## Clarification Questions – Mapping broad-scale grassland habitat types

**Q: Can existing cost from the previous phase of analysis be shared?**

A: Natural England and the Living England team will supply the contractors with the data and code required for the projects.

**Q: Are any particular Operating Systems, environments or applications Natural England would prefer we use?**

A: The current Living England methodology is scripted in R with the exception of a segmentation process which is run in eCognition. Any developed approaches would ideally be in this format or similar (e.g. Python) to run on a Microsoft Windows Operating System suitable for larger scale process on AWS.

**Q: Is the customer already using Sentinel 1 for analysis or are they are currently only using Sentinel 2?**

A: Living England does include Sentinel 1 data for analysis and further information on the methodology can be found in the Phase IV Technical User Guide [Living England: Satellite-based habitat classification- Technical User Guide - NERR108 (naturalengland.org.uk)](http://publications.naturalengland.org.uk/publication/4918342350798848).

**Q: What ground truth would be available for the test area as this would change the level of accuracy and precision we can report.**

A: Living England uses our own bespoke app to collect ground truth data for training and validation of the methodology. We would be able to share this ground data with the contractor.

**Q: Is there a particular proposal template you would like us to use or are you happy with our own?**

A: We are happy for you to use your own proposal template. As long as your response meets the requirements of the tender.

**Q: Are there any other imagery sources that Natural England have access to under government license that we might be able to utilise for this project?**

A: Natural England are able to use imagery which is under an Open Government Licence. Other sources would have to be individually discussed.

**Q: Would Natural England be open to perform these analytics using Google Earth Engine?**

A: Yes, part of the Living England methodology currently uses Google Earth Engine and this would be acceptable although alternative methods using freely available open source approaches (e.g. R or Python) would also be encouraged. Any use of Google Earth Engine should also include estimates for the processing charges.

**Q: For any custom dataset, is Natural England willing to import into Google Earth Engine?**

A: Any dataset available under an Open Government Licence would be suitable for importing into Google Earth Engine, however, other datasets may be limited to usage restrictions and licensing.

**Q: We see that there are multiple datasets mentioned in the Resource Required section of each requirement, is it mandatory to use all the datasets or Natural England is open to get these results from Google Earth Engine?**

A: The proposed projects are intended to align and improve the current Living England methodology and therefore would need to be implemented alongside the datasets provided. It may be possible that some aspects can be completed within Google Earth Engine and should be discussed at the inception meeting with the Living England team.

**Q: Is Natural England open to use JavaScript for analytics instead of R & Python scripting?**

A: R and Python would be preferable to JavaScript to align with the existing methodology.

**Q: Would the output as a source code that has been used on Google Earth Engine analytics along with Technical Report be acceptable for Natural England?**

A: Yes, that is acceptable.

**Q: Does it have to be explored using satellite imagery or can it be undertaken using aerial imagery and NDVI derived from aerial imagery?**

A: For the grasslands project any methodology would have to be implemented alongside the Living England workflow. This could include further refinement of the grassland classes using aerial imagery and NDVI within the broader classes initially identified as grassland in the current workflow. Any proposed methodology would have to be suitable for implementing on a national scale, aligning with the time frames of the Living England iterations, and be for publishing under an Open Government Licence.