

Building consensus for a £6 million wetlands scheme

Black & Veatch

The Challenge

- Incorporate partners' views into a shared vision
- Gain buy-in from stakeholders and the public

The Benefits

- A collaborative approach to designing an environment
- Effective engagement with stakeholders and the general public
- Evidence to support funding decisions and applications for grants
- Success in national design awards



In an award-winning project in Staffordshire, Black & Veatch used ArcGIS to work collaboratively with partners and design a multi-million pound wetlands development project. It then built consensus for the scheme using an ArcGIS Story Map to engage the public in consultations, attract funding and gain support from diverse stakeholders.

The Challenge

Working on behalf of the Environment Agency, through the Water and Environment Management (WEM) Framework, the engineering, procurement, consulting and construction company Black & Veatch was set the challenge of reimagining a 630 hectare floodplain near Burton-upon-Trent. The Environment Agency didn't just want to develop the area's role as a natural flood defence; it also wanted to improve the biodiversity of the wetland and enhance the recreational value of the environment for visitors.

Previously, several conservation groups, the local authorities and Natural England had produced plans relating to parts of the region, but there was no overarching vision for the entire floodplain. Black & Veatch was, therefore, asked to work with a variety of partners and stakeholders to produce a new Landscape Vision for the Burton and Trent Washlands that would raise the quality of the whole area, create sustainable natural habitats for wildlife and deliver benefits for the local community.

The Solution

A long-standing user of Esri's ArcGIS platform, Black & Veatch used Esri's cloud solution, ArcGIS Online, to consolidate environmental data about the area and previous landscape studies from a large number of partners, including East Staffordshire Borough Council, Staffordshire Wildlife Trust and The National Forest. The firm was able to incorporate layers of data into ArcGIS Online on everything from built assets and historical records to natural features and make all this information available to everyone on the project team to improve communication and inform their design choices.

Whenever employees went on site, they used Esri's Collector App for ArcGIS on tablets or smartphones to capture new data or pictures, upload it to ArcGIS Online and enhance the team's collective knowledge of the region. Any member of the Black & Veatch team could add information to ArcGIS Online, make web maps and share them with other users. Team members could also use blank map layers within ArcGIS to propose new design ideas for the area and allow colleagues to view them on digital maps, in the correct geographic context.

Once the Landscape Vision was formulated, Black & Veatch developed an ArcGIS Story Map to share its proposals with partners, stakeholders and the local community. Highly interactive, this Story Map allows people to zoom into specific parts of the site, find out about the quality of the ecosystem, recognise existing historical features and see planned new infrastructure like paths and playgrounds. The Story Map was published on the East Staffordshire Borough Council website, shared with stakeholders and displayed on large screens at public consultations.

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Mark Boothroyd, Chief Landscape Architect, Black & Veatch



The ArcGIS Story Map presents environmental, historical and recreational information in a visual, interactive format.

The Benefits

A collaborative approach to design

Through the use of ArcGIS Online, Black & Veatch was able to create a Landscape Vision for the Burton-upon-Trent Washlands that took into account the data and earlier proposals from a wide range of other organisations and conservation groups. The Black & Veatch team could also more effectively consider existing landscape features, buildings and areas of historical significance, as information on all these pertinent factors was available to them within ArcGIS Online. “ArcGIS helped us to consolidate the views of a wide range of organisations and groups when developing the new Landscape Vision for the Washlands and ensure that our designs complemented the existing features of the area,” says Paul Hart, GIS Manager at Black & Veatch.

Effective engagement with the public

The Story Map played a vital role in helping Black & Veatch and the Environment Agency to share the Landscape Vision with stakeholders, partners and the general public and gain buy-in for the scheme. In particular, the use of the Story Map at public consultations made it much easier for local people and community groups, such as angling clubs, to understand the development plans and contribute their views. “ArcGIS enabled multiple stakeholders to create a shared vision for the future of the Burton Washlands and then communicate that vision to local people in a way that completely captured their imagination,” says Mark Boothroyd, Chief Landscape Architect at Black & Veatch.

Evidence to support funding bids

The partners involved in the project are now continuing to use the Story Map to present information about the scheme in an accessible format, to help them secure the funding that will be necessary to deliver this £6 million pound scheme. For instance, the Story Map has provided Staffordshire Borough Council with the evidence it needed to justify the allocation of public funds to the project. The Story Map has also been shared with a number of local and national grant-awarding bodies to help the partners gain the financial support to turn their vision into a reality.

Success in prestigious awards

In November 2018, Black & Veatch won a prestigious Landscape Institute Award for the Burton and Trent Washlands project, with judges praising the company for the way in which it engaged with the public. “ArcGIS played a big part in the success of the project,” Boothroyd says. “ArcGIS helped us to produce and share a vision for the Burton and Trent Washlands that everyone could feel excited about.”

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