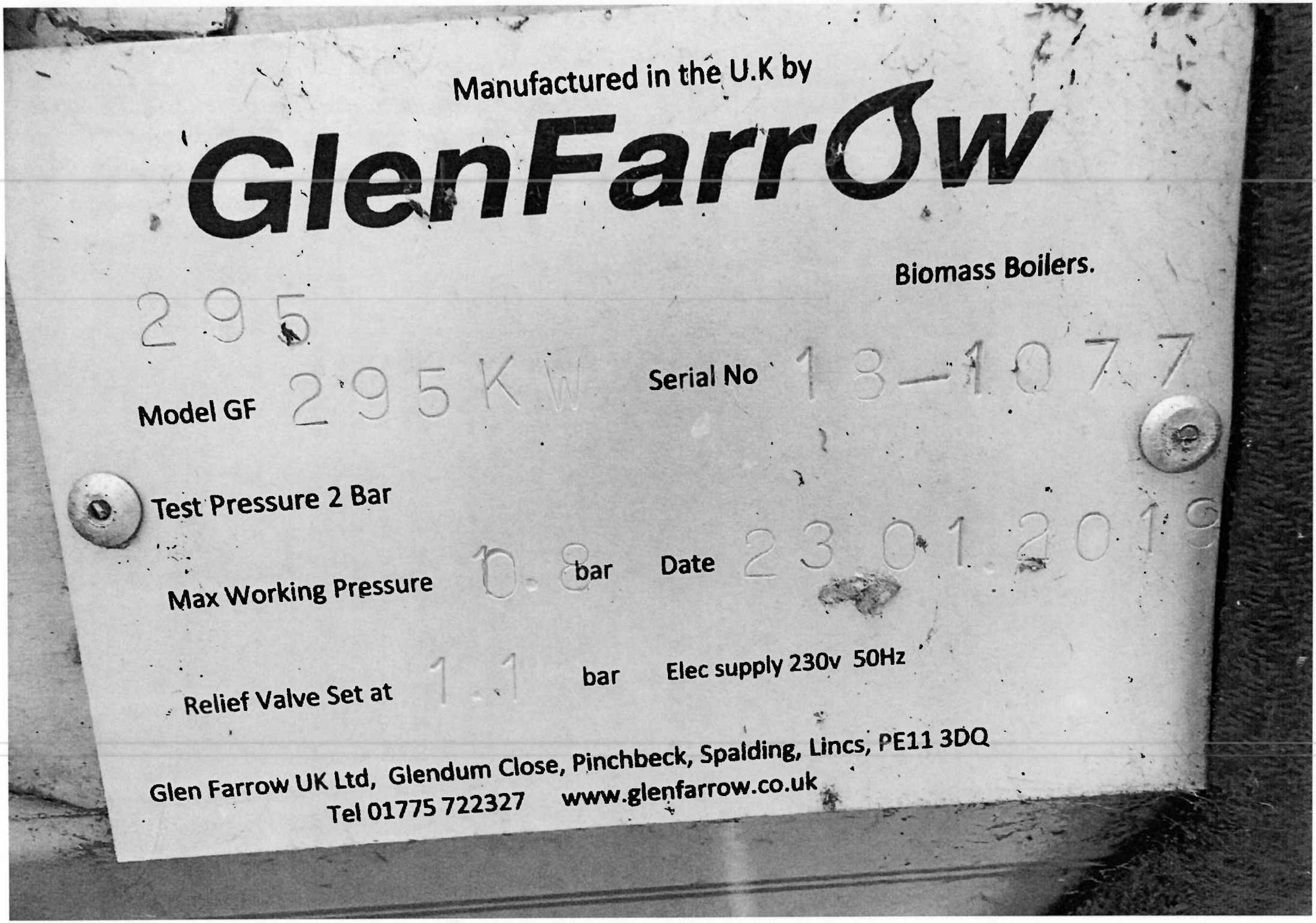

Manufactured in the U.K by
GlenFarrow
Biomass Boilers.
295
Model GF 295KW
Serial No 18-1077
Test Pressure 2 Bar
Max Working Pressure 0.8 bar
Date 23.01.2019
Relief Valve Set at 1.1 bar
Elec supply 230v 50Hz
Glen Farrow UK Ltd, Glendum Close, Pinchbeck, Spalding, Lincs, PE11 3DQ
Tel 01775 722327 www.glenfarrow.co.uk

GlenFarrow

DESIGN AND ACCESS STATEMENT

PROPOSAL FOR INSTALLATION OF A NEW 295 KW BIOMASS BOILER

(SITE LOCATION)

P & F Safepac CO Ltd, 67 Fred Dannatt Road, Mildenhall, Suffolk, IP28 7RD

On Behalf Of:
P & F Safepac Co Ltd

Prepared By:
[redacted] | Biomass Technical Manager | Mob: [redacted]
| Email: [redacted]
Glen Farrow UK Ltd | 01775 722327 | glenfarrow.co.uk
Glendum Close, Pinchbeck, Spalding, LINCS, PE11 3DQ

1. Introduction

This Design and Access Statement has been prepared by Andrius Lescinskas, Glen Farrow Uk Ltd, on behalf of P & F Safepac Co Ltd. in support of the full Planning Application for a new 295kW Biomass Boiler at P & F Safepac Co Ltd, 67 Fred Dannatt Road, Mildenhall, Suffolk, IP28 7RD.

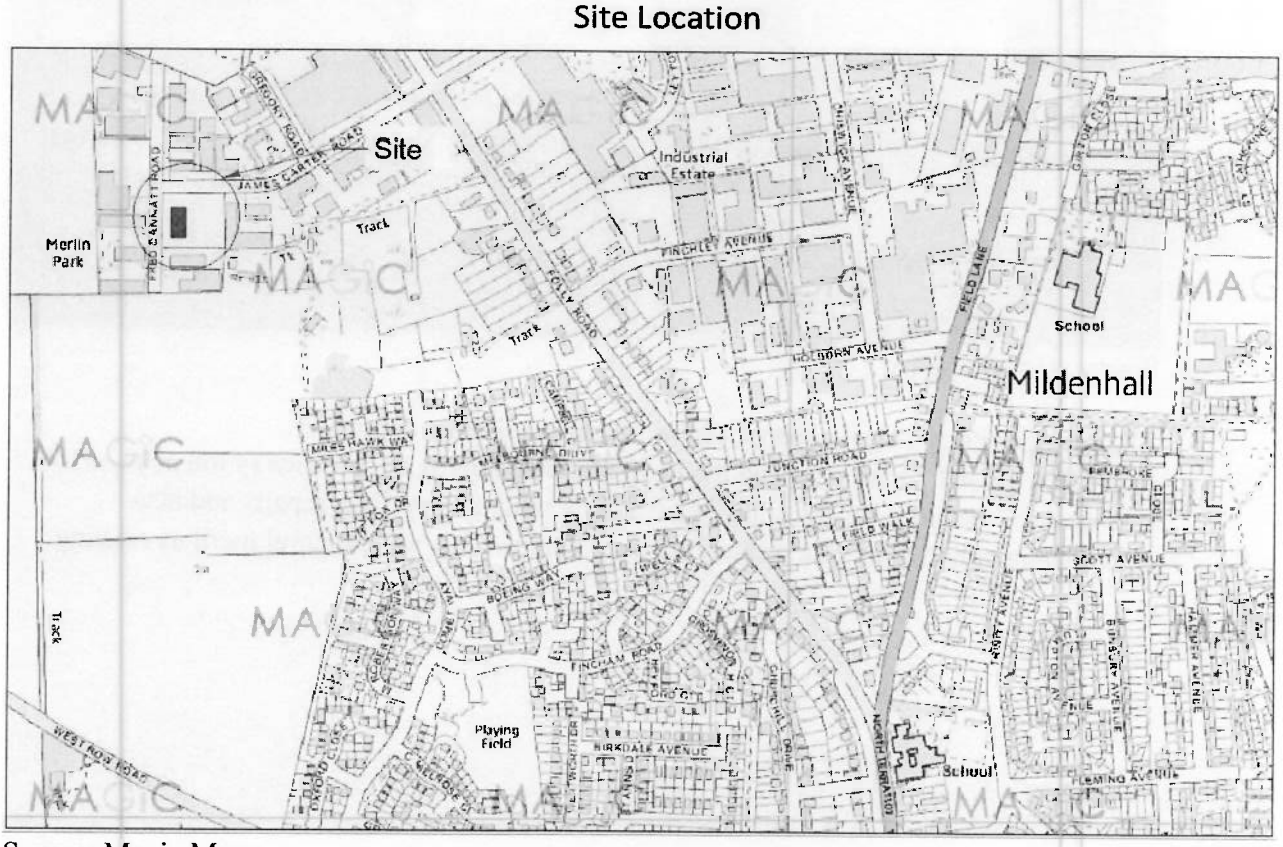
I have already sought advice from West Suffolk pre-application service. Mr. Matthew Harmsworth conducted a site visit and concluded that, in his opinion, the proposal would in all likelihood be considered acceptable. He has also advised us to utilise the Development Management Policy DM8 – Low and Zero Carbon Energy Generation as a key policy addressing the Landscape and Visual Impacts and Habitat Mitigation for this statement, which I included in Section 5 and Section 6.

2. The Site and Surroundings

2.1. Location

The application site is situated within the Forest Heath District Council, West Suffolk. The site is located on industrial estate in North West Mildenhall.

Figure 1 Site Location



Source: Magic Maps

3. Access

Site can be accessed via Fred Dannatt Road, which is a no-through road. The route to site would be from Hampstead Avenue or Folly Road, via James Carter Road. The installation would not require a new access from the main or site roads. All the deliveries of fuel and maintenance will be utilising the existing access and this will be very low in volume. The Biomass Boiler and all associated equipment will be unloaded via a HIAB attached to the delivery lorry and forklifts available on site, which is a one off delivery.

4. Design

4.1. Description of the Application Proposal

As mentioned previously, the project involves the installation of 1x 295kW Biomass Boiler (Make - GlenFarrow UK Ltd, Model - GF295) and new heating system in the warehouse. Currently there is no heating system in the warehouse and during the seasonally colder weather the only source of heating is portable diesel/kerosene and electric heaters. The Biomass Boiler will have an application to be accredited to the Renewable Heat Incentive (RHI) submitted after installation, which is a UK Government scheme set up to encourage uptake of renewable heat technologies amongst householders, communities and businesses through financial incentives. It is the first of its kind in the world and the UK Government expects the RHI to contribute towards the 2020 ambition of 12% of heating coming from renewable sources.

The Biomass Boiler will be fuelled with untreated timber offcuts from site activities.

4.2. Scale and Appearance

The Biomass Boiler will be placed on an existing concrete base, near to the warehouse it will be heating. The Biomass Boiler is 2.2m wide, 3.8m long and 3.2m high, excluding flue. The Boiler will require clearance 0.5 m from the wall. The flue will be attached to the boiler and will be 13 m high (total height of the ground level 15.7 m).

Figure 4 Biomass Boiler GF295

(Installed boiler Elsewhere)

4.3. Layout

The Biomass Boiler will be situated near the warehouse, facing the yard, for ease of loading.

Landscape effects derive from changes in the physical landscape, which may give rise to changes in its character and how this is experienced. This may in turn affect the perceived value ascribed to the landscape.

This assessment has been undertaken in accordance with:

- Guidelines For Landscape And Visual Impact Assessment, Third Edition (2013);
- An Approach to Landscape Character Assessment, published by Natural England (2014)
- Landscape and Visual Impact Assessment Methodology Rev A (Docarum.gov.uk)

In accordance with the guidance noted above, both the landscape and visual assessments include baseline studies that identifies potential effects, sensitive receptors, describes and quantifies the changes to the baseline and evaluates the predicted effects.

5.3. Baseline Study

The initial step in any landscape or visual impact assessment is to review the existing landscape and visual resource in the vicinity of the proposed development – that is the baseline landscape and visual conditions. The data collected will form the basis from which the magnitude and significance of the landscape and visual effects of the development may be identified and assessed.

5.3.1. The Site

The site is bounded with palisade fence with row of bushes / plants at the north boundary of the site. There is an open field about 40m south from site and about 60 m west to the site. Residential properties are located 250 m Southern Easterly and 350 m easterly of the site. North to the site there is the Mildenhall RAF base boundary 185 m away (Runway - 750 m). The site and surrounding area is relatively flat.

5.3.2. Landscape Character

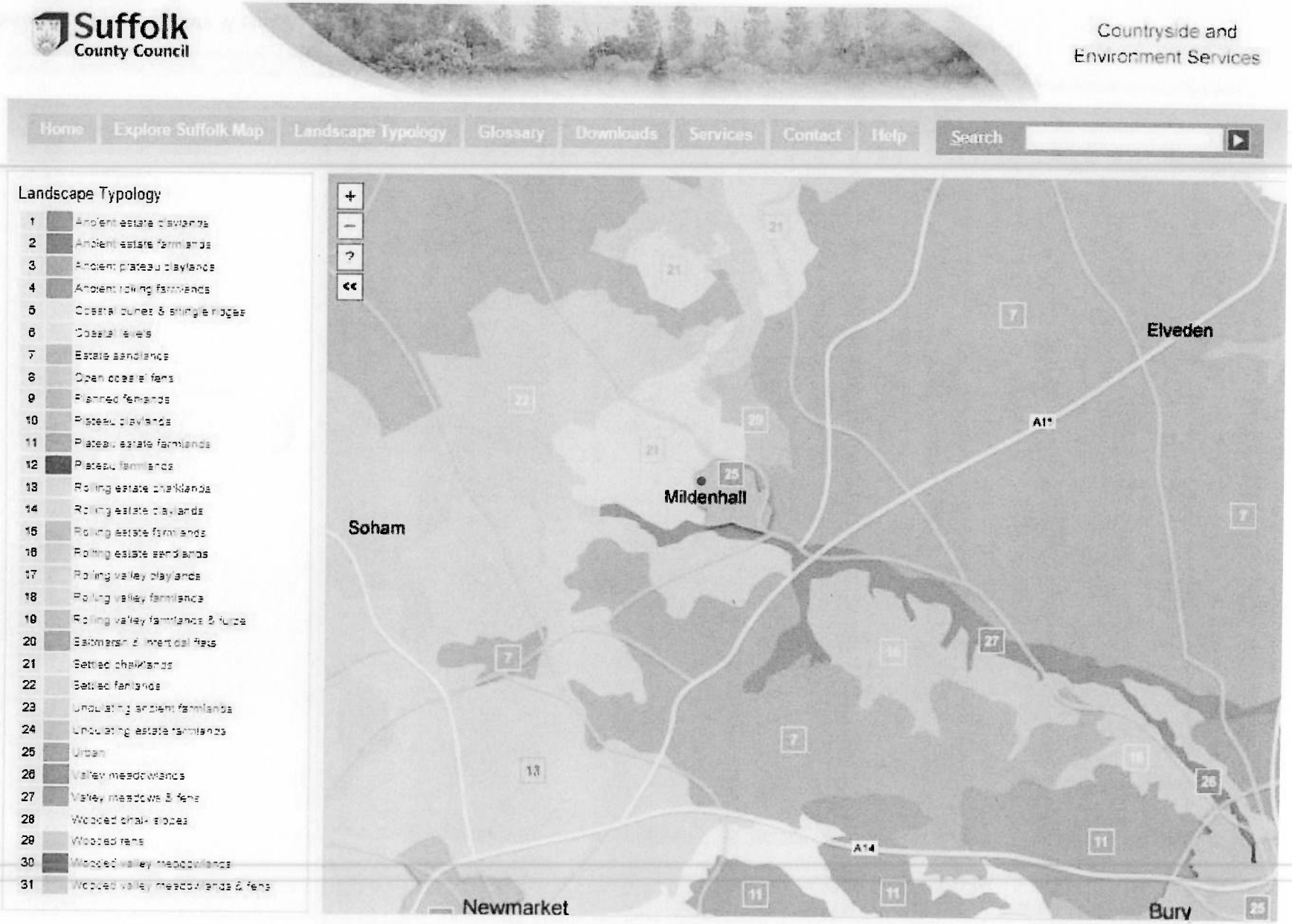
The landscape effects include the direct and indirect effects of the development on individual landscape elements and features, as well as the effect upon the general landscape character and quality of the surrounding area. Landscape effects are described clearly and objectively, and the extent and duration of any adverse/beneficial effects quantified, using four categories of effects, indicating a grading from high to low (i.e. high, medium, low, negligible i.e.no change).

Landscape Character been assessed using references listed below:

- Forest Heath supporting statement natural environment 2009
- Suffolk landscape character assessment

The site is located within an urban area and does not fall into any nature conservation areas. There is a Deciduous Woodland 280 m North East from the site; The Lowland Heathland registered at England Nature Heathland Inventory 880 m North East from the site and Suffolk (BRC) County Wildlife Site – Thetford forest 1200 m North East from site.

Figure 7a Landscape Typology



Source: Suffolk County Website

5.4. Landscape and Visual Receptors

The Evaluations of landscape value and character been made using the following criteria:

Value	Typical criteria	Typical scale of importance/ Rarity	Typical examples
Exceptional	High importance and Rarity. No or limited potential for substitution	International, National	World Heritage Site, National Park, AONB
High	High importance and Rarity. Limited potential for substitution.	National, Regional, Local	AONB, SLA Conservation area
Moderate	Moderate importance and Rarity. Limited potential for substitution.	Regional, Local	Undesignated but value perhaps expressed through non-official publications or demonstrable use.
Low	Low importance and Rarity. Considerable potential for substitution.	Local	Areas identified as having some redeeming feature or features and possibly identified for improvement.
Poor	Low importance and Rarity.	Local	Areas identified for recovery.

The condition of the landscape has been assessed using following criteria:

Good	Where the landscape and its features are in good repair / quality and have a high contribution to landscape character.
Moderate	Where the landscape and its features are in average repair/quality and make a medium contribution to the landscape character.
Low	Where the landscape and its features are in poor repair/quality and make a low contribution to landscape character.

The following table has been used to determine the sensitivity of the landscape to change:

Landscape Value	**SENSITIVITY**		
High to exceptional	High	High	Moderate
Moderate	High	Moderate	Low
Low to poor	Moderate	Low	**Low**
	Good	Moderate	Low
	Landscape Condition		

The sensitivity of visual receptors in views may be dependent on:

- The location and context of the viewpoint;
- The expectations and occupation or activity of the receptor;
- The importance of the view (which may be determined with respect to its popularity or numbers of people affected, its appearance in guide books, on tourist maps, and in the facilities provided for its enjoyment and reference to it in literature or art).

The most sensitive receptors may include:

- Residential properties with views from ground and first floor windows and gardens towards the proposals;
- Important public sites used by many people;
- Public rights of way, public open spaces and other locations where the view is part of the reason for the visit.
- Outdoor recreation facilities, where the users attention or interest may be focused on the landscape.

Assessment of significance of landscape impacts			Landscape receptor sensitivity		
			High	Medium	Low
			Landscape with important components or of a particularly distinctive character, susceptible to relatively small changes of the type proposed.	Landscape with relatively ordinary, moderately valued characteristics reasonably tolerant of changes of the type proposed.	A relatively unimportant landscape with few features of value or interest, potentially tolerant of substantial change of the type proposed.
Magnitude of landscape impact	**Major adverse**	Significant adverse changes, over a significant area, to key characteristics or features or to the landscape's character or distinctiveness for more than 2 years	High adverse significance	High/Medium adverse significance	Medium adverse significance
	Moderate adverse	Noticeable but not significant adverse changes for more than 2 years or significant adverse changes for more than 6 months but less than 2 years, over a significant area, to key characteristics or features or to the landscape's character or distinctiveness.	High/Medium adverse significance	Medium adverse significance	**Low adverse significance**
	Slight adverse	Noticeable adverse changes for less than 2 years, significant adverse changes for less than 6 months, or barely discernible adverse changes for any length of time.	Medium adverse significance	Low adverse significance	Neutral
	Neutral	Any change would be negligible, unnoticeable or there are no predicted changes.	Neutral	Neutral	Neutral
	Slight benefit	Noticeable beneficial changes for less than 2 years, significant beneficial changes for less than 6 months, or barely discernible beneficial changes for any length of time.	Medium beneficial significance	Low beneficial significance	Neutral
	Moderate benefit	Noticeable but not significant beneficial changes for more than 2 years or significant beneficial changes for more than 6 months but less than 2 years, over a significant area, to key characteristics or features or to the landscape's character or distinctiveness.	High/Medium beneficial significance	Medium beneficial significance	Low beneficial significance
	Major benefit	Significant beneficial changes, over a significant area, to key characteristics or features or to the landscape's character or distinctiveness for more than 2 years	High beneficial significance	High/Medium beneficial significance	Medium beneficial significance

I have collated the visual receptors in the following groups:

Group 1:
Fred Dannatt Road is occupied by commercial and industrial buildings and is on no-through way road, with no public path ways. The potential receptors are workers in the industrial estate and delivery drivers for the businesses. **Therefore, the Visual Receptor Sensitivity is Medium.**
The Boiler would be visible only from south end of Fred Dannatt Road, and the flue would be partially visible from rest of the estate. **The degree of the view is Truncated/Curtailed and Partial view.**
Visual impacts significance is Low adverse significance.

Group 2:

James Carter Road is occupied by commercial and industrial buildings. The potential receptors are workers in the industrial estate and delivery drivers for the businesses. **The Visual Receptor Sensitivity is Medium.**
The boiler would not be visible from James Carter Road and some of the flue would be visible through the trees and obstructions. **The degree of the view is Truncated/Curtailed.**
Visual impacts significance is Low adverse significance.

Group 3:

Folly Road is occupied with residential houses and commercial buildings. **The Visual Receptor Sensitivity is High.**
The boiler would not be visible from Properties on Folly Road and some of the flue would be visible in the distance through the trees and obstructions. **The degree of the view is Truncated/Curtailed.**
Visual impacts significance is Medium adverse significance.

Group 4:

Residential properties on Campbell Close, Flemington Close, Comet Way and Miles Hawk Way. **The Visual Receptor Sensitivity is High.**
The boiler would not be visible from Properties on Flemington Close, Comet Way and Miles Hawk Way and some of the flue would be visible in the distance through the trees and obstructions. **The degree of the view is Truncated/Curtailed.**
Visual impacts significance is Medium adverse significance.

Group 5:

Residential properties on Miles Hawk Way and other streets coming of Comet Way. **The Visual Receptor Sensitivity is High.**
The boiler would not be visible from these Properties and some of the flue would be visible in the distance from the 1st and 2nd floor windows. **The degree of the view is Partial View / Open View.**
Visual impacts significance is Medium adverse significance.

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50 YEARS

Particulars of the GF295 Biomass Boiler

Revised on 26/01/2024

Glen Farrow Biomass boiler GF295 is 295 kW max capacity. Batch fed type boiler. Combustion efficiency reaches approximately 90%. Boiler thermal efficiency is approximately 70%. Boiler fuel burn rate is 66.38 kg/hr.
Glen Farrow GF295 boiler is designed to burn biomass fuel such as wooden logs and straw bales. The boiler is batch fed type boiler, meaning that the fuel is loaded manually through the main door into a combustion chamber.

Combustion is achieved by manually lighting the fuel and with help of the burner fan the fuel keeps alight. The burner fan, located at the rear of the boiler, is forcing the air through the blower bar into the chamber to achieve intense combustion. Blower bars are positioned to direct the air underneath the fuel for primary ignition processes and deliver the air above the fuel to achieve secondary combustion. The burner fan speed can be controlled manually with speed controller located at the control panel to suit the heat demand and achieve better combustion performance. The boiler can achieve over 1500°C temperatures.

The combustion gases leave the chamber through the heat exchange tubes into the chimney box, where the unburnt fuel particulates settle, and up to the insulated flue, then being discharged into the atmosphere being around 200°C.

The combustion gases are heating water jacket surrounding the chamber and heat exchange tubes. To maximize amount of harvested heat, the door is filled with water which is being circulated by a shunt pump located at the rear of the boiler.

The combustion chamber is built from 10 mm thick boiler plate which increases durability of the boiler.

The water jacket around the chamber is 60 mm wide and holds approx. 3000 l of water. The boiler then is insulated using insulation board and rockwool to minimize the heat loss.

The boiler then is cladded with stainless steel cladding and prime coated and painted trimming.

The GF295 boiler is batch fed type boiler, meaning that the fuel is loaded manually through the main door into a combustion chamber by trained personnel.

The boiler will be loaded with small amounts of fuel trying to build the fire up and keep it burning at high temperatures by introducing small amounts of fuel into hot fire when needed. Loading routine will be adjusted to meet the system demand.

The control panel usually located on the side of the boiler, helps operator to monitor the temperatures and adjust the burn rate by adjusting the burner fan speed.
The boiler chamber will collect most of the ash and some of it will settle in chimney box, which will be cleaned out on a weekly basis.

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50 YEARS

Glen Farrow Biomass Boiler GF295 Fuel rate calculation

FAO: [redacted]
Environmental Health Resource Centre Ltd.
41 Elsiedene Road,
London,
N21 2RN

Wood Calorific value units' conversion:

$J = W \cdot s;$

$MJ = 1{,}000{,}000\ J$

$kW = 1{,}000\ W$

$Wh = \frac{J}{3600s};$

$kWh = \frac{MJ}{3600s} \cdot \frac{1{,}000{,}ØØØ}{1{,}ØØØ};$

Wood Calorific Value from "Environmental permitting technical guidance PG5_1" $= 16\ MJ/kg$

Wood Calorific Value in kWh:

$\frac{16}{3600\ s} \cdot 1000 = 4.44\ kWh/kg$

Glen Farrow Biomass Boiler GF295 max. thermal capacity (thermal input) is 295 kW

Calculating max. fuel burn rate in kg/hr:

Burn Rate = $\frac{295\ kW}{4.44\ kWh/kg} = 66.38\ kg/h$

Kind regards,

[redacted] | Wastewater Manager | [redacted]
Glen Farrow UK Ltd | 01775 722327 | glenfarrow.co.uk
Glendum Close, Pinchbeck, Spalding, LINCS, PE11 3DQ

GlenFarrow

50 YEARS

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Revised on 26/01/2024

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The control panel usually located on the side of the boiler, helps operator to monitor the temperatures and adjust the burn rate by adjusting the burner fan speed.
The boiler chamber will collect most of the ash and some of it will settle in chimney box, which will be cleaned out on a weekly basis.

- Check the shunt pump and flow switch operation
- Grease the door bearings

6-month inspections:

- Clear/Scrape the chamber walls
- Check the blower bars manifold for blockages
- Thoroughly clean/scrape the chamber
- Sweep the chimney
- Check for rust, clear and re-paint if necessary
- Check electrical connections
- Check the pipe lagging
- Check the door rope

Boiler to be serviced by Glen Farrow biomass engineer or other competent engineer annually. Service includes checking for faults, thoroughly inspecting whole system components, repairing/replacing faulty components, cleaning the boiler, sweeping the flue, removing the rust and repainting surfaces if needed, advising customer about operational faults, etc.

Glen Farrow engineers are also available on the phone for any help or advise for the boiler operatives.
Boiler is fitted with number of safety devices which would stop the burner fan from running if the system is at fault. Failure would stop the oxygen feed into the chamber, starving the fire of oxygen.

Boiler Stack Details

Stack ID – 250 mm
Exhaust gas efflux velocity (m/s) – 7.8 m/s

Maximum particulate matter and nitrogen oxides emission rates:
PM - 56.5 mg/m^3; NOx 115.3 mg/m^3 @ 273K, 101.3kPa, **11% oxygen**
PM – 40.2 g/hr (0.02163 g/s); NOx 82.1 g/hr (0.04414 g/s) @ STP 273K, 101.3kPa, **11% oxygen**
PM - 85.0 mg/m^3, NOx 173.5 mg/m^3 @ 273K, 101.3kPa, **6% oxygen**
PM – 60.6 g/hr (0.02320 g/s), NOx 123.5 g/hr (0.04728 g/s) @ 273K, 101.3kPa, **6% oxygen**

Prepared and review by:
[redacted] | Wastewater Manager | [redacted]


FL-
90 907
AT

Eirebloc Composite Blocks

Introduction

Eirebloc composite blocks are manufactured in accordance with UIC 435. All stages of the production process from incoming raw materials, finished products and order despatch, are monitored to a rigorous quality control programme. This enables us to consistently maintain our product quality to the highest standards.

Eirebloc is FSC certified for; Purchase of Postconsumer woodchip material and sale of FSC recycled composite wooden blocks.

Regulatory Compliance

Packaging and Packaging Waste Directive 94/62/EC:
Composite blocks manufactured by Eirebloc are
confirmed as satisfying the requirements of the directive and the limits set therein for concentrations of the four heavy metals, lead cadmium, mercury and hexavalent chromium.

The blocks are not classified as hazardous waste material and may therefore be safely disposed of into landfill sites. Eirebloc undertake regular analysis of block samples by authorised testing providers to ensure continued compliance with the criteria for acceptance of waste at landfills.

Waste Incineration Directive (WID) 2000/76/EC: The aim of Directive is to prevent or limit as far as is practical negative effects on the environment, in particular pollution by emissions into air, soil, surface water and ground water resulting in the risk to human health from incineration of hazardous and non – hazardous waste.

Blocks made from composite materials of wood and resin can be incinerated as waste or bio fuel but only in waste incineration and co – incineration plants that conform to the stringent operating and technical requirements for waste incineration set down in the Directive, WID 2000/76/EC. It is not recommended to incinerate waste in biomass facilities that do not conform to the requirements of WID 2000/76/EC unless they operate under a permit regulated by the country/local environmental authority.

Characteristics

Positive Environment Profile

An environmentally friendly product manufactured with raw materials from controlled and sustainable sources; comprised of up to 30% virgin wood and the balance from recycled wood.
Recycled wood is rigorously tested to ensure its content is free of unacceptable impurities.
End of life products can be recycled into other products or used for bio fuel.

Technical Benefits

Dimensional accuracy

The engineered homogeneous composition of the block products are manufactured under high pressure and temperature. Resulting in the moulded block having a high degree of consistent dimensional accuracy compared to softwood blocks.

Block density

The composition of wood chip bonded with resin, the block density typically averages 610 kgs /m^3 as a consequence the density is much higher and more stable compared to European softwood species.

Durability

The blocks are manufactured with a very low moisture content of approximately 9%. The presence of resin, bonding the dried wood chips decreases the amenability of the wood content towards biological degradation. Unlike natural wood the composite block does not decay.

Other technical benefits are:

- **Mould:** because of the low inherent moisture content, that is well below the mould growth threshold of 20%. The block is not susceptible to mould growth.
- **Splitting:** orientation of the wood fibre of the bonded chips is different to that of natural softwood species which is susceptible to tangential splitting as the wood dries out moisture. Composite blocks are therefore resistant to splitting from moisture loss, ageing, nailing and impact damage.
- **Shrinkage and distortion:** composite blocks do not expel moisture and naturally dry out the same as solid wood, consequently they do not shrink or distort out of shape.
- **Nail retention:** is superior compared to softwood blocks, the higher density and chip orientation improving nail grip and resistance to nail withdraw.

International Standards for Phytosanitary Measures (ISPM 15)

Regulated Wood Packaging Material*, section 2, sub section 2.1* ***Exemptions****.*
Blocks made from processed wood material created using glue, heat or pressure. The risk from attack by invasive species is eliminated therefore the blocks are exempt from treatment.

User Benefits: composite compared to wood blocks

- Unit load packaging promotes safer and efficient handling, reduced storage capacity, decrease in handling and quality control operations.
- Reduced load weight and transportation cost compared to pre - cut timber blocks and long length block timber.
- Resistance to exposure in external storage, biological attack and structural degradation.

- Off the shelf ready to use product for safer handling and speed of availability.
- No requirement for wood working machinery for cross cutting block length and associated health and safety or wood waste implications.
- Wide variety of standard range block dimensions are available, flexibility of supply to meet customer requirements or bespoke design to customer specifications, subject to investment constraints and limitations imposed by mould tooling.
- Consistent quality and dimension ensures efficiency and compatibility with automated high speed production pallet assembly lines.
- Composite blocks are less susceptible to fluctuating price increases of natural wood; the result is a more predictable cost structure and significant unit cost savings.

P&F Safepac Company Limited

Reference: PFS03 Boxshed 07

Risk Assessment

Title	Bio Mass Boiler	**Date Of Assessment**	Wed 19 Feb 2020
Site	P&F Safepac Company Limited	**Location**	Boxshed
Risk Assessor	[redacted]	**Assisted By**	[redacted]
Non-Employees Involved	-	**People At Risk**	Employees
Task Description	Safe use of Bio Mass Boiler		
Review Date	Wed 11 Feb 2026	**Reviewer**	[redacted]

Hazards

Hazard	Manual handling
Risk Of Harm	Risk of back and upper limb injury or damage due to lifting excessive or awkwardly shaped loads.
Existing Control Measures	Wood is loaded into the Bio Mass Boiler by Fork Lift Truck. If the occasional piece of wood is put into the Bio Mass Boiler the Operator has received manual handling training, with continuing refresher training.

Hazard	Hot Equipment
Risk Of Harm	Risk of burns or scalds. Always be aware of hot surfaces.
Existing Control Measures	1. Only trained persons to operate equipment. 2. Appropriate safety equipment, gloves, boots, dust mask and eye protection must be warn. 3. Always attach the safety chain to the door and secure the carabine hook when boiler is operating. 4. Never leave the door open if the boiler is firing as free air will cause a flare up.

SAFEPAC
PROFESSIONAL MOVERS

Environmental Management

Guide to this logbook:

This Logbook details the actions to be taken and the standards to be achieved in order to comply with the requirements of an Environmental Permit from the Council.

The environmental log sheet is used to demonstrate that we are managing and minimising emissions to atmosphere from our activities. This helps us to demonstrate ongoing compliance with our environmental permit.

1.0 Permitted fuels

Ensuring that only the correct waste fuels are burnt in the heaters.

2.0 Principles of good combustion

Ensuring that smoke emissions are minimised as far as practicable.

3.0 Weekly environmental log sheet

How to complete the weekly record sheet, the standards to be achieved and the actions to be taken.

4.0 Training & instruction

A record of training and instruction.

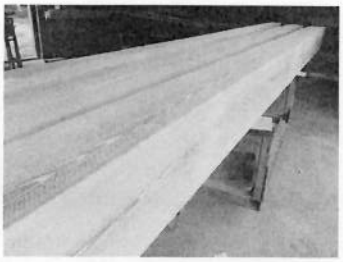
Appendices:

Appendix 1: Example weekly Environmental Log Sheets
Appendix 2: Blank weekly Environmental Log Sheets
Appendix 3: Training
Appendix 4: Environmental Permit

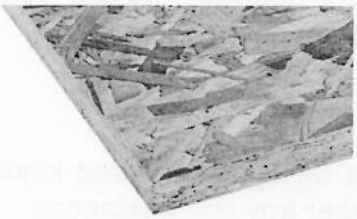
1.0 Permitted fuels

It is an absolute requirement of our Environmental Permit that we do not burn any waste wood containing halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coating.

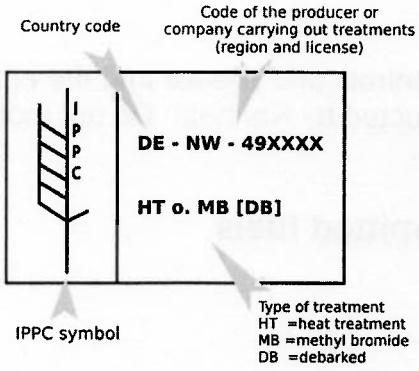
All of the wood used in our joinery activities are free from halogenated organic compounds or heavy metals, however you need to be aware of what can and must not be shredded for burning:



Joinery waste: Production materials via extraction system



Shredder waste: Visibly clean MDF, ply and HT pallets



Any painted wood of unknown origin Treated wood MB treated pallets

Wood removed from client projects as this could contain lead paint or preservatives

If in doubt, **do not burn.** Separate to waste skip for off-site disposal.

Do not burn plastics, floor sweepings or waste other than wood.

2.0 Principles of good combustion

The Fire Triangle is a simple model for understanding the necessary ingredients for most fires. The triangle illustrates the three elements a fire needs to ignite: heat, fuel, and an oxidizing agent (in this case, air):

If the fire triangle is out of balance, the fire collapses and cannot maintain good smoke-free combustion.

Some simple rules:

1 Only light the heater using clean wood kindling and paper. Accelerants must not be used under any circumstances

2 Use the heater controls and ensure that the appliance is set to automatic operation as instructed by Ranheat. Do not modify any settings.

3 **Only burn permitted fuels.**

See section 1

3.0 Weekly environmental log sheet

Our Environmental permit requires:

- No visible smoke to exceed Ringelmann Shade 1 as described in British Standard BS 2742.
- No visible dust to cross the site boundary.
- A high standard of housekeeping shall be maintained

A weekly environmental log sheet is in place to help us undertake and record the outcome of a daily visual and olfactory (smell) assessments so that we can demonstrate we are complying with our permit conditions. The checks only take a few minutes, and could help to defend the company in the event of a complaint made against us

The item numbers on the weekly environmental log sheet correspond to the following guidance. An example of how to complete the assessment and a blank template are at the back of this procedure guide.

Requirement:

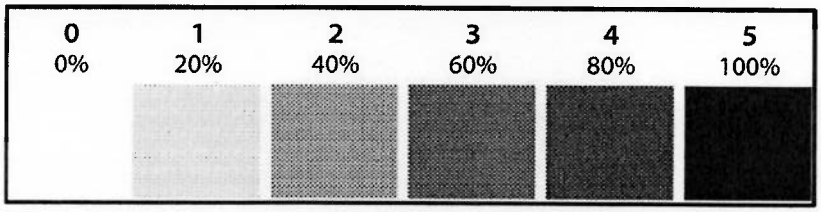
An assessment of emissions shall be undertaken at least daily during process operations ensure that final releases are free from visible emissions, smoke and offensive odour.

Actions:

- Record the time of the assessment (random times each day are best).
- Record your name.
- Record the wind strength and direction the wind is blowing from, for example:

  Calm, SW
  Blustery, NE

- Make a visual assessment of any smoke from the chimney according to the following smoke chart (called a Ringlemann Chart):



Write your assessment result as the Shade number or %. Note that smoke can appear darker than it actually is depending on the location of the sun. Move your observation position if you are unsure of the smoke shade. Under normal circumstances, there will be no visible smoke emission at all. Light smoke of short duration might be seen at start-up and shut down of the Heater, and at change of Heater load. This should only last a few minutes.

Any of the following conditions are not normal operations:

a) Persistent smoke of any shade.
b) Smoke darker than Shade 1 on the Ringlemann Chart.

- Make an olfactory assessment of any emissions from the chimney and write down the result.

  This is a subjective assessment, and you will have to be downwind of the chimney for the assessment to be effective

- Use the comments box to make a note of any useful information, for example if a neighbouring industrial unit is having a bonfire.

If the heater is not in use, state that the heater was not in use.

3.0 Training & instruction

It is out aim that once the permit is in place, all staff should have a basic awareness of the existence of the Environmental permit and that Permit conditions are legal requirements

Awareness training will be via a 'toolbox talk', delivered by our Health Safety and Environmental Consultant. The names of the persons attending that training will be recorded as part of our normal training records.

Specific personnel will be given more detailed instruction on the operation of the biomass heater. This was delivered by Ranheat. A list of these trained personnel will be detailed in the logbook for inspection by the Regulator.

Appendices:

Appendix 1: Example weekly Environmental Log Sheets
Appendix 2: Blank weekly Environmental Log Sheets
Appendix 3: Training
Appendix 4: Environmental Permit

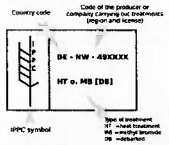
Appendix 2:
Blank weekly Environmental Log Sheets

Weekly Environmental Log Sheet

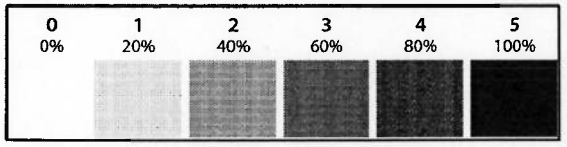
SAFEPAC
PROFESSIONAL MOVERS

Week Commencing: _____

Item	Assessment requirement		Day	Time	Name	Wind strength	Wind direction	Visual Check	Olfactory Check	Action taken & comments
1	An assessment of chimney emissions shall be undertaken at least **daily** during process operations ensure that final releases are free from visible emissions, smoke and offensive odour. ➢ In the assessment of smoke emissions, use the Ringelmann smoke chart below. ➢ If smoke is seen at any other time, make a note of that as well.	Biomass Heater Chimney	Mon							
			Tue							
			Wed							
			Thur							
			Fri							
			Sat							
			Sun							

Item	Assessment requirement			Time	Name	Any wet or prohibited fuel?	Action taken & comments
2	Only clean dry fuel shall be burnt in the biomass This means: ➢ **No** wet wood. ➢ **No** chemically treated wood. ➢ **No** painted wood. 	Wood fuel schecks	Mon				
			Tue				
			Wed				
			Thur				
			Fri				
			Sat				

Ringlemann smoke chart:



Smoke emissions must be no darker than shade 1 of the Ringlemann smoke chart.

Notes & comments:

The plant supervisor and plant management must sign off each weekly environmental log sheet. Records must be retained for 2 years.

Plant supervisor sign off

Name: _____

Signature: _____

Date: _____

Management sign off

Name: _____

Signature: _____

Date: _____

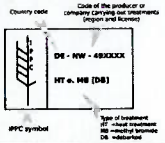
Appendix 1:
Example weekly Environmental Log Sheets

Weekly Environmental Log Sheet

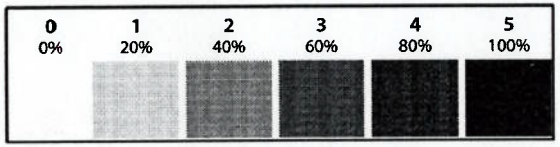
SAFEPAC PROFESSIONAL MOVERS

Week Commencing: 28-04-2025

Item	Assessment requirement		Day	Time	Name	Wind strength	Wind direction	Visual Check	Olfactory Check	Action taken & comments
1	An assessment of chimney emissions shall be undertaken at least **daily** during process operations ensure that final releases are free from visible emissions, smoke and offensive odour. ➢ In the assessment of smoke emissions, use the Ringelmann smoke chart below. ➢ If smoke is seen at any other time, make a note of that as well.	Biomass Heater Chimney	Mon							NOT USED
			Tue							NOT USED
			Wed							NOT USED
			Thur							NOT USED
			Fri							NOT USED
			Sat							
			Sun							

Item	Assessment requirement			Time	Name	Any wet or prohibited fuel?	Action taken & comments
2	Only clean dry fuel shall be burnt in the biomass This means: ➢ **No** wet wood. ➢ **No** chemically treated wood. ➢ **No** painted wood. 	Wood fuel schecks	Mon				
			Tue				
			Wed				
			Thur				
			Fri				
			Sat				

Ringlemann smoke chart:



Smoke emissions must be no darker than shade 1 of the Ringlemann smoke chart.

Notes & comments:

The plant supervisor and plant management must sign off each weekly environmental log sheet. Records must be retained for 2 years.

Plant supervisor sign off

Name: [redacted]

Signature: [redacted]

Date: 28-4-25

Management sign off

Name:

Signature:

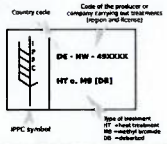
Date:

Weekly Environmental Log Sheet

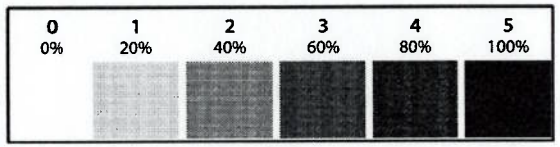
SAFEPAC PROFESSIONAL MOVERS

Week Commencing: 21-04-2025

Item	Assessment requirement		Day	Time	Name	Wind strength	Wind direction	Visual Check	Olfactory Check	Action taken & comments
1	An assessment of chimney emissions shall be undertaken at least **daily** during process operations ensure that final releases are free from visible emissions, smoke and offensive odour. ➢ In the assessment of smoke emissions, use the Ringelmann smoke chart below. ➢ If smoke is seen at any other time, make a note of that as well.	Biomass Heater Chimney	Mon		BANK HOLIDAY					
			Tue							NOT USED
			Wed							NOT USED
			Thur							NOT USED
			Fri	11:30 AM	[redacted]	6	SSE	0	–	–
			Sat							
			Sun							

Item	Assessment requirement			Time	Name	Any wet or prohibited fuel?	Action taken & comments
2	Only clean dry fuel shall be burnt in the biomass This means: ➢ **No** wet wood. ➢ **No** chemically treated wood. ➢ **No** painted wood. 	Wood fuel schecks	Mon		BANK HOLIDAY		
			Tue				
			Wed				
			Thur				
			Fri	11:30 AM	[redacted]	NONE	–
			Sat				

Ringlemann smoke chart:



Smoke emissions must be no darker than shade 1 of the Ringlemann smoke chart.

Notes & comments:

The plant supervisor and plant management must sign off each weekly environmental log sheet. Records must be retained for 2 years.

Plant supervisor sign off

Name: [redacted]

Signature:

Date: 21-4-25

Management sign off

Name:

Signature:

Date:

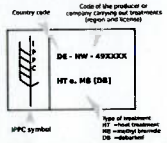
Weekly Environmental Log Sheet

SAFEPAC PROFESSIONAL MOVERS

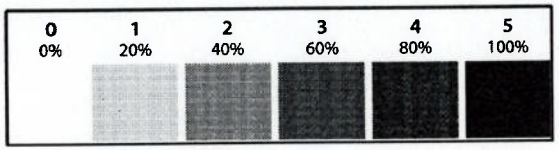
Week Commencing: 14-04-2025

Item	Assessment requirement		Day	Time	Name	Wind strength	Wind direction	Visual Check	Olfactory Check	Action taken & comments
1	An assessment of chimney emissions shall be undertaken at least **daily** during process operations ensure that final releases are free from visible emissions, smoke and offensive odour. ➢ In the assessment of smoke emissions, use the Ringelmann smoke chart below. ➢ If smoke is seen at any other time, make a note of that as well.	Biomass Heater Chimney	Mon							NOT USED
			Tue	11:00 AM	[redacted]	NNE	5 MPH	O	—	—
			Wed							NOT USED
			Thur							NOT USED
			Fri		BANK	HOLIDAY				
			Sat							
			Sun							

Item	Assessment requirement			Time	Name	Any wet or prohibited fuel?	Action taken & comments
2	Only clean dry fuel shall be burnt in the biomass This means: ➢ **No** wet wood. ➢ **No** chemically treated wood. ➢ **No** painted wood.	Wood fuel schecks	Mon				
			Tue	11:00 AM	[redacted]	NONE	—
			Wed				
			Thur				
			Fri				
			Sat				



Ringlemann smoke chart:



Smoke emissions must be no darker than shade 1 of the Ringlemann smoke chart.

Notes & comments:

The plant supervisor and plant management must sign off each weekly environmental log sheet. Records must be retained for 2 years.

Plant supervisor sign off

Name: [redacted]

Signature:

Date: 14-4-25

Management sign off

Name:

Signature:

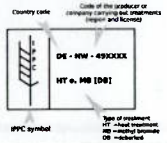
Date:

Weekly Environmental Log Sheet

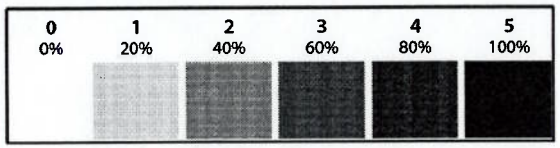
SAFEPAC PROFESSIONAL MOVERS

Week Commencing: 07-04-2025

Item	Assessment requirement		Day	Time	Name	Wind strength	Wind direction	Visual Check	Olfactory Check	Action taken & comments
1	An assessment of chimney emissions shall be undertaken at least **daily** during process operations ensure that final releases are free from visible emissions, smoke and offensive odour. ➢ In the assessment of smoke emissions, use the Ringelmann smoke chart below. ➢ If smoke is seen at any other time, make a note of that as well.	Biomass Heater Chimney	Mon							NOT USED
			Tue							"
			Wed	11:30 AM	[redacted]	10 MPH	NE	1	–	–
			Thur							NOT USED
			Fri							"
			Sat							
			Sun							

Item	Assessment requirement			Time	Name	Any wet or prohibited fuel?	Action taken & comments
2	Only clean dry fuel shall be burnt in the biomass This means: ➢ **No** wet wood. ➢ **No** chemically treated wood. ➢ **No** painted wood. 	Wood fuel schecks	Mon				NOT USED
			Tue				"
			Wed	11:30 AM	[redacted]	No	–
			Thur				NOT USED
			Fri				"
			Sat				

Ringlemann smoke chart:



Smoke emissions must be no darker than shade 1 of the Ringlemann smoke chart.

Notes & comments:

The plant supervisor and plant management must sign off each weekly environmental log sheet. Records must be retained for 2 years.

Plant supervisor sign off

Name: [redacted]

Signature:

Date: 7-4-25

Management sign off

Name:

Signature:

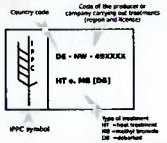
Date:

Weekly Environmental Log Sheet

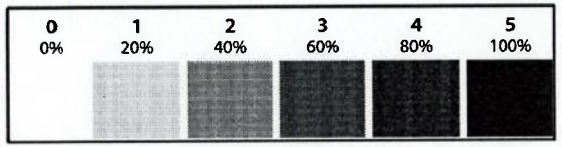
SAFEPAC PROFESSIONAL MOVERS

Week Commencing: 31-03-2025

Item	Assessment requirement		Day	Time	Name	Wind strength	Wind direction	Visual Check	Olfactory Check	Action taken & comments
1	An assessment of chimney emissions shall be undertaken at least **daily** during process operations ensure that final releases are free from visible emissions, smoke and offensive odour. ➢ In the assessment of smoke emissions, use the Ringelmann smoke chart below. ➢ If smoke is seen at any other time, make a note of that as well.	Biomass Heater Chimney	Mon							NOT USED
			Tue	11:30AM	[redacted]	17 MPH	E	1	NONE	
			Wed	11:15AM	[redacted]	16 MPH	E	0	NONE	
			Thur							NOT USED
			Fri							NOT USED
			Sat							
			Sun							

Item	Assessment requirement		Day	Time	Name	Any wet or prohibited fuel?	Action taken & comments
2	Only clean dry fuel shall be burnt in the biomass This means: ➢ **No** wet wood. ➢ **No** chemically treated wood. ➢ **No** painted wood. 	Wood fuel schecks	Mon				NOT USED
			Tue	11:30AM	[redacted]	No	—
			Wed	11:15AM	[redacted]	No	—
			Thur				NOT USED
			Fri				NOT USED
			Sat				

Ringlemann smoke chart:



Smoke emissions must be no darker than shade 1 of the Ringlemann smoke chart.

Notes & comments:

The plant supervisor and plant management must sign off each weekly environmental log sheet. Records must be retained for 2 years.

Plant supervisor sign off

Name: [redacted]

Signature:

Date: 31-3-25

Management sign off

Name:

Signature:

Date:

Appendix 3:
Training