Questions 1:

* Hyperspectral imaging (hundreds of narrow contiguous bands in the visible, near and shortwave infrared) is not currently available from satellite platforms at resolutions less than 30 m. Based on the deliverables listed it appears that your requirement may be for multispectral imagery with broad bands in the red, green blue, NIR and SWIR). Is this the case?
* If you're requirement is for hyperspectral imagery this would have to be capture from airborne platforms to achieve the less than 1 m resolution required. Would you consider an airborne platform to fulfil this task? Based on the Area of Interest in Appendix A, I can advise that the entire area could not be captured for the stated project budget.

Responses 1:

Thank you for getting in contact for clarification.

The term Hyperspectral Imaging may be interpreted in different ways. A couple of guiding characteristics that we would be looking for are as follows:

* There should be more than standard RGB NIR channels available to meet the requirement (e.g. Red Edge, SWIR channels as well)
* The wavebands should be as far as possible discrete (i.e. not overlapping as they would be in a standard camera)

There are VHR satellites that meet these criteria. We wouldn’t consider airborne data capture on the basis of the extreme costs and environmental impact.

Questions 2:

1. I could not see a definition of hyperspectral products other than resolution (<1m) and including VIS, NIR and ideally SWIR. If you have any further specifications this would be useful to know.

2. Can we obtain digital areas of interest, in KMZ, KML or shapefile format please?

Answers 2:

1. The term Hyperspectral Imaging may be interpreted in different ways. A couple of guiding characteristics that we would be looking for are as follows:

* There should be more than standard RGB NIR channels available to meet the requirement (e.g. Red Edge, SWIR channels as well)
* The wavebands should be as far as possible discrete (i.e. not overlapping as they would be in a standard camera)

1. Yes. I will post these up onto the advert

Questions 3:

* For closer analysis it would be beneficial to have the AOIs in kml or sharpe format. Are you able to share them?
  + **I am going to try to post these up onto the advert**
* What is the required lead time before an acquisition? Will you be able to activate the tasking more than 24h before?
  + **We have a set window within which we want to have the imagery captured which is as early as possible within the date range 25th November 2021 to 15th February 2022**
* In case of activation will DEFRA need all AOIs covered within one WP at the same day?
  + **We would prefer to have imagery from a single work package captured on a single day or as few days as possible**
* In case of activation will DEFRA need all AOIs of multiple WPs covered on the same day?
  + **The imagery from different work packages can be acquired on different days**
* You mentioned Hyperspectral VHR imagery. Are you referring to SWIR in this case?
  + **Hyperspectral imagery for the purposes of this project means having more than standard multispectral imaging, to include Red edge channels as well is possibly SWIR. In addition, wavebands should be as far as possible discrete (i.e. not overlapping as you would get in a standard camera)**