

# **Non-Technical Summary**

## **Substantial Permit Variation Food and Drink Installation**

## On behalf of Wyke Farms Limited

Wyke Farmhouse Cheese, White House Farm, Wyke Champflower, Bruton, Somerset, BA10 0PU

Prepared by:

Emily Shann Pitts, BSc (Hons), MIEMA, CEnv

ETL606/2021

Earthcare Technical Ltd Manor Farm Chalton Waterlooville Hants PO8 0BG

Tel: 02392 290 488

emily@earthcaretechnical.co.uk

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# **QUALITY CONTROL**

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Quality control sign off			
Document Author	Emily Shann Pitts	EVSPitts	
Quality Reviewer	Anna Becvar	Annalgun	

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### 1. Introduction

- 1.1. This Non-Technical Summary has been prepared by Earthcare Technical Ltd (ETL) on behalf of Wyke Farms Limited (Wyke) in support of an application for a substantial variation of the food and drink sector installation permit (EPR/BQ1824IV) at Wyke Farmhouse Cheese, White House Farm, Wyke Champflower, Bruton, Somerset, BA10 0PU herein termed 'the Site'.
- 1.2. A full Environmental Risk Assessment has been conducted and is provided in the Aspects and Impacts Register which accompanies this application. A detailed environmental risk assessment of the proposed increase in volume of treated effluent discharge has also been prepared and submitted to support this permit variation application.
- 1.3. This Non-Technical Summary highlights the key control measures that will be employed to minimise any impacts from the operational site and signposts the reader to the key supporting documents of the application.

#### 2. Site Overview

#### Location

- 2.1. The site is located at National Grid Reference ST 66433 34724 on the periphery of the village of Wyke Champflower, approximately 2km west of the town of Bruton, Somerset. The area is predominantly agricultural and is surrounded by Wyke Farm's land other that of neighbouring farms.
- 2.2. The site is situated in the catchment of the River Brue, a tributary of the River Brue lies approximately 200m from the southern edge of the site boundary, it flows northeast to southeast and is culverted as it passes along the edge of the site boundary.<sup>2</sup>

#### **Permitting Background**

- 2.3. The current permit authorises:
  - the treatment and processing of more than 200 tonnes per day of milk (average value on an annual basis) for the production of cheese, butter, cream, skim concentrate and whey powder; and
  - the primary and secondary treatment of effluent produced on site with the treated effluent being discharged into a culverted tributary of the River Brue.
- 2.4. Since its issue in June 2006, the permit has been varied twice in;

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<sup>&</sup>lt;sup>1</sup> Bruton Site Environmental Aspects Register, 26/01/2022

<sup>&</sup>lt;sup>2</sup> Wyke Farms Limited, Hydrogeological Report, Aardvark EM Limited, August 2007

- September 2010 for inclusion of reed beds (now redundant) for effluent treatment which included an extension of the permitted area to the south; and
- December 2013 for upgrade to the Effluent Treatment Plant (membrane system) to replace the reed bed system and ensure compliance with the Industrial Emissions Directive.
- 2.5. The permit variation which this SCR supports is to increase the existing permitted area to incorporate:
  - A cheese store to the north;
  - A building for production to the north and east; and
  - A surface water attenuation pond to the south which accommodates an amended discharge point for uncontaminated surface and roof water run-off (W2) at the outlet of the surface water attenuation pond to the culverted unnamed tributary of the River Brue.
- 2.6. The existing and proposed permit boundaries are shown in Figure 1 Permit Boundary (existing and proposed) and Emission Point Plan. The current permitted area is approximately 2.1 hectares (5.2 acres) in extent. The proposed permit variation is to extend the current site footprint to create a regulated facility with an area of 3.2 hectares (7.9 acres) to encompass all the new proposed infrastructure.
- 2.7. The associated increase in production means that there is a requirement to increase the maximum permitted flow limit of treated effluent to the tributary of the River Brue (W1) from 750m³ to 1,500m³ per day and the maximum flow per hour from 32.25m³ per hour to 62.5m³ per hour.
- 2.8. A second bioreactor has been commissioned as part of upgrading works to the Effluent Treatment Plant (ETP) which will improve the overall treatment potential. There is a volute being installed which will increase the dry matter content of the sludge from the DAF plant and the bioreactors, to make a sludge with a higher solid content This waste stream will continue to be transported via tanker and treated at the Wyke Farm anaerobic digestion (AD) plant. However, the higher solid sludge will provide a higher gas yield per tonne than the sludge and reduce the volume to be treated. The liquid arising from the volute will be recirculated through the ETP.
- 2.9. Emission Point W2 will continue to be for the discharge of uncontaminated surface and roof water run-off a tributary of the River Brue (the culverted tributary described in 2.2). However, the location of this discharge is changing to reflect the creation of a new surface water attenuation pond to regulate flows to the culvert. W2 will be at the outlet of the surface water attenuation pond to the culvert.
- 2.10. The location of emission points to air and water are shown in Figure 2 Permit Boundary (existing and proposed) and Emission Point Plan. Emission Point locations W1 for the discharge of treated effluent and A1 and A2 for the two natural gas fired steam boilers remain the same.

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- 2.11. The variation is also to remove one of the current Directly Associated Activities (DAA) namely the 'connecting pipeline from the installation to Lambrook Piggery for the transportation of waste whey and similar waste products via a pipeline.' This DAA should be removed to reflect the fact that this pipeline is no longer used and has been blocked off; and the permit for the piggery was surrendered in 2017.
- 2.12. The permitted activities and the other DAAs remain the same.
- 2.13. Basic pre-application advice has been sought from the Environment Agency (EA) in May 2021 with respect to this new permit application (Reference EA/EPR/BQ1824IV/V004) to ensure that all the relevant supporting documents have been provided.

#### **Planning**

2.14. Planning permission for the current works namely 'the erection of cheese and butter production facility including meeting and welfare areas with associated parking, lighting, landscaping and drainage' was issued by South Somerset District Council on 25<sup>th</sup> May 2018 (Ref: 18/00161/FUL).

#### Access

2.15. The site is currently accessed via one entrance on Wyke Lane into Whitehouse Farm. The main site entrance is being moved north up Wyke Lane away from the village of Wyke Champflower as part of the ongoing site improvement and expansion works.

#### **Process Summary**

- 2.16. The Installation produces 16,000 17,000 tonnes of cheese annually with associated productions of cream, butter and whey proteins. Ivy's Dairy is projected to produce between 30,000 35,000 tonnes of cheese annually, however this is dependent on milk availability.
- 2.17. Milk is received in bulk tankers and pumped into 1 of 8 storage silos. The milk is then pasteurised for cheese making. The skimmed milk is then pasteurised and sent for evaporation. The separated cream is sent for butter making. Whey, separated from the curds in the cheese making process, is sent to the ultra-filtration plant to recover whey protein. The key processes undertaken are therefore milk separation, pasteurisation, cheese making, evaporation, whey processing and butter making.
- 2.18. During the period 1 April 2020 31 March 2021 the average daily milk intake was 686 tonnes, of which 440 tonnes was used for cheese making and 246 tonnes went to separation

#### Infrastructure

- 2.19. The existing site infrastructure comprises:
  - Cheese Dairy
  - Starter Room
  - Packing Room
  - Cleaning in place (CIP) rooms
  - Evaporator Department
  - Whey Separation and UF Room

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- Pasteuriser Department
- Butter Dairy
- Cheese store and butter store
- Shop
- Dry goods store
- Engineering stores and workshop
- Borehole Water Treatment Room
- Offices
- Electrical Switch Room, Standby generator and associated diesel tank
- 2 No. Natural gas boilers for steam production
- Chemical store
- Effluent treatment plant (ETP) including:
  - Turbidity tank
  - Fat settlement tanks
  - o Balance tank (2,400m<sup>3</sup>)
  - o Dissolved air flotation (DAF) plant including DAF balance tank
  - o 2 No. Bioreactors
  - Ultra-filtration plant
  - o Reverse osmosis plant
  - UV treatment equipment
  - o Recovered water silo
  - Sludge tank
  - Divert tank
- 2.20. The additional proposed infrastructure comprises:
  - New Ivy's Dairy building including:
    - o New Butter Dairy Silo Area
  - Additional infrastructure for effluent treatment including:
    - Volute to treat sludges from ETP
    - Volute feed tank
  - New weighbridge
  - New lorry wash
  - Surface water attenuation pond (1,190m³ capacity)
- 2.21. The proposed site layout is shown on Figure 2.

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# 3. Key Environmental Sensitivities

3.1. Human receptors within 1 km of the site are captured in Table 1 below.

Table 1: Human Receptors within 1km

ID	Receptor	Туре	Bearing from site	Approx. distance from site boundary
				(m)
1	Manor Farm (2 no. dwellings)	Residential	W	59
2	Greenclose	Residential	SW	215
3	Hill House Farm	Residential	W	105
4	Pear Tree Cottage	Residential	NW	255
5	Coombe Croft Bungalow	Residential	N	30
6	Wyke Farms	Residential	NW	410
7	Wyke Farm Cottages	Residential	NW	605
8	Poplar Farm	Residential	NW	995
9	Combe Croft & Mobby House	Residential	NE	280
10	Brick Kiln Bungalow	Residential	E	805
11	Brick Hill Farm	Residential	E	700
12	Gants Mill Cottage	Residential	SE	885
13	Properties in Cole	Residential	SE	845
14	Champflower House	Residential	SW	540
15	Steps Farm	Residential	SW	670
16	Pomeroy Farm	Residential	SW	490

- 3.2. The site is situated over a Secondary A bedrock aquifer; there is no superficial aquifer recorded. Groundwater vulnerability is classified as high risk. However, the site is not within a Groundwater Source Protection Zone nor is it within a Drinking Water Protected Area or Safeguard Zone.<sup>3</sup>
- 3.3. The site is situated in a location which has a low probability of flooding.<sup>4</sup>

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<sup>&</sup>lt;sup>3</sup> https://magic.defra.gov.uk/MagicMap.aspx Accessed 8th November 2021

<sup>&</sup>lt;sup>4</sup> https://flood-map-for-planning.service.gov.uk Accessed 8<sup>th</sup> November 2021

- 3.4. The site is not within a Nitrate Vulnerable Zone.
- 3.5. The site is situated in the catchment of the River Brue, a tributary of the River Brue lies approximately 200m from the southern edge of the site boundary, it flows northeast to southeast and is culverted as it passes along the edge of the site boundary.
- 3.6. The nature and heritage conservation sites identified through a screening report provided by the Environment Agency in February 2022<sup>5</sup>, identifies the sites in Table 2 below for consideration within the permit variation application:

Table 2: Nature and Heritage Conservation Sites within relevant screening distance

Site name and type	Screening distance (km)		
Sites of Special Scientific Interest (SSSi)			
Godminster Lane Quarry and Railway Cutting	2		
Local Wildlife Sites			
Lamyatt Beacon	2		
Holywater Copse	2		
Gants Mill Race	2		
River Brue (Ansford Bridge to Wyke) Tolbury	2		
Dovecote and Abbey Fields	2		
Wyke Champflower Lane	2		
Pitcombe Railway Cutting	2		
Green's Combe Farm	2		
Ham Hill Farm	2		
Ancient Woodland	•		
Lamyatt Wood	2		

3.7. The impact of the proposed changes upon these receptors has been assessed through a Nature and Heritage Conservation Risk Assessment which forms Appendix B.

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<sup>&</sup>lt;sup>5</sup> Nature and Heritage Conservation Screening Report, EPR/BQ1824IV/V004, Environment Agency, 02/02/2022

# 4. Management

- 4.1. The site is operated by Wyke Farms Limited. The Staff Organogram forms Appendix C.
- 4.2. Senior management of Wyke have committed to the establishment and further development of an environmental management system (EMS) which forms part of the wider Integrated Management System (IMS). The IMS is accredited to ISO 14001. The IMS is being reviewed in light of the proposed changes.
- 4.3. The IMS incorporates:
  - A management manual and written procedures to control activities with significant environmental impact as well as relevant records;
  - Objectives and performance indicators in relation to significant environmental aspects, including safeguarding compliance with applicable legal requirements;
  - Structures and roles and responsibilities in relation to environmental aspects and objectives and provision of the financial and human resources needed;
  - Effective operational planning and process control;
  - Document and record management;
  - Planned and preventative maintenance which issued to the site engineers through an electronic maintenance system called Emaint which is managed by the Maintenance Manager and Engineering Manager;
  - Relevant training of employees and contractors;
  - Internal auditing and management review;
  - Internal communication including employee involvement in good environmental practices;
  - External communication including an Environmental Policy; and
  - Emergency preparedness and response protocols, including the prevention and/or mitigation of the adverse (environmental) impacts of emergency situations.
- 4.4. The Operating Techniques referred to in Permit Condition 2.1.1 and Table 2.1.1 of the current permit are now superseded by the documentation supplied in support of the substantial permit variation.

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#### 5. Control of Emissions to Land and Water

5.1. In relation to the proposed changes encompassed in the permit variation application, the controls in relation to emissions to land and water are detailed in the sections below.

#### **Effluent Treatment**

- 5.2. This section should be read in conjunction with the Effluent Treatment Process Flow Diagram (Appendix A) which shows the effluent treatment process as it will be once the new infrastructure is commissioned.
- 5.3. There will be improved effluent treatment capacity in place prior to the increase in production associated with the operation of the new production building.
- 5.4. The following infrastructure is being added to the Effluent Treatment Plant (ETP):
  - A second bioreactor with a working capacity of 540m³ which is mixed via aeration (this has already been commissioned).
  - A volute to treat sludges from the DAF plant and the bioreactors; this enables the production of a thicker sludge with a higher biogas potential per tonne than the sludge will reduce the volume to be transported and treated. This waste stream will be sent via tanker for treatment in the Wyke Farm anaerobic digestion (AD) plant. The liquid arising from the volute will be recirculated through the ETP.
  - Volute feed tank with a working capacity of 25m<sup>3</sup> to allow balance of sludge flows through the volute.
- 5.5. Monitoring of emissions via water testing at emission point W1, the discharge of treated effluent to a tributary of the River Brue, has been reviewed in relation to BAT<sup>6</sup>, specifically BAT 4 Monitoring of emissions to water; monitoring parameters and frequencies.<sup>7</sup>
- 5.6. As part of the permit variation application Dr Craig Fannin of Byrne Looby conducted a risk assessment to assess the potential impact of the proposed increase to the maximum permitted flow limit of treated effluent at W1 from 750m³ to 1,500m³ per day and the increase in maximum flow per hour from 32.25m³ per hour to 62.5m³ per hour.8
- 5.7. The report concludes:
  - Risk assessment and water-flow-quality modelling demonstrates that the receiving River Brue water chemistry is unlikely to be discernibly changed downstream of the site for effluent treated to the same standards as currently demonstrated.

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<sup>&</sup>lt;sup>6</sup> Best Available Techniques (BAT) Reference Document for the Food, Drink and Milk Industries, European Commission, 2019

<sup>&</sup>lt;sup>7</sup> ETL606/Wyke Cheese/BAT/V1.0 January 2022

<sup>&</sup>lt;sup>8</sup> Whitehouse Farm Discharge, 14-K6029-R01, Revision 01, Byrne Looby, February 2022

• No change to the discharge conditions is required for BOD and ammoniacal-N, which should remain at 10mg/l and 5mg/l respectively. The same 5mg/l upper limit to the phosphate (as PO4-P) content is recommended.

### **Surface Water Management**

- 5.8. In response to the Flood Risk Assessment and Drainage Strategy conducted to support the planning application for the development,<sup>9</sup> a surface water attenuation pond is being constructed. The total required effective storage volume required for the 100-year storm event plus 40% to allow for climate change equates to 927m<sup>3</sup>; this will be provided for in the new surface water attenuation pond of 1,190m<sup>3</sup> capacity.
- 5.9. The surface water attenuation pond will have a flow control structure on the outlet to regulate flows of clean water into the unnamed tributary of the River Brue. The proposed maximum discharge rate of 8.7l/s was approved by the Environment Agency through the planning process.
- 5.10. The new surface water attenuation pond will have the added benefit of allowing settlement of any suspended solids prior to discharge to the watercourse.

#### **New Infrastructure and Associated Drainage**

- 5.11. The new production building will drain to internal sumps and from there to the effluent treatment plant.
- 5.12. The butter dairy silos which are currently located where the new production building will stand are being removed and new tanks are being installed on a purpose-built concrete base in a bunded area with appropriate capacity. All new tanks will have high levels alarms and will be linked to SCADA as per existing tank infrastructure and control measures.
- 5.13. The new lorry wash has an impermeable sump with sealed drainage; dirty water drains to the effluent treatment plant.
- 5.14. Site Drainage is shown in Figure 3 Whole Site Drainage Plan

### 6. Control of Emissions to Air

- 6.1. The proposed changes do not trigger any requirement for changes to the existing controls of emissions to air.
- There will be more refrigerant units in place, but the control measures will remain the same as per the detail under BAT 2 within the Best Available Techniques Assessment.<sup>5</sup>

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<sup>&</sup>lt;sup>9</sup> Flood Risk Assessment and Drainage Strategy, TWP Consulting Structural and Civil Engineers, Rev B, January 2018

# 7. Control of Amenity Impacts

- 7.1. The proposed changes do not trigger any requirement for changes to the existing controls for amenity impacts.
- 7.2. Noisy equipment such as vacuum pumps and evaporating plant will continue to be located inside the production buildings and insulated.
- 7.3. Odour is controlled through the use of covers on tanks if they contain odorous materials.
- 7.4. In accordance with the Register of Environmental Aspects there are no other significant amenity hazards.

# 8. Resource Efficiency

8.1. Resource efficiency including raw materials, water and energy are fully considered in the BAT Assessment that accompanies the permit variation application.<sup>6</sup>

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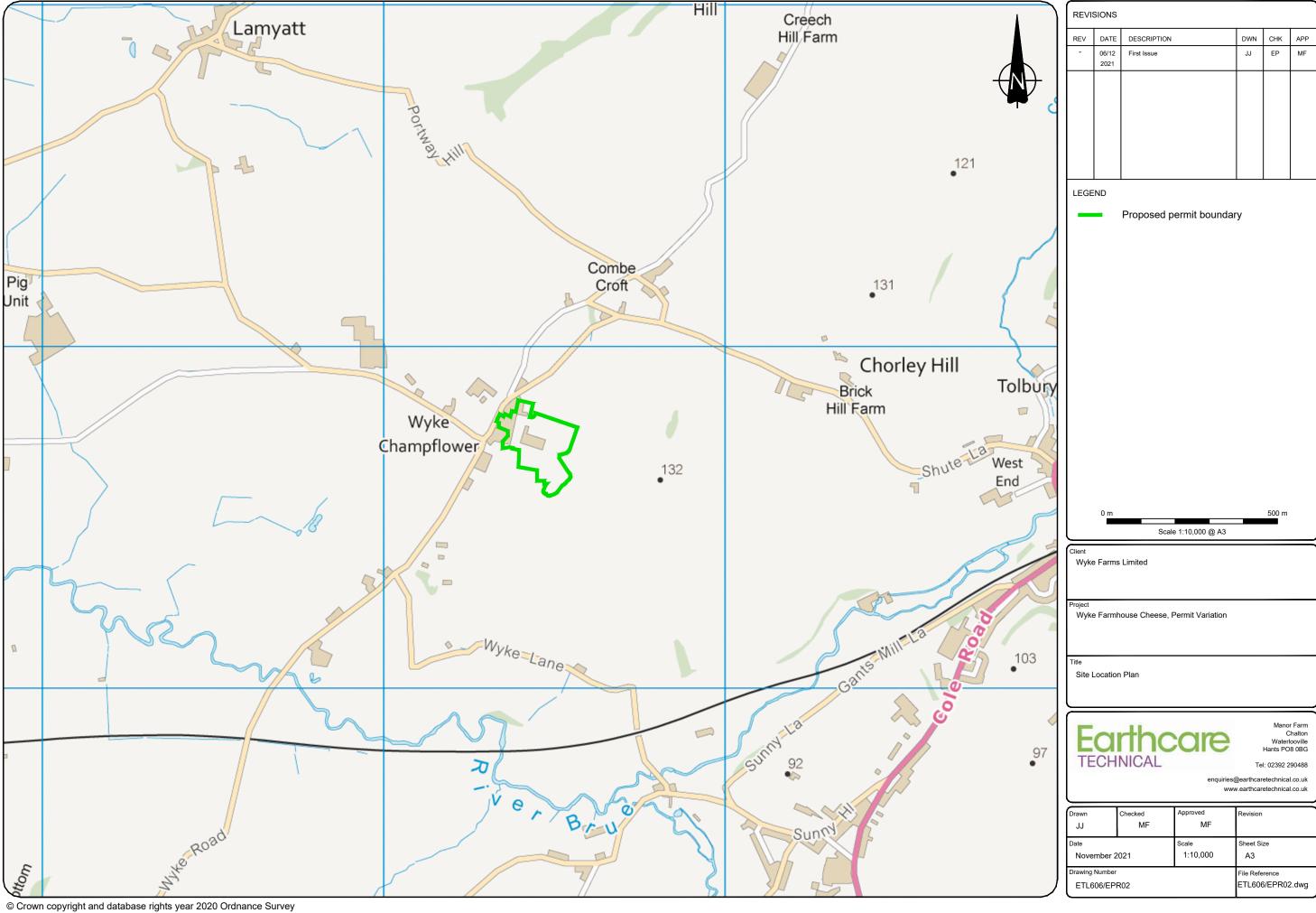
# **Figures**

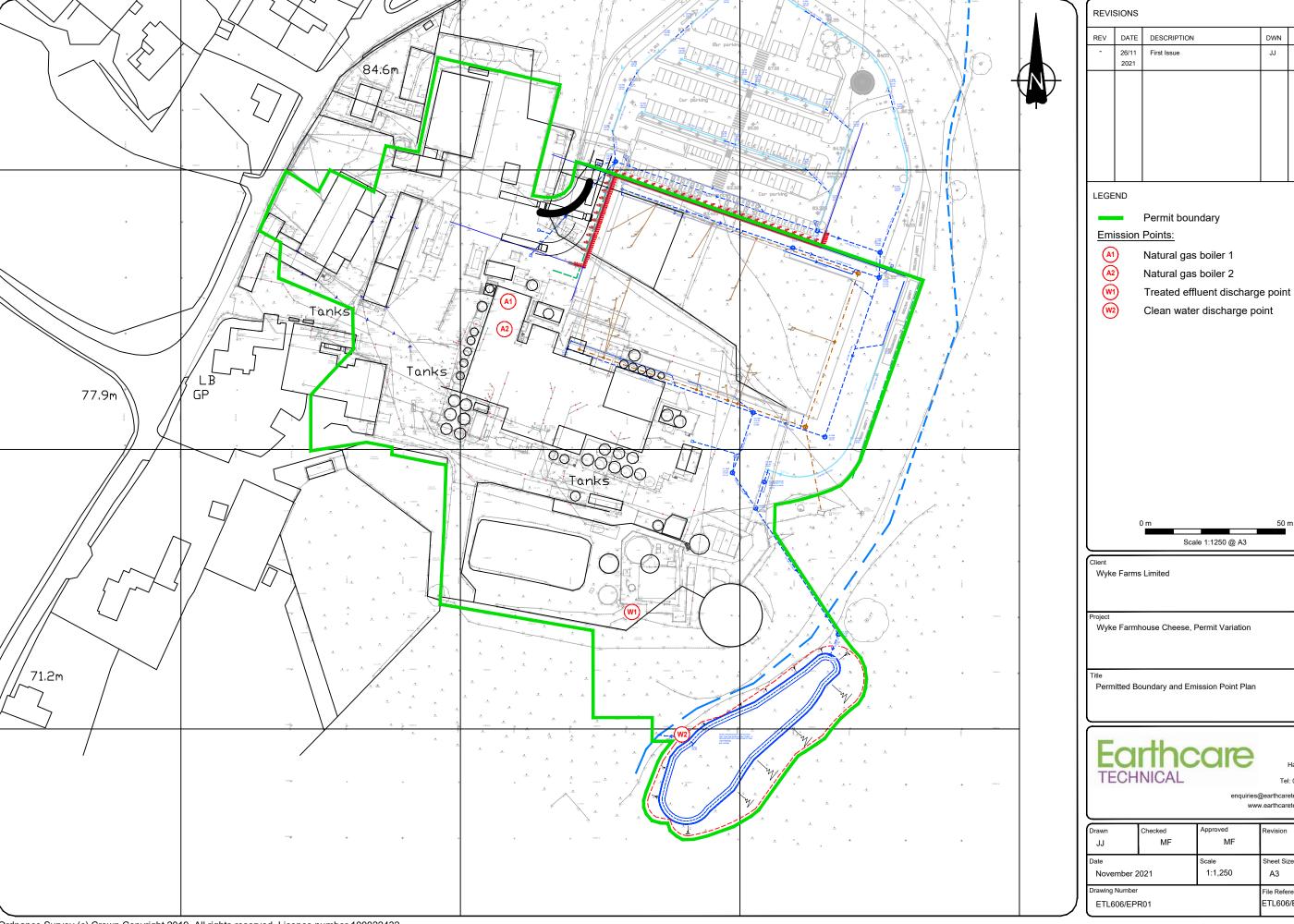
Figure 1: Site Location Plan (ETL606/EPR02)

Figure 2: Permit Boundary (existing and proposed) and Emission Point Plan (ETL606/EPR01)

Figure 3: Whole Site Drainage Plan, TWP Consulting Structural and Civil Engineers (27/01/2022)

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JJ EP MF

Manor Farm Chalton Waterlooville Hants PO8 0BG

Tel: 02392 290488

enquiries@earthcaretechnical.co.uk www.earthcaretechnical.co.uk

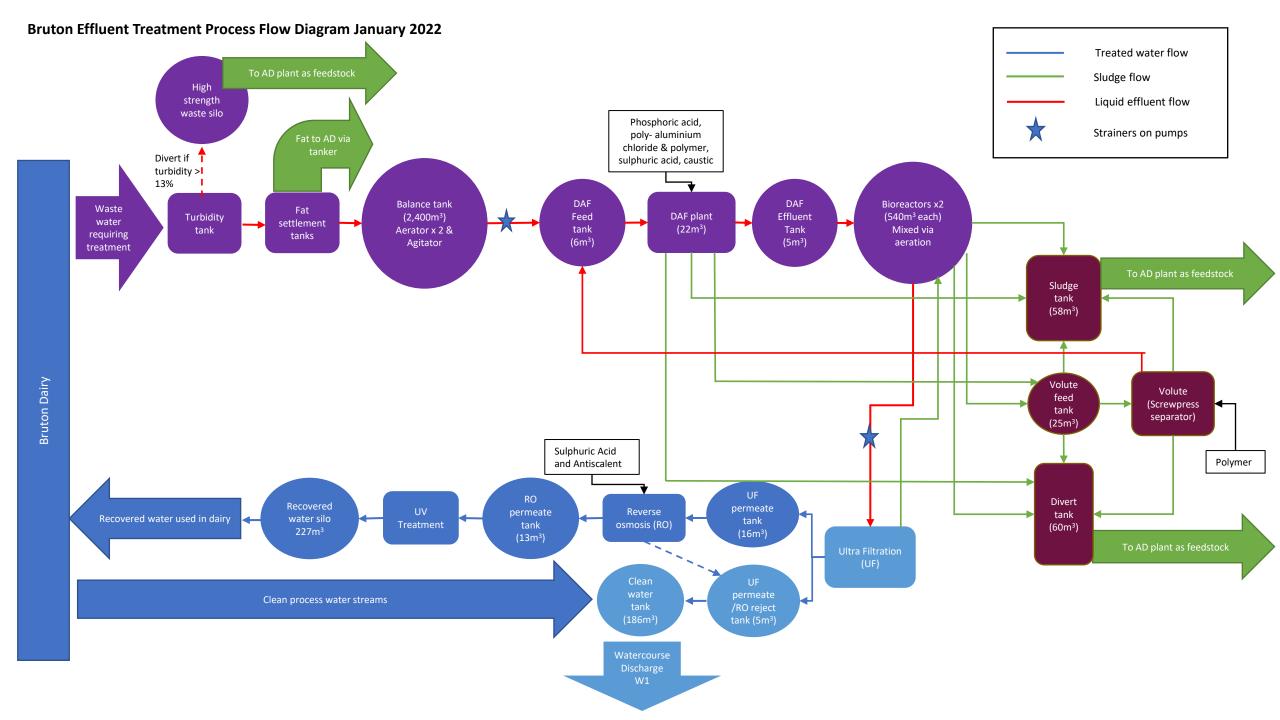
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# Appendix A – Bruton Effluent Treatment Process Flow Diagram

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# **Appendix B – Nature and Heritage Conservation Risk Assessment**

Site name and type	Screening distance (km)	Assessment of risk upon protected site from proposed changes
Sites of Special Scientific Interest (SSSi)		
Godminster Lane Quarry and Railway Cutting	2	Designated for geological features - no further assessment required
Local Wildlife Sites	l .	
Lamyatt Beacon	2	No change to emissions to air – no further assessment required
Holywater Copse	2	As above
Gants Mill Race	2	Upstream of discharge to River Brue
River Brue (Ansford Bridge to Wyke) Tolbury	2	There is a full risk assessment which supports the variation application regarding the impact of the proposed changes on water quality in the River Brue. <sup>8</sup>
Dovecote and Abbey Fields	2	No change to emissions to air – no further assessment required
Wyke Champflower Lane	2	As above
Pitcombe Railway Cutting	2	As above
Green's Combe Farm	2	As above
Ham Hill Farm	2	As above
Ancient Woodland	1	
Lamyatt Wood	2	As above

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# Appendix C - Staff Organogram

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## WYKE FARMS LIMITED

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## **ORGANISATION**

The Chairman has defined the company's operational management structure which identifies the personnel involved in managing, performing and verifying product Quality and Safety, Environmental and Health and Safety activities.

Company personnel and their resources are reviewed during Management Review meetings to ensure that they are adequate to meet the IMS Policies and Objectives.

See over for the company organisational charts. Chart 1 outlines the company organisation of Farming, Finance, \*IT, Marketing, Sales and \*Export responsibilities. Chart 2 covers Production and the Integrated Management System. Both charts encompass all Wyke Farms Ltd sites.

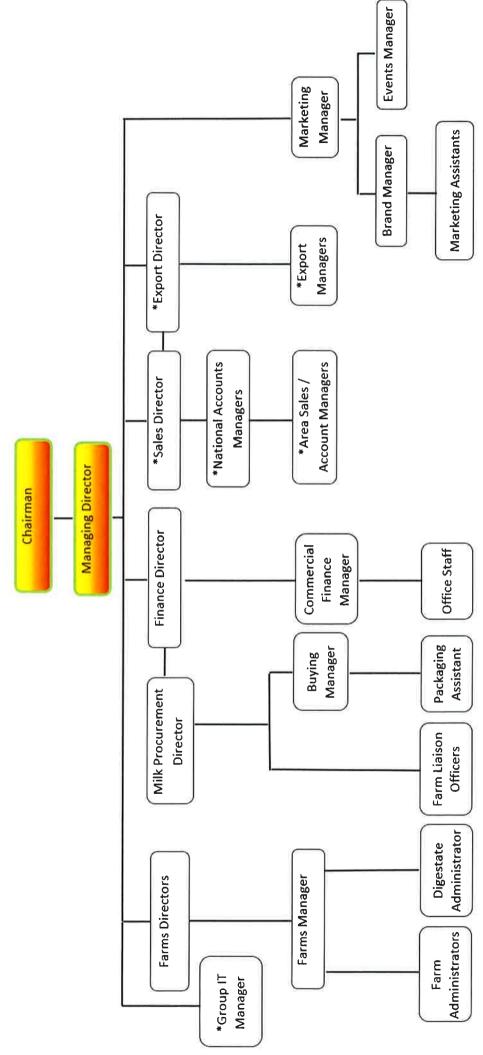
Although it is part of company culture that all staff are responsible for all aspects of the safety of the product, themselves and others, and the environment, personnel directly, responsible are colour coded in the charts below. Personnel responsible for product safety and quality are highlighted in yellow, those with environmental responsibility are highlighted green and those with Health and Safety responsibility highlighted in red. Personnel whose main responsibilities overlap into 2 or all 3 activities are highlighted accordingly.

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Chart 1\_\_(Farming, Finance, \*IT, Marketing, Sales and \*Export, across all Wyke Farms Ltd. sites.)



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Chart 2 (Production and Integrated Management Systems, across all Wyke Farms Ltd. sites.)

