

Insert Project Name: BNG UKhab Application

All of England covered by Statutory BNG

Temple, UKHab, ESRI UK

## BIG Biodiversity Challenge Award Category: Innovation Award

### Project overview (50 words max)

Temple worked with ESRI and Ukhav, forming a commercial collaboration creating a BNG / UKhab Application, released in March 2024. Our unified approach to BNG survey using the UKHab standard maximised ESRI UKs Sweet products unique spatial capabilities and included Temple ecology expertise in matching the two ecology standards.

### What were the biodiversity conditions on site prior to the enhancement? (100 words max)

The App adheres to the policy drivers of the statutory metric by incorporating the necessary choices for strategic significance, distinctiveness and condition. The app allows a flexible approach to baseline data sources and the complex range of habitat classes and secondary codes and lined secondary codes are pre-mapped for the user following their choices – we call this contingent values, in that they are related and cascade. These in turn are linked to 29 varying condition proformas to specific habitats, to enable a paperless and efficient survey to support a compliant survey and planning application.



Topology Rule Editing, Temple 2024



On the fly metric calculation, Post Dev Temple 2024

### What were the reasons behind this project? (100 words max)

Please consider the following:

The BNG Standard was first released with guidance and support for open-source GIS users, which was correct, in that it was an approach open to anyone. However, the ESRI platform is widely used and many thousands of ESRI users, as landowners, managers and or operators would have demand for a robust and defensible; approach to BNG. Temple saw an opportunity to create a sustainable solution to support large scale BNG projects but also an accessible entry point for non-specialist GIS users.

### What were the biodiversity measures taken? (300 words max)

The standard adopted means the app workflow is replicable across any BNG project

The app build is modular so can adapt to evolving demands and needs of BNG through monitoring integrations in near real time

It is innovative through its use of Sweet, an ESRI UK product that contains a unique topology rule engine that powers the embedded (hard coded rules) that drives seamless data capture so essential to accurate BNG projects.

Within the client facing technology of the app is not only connectivity to the wider ERSI platform but expression language sin the client side that make instant calculations and recalculations of the metric possible, without having to fill out the Natural England spreadsheet.

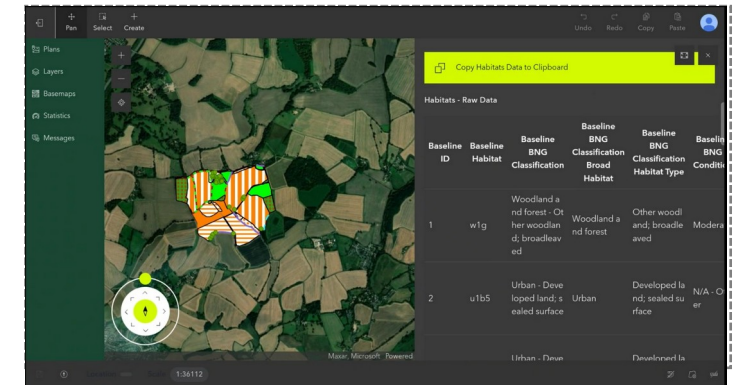
This ease of capturing data against a familiar standard such as UKHab and having that data capture converted to BNG 'on the fly' is hugely valuable to ecologists in the field.

Innovation comes in many guises. In the context of our BNG / UKHab app we have fielded a best-in-class data capture solution, which delivers against a complex problem that can efficiently speed up data capture, reduce paper in the field and can be relied upon l the context of BNG for a metric compliant outcome.

The involvement of our ecology expertise and GIS expertise in Temple has been key the successful delivery of the app and its continued development.



*Role based journey, BNG data, Temple 2024*



*Data View, Temple 2024*

### Further information (250 words max)

The technology behind the app (notably the expression languages) and being built on the ESRI platform makes it scalable, secure, and prime to be deployed across a wide range of projects by customers ranging from 1 person ecology consultancies to multidisciplinary companies that have dozens of people in their teams across multiple long-term sites or complex infrastructure projects. The app embodies digital ecology without detracting from the value of professional judgment of an ecologist.

The App seamlessly enables not only survey but also post development, with 3 post development scenarios currently supported but this could scale based on a customer's needs.

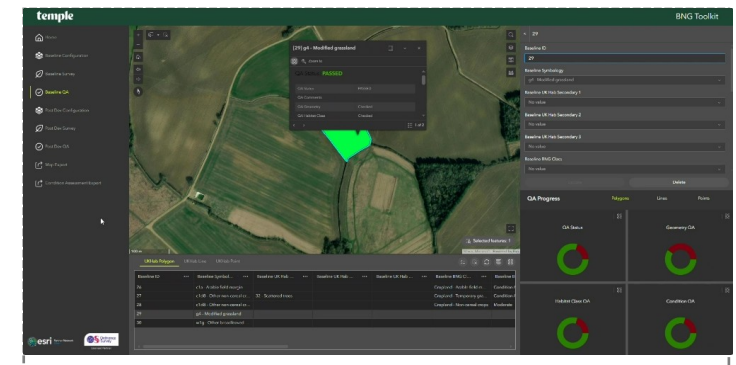
The legacy of the app is bridging GIS expertise to ecology expertise in baselining with the complex spatial rules sets that underpin BNG but then beyond to the post development, non-GIS or ecology practitioners such as urban designers or landscape designers are enabled to partake in a seamless data journey to ensure that not only is the workflow compliant to the metric, but all stakeholders are also planning for biodiversity outcomes.

### What was the motivation for carrying out the enhancement? (100 words max)

Temple were motivated to build the app to service its own teams needs in the context of digital transformation but broadly, as a companies with a history of collaboration and innovation in applying best practice, Temple and ESRI saw an opportunity to support the wider industry by making the app available at an accessible price point.



*User Journey, BNG workflow, Temple 2024*



*Data QA journey, UKhab BNG App, Temple 2024*