

Sustainable to the core

Under the guidance of Ashford Borough Council Building Control, a unique environmentally friendly venue nestling in tranquil, landscaped grounds has been created at Singleton. The Singleton Environment Centre now provides a full and imaginative programme of activities catering for people of all ages from both the local community and visitors to Ashford



The Singleton Environment Centre, which opened in May last year, serves as a local attraction and environmental education resource for local primary schools and a growing number of environmental groups and projects in the borough.

As well as being a focus for environmental activity, the centre will be a venue for arts, entertainment and community events, alternative health and fitness classes, rooms for hire, and a café and bistro,

Footprints, run by Singleton residents Neville Robinson and Caroline Shier.

The centre was designed by architects Architype, winner of the Sustainable Architect of the Year award, presented at the Building Sustainability Awards in November 2007.

It was built by Kent-based Barwick Construction, whose chairman, Richard Barwick, said: "We source most of our suppliers and subcontractors from within Kent, and seek to meet sustainability targets by working with a local supply chain.

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"We encourage the use of modern methods of construction wherever possible and have worked closely with the project team to overcome the challenges that a pioneering design and the use of materials that are new to this country have posed."

It is managed by BTCV, one of the UK's leading environmental conservation volunteering charities, on behalf of Ashford Borough Council. Natural ventilation, low energy lighting, rain water harvesting, wood chip powered heating and solar power are



◀ just some of the features of the centre.

The centre promotes Ashford's green spaces, wildlife and local environment as well as promoting sustainability. The centre sits in its own landscaped area with a terrace leading out to the grounds which feature native plants, trees and a pond.

The centre also boasts a workshop area in specially adapted redundant shipping containers and a 100-seat amphitheatre adjacent to the main building. The centre adjoins the tranquil

surroundings of Ashford Community Woodland, a green space designed and managed by the local community with stunning views of Ashford and the distant Kent Downs.

The Singleton Environment Centre building was designed with sustainability at its core and everything about the centre is ecofriendly. Sustainable features include the following:

- Building materials - local, recycled, natural and toxin-free materials
- IBA (recycled glass) has

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been used to surround the pipes in the building and on site to prevent them from cracking or being damaged while they are in the ground

- Road way is made up of recycled materials like old tarmac. Recycled sharp sand has been used underneath the road as binding. Recycled tyres have been used to surface roads and paths
- The roof is made from recycled aluminium drinks cans
- All the timber used for the



building has been sourced from sustainable local forests and has been organically treated.

- The structural posts on the front of the building are made from solid larch
- The workshops and boiler room have been made from five joined together timber clad second-hand shipping containers with tree trunks being used for the external column. The containers have been clad in untreated oak meaning the oak has dried naturally without fuel being used to dry the wood
- Reclaimed bricks were used in the outside walls. The windows are designed so that low winter sun warms the

building, while overhanging eaves provide shade in summer

HEATING, INSULATION AND LIGHTING

The orientation of the building enables both passive solar heating in the winter to make the most of sunlight for heating and good solar protection against overheating in the summer.

There is good natural ventilation to all principal spaces particularly to cool the building in summer. The 'Windcatcher' ventilation system enables cool air to be drawn through the building 'passively' in the summer, avoiding the need for mechanical ventilation. Windcatcher technology

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provides natural ventilation without any moving parts. Using compartmentalised vertical vents, fresh air is brought into the room and stale warm air expelled using the natural effects of the wind

A heavyweight spine wall has been built and as well as acting as a physical divide between the key spaces, it acts as a thermal mass which will retain heat in winter and reduce cooling needs in summer (absorbing the sun's heat to be released slowly later).

The wall is made from 'Sumatec' blocks, which are compressed earth bricks and, unlike traditional bricks, do not need to be fired. This significantly reduces harmful CO₂ emissions. The thermal

Singleton Environment Centre scoops top accolade

The Singleton Environment Centre and neighbouring John Wesley School were among the winners at this year's Ashford Borough Council Building Excellence Awards.

The ceremony was held at the Civic Centre and was hosted

by the Mayor of Ashford, Cllr John Link.

He said: "Some of the schemes we have seen tonight are absolutely splendid examples of innovative and clever workmanship. I'm sure the judges had a very hard job choosing the winners from several strong entries in each category."

The Ashford Building Excellence Awards scheme highlights the importance of Building Control in achieving high standards and gives well-deserved recognition to companies and individuals within the construction industry who are committed to producing high quality buildings throughout the borough of Ashford.

The LABC Building Excellence Award recognises and rewards the most forward thinking people and organisations and the most innovative construction projects completed over the last year.

Richard Alderton, Head of Planning and Development, said: "Sustainable development and building excellence are at the centre of Ashford Borough Council's approach to planning and we are delighted to showcase and reward excellent construction in and around the borough."





◀ wall is also covered with lime. Hemp mixed with recycled cotton has been used on all the internal walls to improve the natural insulation of the building.

The centre uses a wood chip boiler for heating, with the coppiced wood fuel sourced locally. Water is heated by solar panels.

All lights are fitted with highly efficient low energy bulbs. Sensors only switch the lights on when it gets dark and movement is detected in the room. So when you walk into the toilets the lights come on,

and they automatically switch off when you leave.

WATER SYSTEMS

A grey water recycling system collects rainwater from the roof and is directed into an indoor storage tank and used for flushing toilets, feeding the outdoor water tap and for plant irrigation. The overflow from the storage tank is used to top up the pond. Once the pond is full, the water will discharge into a ditch to top up the water table.

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The urinals in the mens' toilets also feature a sensor to only flush after people use them, so not wasting any water flushing when it's not needed. Biodegradable urinal cubes feature harmless bacteria which breakdown scale and smells whilst using no nasty chemicals.

LANDSCAPING

All the soil that was excavated from the site has been retained and formed into mounds which will create natural habitats and areas for children's play. ▶





Kentish rag stone from the site has been used to create the seating in the amphitheatre and can also be seen around the site.

Topsoil from the neighbouring housing development has been used to create a natural amphitheatre and all plants are made up of native English species.

REDUCE, REUSE, RECYCLE

All waste will be segregated and recycled wherever possible, including office paper, newspaper, cardboard, cans, glass and plastic bottles. Batteries, ink and toner cartridges and electrical waste are also recycled.

Food waste, grass cuttings, garden waste and even paper towels from the centre are composted on site and re-used on the grounds.

Wherever possible, all products used at the centre contain recycled material, are made from natural ingredients that have zero or minimal effect on the environment.

Cllr Gerry Clarkson, portfolio holder for cultural services at Ashford Borough Council, said: "The Singleton Centre is an iconic project which will help promote environmental responsibility and we are confident that the whole community will benefit from this really exciting project."

The project was funded by Ashford Borough Council, the Department for Communities and Local Government, Channel Corridor Partnership, Biffaward, Heritage Lottery Fund, Rail Link Countryside Initiative and Kent County Council and run by the BTCV (British Trust for Conservation Volunteers).