



Application Document PAN-005576/V002

Parc Busnes Edwards Biomass Boiler

Dragon Fruit Holdings Limited

Report No. CRM 373 003 PE R 003



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Application Document - CRM 373 003 PE R 003

Project:	Parc Busnes Edwards Biomass Boiler
For:	Dragon Fruit Holdings Limited
Status:	FINAL
Date:	November 2022
Author:	Steph Charnaud, Director of Permitting
Reviewer:	Peter Cumberlidge, Director

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Contents

1.0 Application Forms	3
2.0 Introduction	4
2.2 Environmental Setting	4
2.3 Sensitive Receptors	5
3.0 Proposed Development.....	8
3.1 Proposed Permitted Activities	8
3.2 Process Description	8
3.3 Management and Control	9
3.4 Details of MCP on Site	9
3.5 Point Source Emissions from the Facility.....	9
3.6 Air Quality Assessment.....	10
3.7 Emissions Limit Values.....	10
3.8 Monitoring and Regulation.....	11
3.9 Reporting and Notifications.....	11

Tables and Figures

Figure 2.1.1: Site Location	4
Figure 2.3.1A: Sites of Special Scientific Interest within 2km of the Site Boundary (taken from MAGIC)	5
Figure 2.3.1B: Special Areas of Conservation within 10km of the Site Boundary	7
Table 3.4.1: Current Permitted Activities	8
Table: 3.4.2 Proposed Permitted Activities	8
Table 3.4.3: Details of MCP	9
Table 3.5.1: Point Source Emissions to Air	10

Table 3.7.1: Proposed Emissions Limit Values.....	10
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1.0 Application Forms

2.0 Introduction

2.1.1 This application submitted to Natural Resources Wales (NRW) is for a Normal Variation to a Bespoke Environmental Permit to operate a woodchip fired combustion plant within Parc Busnes Edwards, Pontyclun. The activity comprises a Schedule 25A (Medium Combustion Plant) activity - listed under the Environmental Permitting (England and Wales) Regulations 2016 (as amended).

2.1.2 This variation application is to add an additional boiler to the two already installed boilers. Currently the site has the following boilers installed:

- 2no. 1.2MWth WK RRK 1000 Binder boilers:

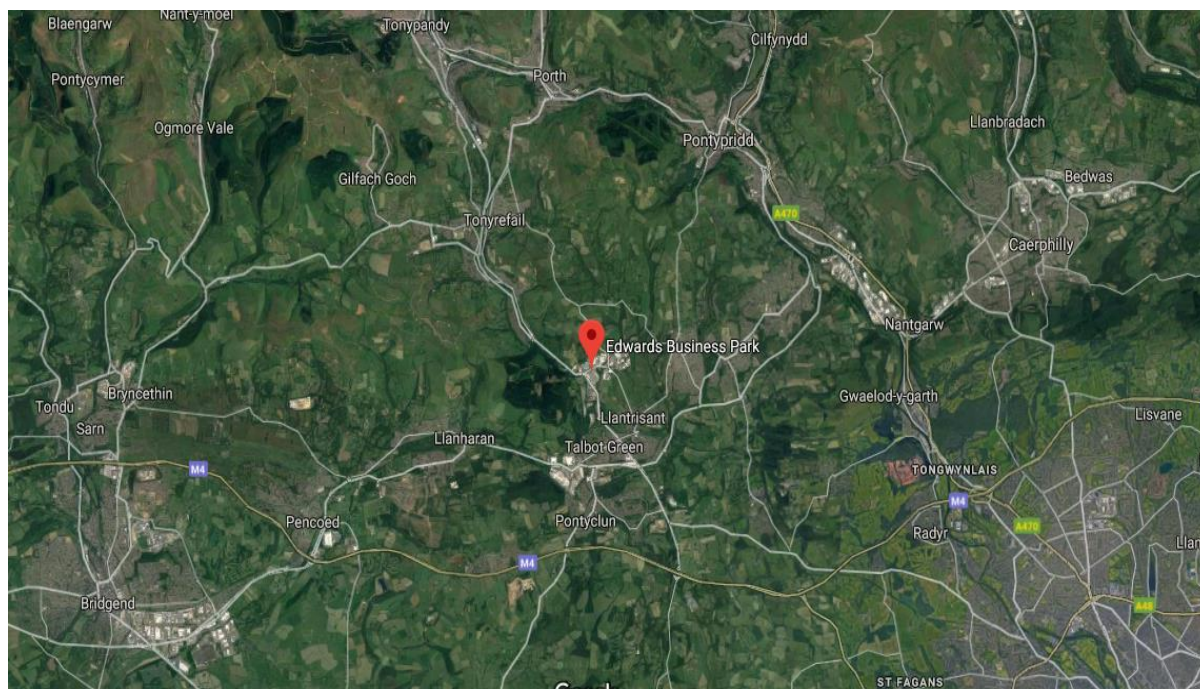
2.1.3 This Permit Variation is to allow a third boiler, a Hargassner, Magno-SR 1200 boiler with a net rated thermal input of 1.2MWth to the Facility.

2.1.4 The boilers will, as previously operate continuously and be fuelled by virgin woodchip.

2.1.5 The plant occupies an area of approximately 396m² and the NGR of the centre of the site is **ST 03725 84379**. This area of operation remains unchanged as a result of this Permit Variation application.

2.1.6 Figure 2.1.1 below shows the location of the site.

Figure 2.1.1: Site Location



©Google Maps 2022

2.2 Environmental Setting

2.2.1 The full address of the site is:

Parc Busnes Edwards Biomass Boiler
Parc Busnes Edwards
Land off Alexandra Drive

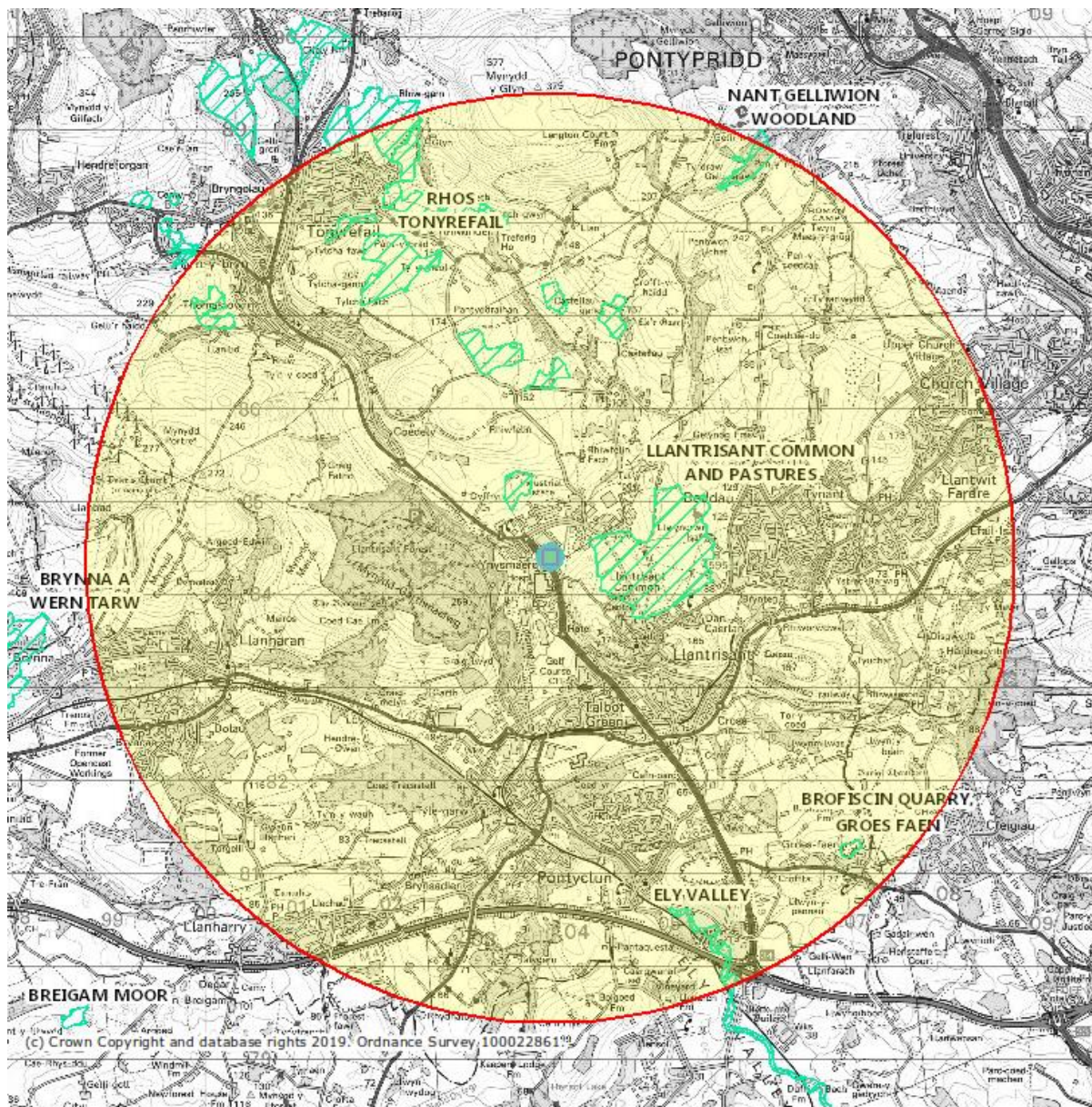
Llantrisant
Pontyclun
CF72 8QZ

- 2.2.2 The Facility shall continue to be operated by Dragon Fruit Holdings Ltd; whose registered office is: The Courtyard, Edwards Business Park Business Park, Llantrisant, Pontyclun, CF72 8QZ. Company Registration Number is: 10012716.
- 2.2.3 The primary contact for the application is Steph Charnaud, Principal Consultant, Enzygo Limited, steph.charnaud@enzygo.com
- 2.2.4 The nearest watercourse is the Nant Muchudd, 61.2m to the south-east of the proposed Facility boundary. The Ely River lies 194m to the west of the proposed Facility boundary.
- 2.2.5 The Royal Glamorgan Hospital is on the opposite side of the A4119 (Ely Valley Road), approximately 74m to the west of the proposed Facility boundary.
- 2.2.6 The nearest residential property is located approximately 215m to the west of the site in Ansari Court.
- 2.2.7 The nearest workplace is the warehouse adjacent to the proposed Facility boundary to the east and north.
- 2.2.8 The prevailing wind direction at the site is from the south-west.

2.3 Sensitive Receptors

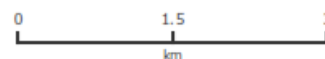
- 2.3.1 A review of MAGIC (www.magic.defra.gov.uk) showed three Sites of Special Scientific Interest (SSSIs) within 2kms of the site, Llantrisant Common and Pastures 476m to the east of the proposed Facility, Rhos Tonyrefail 668m to the north west of the proposed Facility and Rhos Tonyrefail 1844m to the north of the proposed Facility.
- 2.3.2 MAGIC showed one area of Special Areas of Conservation (SACs), Cardiff Beech Woods, within 10kms of the proposed Facility at approximately 7414m to the south east of the proposed Facility.
- 2.3.3 MAGIC showed no Special Protection Areas (SPAs) or RAMSAR sites within 10kms of the proposed Facility.
- 2.3.4 Key sensitive receptors are presented in Figure 2.3.1A and 2.3.1B below.

Figure 2.3.1A: Sites of Special Scientific Interest within 2km of the Site Boundary (taken from MAGIC)



Legend

Sites of Special Scientific Interest (Wales)



Projection = OSGB36

xmin = 288500

ymin = 177100

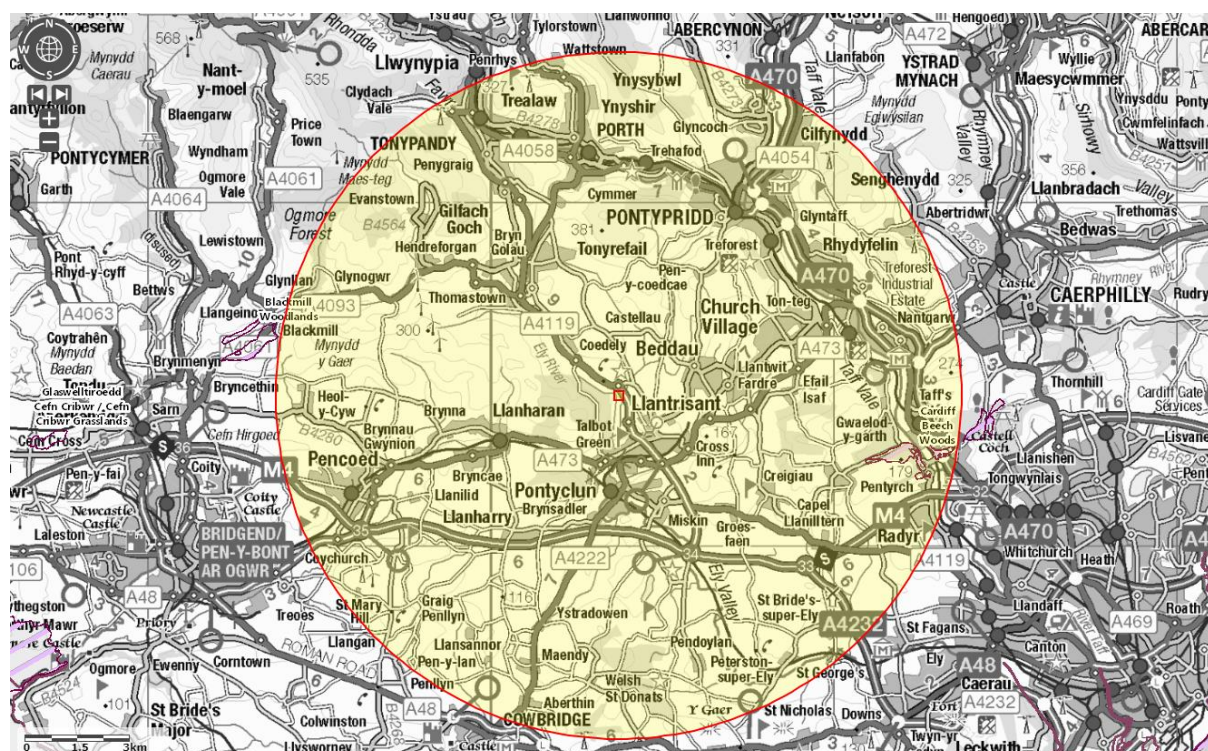
xmax = 319000

ymax = 191700

Map produced by MAGIC on 9 May, 2019.

Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

Figure 2.3.1B: Special Areas of Conservation within 10km of the Site Boundary



LEGEND

Special Areas of Conservation (Wales)

Special Areas of Conservation (Wales)



0 1.5 3km

3.0 Proposed Development

3.1 Proposed Permitted Activities

3.1.1 Dragon Fruit Holdings Limited are applying to vary their Bespoke Environmental Permit reference PAN-005576/V002 which permits the operation of a Schedule 25A (Medium Combustion Plant) activity listed under the Environmental Permitting (England and Wales) Regulations 2016 (as amended).

3.1.2 The aggregated net rated thermal input of the 2no. existing Binder boilers and the proposed additional Hargassner, Magno-SR 1200 boiler has been calculated to be 3.6MWth.

Table 3.4.1: Current Permitted Activities

Activity	Description of Activity	Operational Capacity
Schedule 25A Medium Combustion Plant	A combustion plant with a rated thermal input equal to or greater than 1 megawatt but less than 50 megawatts	Total net rated thermal input: 2.4MWth from 2no 1.2MWth boilers.
DAA	Storage of raw material (e.g. wood chip) and wastes Site surface water drainage	N/A

Table: 3.4.2 Proposed Permitted Activities

Activity	Description of Activity	Operational Capacity
Schedule 25A Medium Combustion Plant	A combustion plant with a rated thermal input equal to or greater than 1 megawatt but less than 50 megawatts	Total net rated thermal input: 3.6MWth (3no 1.2MWth boilers)
DAA	Storage of raw material (e.g. wood chip) and wastes Site surface water drainage	N/A

3.2 Process Description

3.2.1 The generating plant currently comprises 2no. 1.2MWth WK RRK 1000 Binder wood chip biomass boilers are housed within a building, which provide heat to the Edwards Business Park.

3.2.2 The virgin wood-fired biomass boilers operate continuously (8760 hours per year), excluding downtime for maintenance. Wood chips are delivered to the wood store and then transferred to the boilers via a conveyor. This is unchanged from the current operation

3.2.3 Each boiler has an individual 9m flue.

3.2.4 A Technical Data Sheet showing the specifications of units on site is included in Appendix B.

3.2.5 The proposed facility will comprise of the following elements:

- 2 x 1.2MWth WK RRK 1000 Binder boilers;
- 1 x 1.2MWth Hargassner Magno-SR 1200 boiler;
- 3no. 9 meter flues;

- 3no. buffer tanks;
- 3no. hot water tanks; and;
- Facility Building.

3.2.6 The Facility also has a virgin wood chip store. However, this does not fall under Schedule 25A of the Environmental Permitting (England and Wales) Regulations and is unchanged from the current operation.

3.3 Non-Permitted Activities

3.3.1 The Operator is not proposing to undertake any activities within the Permit Boundary other than those which will be included in the Environmental Permit.

3.4 Management and Control

3.4.1 It is acknowledged that Natural Resources Wales relies heavily on the use of effective Environmental Management Systems (EMS) as a driver for environmental compliance and improvement. As required by Section 3d of Application Form Part C2, Dragon Fruit Holdings Limited has an effective, written management system in place.

3.4.2 The Environmental Management System will be developed in line with ISO14001 and will meet the requirements of 'How to Comply' and EA Guidance: *Develop a management system: Environmental permits, updated August 2022*. The management system will address the following areas:

- Cleaning and maintenance;
- Training and plant operation;
- Emission monitoring;
- Plant failures; and
- Records keeping.

3.5 Details of MCP on Site

3.5.1 Drawing CRM 373.003 PE D 002 shows the MCP generator and flue arrangement at the site. This drawing reinstates a third boiler which was what originally applied for in application reference PAN-005576 and was removed in application reference PAN-005576/V002.

3.5.2 As required by Appendix 8 of Application Form Part BC3, Details of each stationary MCP is provided in Table 3.4.1 below. Emission point A1 is to the northeast of the site, with A3 to the southwest.

Table 3.4.3: Details of MCP

Air Emissions Point Reference	MCP Specific Identifier: Serial Number	NGR
A1	AB21-0121	ST 03713 84398
A2	AB22-0081	ST 03709 84395
A3	TBC	ST 03708 84394

3.6 Point Source Emissions from the Facility

3.6.1 There will be 3no. point source emissions from the Facility consisting of 3 flues, one from each boiler.

Table 3.5.1: Point Source Emissions to Air

Air Emissions Point Reference and Location	Receiving Media	Source of Emissions
A1 – A3	Release into the atmosphere	Boiler exhausts

3.7 Air Quality Assessment

3.7.1 An Air Quality Assessment was completed in November 2022 by Enzygo's Air Quality Team as part of the preparatory work undertaken to support this Permit application. The ADMS 5 (V5.2) dispersion model was used to undertake the detailed air quality modelling.

3.7.2 This assessment focusses on the impacts of the key pollutants associated with the operation of the (virgin wood fuelled) biomass boilers. These are nitrogen dioxide and particulate matter.

3.7.3 Other pollutants, such as sulphur dioxide - which is a specified pollutant in the Medium Combustion Plant Directive and Schedule 25A of the Environmental Permitting (England and Wales) Regulations 2016 (as amended), are considered to be negligible when using virgin wood as a fuel. Therefore, sulphur dioxide was screened out of further assessment.

3.7.4 Short term and long term EQS for NO₂ and PM were not exceeded at any location within the assessment extents relevant of human exposure. Impacts at modelled receptors were screened as insignificant using the EA's significance criteria. Predicted impacts in accordance with the NRW's guidance were considered not significant at all sensitive human receptors.

3.7.5 The EQS for nitrogen and acid deposition on ecological designations was exceeded as a baseline condition however the process contribution from the facility could be screened out as insignificant following initial screening criteria.

3.7.6 Overall, the air quality impacts of the proposed development were judged to be 'not significant', based on the use of robust assumptions and worse-case meteorological conditions over a 5-year period.

3.8 Emissions Limit Values

3.8.1 All activities will comply with the emission limit values specified in Table 3.7.1 below. This remains unchanged from the current operation.

Table 3.7.1: Proposed Emissions Limit Values

Substance	Emission Limit Value
Oxides of Nitrogen	500mg/Nm ³
Dust	50mg/Nm ³
Carbon Monoxide	N/A

3.8.2 The emission limit values above refer to values of concentration, expressed as mass of emitted substance per volume of waste gas (under standard conditions: dry gas at temperature of 273.15K and a pressure of 101,3 kPa) expressed in the unit mg/Nm³. The reference oxygen level of the waste gases is 6% for solid fuels.

- 3.8.3 Emissions during operation will be free from visible smoke and during start up and shut down emissions of smoke will not exceed the equivalent of Ringlemann Shade 1. All other releases to air other than condensed water vapor, including emissions from material handling operations, will be free from persistent visible emissions.

3.9 Monitoring and Regulation

- 3.9.1 NO_x (as NO₂), Dust (as PM₁₀) and Carbon Monoxide emissions will be monitored once every 3 years, and emissions monitoring will be conducted by an MCerts accredited organisation-verified using MCerts monitoring methods. MCerts is the Environment Agency's Monitoring Certification Scheme, which provides a framework for businesses to meet their quality requirements. The Operator will notify the regulator where possible in advance of monitoring taking place, to allow the regulator to witness the testing.
- 3.9.2 The operator will submit the results of any periodic emissions testing to the regulator once they have received the results, in accordance with timescales and format agreed with the regulator.
- 3.9.3 Initial monitoring of the proposed new boiler will be undertaken within 4 months of the permit issue date, in line with the *NRW's Document, Monitoring requirements for the MCPD*. The frequency of testing thereafter will be every three years as specified in the Environmental Permit.

3.10 Reporting and Notifications

- 3.10.1 Dragon Fruit Holdings Limited will notify Natural Resources Wales in advance of monitoring taking place where possible, to allow attendance by the Regulatory Officer for the Facility if required.
- 3.10.2 The Operator will submit the results of any periodic emissions testing to Natural Resources Wales in accordance with the requirements of their Environmental Permit.
- 3.10.3 Records of testing will be held by the Operator for a minimum of 6 years and will be made available for inspection by Natural Resources Wales.

Appendix A – Boiler Datasheet

Appendix B – Air Quality Assessment

Appendix C – Environmental Policy



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Dragon Fruit Holdings Ltd - Environmental Policy

23rd June 2021

- Dragon Fruit Holdings Ltd accepts responsibility for any harmful effects its operations may have on both the local and global environment and is committed to reducing them.
- Dragon Fruit Holdings Ltd will measure its impact on the environment and set targets for ongoing improvement.
- The Company will comply with all relevant environmental legislation.
- The Company will implement a training program for its staff to raise awareness of environmental issues and enlist their support in improving the Company's performance.
- Dragon Fruit Holdings Ltd will encourage the adoption of similar principles by its suppliers.
- Actively promote recycling both internally and amongst its customers and suppliers.
- Use an accredited program to offset the greenhouse gas emissions generated by our activities.

Mike Edwards

Director.

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info@dragonfruitholdings.co.uk

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Registered in Wales 10012716

Appendix D – Environmental Management System

Dragon Fruit Holdings Ltd

Environmental Management System

June 2021

1. General Requirements and Introduction

The company (DFH) is a property management and commercial rental company based at Parc Busnes Edwards (PBE) Llantrisant, South Wales. It also operates a Medium Combustion Plant (MCP), on-site, consisting of three Biomass boilers which are used to heat the adjacent factory units, warehouses and offices. The responsible person for environmental management is Mike Edwards, Director (NEBOSH), assisted by Lucy Edwards (WAMITAB).

There is an appendix of plans including traffic routes, storm and foul water systems, notices to tenants and staff etc, at the end of this document.

2. Environmental Policy

- Dragon Fruit Holdings Ltd accepts responsibility for any harmful effects its operations may have on both the local and global environment and is committed to reducing them.
- Dragon Fruit Holdings Ltd will measure its impact on the environment and set targets for ongoing improvement.
- The Company will comply with all relevant environmental legislation.
- The Company will implement a training program for its staff to raise awareness of environmental issues and enlist their support in improving the Company's performance.
- Dragon Fruit Holdings Ltd will encourage the adoption of similar principles by its suppliers.
- Actively promote recycling both internally and amongst its customers and suppliers.
- Use an accredited program to offset the greenhouse gas emissions generated by our activities.

3. Environmental aspects

As DFH is mainly a rental property company and does not manufacture, process, store or sell any products our main concern regarding the environment is the MCP. The MCP consumes raw materials (waste wood chip) which is stored on site. The bought-in chip, after delivery, is transported by heavy machinery from a wood store to the silo as and when necessary. There is very little noise pollution from the machinery or the boiler plant. Emissions to air, water and off-site transfers of waste are monitored and reported directly to NRW by the end of March in the year after the permit was granted. Consumption of raw materials and heat energy created must be recorded and forwarded quarterly to OFGEM under the RHI scheme. The MCP is behind closed roller shutter doors when in use unless filling the silo is in progress.

4. Legal requirements

The company is required to consider the health, safety and well-being of all employees and visitors to the industrial estate (PBE). There is a plan for car and heavy vehicle parking, along with pedestrian walkways (annexed). There is an evacuation plan in the event of fire (annexed).

There is a water sprinkler system in place in most of the units. There is a 24-hour security guard-house with vehicle access barriers in situ.

5. Objectives and targets

The company is conscious of the fact that there is a river (Nant Muchlyd) directly to the south of PBE and a 4-acre site of Special Scientific Interest to the east. DFH are continually monitoring waste storage and use and disposal of liquids, including oils and detergents, by tenants that may contaminate the adjacent water courses. Welsh Water also regularly monitors the used water from the automated bus wash on site from a dedicated sampling point. The bus wash is operated by a tenant "Edwards Coaches Ltd" their Environmental Policy is appended.

6. Training and awareness

The company only has 2 employees at present so the main tasks regarding the protection of the environment are with the directors and spouses who are trained in risk management (NEBOSH) and waste management (WAMITAB). However, the employees and any sub-contractors are trained in health and safety and fully licensed to operate the equipment owned by the company such as fork lifts, MEWPS, excavators and telehandlers. Training has been provided to staff who may encounter any ACMs enabling them to recognise what they are dealing with and report to their supervisor before any work is carried out. Working at height and harness training has also been carried out. All plant involving lifting of personnel is checked and certified by a LOLER engineer.

7. Communication

Communication to staff is relatively simple as there are not many employees. However, tenants and sub-contractors are kept in touch by email or notices. We also have a duty to communicate with our stake holders such as the bank, finance houses and insurance company.

8. Documentation

Documents such as site, traffic route, and fire plans, etc, are readily available and communicated to tenants and staff by email or on notice boards. The EP is portrayed on company notice boards.

9. Operational Control

The main concern is the operation of the MCP. We have three operators who have been trained in the Biomass Boiler system and they are the only ones permitted to operate the boiler. The boiler supplier (BBSM) has engineers on call that assist with any faults that may occur with the system. The boiler is maintained by BBSM under contract. We also have three members of staff who have a license to drive the mechanical digger that loads the wood chip into the silo. Meter readings MWh and fuel usage is strictly recorded by the directors to enable them to report to OFGEM. The boiler house is monitored by CCTV and has a fire alarm system installed.

10. Emergency preparedness and response

The company has an emergency plan for spillage of contaminants by any person whilst on the industrial estate, this includes absorbent granules and stockings. There is a sluice gate on the

main storm outlet to the river that can be shut in the event of a major spillage. There are adequate fire fighting extinguishers placed around the units and most of the units are covered by a certified sprinkler system. The 24-hour security guard has all relevant emergency numbers to hand, including the local hospital and all directors' mobile phones. There are plans on his notice board to indicate to the emergency services where all mains gas shut off valves and electrical switches are located. The whole estate is covered by CCTV.

11. Checking and monitoring

A hands-on approach by the directors is used to check and monitor the above EMS on a daily basis as they are such a small company, they are all working in the business.

12. Evaluation of Compliance

Evaluation of environmental compliance is discussed at board meetings and any relevant points addressed and implemented forthwith.

13, Control of records

Records are kept on site for the MCP and vehicle and plant maintenance records are kept digitally on a bespoke VMS system.

13. Management review

The system is reviewed continually by directors and updates made as necessary.

Mike Edwards

Director



Enzygo specialise in a wide range of technical services:

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