

## Camphill Blair Drummond Workshop

### Introduction

Camphill Blair Drummond is a residential community near Stirling which provides homes and meaningful daily activities for people with learning disabilities. Currently most activities are undertaken in a large mansion house, which is a beautiful listed building. However, it is not ideal for some of the requirements and activities of the residents at Camphill, so the organisation is currently undertaking an extensive building programme to create new residential living spaces and workshops in the grounds of the mansion house. One of these buildings is an estate workshop for woodworking and other crafts undertaken by the Camphill residents. The previous woodwork workshop was small and cramped, with little natural light. In addition, the Estate workshop had no fixed premises at all. The winter weather often restricted the activities they were able to undertake. They were keen to keep the building as sustainable and affordable to run as possible, so building on the findings of a CARES-funded feasibility study of the whole site, they decided on a ground-source heat pump (GSHP) to provide the building with heat and hot water.

**Equipment: One IDM Terra S 14.5 kilowatt heat pump, using three 125 metre boreholes and collection loops.**

The heat pump uses a 1000l accumulator tank to maximise efficiency, and also has a 500l tank to store hot water for the building. Boreholes were used for the heat source due to the increased efficiency these were expected to offer compared when to an air-source unit, and because of the reduced area of ground collector required a smaller footprint compared to a 'slinky-coil' ground collector.

### Cost and Grant Funding

Total Project cost	£38,304	The remaining funding was obtained through the wider fundraising efforts for the new building programme at Camphill
CARES grant	£22,984.40	
CARES grant Percentage	60%	



### Fuel Bill Savings

The scheme is estimated to generate around 22,000kWh of heat a year, using around 7333kWh of electricity at a cost of around around £733 at present prices. The alternative heating source would have been oil; to meet the heat requirement (for oil) would have required around 2373 litres/year, at a cost of around £1115. This means the GSHP is saving them around £382/year, although the cost savings are likely to increase significantly as electricity prices rise in the future.



### Emission Savings

Estimated kWh savings p.a.	17,111kWh
Annual CO <sub>2</sub> savings (kg)	2822kg
20yr lifetime CO <sub>2</sub> savings (kg)	56,440kg (56.4 tonnes)

## Project Monitoring

The system is not being monitored at present, but Camphill are considering fitting extra electric meters to measure the consumption of the GSHP unit.

## Local Impact

The users of the workshop were delighted to be able to move into new premises which were built specifically around the needs of the vulnerable adults that Camphill work with. The new workshop is large, well lit, flexible and airy. There is plenty of storage and is equipped with special equipment to make learning easier.

Many adults with learning disabilities struggle with feeling 'cooped up' inside. The new premises give the impression of working in the open air, whilst remaining warm and sheltered, especially in the winter. They are able to enjoy the freedom and fresh air whilst always being safe and secure.

The Estate workers are now able to undertake tasks such as vehicle maintenance and tool repairs inside when adverse weather means they are unable to work in the grounds.

The Camphill staff feel the addition of a ground source heat pump has been a huge contributor to the success of the workshop. The GSHP ensures the building remains at a comfortable temperature for working all the year round, and is a key focus for any trips and events as well as being a great talking point.



## Lessons Learned

*'We were amazed by the effectiveness of the Ground Source Heat Pumps. Within twenty four hours the workshop was up to room temperature. The heating is very effective and easy to control.'*

*'It's a very comfortable warmth, not the dry heat you often get with central heating. It's ideal for the adults who attend these workshops. The workspaces are cosy but never stifling. You feel like you're outdoors whilst working in the comfort and shelter of bespoke premises.'*

*'We installed a log burning stove in the tea kitchen, just in case we needed an extra boost of heat during the winter months. The pumps have been so effective we haven't needed to use it. It's now just decorative.'*

For further information, contact:

Camphill Blair Drummond

Jason Glass  
Director of Operations  
Camphill, Blair Drummond House  
Cuthil Brae, Stirling  
FK9 4UT  
01786 841573  
[office@camphillblairdrummond.org.uk](mailto:office@camphillblairdrummond.org.uk)

Community Energy Scotland Contact:

Jamie Adam  
2 Grosvenor House  
Shore Road  
Perth  
PH1 1HT  
01738 620879  
[jamie.adam@communityenergyscotland.org.uk](mailto:jamie.adam@communityenergyscotland.org.uk)