

Heritage responds -
**Taking positive action
on climate change**

Case study

Jubilee Pool

The Architectural Heritage Fund



Grade II listed Jubilee Pool is the largest and most celebrated seawater lido in the UK and provides safe access to seawater swimming for people of all ages, as well as a range of water-based activities and sports.

The Jubilee Pool project balanced local need and tourism potential to create an environmentally and financially sustainable, year-round attraction using innovative technology.

The pool, named for George V's Silver Jubilee, is the first lido in the UK to use geothermal heating. By using this low-energy heating method, the pool can remain open and generate income throughout the year, enabling financial sustainability, without expending significant fossil fuel energy. The system is the first of its kind in the UK and will act as a showcase for geothermal, low-carbon heat supply.

Jubilee Pool in Penzance was opened in 1935 at a time when Art Deco outdoor lidos were extremely fashionable and has been a regional landmark ever since. It is the largest of only five surviving seawater lidos in the UK, Grade II-listed, and sits in a commanding position with views across Mount's Bay to St Michael's Mount.

In 2014 the pool was hit by a devastating storm, resulting in significant damage, and it was only re-opened in 2016 after nearly £3 million had been raised. At this point, however, it became clear that a new plan was needed to secure the pool's future. The first step was to form Jubilee Pool Penzance Limited, a community-run social enterprise in the form of a charitable Community Benefit Society, which took control of the lido

in 2017. This structure meant the pool would be run for the community, by the community.

To achieve financial sustainability, the project team needed to look at ways the pool could remain open for more than four months per year and reduce dependence on warm weather. In 2018, they launched an ambitious fundraising Community Share offer to geothermally heat a section of the pool, which could bring in paying swimmers throughout the year. Nearly £540,000 of the £1.8m funding came through community shares, and the Power to Change, Architectural Heritage Fund and Cooperative Community Investment Fund stepped in to provide the rest through loans and grants.

How does it work?

The geothermal system installed operates by extracting warm water from a deep well, taking heat out of that water using heat pumps and distributing it to the pool via a heat exchanger, before re-injecting the cooler water from the pool's surface back into the ground. This combined system means that the temperature of the pool can be sustained year-round with a very low carbon footprint. The system is the first of its kind in the UK and will act as a showcase for geothermal, low-carbon heat supply.

Now able to remain open throughout the year, the pool's financial sustainability had dramatically improved:

- The whole pool contains 5 million litres of sea water.
- It has no mechanical filtration and minimal chemical treatment for a natural sea water bathing experience and a robust cleaning regime to keep it clean and safe.

- The geothermal pool has additional UV filtration in place to maintain the water quality in higher temperatures and is heated to 30-35 degrees via its own 410m deep geothermal well.
- The geothermal system operates by extracting warm water from the geothermal well taking heat out of that water using heat pumps and distributing it to the pool via a heat exchanger, before re-injecting the cooler water back into the ground.
- This combined system means that the temperature of the pool can be sustained with a very low carbon footprint.

Due to its heat, the geothermal pool enables this community-centred organisation to generate profits year-round, creating important employment opportunities for local people and increasing its resilience against future shocks.

The Jubilee Pool project demonstrates what is possible through dedicated community building and innovative thinking.

Local voices and values helped shape the decision to pursue a geothermal pool, and local supporters led discussions surrounding its construction, championed of the project as an important income generator for Penzance, provided funding that enabled the project and ultimately will be the ones to use it regularly. This level of community engagement and involvement, and the general appeal of the geothermal proposition, has meant that the pool has been achieved nearly full occupancy when it has been able to open.

Image:

Architectural Heritage Fund