alwitra

DIE DACHMARKE

Case Study
Stonehenge
Visitor Centre

New Visitor Centre at Stonehenge

Modest, yet independent

For a long time, building a visitor centre for Stonehenge, the famous 5000 year old stone circle construction, seemed to be a mission impossible. Numerous ideas were developed, e. g. building a tunnel under the A303, and then dropped again. First projects attempts date back to the late 1980‘s. Then in 2001, the Australian architectural practice Denton Corker Marshall won an international competition. Finally, after various setbacks and discussions, the centre opened in winter 2013. Keeping a respectful distance to the world famous stone circle, the visitor centre aspires to be no more than a first point of contact and information.

“When visitors to Stonehenge go back home again remembering the stone circle but not the visitor centre they have passed through, then we will have achieved exactly what we wanted”, says Stephen Quinlan of Denton Corker Marshall. The building, however, deserves more than just a superficial glance. Notwithstanding its independent status it does not interfere with its great historic setting.

Light and casual

The building blends in smoothly with the distinctive, undulating landscape, always opening up to the horizon. Within its own context, however, it reveals lightness and casualness, as if to compensate for the massive immoveable monolithic stone circle behind the hill. Based on a self-supporting foundation plate, three cubes are spanned by a canopy, delicate in appearance and curved, resting on irregular struts. The whole structure has been designed in a way that it could be dismantled at any time without leaving any traces. The largest of the three cubes, clad with a weathered hazel wood façade, contains an exhibition area as well as rest rooms. A second glass cube houses a café, a museum shop and educational facilities. Between them, the third cube with a zinc sheet cladding contains the ticket desk. All three structures are light-weight constructions with extensive thermal insulation to meet environmental and sustainability requirements. Furthermore, the complex features underground heat exchangers, natural ventilation and water treatment systems.

Although the three cubes are spanned by a canopy resembling a sail, they are each equipped with their own fully functional roof waterproofing. The material applied was the same as on the large canopy which stretches out well beyond the cubes. With a view to sustainability and environmental protection, it was decided to use the ecological roof waterproofing system of EVALASTIC® produced by alwitra GmbH, Trier, Germany. In addition to the high quality, long-term reliable EPDM waterproofing membrane

Proven ecological performance

EVALASTIC®, the complete “ecological” system, which in the UK is distributed by the sales partner ICB (International Construction Bureau) Ltd in Poole, comprises a series of accessories.

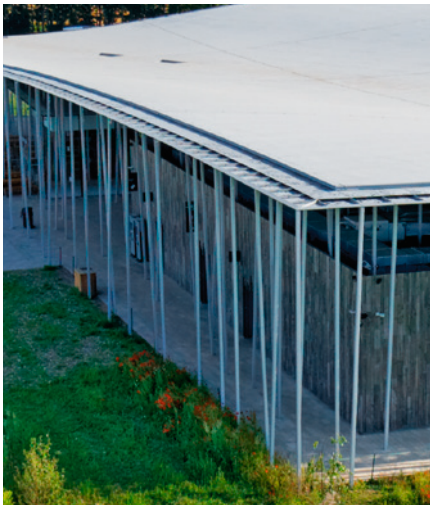
Proven ecological performance

Importantly EVALASTIC® does not contain PVC or Plasticisers which may harm the environment. This combined with its other superior properties: fully heat weldable, bitumen compatible with good thermal elasticity performance made it an ideal choice for this project. Further specific features of the product are: its high resistance to chemicals, its FLL-tested resistance to root/rhizome penetration as well as its excellent low temperature flexibility.

Due to the polymer base of EPDM/PP, handling of the waterproofing membrane is as easy as with most other synthetic membranes. The membranes are homogeneously welded using hot air. As far as detail work and flashing is concerned, EVALASTIC® proves to be particularly practical: Due to its thermoformability it is extremely pliable thus easily facilitating flashing works.

In particular, the ecological profile provides for a unique position of the EVALASTIC® system among modern synthetic waterproofing membranes. The high-performance waterproofing membrane contains absolutely no chlorine or any chlorinated organic compounds. Originally, EVALASTIC® was tested according to DIN 7864 “Elastomer membranes for waterproofing” and has been meeting also European standards for many years since. In Belgium, testing and approval was done according to the “UEAtc Technical Guide for waterproofing systems made of EPDM”. Today, all EVALASTIC® membranes are CE-marked as EPDM waterproofing membranes in accordance with EN 13956 and EN 13967. Both sustainability and the outstanding ecological profile have been verifiably documented in the comprehensive Environmental Product Declaration (EPD), issued by the renowned Institute Bauen und Umwelt (IBU). Thus, EVALASTIC® is to be found among the few high quality and, at the same time, environmentally sound roof waterproofing systems on the European roofing market.


audio tour



Roofs below the roof

Roofs below the roof

Applying the roof waterproofing to the two large cubes proved to be a challenge for the roofers because of the numerous struts, whilst weather conditions made waterproofing the large canopy a demanding task.

At the canopy, EVALASTIC® was directly bonded to large size plywood panels. A common laying method in the UK. Flashing against the metal edge of the canopy was carried out by Malone Roofing from Newbury Berkshire, using fabricated EVALASTIC® metal sheets. In addition, various items of mechanical plant were installed on top of both large cubes. In some places the roof area was lowered, while keeping the parapet edge at the same height so from below the mechanical plant will not be noticed.

Consequently, the waterproofing membranes had to be installed not only on the flat roof area but also be flashed and fixed against the unusually high parapet.

The numerous struts supporting the roof had to be integrated individually. EVALASTIC® membranes are homogeneously welded together with hot air, giving the impression of a single continuous waterproofing from one roof edge to the other.

Visually inspiring

The completion of the Stonehenge Visitor Centre marks the end of a very long time of discussions, planning and redesigning. In the end, about 25 million pounds have

Visually inspiring

been invested to build a worthy gateway for the visitors to the UNESCO World Heritage Site of Stonehenge. Undoubtedly, the goal has been achieved. At a very early stage already, architects understood that there is nowhere to hide in this landscape. Therefore, in their design of multiple struts and an undulating canopy they incorporated elements of the surrounding landscape. Without aspiring to become a part of it. The new centre will give the millions of visitors a visually inspiring welcome.

Construction site sign

Building Owner/Investor:
English Heritage, UK

Exclusive alwitra partner in the UK:
ICB (International Construction Bureau) Limited, Poole, Dorset, UK

Architects:
Denton Corker Marshall's, Melbourne, Australia

Installer:
Malone Roofing, Newbury, Berkshire, UK

Material:
alwitra EVALASTIC®V Waterproofing Membranes

alwitra

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