Case study

POUNDFIELD PRECAST
A PPG COMPANY
'INNOVATION in CONCRETE'

Europe's largest polar bear reserve

It's not everyday we play a part in providing a new home for a polar bear, but this is exactly what happened when Jimmy's Farm and Wildlife Park got in touch. Orsa Predator Park in Sweden closed its gates in November 2022 leaving polar bear, Ewa, facing an uncertain future. With already over 100 different species and breeds, and plans to open a new Tundra zone, Jimmy's Farm would be able to provide Ewa with a secure and safe environment with access to over 5 acres of magnificent woodland.

Client

JIMMY'S FARM & WILDLIFE PARK
Share the good life

Background

Ewa was due to arrive at the beginning of October 2023. Planning for the project started 12 months previously and resulted in the building of a secure area at Jimmy's Farm, along with accommodation and bathing facilities. Three lakes were created up to 16 metres deep, to provide plenty of space for her to swim in. A purpose housing area was also constructed where Ewa could be cared for if she required any medical treatment. Two outdoor shelters were to be created, which would be dug into earth banks to provide cave-like surroundings for the polar bear to sleep in or take shelter from the elements.

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How we helped

Our Betaloc interlocking blocks were used to create two separate shelters, built with three sides, and 6.4 metre long prestressed concrete panels were used for the roof, which eventually would be covered with soil and seeded. The use of precast units meant the units could be installed very quickly and easily, and yet provide a very robust structure capable of withstanding the day-to-day activities of a very large polar bear.

The Betaloc units were cast using our Greenbloc low carbon mix which resulted in carbon savings of up to 70%, compared to using conventional OPC (Ordinary Portland Cement).

Rob Clarke (Retaining Walls Director) and Stevie Sheppard (Park Director)

A plunge pool was also required to allow Ewa to be able to bathe in salt water, which is important to help maintain a healthy coat. A 3.1 metre diameter x 1.5 metre deep bespoke ring unit was designed by Fairhurst and was then fabricated by AK Bryan Mould Engineers. Cemfree Rapid was used to produce the unit which provides up to an 80% lower carbon footprint than if standard Ordinary Portland Cement had been used. Radius bars were used within the mould to provide reinforcement to the unit. The final unit weighed approximately 7 tonnes.

Plunge pool mould

Arrival on site

As the concrete goes through its natural curing process it gradually changes colour from blue/green to grey.

When delivered to site the unit was placed on level ground and a cement-free floor poured using Cemfree Optima from DB Group (Holdings) Ltd. This ensured the carbon footprint of the pool was as low as technically possible, an important criteria for the team at the wildlife park. Approximately 1,500 kgs of CO_2 were saved by using these cement-free options.

Ewa's new home meets the highest standards of welfare and is now enjoying her new surroundings in the Suffolk countryside.

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