

Design & Access Statement
Abbeyfield Bognor Regis Society Biomass Plant Installation

Re: 9-17 Richmond Avenue,
Bognor Regis,
West Sussex
PO21 2YE

Plant Installers:
Constructive Renewables Ltd
Alpha works,
Oldham, OL4 3EZ

Application No: PP-03053417

Proposal: Biomass boiler cabin with underground pipe run to rear of main building

Date: 05/12/2013

Location of the cabin & Pipe: The two cabins which are 2.4m wide x 5.9m long will sit on a 300mm deep slab placed at the rear of the property between an existing garage, rear access gate and outhouse. (See side elevation, OS map and plan view drawing) Pipe work has been shown on plan and as a red line on the OS Block Plan. Proximately of the cabins to the rear boundary wall will be approximately 600mm

Existing use of site: The proposed location consists of a paved area with overhanging timber frame pergola which would be removed. An apple tree in close proximity on the grassed area. The tree will not be removed but may require some minor lopping to the branches and some grass will be lost from the garden but minimal.

Access: The boiler and pellet store can be easily accessed via the road to the rear of the property which will allow for easy pellet deliveries via the turquoise gate next to the garage.

Proximity to buildings: The distance of the flues from the windows of the properties to the rear of the care home is approximately 18.5m and 17m to the closest windows and doors of the care home. (see plan view)

Flue Design: The flue which is raised 2m above the cabin roof (2.5m) does not emit smoke, just heat and is exempt from smoke control areas.

Impact on building: Pipes externally will be minimal and buried in a 500mm deep trench. Internally pipe will run through the ceiling void and trunking where required. The new system will integrate with the existing heating system in the internal boiler rooms, the pipe junction entering the building will be to a high standard of workmanship and insulated.

Tree Preservation: No trees will be moved during the installation process although some minor lopping will be required to the apple tree in the garden.

Materials: Timber cladding will be used around the cabin which will be stained in a weather resistant natural shade (see fig 1. pre stained cabin jpeg below) and roof covering will be felt.

Sound: The running of the boiler is almost silent and cannot be heard from the exterior of the cabin. The transport of the pellets to the boiler from the store is via suction which cannot be heard from the outside due to 50mm Rockwool insulation, timber cladding and the steel container unit.

Actual (internal) operating levels of the boiler unit are: airborne noise level 40dBA - 50dBA with peaks of 75dBA. (initial ignition, auto heat exchanger cleaning)

Cabin contents & Pellet Feed: The biomass boilers are manufactured in Austria by ETA, they are state of the art biomass boilers and highly efficient running off pellets which will be delivered between five to six times per year. The pellets will be fed to the store via a vehicle and blown in to the storage container positioned above the boiler cabin, the process takes approximately 1 hour to complete from arrival of the vehicle to leaving.

Benefits of the new system will include:

- Renewable Heating source (wood pellets)
- Co2 reduction (70 tonnes per annum)
- Heating cost reduction to business
- Reduced risk of boiler breakdown during winter with remote monitoring
- Low maintenance operation

Vehicle Size & Boiler / Pellet Specifications

Boiler Specification: 2 x ETA 90KW PE-K Pellet boilers (see attached ETA PE-K 35 -90 PDF)

Conforms to:

- EU Standards boiler rating 3 according EN 303-5
- IBS (Institute for Fire Protection)
- Listed on the Energy technology List
- The certification Mark for onsite Sustainable Energy Technologies

Test reports can be found at: blt.josephinum.at

Pellet Specification & Source:

Deliveries will be carried out by Forever Fuels supplying Grade 1 premium quality 6mm wood pellets. All pellets are manufactured from virgin timber which is locally sourced within the UK and conforms to the European Standard, ENplus Certificate UK001.

ENplus is the latest European Standard which assesses the whole supply chain, guaranteeing the customer receives premium quality wood pellets. www.forever-fuels.com Tel: 01628 509690

Full pellet specifications here:

http://www.verdorenrenewables.co.uk/files/VERDO_Pellet_Specification_1.pdf

Vehicle access / size and delivery frequency

Vehicle Size: (Vehicle used to deliver the required pellet payload)

4 wheeler -

Width 3.00m
Height 4.20m
Length 8.50m
Track 2.50m
Turning Circle 9.00m
Payload (tonnes) 9.25t
Vehicle weight: 18.00t

Delivery Frequency:

Approx 50 - 60 (tonnes) per year = Approx 5 to 6 deliveries per year based on 9.25t per delivery.

Vehicle access:

The site will comfortably allow for deliveries with up to 18 tonne vehicles based on the size of the rear access road. The pellet inlet can be easily accessed by hose from the delivery truck via the rear gate.

Figure 1. Bare timber cladding to shipping container.

