

## **1.0 Introduction**

The aim of this statement is to provide background information on Service Timber and provide justification for the installation of a 499KW woodchip biomass system within an existing building on the Service Timber site.

## **2.0 Site Context**

Service Timber is a specialist timber importer that deals with 5,000 cubic metres of timber every month. Some of the services and activities that currently occur on site include timber milling, sawing, and manufacturing of end point timber products including bed frames, furniture and outbuildings such as sheds. Production of these products produces excessive virgin timber waste which has the potential to go to landfill.

There are multiple buildings on site at service timber consisting of offices, timber storage depots and multiple sheds for milling, sawing and manufacturing. Some of the employed staff includes managers, receptionists, site supervisors, joiners and general labourers. The workspaces across the site are heated with a mixture of sources and some buildings are currently unheated.

The nature of the site is a disused WW2 airfield which has been turned into an industrial site housing mainly Service Timbers activities but also other industrial units including scrap yards and additional timber merchants.

## **3.0 Proposal**

There are multiple reasons for the installation of a biomass heating system at Service Timber. The building that the biomass heats was previously unheated and has several staff working inside. In a conscious effort to improve the health and safety and general welfare of all employees a minimum temperature of 13 degrees C must be achieved in line with the Workplace (Health, Safety and Welfare) Regulations 1992.

The on-site process of milling and sawing also creates a significant amount of virgin timber off cuts that have the potential to go to landfill. This wood is uncontaminated and untreated timber which can be chipped to specification. By utilising this 'waste' timber in conjunction with a biomass boiler system this prevents unnecessary landfill within the local district as well as provide a carbon neutral fuel to heat the premises that has no transport carbon footprint.

The installation of a biomass boiler at service timber provides the best practice heating solution due to the following reasons:

- Carbon Neutral heat source
- Biomass Boiler is 91% efficient (also listed on the smokeless appliance register and clean air exempt)

- Reduced landfill costs and burden on the local council
- No carbon footprint for fuel delivery compared to gas/oil.
- Fuel is FSC certified timber off cuts.
- Significant fuel cost savings for Service Timber – essentially free fuel and savings on landfill duties.
- Boiler provides adequate heating to employees improving morale and welfare standards.
- Average lifespan of the boilers is 20 years compared to Oil or Gas which tends to have a 10 year lifespan before replacement.

The biomass boiler will be located within an existing building in a purpose built plant room and adjoining wood chip store on the Service Timber Site. The adjoining fuel store with a woodchip auger agitator system inside will feed the biomass boiler and the building is open at one end for loading with a wind breaker. The biomass boiler plant room houses a 499 kw herz firermatic biomass boiler, a 3000 litre buffer tank and associated equipment. The biomass boiler plant room roof is penetrated by a 450mm internal diameter stainless steel twin walled flue. The height of the flue from ground level is approx. 6.0m high.

Due to the amount of land owned by Service Timber and the centralised location of the Biomass Building, no plant is visible from any road sides or domestic houses. The location of the site in particular is more in keeping with industrial activities with a nearby scrap yard, a private airfield and other timber merchants. The location of the biomass boiler will be over half a kilometre from the nearest public roadside. There are no domestic houses within the half a kilometre radius. The nearby local commercial tenants on site will be notified of the proposal for development via verbal communication and also a letter.

The positioning of the biomass boiler is at the back of the packaging and storage processing shed and the plant room and fuel store footprint is 34.50m<sup>2</sup> along with the adjoining fuel store which has a footprint of 36.7m<sup>2</sup> bringing the combined footprint to 71.2m<sup>2</sup>. The placement of the biomass boiler plant room and the fuel store has had no detriment on the environment or ecology with any nearby trees requiring cutting or vegetation that will be displaced. The Service Timber site being a former disused WW2 Airfield could be considered 'Brownfield'. It is also worth noting that no complaints both in terms of visible and air pollution have been submitted since the installation of a previous biomass boiler system in early 2017.

#### 4.0 Access

Access to the site will be via the B1228 (Street Lane) between Bubwith Village and Howden. The nearby towns to the site are Bubwith, Howden & Brighton Village. Due to the size of the site and the location of the plant room in the centre of the plot there are no villages in immediate proximity to the proposed installation. Much of the installation equipment will be installed directly into the building therefore storage on site is not required and with ample parking facilities, there should be very little, if any impact, to the access of the site. The installation of the biomass boiler should have no adverse effect on the local residents/workers or transport links. As the fuel for the boiler is made on site there is little need for any fuel feed wagons to visit the site.

There will be no implications for the access of any of the buildings or internal roads on the site with any disruption to fire escapes, gathering points and no loss of parking spaces.

## 5.0 Scale

The installation consists of a biomass boiler, buffer tank and associated components with a 6.0m high 450mm diameter stainless steel flue. The plant room is located within an existing building which matches the finish of other buildings on the site. The fuel store, which houses the boiler feed system, and is also contained within the existing building, matches the finish of other buildings on the site.

## 6.0 Landscape

The landscape of the site is generally well developed with multiple buildings erected over several decades. The landscape of the site will remain generally unaffected. There is 1 x flue which is finished in stainless steel. The flue and the boiler house are concealed from the roadside due to the location of the plant room in relation to the site boundaries and surrounding properties which are mainly industrial units.

## 7.0 Impact

Public road and footpath views – With the positioning of the biomass boiler there will be no view of the biomass installation from the road. The nearest roads are without pavements and not pedestrian ‘friendly’. The nearest public road to the proposed site is 0.5KM.

Residential Impact – There will be no residential impact, the nearest properties are over 0.5KM away and due to the build up nature of the Service Timber Site the plant room building will be well concealed in the middle of the site. The nearest Domestic Property is Gunby Hall Estate which is approx 1KM away. The plant room will not be visible to this property due to multiple buildings on the Service Timber site and also a number of hedge lines at the distant roadside to the Gunby Hall Estate.

Heritage Impact – None

Environmental & Human Health Impact – The boiler is a clean air exempt appliance suitable for use in a smokeless zone and over 90% efficient. The boiler will use virgin wood offcuts from the timber milling process and under no circumstances will it burn recycled or contaminated wood sources. The only available alternative to installing a boiler would be to install two large oil boilers which would require periodic oil deliveries and would be burning a fossil fuel. The biomass boiler is eligible for the RHI non-domestic scheme which requires an Emissions certificate to qualify for the scheme ensuring low NOX and PM emissions.

There is no noise impact of the boiler due to use of a silent auger arm feed instead of a vacuum system.

Flood Risk Consideration – Environment Agency flood maps have been consulted and the site can be confirmed to be at no risk of flooding with a Flood Zone 1 Category.

## 8.0 Conclusion

There are several benefits to the installation of the 499kw biomass boiler system for Service Timber. The environmental benefits of the project mean that a potential virgin waste product would be used for heating rather than going to landfill. It eliminates the transport carbon footprint of the heating and negates the need for the installation of a 499kw fossil fuel oil fired equivalent boiler which would have a significant transport carbon footprint. It would also require regular oil deliveries into the site which comes with a spillage and soil contamination risk, additional site transport and disruption as well as reliance on a fossil fuelled appliance of which the UK government are looking to slowly phase out. The biomass boiler is also classed as a clean air exempt appliance. The site will also have a more efficient and reliable heating system which will last approx 20 years or more compared to the 10 year standard life expectancy for oil boilers.

There are also economic benefits for Service Timber from the installation of biomass which include a low cost heating system with no ongoing fuel dependencies on fossil fuels. The installation of this system also enhances the wellbeing and welfare of the workforce with reliable, sustainable heating of a previously unheated workplace. The environmental risks including visual, noise and emissions are all minimal due to the positioning of the boiler which is well concealed from any road sides or domestic locations off site, the appliance is clean air exempt and produces minimal noise which will be residually contained within its plant room.

It can be concluded that the positives of the proposal far outweigh any negatives and the conversion from finite oil to an environmentally responsible on-site produced sustainable zero carbon fuel should be promoted and encouraged within the East Riding area giving Service Timber a reliable heating system for the next 20 years and the savings to reinvest within the ongoing employee welfare and production targets of the business.