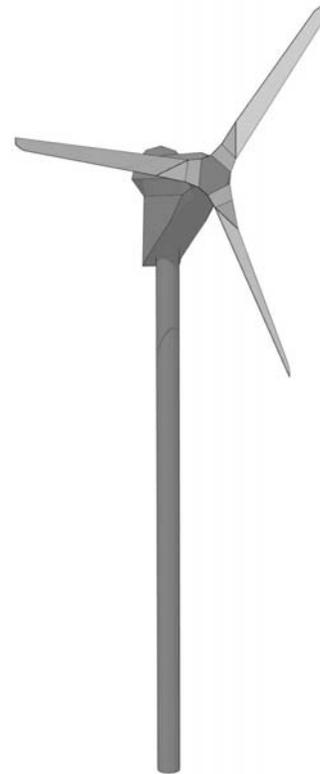




Jubilee Wharf is a mixed use development comprising of 6 maisonettes, 12 work units, a nursery, a multi use hall, and an organic cafe, with views out over the estuary and a landscaped court yard protected from the worst of the elements.

Electricity Generation

The 4 6kw Proven Wind Turbines mounted outside building 2 provide the majority of the electrical demand for the development. The electricity is primarily used in the buildings, at times of excess production they export to the grid and at times of high consumption electricity is drawn back from the grid. The buildings here at Jubilee Wharf have the capability to at a future date to be installed with enough renewables to cater for both of the buildings during the course of the year providing a net zero carbon production. The turbines do not have a braking mechanism in case of high winds, the turbines which are mounted downwind, have a spring loaded furling mechanism always producing the optimum amount of electricity even in heavy storm conditions.



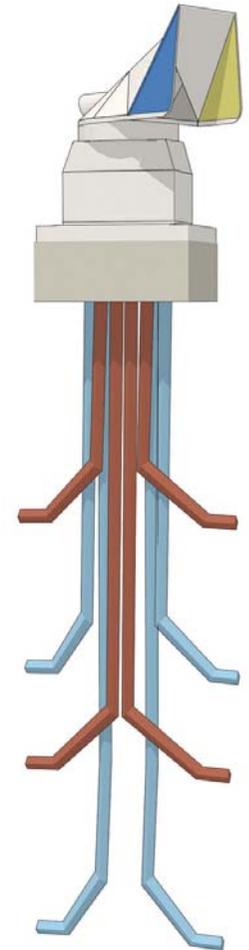
Passive ventilation

At Jubilee Wharf the building fabric has been tested to 2 air changes at 50Pa making fresh air supply non conventional

To provide enough fresh air during the winter months (when you want to keep all the heat in the building) a passive heat exchange wind cowl is used.

As this is a passive system it uses no electricity and is highly reliable by providing fresh air at low level and extracting air at high level when the temperature of the air in the room has risen. This form of ventilation is called displacement ventilation and is the main driving force of passive ventilation systems.

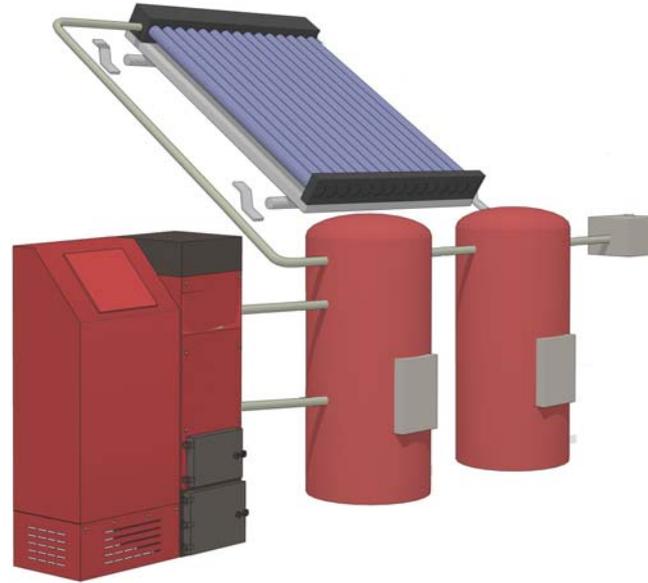
The cowl turns to face the wind drawing fresh air in via a heat exchanger which warms the incoming air with the outgoing air. The heat exchanger is around 80% efficient and minimises heat loss from the building yet provides a constant supply of fresh air.





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Solar assisted hot water

Hot water at Jubilee Wharf is provided by Solar Thermal Tubes mounted on the roof. There is one panel per dwelling which uses the sun's energy to heat water. The communal Wood Pellet Boiler which provides underfloor heating to the workspaces also provides top up hot water to the private dwellings in winter.

The evacuated tubes are similar to a light bulb in which the air has been removed so that radiant losses are reduced. This means even if the air is at -10c as long as the sun is shining water will be heated by the tubes

Reclaimed materials

Cafe flooring

This is made up from a reclaimed dance studio maple floor. The tongue and groove floor was carefully dismantled, dried and remachined when necessary so that it could be fixed down on battens. The floor is heated by an underfloor heating system. A series of tubes have hot water pumped through them and transfer heat up through the boards.

Ceiling of Yoga space

The ceiling is made of reclaimed floorboards from a victorian house in Putney, London. The boards have not been changed but have been treated and cut to length. All reclaimed materials were provided by *Bioregional Reclaimed*.

Why reclamation works

The graph to the right shows the difference in environmental impact between reclaimed floorboard and an average new floorboard. The chart shows that reclaimed boards actually have a positive impact on climate change compared with new floorboards.

Example of Environmental Profiling for timber flooring

