

## ACO Wildlife provides perfect ecological solution at Castle Hill project

*ACO Climate Tunnel steers amphibians at new Garden City*



### ACO WILDLIFE

A major new residential development in Ebbsfleet Valley was set to be the UK's first Garden City in 100 years. Living up to its name, the developers wanted to embed sustainability in the new town's identity from the outset, and turned to ACO Water Management to provide the perfect ecological solution to protect the area's wildlife.

The Castle Hill site, near Swanscombe, was selected as the location for a major new development in Kent. The Garden City, as it's otherwise referred to, is set amongst 400 acres of sensitively designed parkland and open space throughout the Ebbsfleet Valley.

During Phase 1 of the scheme, Land Securities were granted permission to build 150 homes on the brownfield site situated on the Thames estuary, with the potential to extend this figure to 5,000 by 2019.

Garden cities were the brainchild of Ebenezer Howard in 1898 and were originally intended as an alternative to industrial slums, with green space and community at their heart. Given the fact that this was a sustainable development, Arup, the acting Infrastructure Engineer on the scheme, along with other contractors involved on the project, were keen to fulfil their ecological commitment from the outset.

Following specialist advice from an ecological consultant, Arup specified the use of ACO Climate Tunnels in order to support the ethos of the new

town and protect the local wildlife. The Climate Tunnel system is an enclosed series of polymer concrete tunnels which can be installed to sit flush with the road surface, to allow amphibians safe passage across potential 'risk' areas, such as roads and footpaths. It is also designed to meet load class D 400, making the range perfect for trafficked areas.

A major selling point of the climate tunnels was that the polymer concrete construction material contains no reinforcing steel, eliminating the possibility of disorientation to animals arising from magnetic fields. Additionally the non-absorbent texture creates minimal thermal conductivity while the material is also non-caustic, providing an ideal surface for amphibians to move along.

The principal civil engineer on the project for Arup, William Dunford, commented:

*"Middlemarch Ecologists, who were advising us on the project, recommended the use of ACO Wildlife Climate Tunnel. When we were bought up to speed with the issues faced, we were keen to implement this kind of solution throughout the development. We selected the ACO Climate Tunnels based on the product's proven success on similar projects.*

*"The Climate Tunnels are provided in one metre sections, which are then built up to the required length. In our case we extended them up to 10 metres in length to reach beneath the verge on one side of the access road, and a footpath on the other."*

Not only does the slotted version allow light and humidity to enter the tunnel but, being set flush with the carriageway, it also reduces the travel distance for the wildlife and the excavation depth for the contractors involved.

Where a continuous carriageway surface is required, the tunnels can also be produced with a solid top section for setting deeper in the ground.

As part of a fully thought out wildlife range, the ACO Climate Tunnel should be used in conjunction with the ACO LEP Guide Wall, ACO Climate Tunnel Entrance, and ACO Climate Stilt Tunnel to form a complete guidance and crossing system.

For more information on ACO Wildlife's range of products, visit: [www.aco.co.uk/wildlife](http://www.aco.co.uk/wildlife)



Guide Wall front view showing anti-climbing barriers



Climate Tunnel Entrance



Slotted Climate Tunnel for installation flush with road surface



Climate Stilt Tunnel with KSP Climate Plate

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