



SOL₂O
GREEN BUILDING SOLUTIONS

Air Source Heating Early Years Nursery

Client GB Building Solutions

Contract Value £20,000

The Brief

The John N Dunn Group were contracted to design and install a renewable heating solution for the Early years nursery at Allendale school

The Solution

The solution that the John N Dunn Group designed and implemented at the Early Years Nursery consisted of an under floor heating system powered via an air source heating unit.

The system is supported by a single high efficiency 18kW air source heating unit, supplying the under floor heating system with a constant stream of low intensity ambient heat.

The unit was installed over a period of 3 weeks:

Week 1: Pipe work installed and screed on top of under floor pipe work.

Week 2: Air source heating unit installed outside of the building

Week 3: Air source unit connected to under floor heating via a buffer vessel and fully tested.

The unit, situated on the outside of the building is able to function all year round including winter temperatures as low as minus 15°C.

The pump works in much the same way as a domestic refrigerator, it uses relatively small amounts of mains electricity to circulate and compress an active refrigerant fluid through the unit and then extracts the thermal energy from

this fluid and upgrades the temperature – where a refrigerator would just expel the heat, the air source heat pump utilises it, producing many units of heat per single unit of electricity consumed.

The Result

The Early Years Nursery now has a sustainable heating solution that over its life span will help to lower their carbon footprint.

In addition to this, the system is much better suited to the nursery than conventional heating/radiator systems as the low surface temperature under floor heating is considerably safer given the environment and the buildings occupants.