report in consistency with previous studies defined that the type of fugitive emissions at the Kellogg's manufacturing facility in Wrexham would be classified in two distinct categories.

- Process related emissions
- Non – process related emissions

Process fugitive emission sources include those emissions which are directly related to the manufacturing of the Kellogg breakfast cereal. It is important to note that product recipes have evolved and changed frequently over the past years but the principal manufacturing process remain fairly constant and this include primary cereal cooking, drying, forming and toasting prior to the final phase of packing the product into a finished goods format.

All types of emissions sources to air, water originating from the manufacturing operation are subjected to an effective abatement systems based on the latest available techniques (BAT) coupled with a strict regime of surveillance routines and planned program maintenance to all critical assets and equipment's.

In addition to the above it is also an internal policy of the facility that all plant doors, windows, louvres are subjected to a strict control whereby there are kept closed at all times and proper signage assigned in key places reminding personnel of such importance. The other types of fugitive emissions found at the plant are classified as non - process related and includes emissions originating from:

- Transportation goods vehicles;
- Personnel vehicles;
- Waste Water Treatment plant;
- Animal Feed holding waste station;
- Extraction and Ventilation systems

The fugitive emissions potentially released from the plant facility are categorised as:

Table 1: Category / Type of Fugitive Emissions

Fugitive Emission Category / Type	Type of Operational Activity	Category Code
Process Related	Bulk raw materials, ingredients and packaging deliveries	C1
	Raw materials /ingredients handling and transfer	C2
Process Related	Manufacturing processes which include the following: Cooking, drying, baking, toasting, flavouring and final packaging	C3
Process Related	Finished goods storage / warehousing	C4
Non Process Related	Vehicle Traffic on site	C5
	Waste Water Treatment Plant (WWTP) facility	C6
Non Process Related	Animal feed handling, storage and transportation	C7

3. Operating Practices and Control Measures

The operating practices and control measures that are currently in place in relation to fugitive emissions sources are identified in Appendix 2 and are described as follow:

3.1.1 Odour

The effect of odour emissions on the local environment depends on certain variables:

- proximity to neighbour's and other sensitive receptors
- local topography
- prevalent weather conditions such as wind speed, wind direction and atmospheric stability

Fugitive emissions related to odour play an important part at the facility and are subjected to a strict control and surveillance regime designed to minimize their environmental impact.

All waste containers and vehicles are kept clean and properly covered at all times to minimize any adverse effect. Waste product is only stored on site for a minimum period of time before being taken off for its final disposal.

The Waste Water Treatment plant which is another potential source of concern for fugitive emissions is subjected to a daily operational control and surveillance if any malfunction is identified to the proper operation of the plant site services personnel will immediately report the problem and implement a remedial action immediately.

In addition to the above regular cleaning of equipment and operational areas such as loading bays, roads and pathways, drainage systems around the site including regular cleaning of drainage channels and gullies.

3.1.2 Noise

Fugitive noise emissions produced by equipment on the roof, deliveries of raw materials / ingredients, dispatch of finished goods, pick of waste materials, services / maintenance vehicles are limited to the hours identified in the planning permission and operating conditions.

A speed limit of 10 mph is strictly imposed on all vehicles entering or leaving the site. All doors are kept closed outside delivery times, during shut down periods or when not required for operational purposes. A strict one – way system is enforced to reduce noise associated with vehicles reversing.

All raw materials / ingredients deliveries are supplied by bulk tanker to reduce material movement noise when loading and unloading.

The majority of the process equipment with the exception of the dust extraction and odour abatement systems, cooling towers and the Waste Water Treatment Plant (WWTP) and storage silos are within the envelope of the main building fabric to minimise noise emissions impact.

Kellogg Staff are aware of the environmental impacts of their work and exercise an appropriate standard of good housekeeping, proportionate to the impact of any potential emissions. Training and competency of staff is managed by the Operations

Development Department. The company identifies training requirements of its employees and contractors and provide suitable resources to ensure they have the required knowledge, skills and expertise to carry out their respective duties.

In addition to the routine operational tasks, planned preventative maintenance program (PPM) are in place. Operators qualified to carry out routine mechanical and electrical maintenance will be present on site to ensure any breakdowns likely to cause noise problems are actioned without delays.

3. Inspection, Monitoring and Record Keeping

Records are kept at the facility at all times to ensure that any identified noise emission is fully investigated and remedial action will be implemented immediately. All interventions are then logged for any future reference.

This information will also assist the surveillance personnel in identifying the adequate check frequency of sensitive equipment to achieve maximum cost-effective emissions reduction whilst assisting the unique characteristics of the facility.

3.1.4 Manufacturing Roof Space

The roof area is regularly monitored by the facility management company who report any equipment malfunction and product spillages. A external consultant comes to site and performs regular maintenance of the filtration systems. In the event of any equipment malfunction which may cause unnecessary noise emissions, product spillage or dust blow down, such incidents will be dully recorded and immediately reported to the EHS Department and remediation action will be initiated immediately as described in Appendix 1.

4. Previous Coverage of Fugitive Emissions

See Appendix 2: Coverage of fugitive emissions assessment

5. Benefits of the Fugitive Emissions Study

Since the last major upgrade to the Waste Water Treatment plant (WWTP) which took place back in 2013 has resulted in a significant reduction in odour emissions from the plant. The surveillance routine carried out by the security patrol on a daily basis provide an early warning and reporting mechanism in the event of any malfunction to the WWTP.

6. Operational Control

The internal operating control procedures adopted at the Kellogg facility in accordance with Permitting Conditions provide an effective mechanism of compliance.

All the activities on site are fully planned and managed by the site management team and these include a robust regime of surveillance routine coupled with a planned preventative maintenance (PPM) to all assets and equipment so they continuously

perform at their optimum level of efficiency according to the manufacturer instructions.

7. Complaints Handling and Communications

At the Kellogg facilities there exists a very comprehensive system of monitoring and inspection to check on all potential issues relating to noise or odour emissions. If a complaint is received locally, they will be directed to the EHS Department at the plant. The management of complaints is controlled by the EHS Department, which states that the company will maintain a register of all complaints and incidents to ensure that they are appropriately handled and that preventative measures are put in place to prevent recurrence in the future. All complaints and severity are monitored and reported to the Senior Management Team on a regular basis for review and further action if required.

8. Conclusion

This report has defined and explained fugitive emissions potentially present at the Kellogg manufacture facility in Wrexham and described the control measures that are currently in place to ensure their effective control. The key sources of fugitive emissions have been described, and the plant data has been used to illustrate the potential benefits and the careful and focused application of the daily surveillance carried out by the dedicated site personnel.

Appendix One: List of Fugitive Emissions Sources

Fugitive Source ID	Fugitive Emission Description	Location	Abatement Type	Operating Control Procedures / Practices	Visible Emissions Check Requirements?
1	Sugar Silo 1 Exhaust	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures,	Weekly checks
2	Sugar Silo 2 Exhaust	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
4	Silo Exhaust Receiver	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
5	Silo Exhaust Receiver	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
6	Scale Dust Receiver	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
8	Dust Receiver Exhaust	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
10	Pulsair 2 Exhaust	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
11	Pulsair 3 Exhaust	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
12	Pulsair 4 Exhaust	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
13	Animal Feed receiver	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
14	Salt Receiver Exhaust	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks

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Fugitive Source ID	Fugitive Emission Description	Location	Abatement Type	Operating Control Procedures / Practices	Visible Emissions Check Requirements?
15	Sugar Receiver Exhaust	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
16	K Rework Exhaust	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
17	RDX Rice Scale 1 Exhaust	North side of the plant	Fabric Filter	Not Operational	Not Required
18	RDX Bran Scale 2 Exhaust	North side of the plant	Fabric Filter	Not Operational	Not Required
19	Bran flakes Suction	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
20	All Bran Suction	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
25	Malt Dust Filter	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
26	Corn Alpine Mill	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
27	Malt Kek Mill	North side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
32	RDX CPD Infeed	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
33	Packing Line 1-4 Dust Collection	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
34	RDX Jetzone Extractor	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
35	All Bran Feed Collection	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks

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Fugitive Source ID	Fugitive Emission Description	Location	Abatement Type	Operating Control Procedures / Practices	Visible Emissions Check Requirements?
36	Bran flakes Feed Collection	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
37	Tank floor and Bran Flakes Feed	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
38	RDX Jetzone Dust Collection	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
39	RDX Flaking Mill Exhaust	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
40	Bran flakes Food Receiver	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
41	Bran flakes LBB Receiver	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
43	Bran flakes Mill Extraction	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
44	RDX LSB Return	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
45	RDX SSB Infeed	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
46	RDX SSB k-Ray	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
47	RDX SSB Return	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
48	Hot Ait Lift Receiver	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
49	RDX Morton Mixer Pulsar	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
50	All Bran Dryer Bleed 2	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks

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Fugitive Source ID	Fugitive Emission Description	Location	Abatement Type	Operating Control Procedures / Practices	Visible Emissions Check Requirements?
51	All Bran Dryer Bleed 2	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
52	All Bran Cooler Bleed	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
53	RDX Surge Bin Receiver	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
54a	RDX Pellet Mill 1 + 12	Main roof on the North side of the plant	Fabric Filter	Not Operational	Not Required
54b	RDX Pellet Mill 3 + 4	Main roof on the North side of the plant	Fabric Filter	Not Operational	Not Required
54c	RDX Pellet Mill 4 + 5	Main roof on the North side of the plant	Fabric Filter	Not Operational	Not Required
54d	RDX Pellet Mill 6 + 7	Main roof on the North side of the plant	Fabric Filter	Not Operational	Not Required
54e	RDX Pellet	Main roof on the North side of the plant	Fabric Filter	Not Operational	Not Required
54f	RDX Pellet Mill 10 + 11	Main roof on the North side of the plant	Fabric Filter	Not Operational	Not Required
55	Bran flakes Jetzone Extract	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
56	Bran flakes Jetzone Bleed	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
57	RDX Jetzone Fume Extractor	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
58	RDX Jetzone Bleed	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required

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Fugitive Source ID	Fugitive Emission Description	Location	Abatement Type	Operating Control Procedures / Practices	Visible Emissions Check Requirements?
59	Spare Outlet	Main roof on the North side of the plant	Not assigned	Not Operational	Not Required
60	RDX Jetzone Bleed Fan	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
61	RDX FM 1 – 7 Dust Collection	Main roof on the North side of the plant	Fabric filter	Not Operational	Not Required
62	RDX FM 8 – 14 Dust Collection	Main roof on the North side of the plant	Fabric filter	Not Operational	Not Required
65	RDX Dust Collection	Main roof on the North side of the plant	Fabric filter	Not Operational	Not Required
66	Line 1-4 Feed Conveyor	Main roof on the North side of the plant	Fabric filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
67	RDX Dust Collection	Main roof on the North side of the plant	Cyclone	Not Operational	Not Required
68	BF Finished Food Torrit Filter	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
69	All Bran Dust Collection	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
70	Recook Receiver	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
71	Recook Receiver	Main roof on the North side of the plant	Cyclone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
72	Packaging Line 2 Dust Extraction	Main roof on the North side of the plant	Fabric filter	Not Operational	Weekly checks
73	Packing Line 1-4	Main roof on the North side of the plant	Fabric filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
74	Muesli Dust Extraction	Main roof on the North side of the plant	Fabric filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks

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Fugitive Source ID	Fugitive Emission Description	Location	Abatement Type	Operating Control Procedures / Practices	Visible Emissions Check Requirements?
76	Granola Oven Extract	Main roof on the North side of the plant	Oven Extract	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
77	Granola Oven Zone 5	Tank Floor	Oven Extract	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
78	Granola Oven Zone 4	Tank Floor	Oven Extract	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
79	Granola Oven Zone 3	Tank Floor	Oven Extract	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
80	Granola Oven Zone 2	Tank Floor	Oven Extract	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
81	Granola Oven Zone 1	Tank Floor	Oven Extract	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
82	Lines 9 +10 Dust Extraction	4 th Process roof on the South Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
83	Lines 7 +8 Dust Extraction	4 th Process roof on the South Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
84	Lines 9+10 Dust Extraction	4 th Process roof on the South Side of the plant	Decommissioned	Not Operational	Not Required
85	Line 13 Dust Extraction	4 th Process roof on the South Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
86	Tank Floor Dust Collection	4 th Process roof on the South Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks

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Fugitive Source ID	Fugitive Emission Description	Location	Abatement Type	Operating Control Procedures / Practices	Visible Emissions Check Requirements?
87	DSU 7 & 8 dust collection	4 th Process roof on the South Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
89	Recycled Dust Receiver	4 th Process roof on the South Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
90	4 th Dryer Fines Receiver	4 th Process roof on the North Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
91	4 th Process Dust Collection	Above Canopy Area North West side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
92	Jetzone Bleed	4 th Process roof on the North Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
93a & b	Jetzone Bleed	4 th Process roof on the North Side of the plant	Cyclone	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
94	Jetzone Bleed	4 th Process roof on the North Side of the plant	Cyclone	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
95	4 th FM Dust Collection	4 th Process roof on the North Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
96	Dry area dust Collection	4 th Process roof on the North Side of the plant	Cyclone	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
97	Vitamin Addition Dust Collection	4 th Process roof on the North Side of the plant	Cyclone	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
98	4 th Process Reject Food Exhaust	4 th Process roof on the North Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks

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Fugitive Source ID	Fugitive Emission Description	Location	Abatement Type	Operating Control Procedures / Practices	Visible Emissions Check Requirements?
99	4 th Process Dust Receiver	4 th Process roof on the North Side of the plant	Cyclone	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
100	Process Wet Scrubber	4 th Process roof on the North Side of the plant	Wet De - Duster	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
101	Buhler Flour Return Exhaust	4 th Process roof on the North Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
103	Flour Suction Exhaust	4 th Process roof on the North Side of the plant	Fabric Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
104	Bran Suction Exhaust	4 th Process roof on the North Side of the plant	Wet De - Duster	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
106	Boiler Plant West Stack	North East side of the plant	Chimney Stack (Boiler plant)	Fume exhaust from the boiler plant	Not Required
107	Boiler Plant East Stack	North East side of the plant	Chimney Stack (Boiler plant)	Fume exhaust from the boiler plant	Not Required
108	W1 – East Balance Pond	North East side of the plant	Balance Pond	Regular surveillance routine is carried out by site services and security personnel	No
109	W2 – West Balance Pond	North West side of the plant	Balance Pond	Regular surveillance routine is carried out by site services and security personnel	No
110	Waste Water Treatment Plant	South Side of the plant	WWTP	Regular surveillance routine is carried out by site services and security personnel	No
111	4 th Process Dryer Bleed	Main Roof on the south side of the plant	Wet De - Duster	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
112	4 th Process Dust Extract	Main Roof on the south side of the plant	Wet De - Duster	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
114	Flour Transfer Suction Pump	North side of the plant	Bag filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks

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Fugitive Source ID	Fugitive Emission Description	Location	Abatement Type	Operating Control Procedures / Practices	Visible Emissions Check Requirements?
115	Flour Transfer Suction Pump	North side of the plant	Bag filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
116	Bi – Vac Suction Pump	North West side of the plant	Bag Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
117	Bi – Vac Suction Pump	North West side of the plant	Bag Filter	In the event of a malfunction of the filtration system or blockages any spillages will be clean, collected and disposed off according to the internal operating procedures	Weekly checks
118	RDX Pellet Dryer Bleed	Main roof on the North side of the plant	Dryer Extract	Not Operational	Not Required
119	RDX Coated Product Dryer Bleed	Main roof on the North side of the plant	Dryer Extract	Not Operational	Not Required
120	Extrusion Plant Dry Rotacalone	Main roof on the North side of the plant	Rotacalone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
121	Extrusion Plant Wet Rotacalone A	Main roof on the North side of the plant	Rotacalone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks
122	Extrusion Plant Wet Rotacalone B	Main roof on the North side of the plant	Rotacalone	In the event of any product spillage or blow out will be reported by the daily inspection routine and the necessary cleaning measures will be undertaken immediately	Weekly checks

Appendix Two: Coverage of Fugitive Emissions Assessments

Hazard	Receptor	Pathway	Risk Management	Exposure Probability	Consequences	What is the overall risk?
What has the potential to cause harm?	What is the risk? What need protecting?	How can the hazard travel to the receptor?	What measures are taken to mitigate the risk? If it does occur – who is responsible to take action?	How likely is this contact?	What is the harm that can be caused by such exposure?	What is the risk? The balance of probability and consequences
Food dust generated from the loading & unloading of raw material products	Neighbouring residential area, local amenity / industry.	Blown over by wind or during adverse weather conditions.	All food vessels, containers are fully enclosed and have additional secondary containment systems to minimise /reduce the impact on the local environment. The responsible person to manage such event will be primarily the EHS Practitioner.	Approximately 260 operating days a year, however this does depend on production requirements.	The nuisance can be seen in the form of dust deposit on local residential properties, roads, vehicles and local surrounding.	Dust deposit. This risk is however minimised due to the preventive measures undertaken by the plant. Hazard considered being not significant.
Dust powder deposit on the factory roof space.	Neighbouring residential area, local amenity / industry.	Blown over by wind or during adverse weather conditions.	The implemented planned preventative maintenance does provide a safeguard which minimises the effect of any contaminants. The responsible person to manage such event will be primarily the EHS Practitioner.	This type of events could be caused by a malfunction or blockages to the filtration or the abatement systems currently located on the roof space of the plant.	Nuisance caused by deposited organic dust can easily migrate from the plant under adverse weather conditions. In the event of a rain fall any deposited contaminant can be potentially washed down towards the site balancing ponds which act a secondary containment system.	In this instance the potential is considered to be not significant in view of the mitigating measures put in place by the surveillance regime and the preventive maintenance system.
Open plant doors, windows and louvers.	Neighbouring residential area, local amenity / industry.	Blown over by wind or during adverse weather conditions.	The site has a policy of keeping all doors, windows and louvers closed at all times. This is facilitated by automatic closing mechanism whenever possible as well as an effective signage which provide a timely reminder to all personnel to keep all openings closed at all times. Regular awareness training is also provided to all site personnel of such potential hazard.	Dust and /or noise nuisance could easily originate from doors and windows being left open during adverse weather conditions.	This type of nuisance could manifest itself in form of dust deposit or elevated noise levels on local residential properties, local amenity, industry and pathways.	This type of risks is again considered to be not very significant in view of the preventive measures and surveillance routine currently in place at the plant.

Appendix Two: Coverage of Fugitive Emissions Assessments

Hazard	Receptor	Pathway	Risk Management	Exposure Probability	Consequences	What is the overall risk?
What has the potential to cause harm	What is the risk? What need protecting	How can the hazard travel to the receptor	What measures are taken to mitigate the risk? If it does occur – who is responsible to take action?	How likely is this contact?	What is the harm that can be caused by such exposure?	What is the risk that remains? The balance of probability and consequences
Loading / unloading animal feed waste	Neighbouring residential area, local amenity / industry.	Blown over by wind or during adverse weather conditions.	All transportation vehicles and storage containers are provided with purposely manufactured covers designed to prevent any waste product. The responsible person to manage such event will be primarily the EHS Practitioner.	This could happen under adverse weather conditions or covers being left opened accidentally or damaged.	The nuisance can be seen in the form of dust deposit on local residential properties, roads, vehicles and local surrounding.	This type of risk is considered not to be significant because transportation personnel and local workforce maintain a robust surveillance which minimises such incident from occurring.
Organic and non organic waste removal from the plant.	Neighbouring residential area, local amenity / industry.	Carried over under adverse weather windy conditions.	All transportation vehicles are provided with properly designed covers and netting which provide an effective physical barrier to any waste product from being blown away from its containment. The responsible person to manage such event will be primarily the EHS Practitioner.	This could potentially happen if the transportation are not adequately equipped to prevent such incidents from happening.	Litter and waste debris could potentially be deposited on the public highway and local pathways.	This type of risk is considered to be not significant because transportation personnel and local workforce maintain a robust surveillance which minimises such incident from occurring.
Transportation vehicles (Raw ingredients / packaging materials).	Any liquid contaminant / pollutant originating from a leak could potentially enter a local water course.	Surface water runoff.	The site internal operating spillage procedures provide effective guidelines to all transportation personnel on how to deal with such potential eventuality. In addition to the above all transportation vehicles are fully equipped with a spill kit and spill kit stations are also strategically located around the plant and provide another safeguard to deal with a spillage. The emergency preparedness program currently in place has been fully trained site personnel which will deal with any unplanned emergency caused by a vehicle spillage according to the internal operating procedures.	This type of incident could potentially occur accidentally or due to lack of proper maintenance to a transportation vehicle.	In the event of such incident an oil, fuel or other liquid contaminant could potentially be washed down to the balancing ponds which will act as a secondary containment system which will prevent any harmful pollutant from entering a controlled water course.	In view of the fact that the plant has an effective secondary containment system in the form of the East and West Balancing which act as additional safeguards which minimise the risk of water pollution. These preventive measures currently in place in the plant make such incident unlikely to cause a significant environmental impact.

Appendix Two: Coverage of Fugitive Emissions Assessments

Hazard	Receptor	Pathway	Risk Management	Exposure Probability	Consequences	What is the overall risk?
What has the potential to cause harm	What is the risk? What need protecting	How can the hazard travel to the receptor	What measures are taken to mitigate the risk? If it does occur – who is responsible to take action?	How likely is this contact?	What is the harm that can be caused by such exposure?	What is the risk that remains? The balance of probability and consequences
Liquid pollutants caused by transportation vehicles parked on site.	Any liquid contaminant / pollutant originating from a leak could potentially enter a local water course.	Surface water runoff.	The site internal operating spillage procedures provide effective guidelines to all transportation personnel on how to deal with such potential eventuality. In addition to the above all transportation vehicles are fully equipped with a spill kit and spill kit stations are also strategically located around the plant and provide another safeguard to deal with a spillage. The emergency preparedness program currently in place has fully trained site personnel which will deal with any unplanned emergency caused by a vehicle spillage according to the internal operating procedures. The responsible person to manage such event will be primarily the EHS Practitioner.	This type of incident could potentially occur accidentally or due to a lack of proper maintenance to a transportation vehicle.	In the event of such incident an oil, fuel or other liquid contaminant could potentially be washed down to the balancing ponds which will act as a secondary containment system which will prevent any harmful pollutant from entering a controlled water course.	In view of the fact that the plant has an effective secondary containment system in the form of the East and West Balancing which act as additional safeguards which minimise the risk of water pollution. These preventive measures currently in place in the plant make such incident unlikely to cause a significant environmental impact.
Litter blown from the site onto the highways and the surrounding area.	Adjacent roadways to the plant, footpaths, local residential area and industry.	Blown over or carried over under adverse windy conditions.	Effective measures are currently in place which will prevent / minimise the risk of litter from migrating outside the inner perimeter of the plant by means of a new fencing and the purposely built soil embankment which act as a secondary physical barrier.	This type of risk could occur under adverse weather conditions.	Litter nuisance to the local residents and businesses.	Moderate to minimum due an effective control system currently in place.

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Pest caused by animals (birds, rabbits, foxes etc...)	Residential properties and local businesses.	Food waste carried over by animals to the local area surrounding the site.	All waste containers are kept covered at all times and kept in purposely designed areas which provide a secondary containment system which prevent rodents and other animals from again access to such waste product. The responsible person to manage such event will be primarily the EHS Practitioner.	This type of problem is considered as a likely event and occurs on a regular basis. Birds and rabbits have been identified as potential issues but control mechanism currently in place minimise the risk.	Nuisance of food waste and litter being dropped / deposited by animals on site and in the surrounding area adjacent to the site.	Moderate to minimum due to an effective control system currently in place.
Noise emissions caused by transportation vehicles whilst loading or unloading goods or waste materials	Residential properties and local businesses adjacent and surrounding the plant.	Noise carried transmitted to local areas adjacent to the plant.	All vehicles delivering raw materials / ingredients, packaging and transporting finished goods from the plant are always expected to be properly maintained and according to the manufacturer best practices and instructions. Awareness training sessions are regularly given to all drivers so they are all familiar with the internal operating procedures and requirements. In the event of a noise complaint the site management will investigate and rectify the issue.	It is potentially possible that this type of nuisance could occur which could be caused by a malfunction of equipment or assets but such incident are likely to be of short duration and presenting minimum risk to the local area.	Noise nuisance	The risk of noise emission is potentially probable but it is likely to be of short duration therefore presenting moderate to minimum risk.
Leaks from hazardous storage containers holding engineering / waste oil and other liquid waste.	Any liquid contaminant / pollutant originating from a leak could potentially enter a local water course.	Surface water runoff.	All hazardous waste containers awaiting removal from site are kept and contained in designated and secured areas only. These are designed to effectively contain any unplanned spill from causing a serious polluting incident. The responsible person to manage such event will be primarily the EHS Practitioner.	This type of event is considered to be low to minimum.	Deterioration of the local vicinity but very unlikely to cause a serious polluting incident.	The risk of exposure is perceived and is not significant due to the existing mitigating measures currently in place.

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Noise emissions caused by movement of ingredients/product on the roof and also the other equipment on the roof.	Residential properties and local businesses adjacent and surrounding the plant.	Noise carried transmitted to local areas adjacent to the plant.	All equipment on roof should be properly maintained and according to the manufacturer best practices.	It is potentially possible that this type of nuisance could occur which could be caused by a malfunction of equipment or assets but such incident are likely to be of short duration and presenting minimum risk to the local area.associated with traffic and internal noise). In terms of control measures, did you not recently have equipment acoustically enclosed on the roof? Also you can mention maintenance and roof inspections.	Noise nuisance	The risk of noise emission is potentially probable but it is likely to be of short duration therefore presenting moderate to minimum risk.

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Unplanned fire incident	Neighbouring residential area, local amenity / industry.	Surface water runoff and fume /smoke blown off site.	Preventive measures such as the fire precaution and the emergency preparedness currently in place together with trained personnel who will be ideally placed to deal with such eventuality effectively and according to internal site operating procedure. The responsible person to manage such event will be primarily the EHS Practitioner.	This type of event is considered to be low to minimum.	Smoke / fume drift, odour nuisance and the potential of polluting the local water course located outside the perimeter of the plant. This type of water pollution could be caused by the fire fighting water run-off.	In this instance it could be said that the overall risk to the local environment could be kept to a minimum based on the mitigating measures in place to deal with such incident.