TIMBER PROCESSING

MANGEMENT PLAN

At

Anchor Croft Farm

Gargrave

Skipton

OMP Manager/Contact	Permit Number
Paul & Debbie Barker	tba
Anchor Logs Ltd	
Anchor Croft Farm	
Gargrave	
Skipton	
N.Yorkshire	
BD23 3NB	02nd July, 2019

Preface

This document contacts supporting information which accompanies the Environmental Permit application being submitted by Anchor Logs Ltd for timber processing at:

Anchor Croft Farm, Gargrave, Skipton, North Yorkshire, BD23 3NB.

The installation of the boilers addresses the local need for facilities (drying kilns) that are able to dry logs to meet the standards required for 'Wood sure and Ready to Burn' Schemes which the government have put in place to ensure that dry wood is burnt on household fires.

The 'Ready to Burn' initiative is for wood log producers, having a distinct certification category for dry firewood logs where they are able to demonstrate through audit and fuel testing that wood fuel they sell as 'Ready to Burn' is:

- Labelled as 'Ready to Burn'
- Is less than 20% moisture content
- There is point of sale information, labelling and support
- Where appropriate provides retailers with information on how to effectively store and keep the firewood in good condition

Making this dry fuel available to consumers in a way that they can recognise it is 'ready to burn' and differentiate it from wet wood, will significantly increase the sale of dry wood whilst at the same time educating consumers on the benefits.

The principle of the Woodsure scheme is that raw materials, the collection of trees and forestry thinning or post timber processing is legally sourced, processed to achieve size and moisture characteristics and made available to the end consumer with clear identification.

The Dragon Boiler (330kw), and 2 Central Boilers boilers will be fuelled by Virgin Wood which is produced on site, and have an aggregated operational capacity of up to 133kg/hour. These boilers heat water which a system then fan hot air into the 2 kilns on site to dry the wood which has been processed into 12 inch logs.

Figure 1 provides the location of the facility and figure 2 provides the site layout plan.

Details for the boilers are included in Document 1

The boiler systems comprise the following principle infrastructure:

- 1 x 330kw Dragon Biomass Boiler
- 2 x 88kw Central Boilers
- Biomass fuel storage and processing area
- Elevated flues for dilution and dispersion of residual emissions.

Section 1: Site Location and Operation:

1.1 Location

The Land Owner and Operator is:

Paul Barker

Anchor Croft Farm, Gargrave, Skipton, North Yorkshire, BD23 3NB

Land at OS Grid Ref: Grid ref: SD92323 54220 X: 392323 Y: 454220

The site is located as shown in figure 1. Location Plan.

1.2 Site Plan Showing Boiler System Locations

The site plan is shown at Figure 2. Figure 3a & 3b shows the location of the boilers and activities within the site

Fig 2

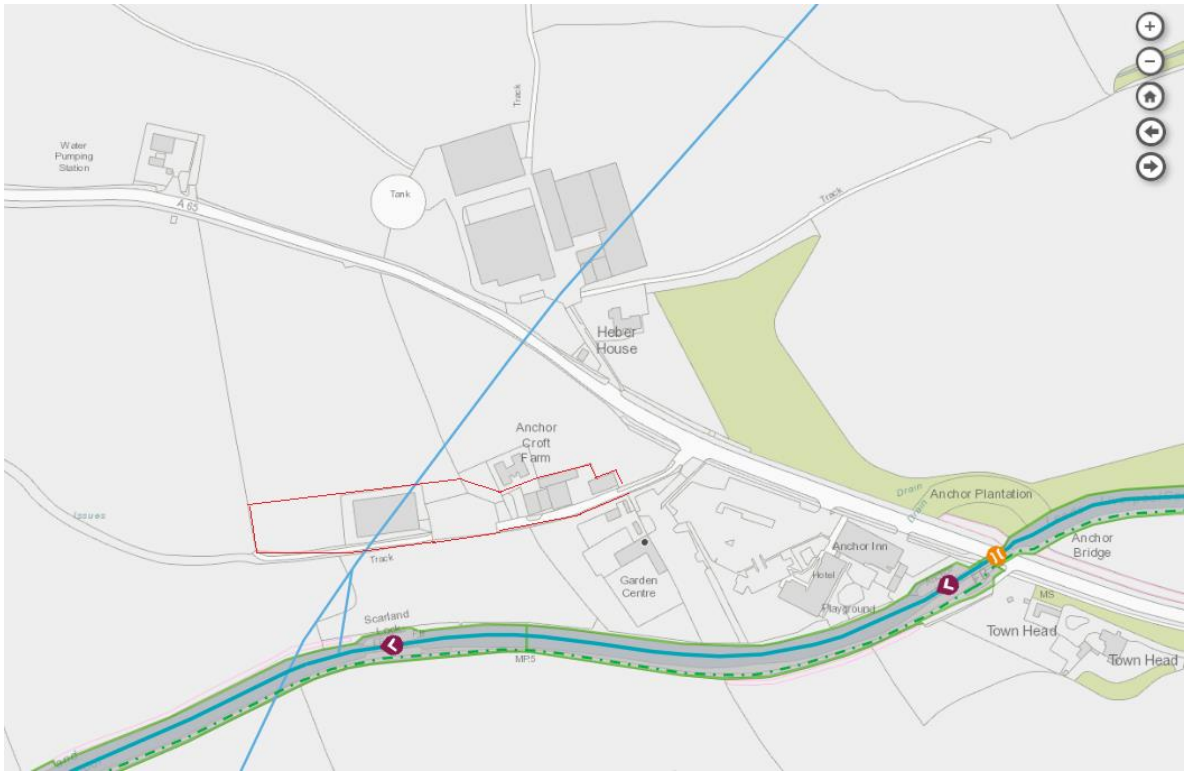
Water Pumping Station
A 65
Track
Tank
Heber House
Anchor Croft Farm
Track
Garden Centre
Anchor Inn
Hotel
Playground
Drain
Anchor Plantation
Anchor Bridge
MS
Town Head
Town Head
Scarland
MP5

Fig 3a

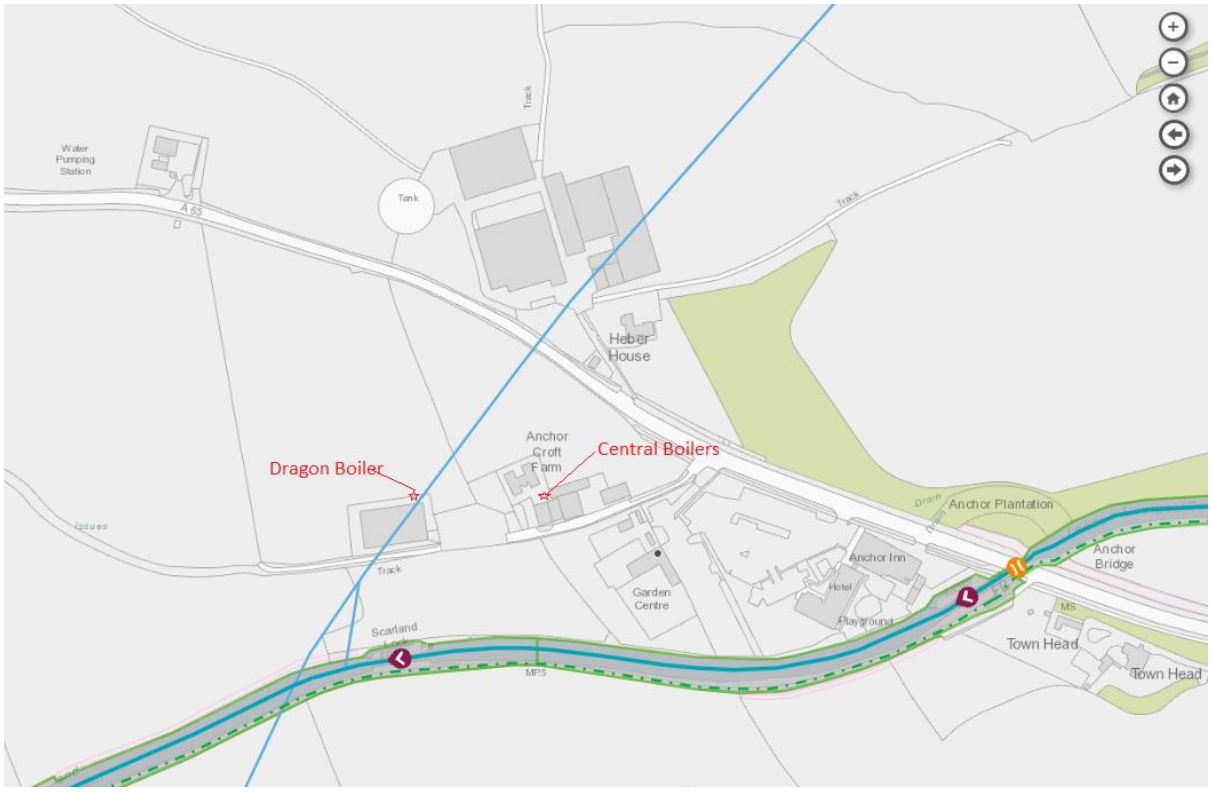
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Fig 3b

Fig 4. Site picture of Dragon Boiler showing boiler installation.

Fig 5. Site picture of Central Boilers showing boiler installation.

Section 2: Boiler Wood Fuel

2.1 Location

The wood used in the boilers is virgin wood, which is clean, uncontaminated wood. The wood is bought in onto site in 3 meter round lengths and is processed on site. The processor which is used is a Binderberger wood processor. Any of the round wood bought onto site which has a diameter more than 18 inches is used to fuel the boilers. Also larger lengths of wood are cut and split, that also fuel the boilers, see below..

All the round wood sourced is covered by the BSL audit, our BSL number is BSL0298342-002. All round wood is subject to a felling licence and is recorded in the office. Fig 6 is an example of the information record.

Fig 6.

Del Date	Del Note	Inv Number	Quantity	Approx Moist	Supplier	Product Type	Species	Input Product	Licence Number	FSC Numebr	Documentary Evidence	Location product sourced	Haulage
06/05/2018	0820		26,500	50%	W/land Thin	Hardwood	Mixed	Rounds	022/91/16-17	PANNAL	Del Note	Pontland Golf Club	Graham's Logs
06/05/2018	0904		26500	50%	W/land Thin	Hardwood	Mixed	Rounds	022/91/16-17	PANNAL	Del Note	Pontland Golf Club	Graham's Logs
31/10/2018		107	20960	50%	W/land Thin	Hardwood	Mixed	Rounds	012/151/15-16	012/40109/2018	Del Note	Alwoodley Golf Club	J R Dun
07/11/2018		110	20968	50%	W/land Thin	Hardwood	Mixed	Rounds	012/151/15-16	012/40109/2018	Del Note	Alwoodley Golf Club	J R Dun

2.2 Wood Sources and Reception

Round wood is sourced as locally as possible and delivered onto site on articulated lorries which have a timber grab on them and is stacked on the yard, as seen in Fig 4. Each consignment comes with a delivery note with the weight and haulage details on it.

2.3 Wood Fuel Processing and Storage

The round wood is picked up using a JCB which has a timber grab attached and loaded onto a round wood moving table, which moves the round wood towards the binderberger processor. The binderberger processor then saws the round length into 12 inch round logs and then a ram pushes these round logs through a steel knife making them into smaller logs. The sawdust/dust emissions are sucked and then blown into a plastic tube which then deposits these particles into a bulk bag.

All the wood is processed undercover and is conveyed into metal stillages which are then stacked on the yard until placed in the kiln for drying. The kiln cycle is 103 hours and the kiln will hold 10 stillages at any one time. Once the drying cycle has completed the logs are emptied from the stillages and stored in potato boxes undercover within the shed. The logs are then put into bulk bags ready for delivery as and when required.

2.4 Boiler Operation

The boilers used are one 330kw Dragon Boiler and two 88kw Central Boilers, located as shown on the site plan (Fig 3). The boiler information is within Document 1.

Each boiler has to be loaded via a forklift or by hand. The boilers are loaded as and when fuel is required, which can be 5/6 times a day, down to twice a day depending on what the drying cycle has still to run.

Residual exhaust emissions from the boilers are released via the elevated flue. The waste ash arising from the boilers is collected in the enclosed vessels and removed on a weekly basis and are taken to a permitted waste facility for further management/disposal.

Section 3: Potential Atmospheric Emissions and Control

3.1 Emissions Sources/Flue Emissions

The main potential sources of air emissions have been identified as follows –

- Residual emissions from flues serving the biomass boilers; and,
- Fugitive dust from handling, processing and storage of wood.

The emission certificates are included in Document 2.

Regular servicing and preventative maintenance is undertaken on the boilers to maintain efficient boiler operation. This includes the following methods/procedures:

- Weekly cleaning in accordance with the manufacturers specification/instruction;
- Bi-annual boiler services.

The potential for dust emission may arise from the processing of wood, but to prevent this we have invested in additional piece of machinery within the binderberger processor that the sawdust/dust is

sucked and then blown into a plastic tube which then deposits these particles into a bulk bag. This material is used for animal bedding. Visual monitoring of dust from the processing shed, site operatives will continuously monitor dust emissions whilst the site is in operation and will report back to the site managers for advice if required. Given that the wood processing operations are semi-enclosed; no dust issues have arisen yet.

Emissions from the combustion process should be free from visible smoke. During start up and shut down of the boiler, emissions should not exceed the equivalent of RIngelmann Shade 1. All emissions from air should be free from droplets and persistent emissions. Stack emissions are visibly monitored on an ongoing basis and are monitored/recorded when the boilers are refuelled, Fig 7. Excess air will be continuously monitored and controlled by the control system.

Fig 7

Ringelmann Smoke Observations Record

Recorded by	D.Barker
W/c Date	01/07/2019
Point of Observation	On Yard
Distance to Stack	20 meters
Other Information	103 hour Cycle
Ave Smoke Density	11.33333333 %

Measurement Number	Date	Time	Wind Dir	Wind Strength	Observed Ringelmann Number
1	1st	9am	W	26	2
2	1st	11am	W	26	1
3	1st	1pm	W	21	1
4	1st	4pm	W	20	1
5	1st	7pm	W	19	0
6	1st	9pm	W	19	1
7	2nd	7am	W	13	1
8	2nd	10am	W	13	0
9	2nd	12pm	W	15	0
10	2nd	3pm	W	16	1
11	2nd	6pm	W	17	0
12	2nd	9pm	W	17	1
13	3rd	7am	NW	8	1
14	3rd	10am	NW	8	0
15	3rd	12pm	NW	13	0
16	3rd	3pm	NW	11	0
17	3rd	6pm	NW	11	0
18	3rd	9pm	NW	11	2
19	4th	7am	W	8	2
20	4th	10am	W	8	0
21	4th	12pm	W	12	0
22	4th	3pm	W	12	0
23	4th	6pm	W	9	0
24	4th	9pm	W	9	1
25	5th	7am	NW	13	1
26	5th	12pm	NW	14	0
27	5th	5pm	W	15	0
28	6th	7am	NW	12	1
29	6th	10am	NW	14	0
30	6th	12pm	NW	15	0

There is a wind-flag on site which informs us of the wind direction so that if at start up the wind is in the wrong direction then start up not take place, to prevent smoke blowing in the wrong direction. Also there is a buffer water tank in place which the hot water from this can feed the kiln if the boiler is not refuelled due to wind direction.

Day to day operations will provide the following –

- Procedures for the receipt, inspection and processing of wood
- General site management procedures
- Training procedures
- Emissions control procedures
- Emissions monitoring procedures
- Record keeping procedures

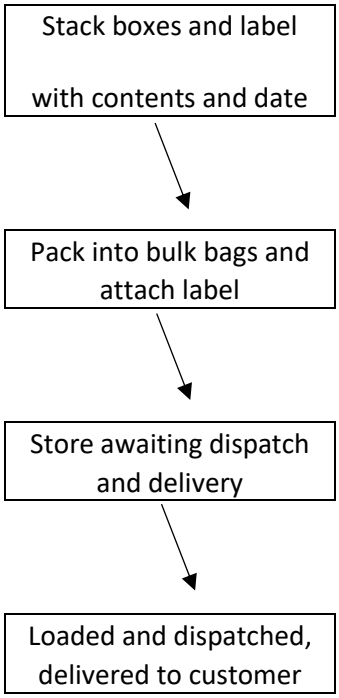
Training Records 01/01/2019

Leigh Jarvis	Fork Lift Certificate Plant Machinery - Loadall/Excavator Certificate Pest Control Certificate Biomass Boiler Training Handheld Applicators - Hydraulic Nozzle & Rotary Atomiser Crop Sprayer - Boom Type Hydraulic Nozzle, Rotary Atomiser, Mounted or Trailed
Edward Williams	Fork Lift Certificate
Perry Carpenter	Fork Lift Certificate

	Biomass Boiler Training Plant Machinery - Loadall Chain Saw Licence
Paul Barker	Plant Machinery - Loadall Biomass Boiler Training
Debbie Barker	Biomass Boiler Training

Site Procedure

Timber Received	-	Check delivery Note - FSC, COC, Felling Licence ect R/P - PB, LJ
Stacked Correctly and Safely	-	R/P - PB, LJ
Split and process into Log Cages	-	Check Log length and diameters R/P - LJ
Place cages in Kiln	-	Check cages are stacked correctly and in correct position in Kiln R/P - LJ
Check Kiln temps and time remaining	-	Ensure Kiln is kept at maximum temp and emptied when cycle finished R/P - PB
Empty kiln and store undercover to cool	-	Ensure product is cooled before Packaging R/P - LJ, PC
Check Moisture Content	-	To ensure desired M/C has been reached R/P - LJ, PC
De-crate into Boxes		



- Mark boxes with species and date R/P - LJ, PC
- Ensure correct label corresponds with content R/P - PC,LJ
- Stored in a dry ventilated place R/P - LJ, PC
- Check load against delivery note for products returned R/P - LJ, PC