



Environment
Agency

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Crisp Malting Group Limited

Great Ryburgh Maltings

Great Ryburgh

Fakenham

Norfolk

NR21 7AS

Variation application number

EPR/FP3037PA/V012

Permit number

EPR/FP3037PA

Great Ryburgh Maltings

Permit number EPR/FP3037PA

Introductory note

This introductory note does not form a part of the notice

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Changes introduced by this variation made by the operator (V012)

The permit has been varied to allow the following change on site:

The replacement of the existing combined heat and power (CHP) plant with one of a similar size. The previous CHP plant had a thermal input of 3.4 MWth whereas the new CHP plant has a thermal input of 3.56 MWth. The new CHP will utilise the same emission points (A3/A4) and operate on natural gas. Whilst compared to the previous CHP plant the new CHP plant offers increased efficiency of 87.9% compared to 84.6% as well as being 20% hydrogen ready, which will allow for some future decarbonisation of the site. The CHP plant meets the requirements of the medium combustion directive and the associated limits will be applicable from the date of permit issue.

Changes introduced by this variation notice/statutory review (V010)

This consolidated permit has been issued following a full review against the best available techniques (BAT) conclusions for the Food, Drink and Milk Industries published on 4th December 2019 in the official journal of the European Union.

We have implemented the requirements of the Medium Combustion Plant directive and incorporated post-dated requirements for 2025.

The schedules specify the changes made to the permit.

The Great Ryburgh Maltings site produces a variety of malted cereals supplied to customers in bulk vehicles, or as bagged product. The processes on site involve the drying, storage, steeping, germination, and kilning in addition to the roasting to produce speciality malts such as roasted malts and cereals (using kilned malt) and crystallised malts (using unkilned 'green' malt).

The process steps involved are:

- Grain drying and storage: incoming grain with a moisture content of 14-16% is dried to 12% prior to storage in silos for up to 12 months. Drying the grain allows for safe long-term storage and facilitates even germination.
- Steeping: grain is immersed in water to hydrate the endosperm and stimulate the onset of natural germination.
- Germination: having hydrated the grain to a moisture content of 40-45% and stimulated the start of germination, 4 – 5 days of controlled germination takes place. This produces an enzyme within the grain for the conversion of starches to sugars in brewing and other process operations (which occur offsite).
- Kilning: the wet germinating grain is dried in controlled recipes which reduce moisture content within the grain from approximately 40% to between 3% and 5%. This stops any further conversion within the grain, stabilising the product for storage and transport and produces colours and flavours in the malt which carry through to brewing and other process operations (which occur offsite).

The finished malt is transported to storage silos and cleaned and graded prior to delivery to brewing and other customers.

The installation produces approximately 110,000 tonnes per year of malted cereals predominantly barley, with a daily processing capacity of 302 tonnes a day.

The Environmental Permit is for the main listed activity falling under Section 6.8 Part A(1)(d)(ii)

Treatment and processing, other than exclusively packaging, of the following raw materials, whether previously processed or unprocessed, intended for the production of food or feed (where the weight of the finished product excludes packaging)

(ii) only vegetable raw materials with a finished product production capacity greater than 300 tonnes per day

The permit also contains a Section 5.4 Part A(1)(a)(i) activity for the biological treatment of process effluent from the processes on site.

Effluent produced during the process, predominantly from steeping, the humidification system and cleaning, is treated at an onsite effluent treatment plant prior to discharge to a tributary of the river Wensum via emission point W1. The effluent treatment plant uses screens, gravity settlement and aerobic treatment to reduce effluent BOD and suspended solids loads before being emitted to the river. Surface water is discharged to a Tributary of the River Wensum via an oil interceptor at emission point W2.

The installation has three boilers (Seeger Boiler 1 4.9MWth, Seeger Boiler 2 4.9MWth and Wanson Boiler 7.9 MWth) and a CHP plant (3.5 MWth) to produce electricity, steam and hot water to meet the needs of the process. The boilers and CHP plant are fuelled by natural gas with gas oil only being used as a backup in the event of natural gas supply outage in the Wanson Thermal boiler.

Releases from the installation include products of combustion and particulate matter. The installation uses a combination of cyclones and fabric filters to reduce particulate emissions.

The installation is situated on approximately 6 hectares of land at Great Ryburgh, Fakenham, Norfolk, NR21 7NW. The centre of the site is at National Grid Reference TF 9565 2755. The River Wensum SAC and SSSI are located approximately 450m to the north east of the installation. The installation is bordered to the south by Fakenham road to the north and west by farm land and to the east by a disused train line.

The installation is operated under an Environment Management System, which is not externally accredited and holds a Climate Change Agreement.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application FP3037PA received	17/03/2005	
Request for information	04/10/2005	Response dated 21/10/2005
Request to extend determination	27/02/2006	
Permit determined	02/03/2006	Permit issued to Crisp Malting Group Ltd
Agency variation determined EPR/FP3037PA/V002	27/01/2014	Agency variation to implement the changes introduced by IED
Application FP3037PA/V003 received	23/09/2014	Application returned - incorrect application type
Application FP3037PA/V004 received	12/09/2018	Application returned– incomplete application
Application FP3037PA/V005 received	23/12/2018	Application returned– incomplete application

Application FP3037PA/V006 received	19/03/2019	Application returned– incomplete application
Application FP3037PA/V007 received	27/05/2019	Application returned – incomplete application
Application EPR/FP3037PA/V008 (variation and consolidation)	Duly made 20/07/2020	Application to vary the permit to include new medium combustion plant and update the permit to modern conditions.
Variation determined and consolidation issued EPR/FP3037PA	09/03/2021	Varied and consolidated permit issued in modern format
Application EPR/FP3037PA/V010 (variation and consolidation)	Regulation 61 Notice response received 06/01/2023	Environment Agency initiated variation and consolidation following the Food, Drink & Milk Industries sector permit review.
Request for Further Information dated 19/05/2023	02/06/2023	Further information submitted to clarify BATc's 4, 5, 7, 9, 11 & 12. In addition to providing further information on the site condition report and climate change adaptation.
Application EPR/FP3037PA/V011	05/07/2023	Basic pre-application advice provided.
Application EPR/FP3037PA/V012 (variation and consolidation)	Duly Made 10/10/2023	Application to vary the permit to replace the onsite CHP with a CHP of a similar size.
Variation determined and consolidation issued EPR/FP3037PA (Billing ref. MP3509SE).	18/12/2023	Varied and consolidated permit issued in modern format, incorporating the changes under V010 and V012.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number

EPR/FP3037PA

Issued to

Crisp Malting Group Limited (“the operator”)

whose registered office is

Great Ryburgh

Fakenham

Norfolk

NR21 7AS

company registration number 01466872

to operate a regulated facility at

Great Ryburgh Maltings

Fakenham

Norfolk

NR21 7AS

to the extent set out in the schedules.

The notice shall take effect from 18/12/2023

Name	Date
Beccy Brough	18/12/2023

Authorised on behalf of the Environment Agency

Schedule 1

Only the following conditions have been varied as a result of an application made by the operator (V012).

- Table S1.1, as referenced in conditions 2.1.1 and 3.1.4 has been updated to reflect the change in the DAA (AR 3) following the inclusion of the new CHP plant.
- Table S1.2, as referenced in conditions 2.3.1 and 2.3.2 has been updated to include the operating techniques employed to support the changes introduced by this variation.
- Table S3.1, as referenced in conditions 3.1.1, 3.1.3, 3.5.1 (a) and 3.5.4 has been updated to reflect the inclusion of the replaced CHP plant.
- Table S4.1, as referenced in conditions 4.2.3 (a) and 4.2.3 (b) has been updated to reflect the reporting requirements of the replaced CHP plant.

All other conditions have been varied by the consolidated permit (V010) as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/FP3037PA

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/FP3037PA/V012 authorising,

Crisp Malting Group Limited (“the operator”),

whose registered office is

Great Ryburgh

Fakenham

Norfolk

NR21 7AS

company registration number 01466872

to operate an installation at

Great Ryburgh Maltings

Great Ryburgh

Fakenham

Norfolk

NR21 7AS

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Beccy Brough	18/12/2023

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

1.2.1 The operator shall:

- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
- (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
- (b) maintain records of raw materials and water used in the activities;
- (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

1.4.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
- (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

- (a) the nature of the process producing the waste;
- (b) the composition of the waste;
- (c) the handling requirements of the waste;
- (d) the hazardous property associated with the waste, if applicable; and
- (e) the waste code of the waste.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.2.

- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Total annual emissions from the emission point(s) set out in schedule 3 tables S3.1, S3.2 and S3.3 of a substance listed in schedule 3 table S3.4 shall not exceed the relevant limit in table S3.4.
- 3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.
- 3.1.5 For the following activities referenced in schedule 1, table S1.1 (AR3) the first monitoring measurements shall be carried out within four months of 01/01/2025 (boiler 3) and 01/01/2030 (boiler 1 and boiler 2) or of the date when the MCP is first put into operation, whichever is later.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
 - (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
 - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
 - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period

specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
 - (a) point source emissions specified in tables S3.1, S3.2 and S3.3.
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2 and S3.3 unless otherwise agreed in writing by the Environment Agency.

3.6 Pests

- 3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.6.2 The operator shall:
 - (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
 - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
 - (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and

(ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production/treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- Where the operator is a registered company:
- (a) any change in the operator's trading name, registered name or registered office address; and
 - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- Where the operator is a corporate body other than a registered company:
- (a) any change in the operator's name or address; and
 - (b) any steps taken with a view to the dissolution of the operator.
- In any other case:
- (a) the death of any of the named operators (where the operator consists of more than one named individual);
 - (b) any change in the operator's name(s) or address(es); and
 - (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
- (a) the Environment Agency shall be notified at least 14 days before making the change; and
 - (b) the notification shall contain a description of the proposed change in operation.
- 4.3.6 The Environment Agency shall be given at least 14 days' notice before implementation of any part of the site closure plan.
- 4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
- (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR1	Section 6.8 Part A(1) (d)(ii)	Treating and processing for the production of food from only vegetable raw materials with a finished product production capacity greater than 300 tonnes per day.	<p>From receipt of raw materials to dispatch of finished malt products through malting and roasting of grains, including in the speciality malting plant (SMP)</p> <p>Total operating hours of SMP shall not exceed 5,876 hours per year.</p> <p>Production capacity is limited to 302 tonnes per day.</p>
AR2	Section 5.4 Part A1 (a) (i)	Disposal of non-hazardous waste in a facility with a capacity exceeding 50 tonnes per day by biological treatment.	From generation of wastewater to treatment including; settlement, activated sludge and coagulation to discharge to a tributary of River Wensum and off-site disposal of solid waste.
Directly Associated Activity			
AR3	Steam and electrical power supply	<p>Medium Combustion plants: 3 x natural gas fired boilers & 1 x natural gas fired CHP Plant:</p> <ul style="list-style-type: none"> • Boiler 1: 4.9 MWth with gas oil (kerosene) used as back up fuel • Boiler 2: 4.9 MWth with gas oil (kerosene) used as back up fuel • Boiler 3: 7.9 MWth with gas oil (kerosene) used as back up fuel • CHP Engine 3.56 MWth 	<p>From receipt of fuel to release of products of combustion to air.</p> <p>Boilers 1, 2 & 3 are permitted to fire on gas oil if there is a disruption in the natural gas network only. The operational of gas oil is limited to 500hours/year.</p>
AR4	Combustion processes	Operation of combustion processes on natural gas for the generation of hot water and hot air for the steeping and drying of materials. With an aggregated input of 12.28MW	From receipt of fuel to release of waste gases from chimney.

AR5	Raw material storage and handling	Storage and handling of raw materials at the installation.	From receipt of raw materials to dispatch of final product.
AR6	Grain cleaning and product packaging	Destoning and cleaning of grain and packaging of finished product. Includes dust abatement.	Receipt of malted and roasted grain to transfer to storage.
AR7	Use of refrigerants	Use of refrigerants in cooling, chilling and/or freezing systems at the installation.	From receipt of raw materials to dispatch of final product.
AR8	Storage and use of chemicals and oils	Storage and use of chemicals and oils at the installation.	From receipt of chemicals and oils to disposal of wastes arising.
AR9	Waste storage and handling	Storage and handling of waste materials.	From generation of waste to storage pending removal for disposal or recovery.
AR10	Surface water drainage	Collection of uncontaminated site surface waters	Handling and storage of site drainage until discharge to the tributary of river Wensum.

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.1 and 2.2 and 2.3 given in pages 7 to 38 of the application	17/03/2005
Application	Responses to application forms (and supporting documents): Part C2 and Part C2.5	24/12/2019 20/07/2020
Application EPR/FP3037PA/V009	Responses to application forms (and supporting documents): Part C2.5 Part C3	10/08/2020
Regulation 61(1) Notice – Responses to questions dated 09/06/2022	All Parts	Received 06/01/2023
Request for further information dated 19/05/2023	Updated Regulation 61 response	02/06/2023
Application EPR/FP3037PA/V012	All parts of application including supporting information and application forms.	Duly made 10/10/2023

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC7	<p>The operator shall submit to the Environment Agency for approval a risk assessment considering the possibility of soil and groundwater contamination at the installation where the activity involves the use, production or release of a hazardous substances (as defined in Article 3 of Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures).</p> <p>A stage 1-3 assessment should be completed (as detailed within the EC Commission Guidance 2014/C 136/-3) as follows;</p> <ul style="list-style-type: none">• Stage 1 – Identify hazardous substance(s) used / stored on site.• Stage 2 – Identify if the hazardous substance(s) are capable of causing pollution. If they are capable of causing pollution, they are then termed Relevant Hazardous Substances (RHS).• Stage 3 – Identify if pollution prevention measures & drains are fit for purpose in areas where hazardous substances are used / stored. <p>If the outcomes of Stage 3 identifies that pollution of soil / ground water to be possible. The operator shall produce and submit a monitoring plan to the Environment Agency for approval detailing how the substance(s) will be monitored to demonstrate no pollution. The operator shall commence monitoring of the RHS within a timescale as agreed by the Environment Agency.</p>	18/12/2024 or other date as agreed in writing with the Environment Agency
IC8	<p>The Operator shall undertake a survey of the primary, secondary and tertiary containment at the site and review measures against relevant standard including:</p> <ul style="list-style-type: none">• CIRIA Containment systems for the prevention of pollution (C736) – Secondary, tertiary and other measures for industrial and commercial premises,• EEMUA 159 - Above ground flat bottomed storage tanks <p>The operator shall submit a written report to the Environment Agency approval which outlines the results of the survey and the review of standard and provide details of</p> <ul style="list-style-type: none">• current containment measures• any deficiencies identified in comparison to relevant standards,• improvements proposed• time scale for implementation of improvements. <p>The operator shall implement the proposed improvements in line with the timescales agreed by the Environment Agency.</p>	18/12/2024 or other date as agreed in writing with the Environment Agency
IC9	<p>The operator shall produce a climate change adaptation plan. The approved plan will form part of the EMS.</p> <p>The plan shall include, but not be limited to:</p> <ul style="list-style-type: none">• Details of how the installation has or could be affected by severe weather;• The scale of the impact of severe weather on the operations within the installation;• An action plan and timetable for any improvements to be made to minimise the impact of severe weather at the installation. <p>The Operator shall implement any necessary improvements to a timetable agreed in writing with the Environment Agency.</p>	18/12/2024 or other date as agreed in writing with the Environment Agency
IC10	<p>The Operator shall submit a written report to the Environment Agency of monitoring carried out to determine the size distribution of particulate matter in the exhaust gas emissions to air from emission point A17, identifying the fractions within the PM₁₀ and PM_{2.5} ranges. The monitoring shall be carried out under representative operating conditions and shall be in accordance with EN ISO 23210 unless otherwise agreed with the Environment Agency.</p>	18/12/2024 or other date as agreed in writing with the Environment Agency

IC11	<p>The Operator shall submit a written report to the Environment Agency reviewing the efficiency and suitability of the onsite dust abatement from the Barley Drying Plant (A17). The report shall contain but not be limited to:</p> <ul style="list-style-type: none"> • Confirmation of the current abatement efficiency, based on monitoring data, with an appraisal of the performance against Best Available Techniques (BAT). • Comparison of the dust emissions data against an indicative benchmark of 20mg/m³. • Identification of any improvements that could be made to the plant, such as maintenance and operating techniques, to maintain or improve the performance in line with BAT. • Where required, an appraisal on other suitable abatement techniques as listed with Chapter 2 of the Food, Drink and Milk Industries Bref (2019). <p>The Operator shall implement any necessary improvements to a timetable agreed in writing with the Environment Agency.</p>	18/12/2024 or other date as agreed in writing with the Environment Agency
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Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Sulphur content of fuel oil	Less than 0.2% by mass

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan in Schedule 7]	Barley drying plant burners 1 -3	Products of combustion	No limit set	--	--	--
A3/A4 [Point A3/A4 on site plan in Schedule 7]	CHP generation plant 3.56 MWth natural gas fired engine	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	95 mg/m ³	Periodic	Every three years	BS EN 14792
		Carbon monoxide	No Limit	Periodic	Every three years	MCERTS BS EN15058
A5 [Point A5 on site plan in Schedule 7]	Seeger kiln boiler plant - Boiler 1 4.9 MWth natural gas fired boiler [Note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	250 mg/m ³	Periodic	Every three years	BS EN 14792
		Carbon monoxide	No Limit	Periodic	Every three years	MCERTS BS EN15058
	Seeger kiln boiler plant - Boiler 1 4.9 MWth when fired on gas oil (emergency operation only) [Note 1 & 3]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	650 mg/m ³	Periodic	Every three years	BS EN 14792
		Carbon monoxide	No Limit	--	--	--
	Seeger kiln boiler plant - Boiler 2 4.9 MWth natural gas fired boiler [Note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	250 mg/m ³	Periodic	Every three years	BS EN 14792
		Carbon monoxide	No Limit	Periodic	Every three years	MCERTS BS EN15058
	Seeger kiln boiler plant - Boiler 2 4.9 MWth when fired on gas oil (emergency	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	650 mg/m ³	Periodic	Every three years	BS EN 14792

	operation only) [Note 1 & 3]	Carbon monoxide	No Limit	--	--	--
A8 [Point A8 on site plan in Schedule 7]	Wanson thermal fluid boiler - Boiler 3 7.9 MWth natural gas fired boiler [Note 2]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	100 mg/m ³	Periodic	Every three years	BS EN 14792
		Carbon monoxide	No Limit	Periodic	Every three years	MCERTS BS EN15058
	Wanson thermal fluid boiler - Boiler 3 7.9 MWth when fired on gas oil (emergency operation only) [Note 2&3]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	650 mg/m ³	Periodic	Every three years	BS EN 14792
		Carbon monoxide	No Limit	--	--	--
A12 [Point A12 on site plan in Schedule 7]	Floor Plant Gas Burners	No parameters set	No limit set	--	--	--
A13 [Point A13 on site plan in Schedule 7]	Vats Plant Gas Burner	No parameters set	No limit set	--	--	--
A17 [Point A17 on site plan in Schedule 7]	Barley drying plant abated by cyclone	Particulate matter	No limit set	Periodic	Annually	BS EN 13284-1
A18 [Point A18 on site plan in Schedule 7]	Barley cleaning and grading plant, abated by bag filter	Particulate matter	No limit set	--	--	--
A19 [Point A19 on site plan in Schedule 7]	By-product collection abated by bag filter	Particulate matter	No limit set	--	--	--
A20 [Point A20 on site plan in Schedule 7]	By-product collection abated by bag filter	Particulate matter	No limit set	--	--	--
A21 [Point A21 on site plan in Schedule 7]	Malt cleaning and grading plant, abated by bag filter	Particulate matter	No limit set	--	--	--

A22 [Point A22 on site plan in Schedule 7]	Malt cleaning and grading plant, abated by bag filter	Particulate matter	No limit set	--	--	--
A23 [Point A23 on site plan in Schedule 7]	Weighbridge lorry sampling abated by cyclone	Particulate matter	No limit set	--	--	--
A24 [Point A24 on site plan in Schedule 7]	Wheat cleaning and grading plant, abated by cyclone	Particulate matter	No limit set	--	--	--
A25 [Point A25 on site plan in Schedule 7]	Wheat cleaning and grading plant, abated by bag filter	Particulate matter	No limit set	--	--	--
A26 [Point A26 on site plan in Schedule 7]	Malt cleaning and grading plant, abated by bag filter	Particulate matter	No limit set	--	--	--
A27 [Point A27 on site plan in Schedule 7]	Barley pre drier cleaning and transport plant, abated by bag filter	Particulate matter	No limit set	--	--	--
A28 [Point A28 on site plan in Schedule 7]	Pellet press, abated by bag filter	Particulate matter	No limit set	--	--	--
A29 [Point A29 on site plan in Schedule 7]	Silo out load 1	Particulate matter	No limit set	--	--	--
A30 [Point A30 on site plan in Schedule 7]	Silo out load 2	Particulate matter	No limit set	--	--	--
A31 [Point A31 on site plan in Schedule 7]	No19 wheat main screen, abated by bag filter	Particulate matter	No limit set	--	--	--
A33 [Point A33 on site plan in Schedule 7]	Work shop welding bay extraction	Particulate matter	No limit set	--	--	--

A34 [Point A34 on site plan in Schedule 7]	Laboratory fume cupboard extraction, GC rooms	Particulate matter	No limit set	--	--	--
A35 [Point A35 on site plan in Schedule 7]	Laboratory mill room dust cupboard	Particulate matter	No limit set	--	--	--
A36 [Point A36 on site plan in Schedule 7]	Packaging plant (grain de-stoners) abated by reserve jet filters	Particulate matter	No limit set	--	--	--
A37 [Point A37 on site plan in Schedule 7]	Packaging plant (rotary cleaner and conveyors/elevators) abated by reserve jet filters	Particulate matter	No limit set	--	--	--
A38 [Point A38 on site plan in Schedule 7]	Laboratory dust cupboard extraction	Particulate matter	No limit set	--	--	--
A39 [Point A39 on site plan in Schedule 7]	Weighbridge dust cupboard extraction	Particulate matter	No limit set	--	--	--
A40 [Point A40 on site plan in Schedule 7]	Workshop heater gas burner	Products of combustion	No limit set	--	--	--
A41 [Point A41 on site plan in Schedule 7]	Hot water boiler (586Kw Natural gas fired boiler)	Products of combustion	No limit set	--	--	--
A43 [Point A43 on site plan in Schedule 7]	Speciality malt process plant cooler exhaust	Particulate matter	No limit set	--	--	--
A42 [Point A42 on site plan in Schedule 7]	Speciality Malting Plant, abated by wet scrubber.	Total particulate matter, during high temperature production [Note 4]	100 mg/m ³	Periodic	Annual [Note 3]	MCERTS BS EN 13284-1
		Total particulate matter, during lower temperature	100 mg/m ³	Periodic	Annual [Note 3]	MCERTS BS EN 13284-1

		production [Note 4]				
		Volatile organic compounds	No limit set	--	--	--
A44 [Point A44 on site plan in Schedule 7]	Pilot Malting Plant Gas Burner	Products of combustion	No limit set	--	--	--
A45 [Point A45 on site plan in Schedule 7]	Backup Generator Floors/Vats	Products of combustion	No limit set	--	--	--
A46 [Point A46 on site plan in Schedule 7]	Backup IT Generator	Products of combustion	No limit set	--	--	--
A47 [Point A47 on site plan in Schedule 7]	Back-up power generator	Products of combustion	No limit set	--	--	--

Note 1: Emission limit and/or monitoring requirements apply from 1 January 2030, unless otherwise advised by the Environment Agency

Note 2: Emission limit and/or monitoring requirements apply from 1 January 2025, unless otherwise advised by the Environment Agency

Note 3: Limits and monitoring requirements not subject to MCPD regulations if operation is limited to a maximum of 500 hours per year.

Note 4: High temperature production is defined as roasting of grain in the SMP at a temperature above 225 °C. Lower temperature production is defined as roasting of grain in the SMP at a temperature of 225 °C or less.

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 [W1 on site plan in schedule 7] Emission to tributary of river Wensum	Discharge from the effluent treatment plant	Flow	1400m ³ in any 24-hour period	24-hour total	Continuous	MCERTS self-monitoring of effluent flow scheme
		Biological oxygen demand	20mg/l	Spot sample	Weekly	EN 1899-1
		pH	5-9	Spot sample	Weekly	BS ISO 10523.
		Total Phosphorus as P	1mg/l	Spot sample	Weekly	EN ISO 6878, EN ISO 15681-1 and -2, ENISO 11885.
		Ammonia	5mg/l	Spot sample	Weekly	BS 6068-2.11 ISO 7150-1
		Total suspended solids	25mg/l	Spot sample	Weekly	BS EN 872
		Chemical oxygen demand	100mg/l	Spot sample	Weekly	As agreed in writing by the Environment Agency
		Total Nitrogen	20mg/l	Spot sample	Weekly	EN 12260, EN ISO 11905-1.
W2 [W2 on site plan in schedule 7] Emission to tributary of river Wensum	Site drainage from site via interceptor	No parameters set	No limit set	-	-	-
W3 [W3 on site plan in schedule 7] Emission to tributary of river Wensum	Site drainage from site via interceptor	No parameters set	No limit set	-	-	-

Table S3.3 Annual limits		
Substance	Medium	Limit (including unit)
BOD	Water	10,000 kg
Suspended Solids	Water	15,000 kg
Ammonia	Water	7,500 kg
Total Phosphorus as P	Water	1,500 kg

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Point source emissions to air Parameters as required by condition 3.5.1	A17(Particulate Matter), and A42	Every 12 months	1 January
	A3/4 (CHP), A5 and A8	First monitoring undertaken in accordance with Condition 3.1.5 to be reported within 3 months, and then every 3 years thereafter.	From first monitoring requirements in accordance with Condition 3.1.5
Point source emissions to water (other than sewer) Parameters as required by condition 3.5.1	W1	Quarterly	1 January, 1 April, 1 July & 1 October

Parameter	Units
Production of malt	tonnes
Production of wet grains	tonnes

Parameter	Frequency of assessment	Units
Water usage	Annually	m ³
Energy usage	Annually	MWh
Waste	Annually	tonnes
COD efficiency	Annually*	COD te/te product
Food waste	Annually	tonnes

*COD efficiency to be calculated on a weekly frequency, reported annually

Parameter	Reporting form	Form version number and date
Point source emissions to air	Emissions to Air Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021
Point source emissions to water (other than sewer)	Emissions to Water Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021
Water usage	Water Usage Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021

Table S4.4 Reporting forms		
Parameter	Reporting form	Form version number and date
Energy usage	Energy Usage Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021
Food Waste	Food waste Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1 06/02/2023
Other performance parameters	Other Performance Parameters Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021

Schedule 5 – Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission limit.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“Medium Combustion Plant” or “MCP” means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW. An “existing medium combustion plant” is combustion plant operating before 20 December 2018.

“Medium Combustion Plant Directive” or “MCPD” means Directive 2015/2193/EU of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from medium combustion plants, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“Pests” means Birds, Vermin and Insects.

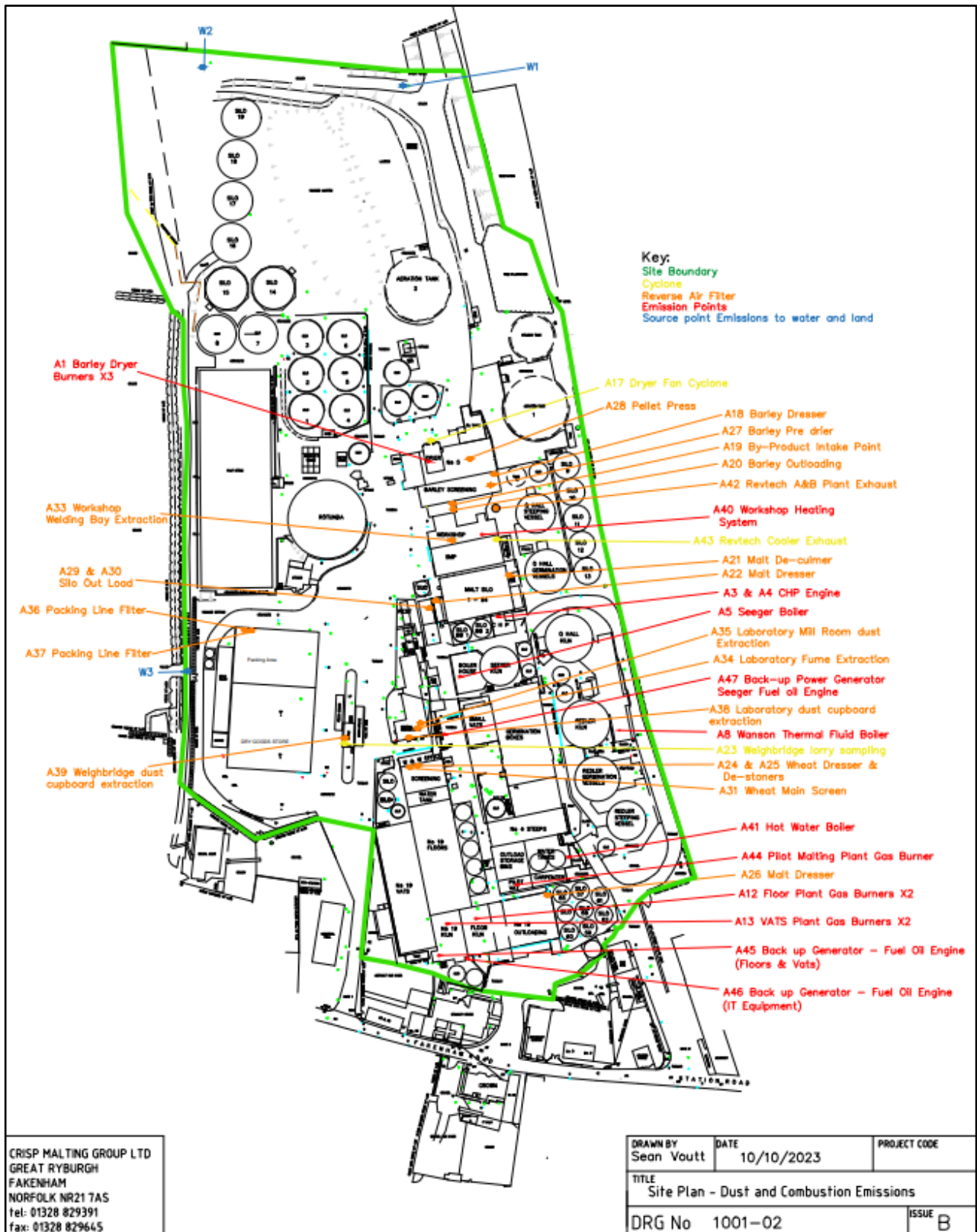
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels other than gas engines or gas turbines, 6% dry for solid fuels; and/or
- in relation to emissions from gas engines or gas turbines, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 15% dry for liquid and gaseous fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content

“year” means calendar year ending 31 December.

Schedule 7 – Site plan



END OF PERMIT