



Suzanne Kobeisse, PhD researcher at Northumbria University, and Andrew Mitchell, Digital Officer at Northumberland National Parks Authority, pictured with the ARcheoBox at The Sill

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## Northumberland National Park and Northumbria University collaboration enables users to step back in time using enhanced technology

A collaboration between Northumberland National Park Authority and Northumbria University has seen the creation of ARcheoBox; a new walk-up-and-use interactive experience which uses augmented reality (AR) to allow the public to get hands on with 3D models of valuable historic artefacts.

ARcheoBox is currently installed at [The Sill: National Landscape Discovery Centre](#), where visitors can interact with the prototype by reaching their hands inside the box itself, manipulating one of the three cylinder-shaped proxies, and inspect the artefact's fine detail virtually.

Visitors will be able to learn about each artefact's history and what it was used for years ago. Feedback from people visiting The Sill in the coming weeks will be used to refine and further enhance the ARcheoBox experience.

The historical artifacts that can be explored include Bronze Age food and drink vessels which were excavated between 1994 and 2003 from the Breamish Valley. The Breamish Valley contains some of the best-preserved archaeological landscapes in the Cheviot Hills, protected by law as a Scheduled Ancient Monument, the largest in England!

In 2017, the digital scans were developed into the detailed 3D models, and from there the new ARcheoBox experience was developed.

Andrew Mitchell, Digital Officer at Northumberland National Park Authority, said: "This AR experience is a fantastic way for people of all ages and abilities to discover, hands on, what life was like thousands of years ago.

"Being able to explore landscapes and understand the archaeology behind them virtually is an amazing educational tool which we hope can improve visitors' experience to the National Park, as well as enhancing visitors' care and protection of the National Park's cultural heritage so it can be enjoyed for years to come. It is great to be able to ask visitors to touch and explore the objects – if only virtually.

"We hope this experience can be developed to allow other artefacts to be discovered by people virtually, helping to remove the barrier of accessing the physical ancient items found in the National Park."

[Lars Holmquist, Professor of Innovation at Northumbria University](#), said: "It has been great working with Northumberland National Park on this project. By getting generous access to their digital collections and visitor centre, we have been able to develop and test a unique new way of experiencing historical artifacts. We hope that this new technology will provide a "wow" factor as well as increased learning to visitors and complement the already

excellent exhibitions at The Sill.

“For Northumbria University, this is particularly important because it means that we get to see our academic knowledge put to use outside of the university. Research projects are always better when they serve a real need, and in this case, we have high hopes that the results will continue to be useful for years to come. In the future, it would be great to be able to expand this project to other locations, and involve different kinds of users – visitors as well as professionals.”

Suzanne Kobeisse, PhD researcher at Northumbria University, said: “The aim of ARcheoBox is to encourage a more tangible interaction when using AR, and remove any physical barrier between the visitor and the artefacts by keeping all interaction embedded within the same artefact.

“Users of ARcheoBox can use the two modes, Explore and Interpret, to discover the history of Bronze Age artefacts through inspecting and manipulating the 3D cylinders. It’s an interactive, intriguing and engaging way to learn and I think it’ll be extremely popular among visitors at The Sill.”

ARcheoBox is available to experience from Monday 09 August 2021 for two weeks at The Sill.

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