

# WRITTEN REPRESENTATION FOR SPR EA1N and EA2 PROJECTS (DEADLINE 1)



## LAND USE

**Interested Party:** SASES    **PINS Refs:** 20024106 & 20024110

**Date:** 1 November 2020

**Issue:** 5

### Introduction

1. This written representation focuses on the operational impacts on land use by the authorised developments, not the construction impacts. However given the questionable conclusions by Scottish Power in respect of the operational impacts and the absence of a proper cumulative impact assessment, its conclusions in respect of construction impacts are likely to be as equally suspect.
2. References to paragraph, page and table numbers in this representation are references to paragraphs, pages and tables in chapter 21 of the Environmental Statement - Land Use.
3. The reference to the “substation complex” means both the Scottish Power infrastructure (the substations for both EA1N and EA2) and the National Grid connection hub.

### Summary

4. Contrary to Scottish Power’s statement that the operational impact of the authorised projects on land use is minor adverse (see table 21.21 on page 64) in fact it is major and contrary to the requirements of EN-1 which at paragraph 5.10.8 states that *“applicants should seek to minimise impact on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5).*
5. This is due to the very high amount of the best and most versatile agricultural land (grade 2 and 3) being lost at the substation complex site. This loss has been exacerbated by:
  - choosing a sensitive landscape and heritage location where, in an attempt to mitigate the landscape and heritage impacts, a very large and disproportionate amount of the best and most versatile (BMV) land is made over to tree planting/landscaping;
  - choosing a site with a high surface water flood risk which requires BMV land to be made over to SuDs ponds;
  - choosing a site which necessitates the construction of a very long and wide operational access road (1700m x 8m) over BMV land.
6. In contrast National Grid and a Scottish Power own land at the existing Bramford substation site which they have chosen not to develop.

7. Scottish Power has also failed to address the cumulative impact of the further developments that will take place at the substation complex site and in the neighbouring area to accommodate the National Grid Ventures projects Nautilus and Eurolink, the Five Estuaries wind farm project, the North Falls wind farm project and National Grid SCD1 and SCD2 projects which could involve the loss of a further 82ha of agricultural land much of which can be expected to be of the best and most versatile type. This is incompatible with the requirements of EN-1.

### **Quality and Quantity of Agricultural Land Lost**

8. The agricultural land at the substation complex site (which includes the land required for mitigation and operational access roads) is grade 2 and 3, which means it is amongst the best and most versatile agricultural land (as categorised by Natural England). Scottish Power accept the land to be of high sensitivity - see paragraph 163 of Chapter 21.

9. The Agricultural Land Classification (ACL) is defined as follows:

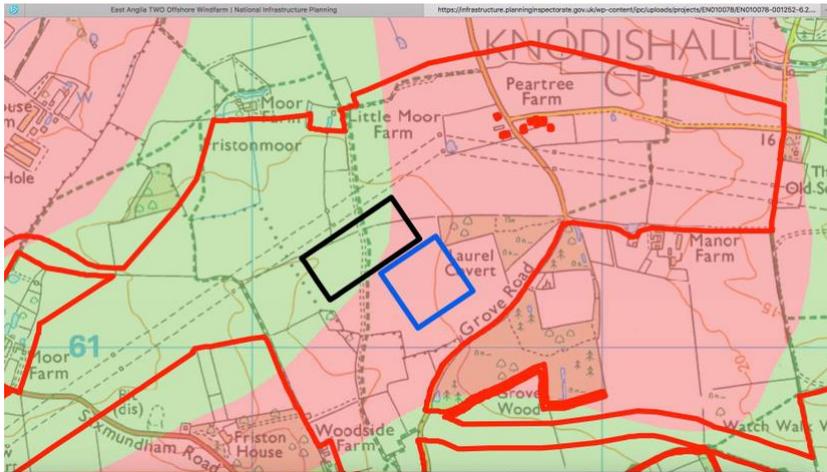
Grade 1 - excellent quality agricultural land with no or very minor limitations.

Grade 2 - very good quality agricultural land with minor limitations which affect crop yield, cultivations or harvesting.

Subgrade 3a – good quality agricultural land with moderate limitations that affect the choice of crop, timing and type of cultivation/harvesting or level of yield. This land can produce moderate to high yields of a narrow range of crops or moderate yields of a wide range of crops.

Subgrade 3b – moderate quality agricultural land with strong limitations that affect the choice of crop, timing and type of cultivation/harvesting or level of yield. This land produces moderate yields of a narrow range of crops, low yields of a wide range of crops and high yields of grass.

10. SPR have submitted a map of Agricultural Land Classification at 6.2.21.3 – Figure 21.3. Below is a detail of this map showing the substation site. The land coloured **pink** being Grade 2 and the land coloured **green** being Grade 3. Given that the green land (grade 3) is sited between two areas of Grade 2 land (pink) and also grows the same crops (cereal and beet), it is reasonable to assume that the green land is Grade 3a agricultural land.



It can be seen from this map that EA2 is 100% in grade 2 land, EA1N is approximately 98% in grade 2 land and that the NG substation is approximately 80% grade 3 and 20% grade 2. Any extension of the NG connection hub to the east to accommodate other projects would be 100% grade 2 land.

11. Based on Scottish Power's calculations the total and permanent land take of the of the substation complex is 37.2 hectares (92 acres) This is made up of the following elements set out in table 21.2 on page 8.

| <b>Scottish Power Infrastructure</b>            | square metres    |
|---|------------------|
| EA1N substation                                 | 36100            |
| EA2 substation                                  | 36100            |
| Operational access road (based on 1.6km length) | 13600            |
| Landscaping                                     | 227800           |
| <b>National Grid Infrastructure</b>             |                  |
| National Grid substation (AIS)                  | 44950            |
| Pylon footprint                                 | 1600             |
| Cable sealing ends                              | 10000            |
| Operational access road to sealing ends         | 1850             |
| <b>TOTAL* ha/acres</b>                          | <b>37.2/91.9</b> |

\*Please note this figure does not include the permanent loss of agricultural land other than at the substation complex site namely land lost due to ecological mitigation (61,200 m<sup>2</sup>) or the degradation in productivity of agricultural land due to underground structures (transition days, jointing bays, link boxes) - see table 21.2 page 8.

12. The biggest figure by far in the table above is that for landscaping which at 22.78 ha is over 60% of the total land take. Expressing this differently the amount of BMV agricultural land required to mitigate the substation infrastructure (not including the operational access roads) is approximately 180% of the land required for the infrastructure itself.

13. However despite the loss of approaching 100 acres of BMV agricultural land, this figure is almost certainly understated. Landscaping (the term which is used in table 21.2) is not defined. There could well be an additional permanent loss of BMV agricultural land due to:

- the areas of the SuDS basins;
- the areas that can no longer be efficiently cultivated due to the fragmentation of the land caused by the substation complex;
- loss of land at the margins of the operational access roads including the drainage needs of an 8m wide 1700m long operational access road.

14. In addition much the agricultural land to the west of the substation site belongs to the residents of Friston House, Pond House and Moor Farm. If the projects were to be approved each of these residents plans to plant more trees on their agricultural land to screen themselves from the substation complex site. This will result in a further significant loss of agricultural land.

### **Magnitude Levels and Impacts**

15. Scottish Power has assessed magnitude levels in Table 21.8 Definitions of Magnitude Levels for Land Use Receptors. This states that a “high” magnitude level is *“Permanent loss of over 20 hectares (ha) of the best and most versatile (BMV) agricultural land (grades one, two and three) or more than 60% total regional resource (Natural England 2012a) or full recovery of land would take more than 10 years.”*

16. There would appear not to be a clear standard for assessing magnitude impact. However it is submitted that expressing magnitude impact by reference to the entirety of agricultural land in a county is arbitrary, particularly when the threshold is 60% and designed to minimise impacts. On this basis no development would ever cause the loss of a significant percentage of agricultural land. Further this percentage also bears no relationship to the absolute measure where the threshold is 20 ha. We would submit a better approach would be to look at the absolute loss of land and for the purposes of this representation we will accept the thresholds adopted by Scottish Power in table 21.8.

17. Given the sensitivity of the land at the substation complex site is high and the permanent loss of BMV agricultural land is 37.2 ha then the impact is major at the substation complex site. However not only is the impact major it is it is major at an extremely high level given the permanent loss of BMV agricultural land is almost double the threshold, even using Scottish Power’s figure for the loss of BMV land which is almost certainly understated.

18. Scottish Power’s assessment of the impact is understated in paragraph 163 on page 43. Scottish Power erroneously concludes that the “impact significance is therefore predicted to be moderate at site level of the substations location”

19. Further the Planning Statement summary (document 8.2 page 216) in respect of land use is misleading in respect of permanent operational impacts. Whilst it admits that *“the onshore substation location and National Grid substation location land covers agricultural land of grade 2 and grade 3 quality”* it then goes on to state *“in total, 75.64% of the proposed onshore development area is moderate to poor quality agricultural land.”* It can only be assumed that this is a reference to the development area within the order limits

or at least includes the cable route. The reality is that in relation to permanent operational impacts 100% of the agricultural land is of the best and most versatile grades.

20. The fact that such a misleading statement appears in the Planning Statement makes one question how many other misleading statements there are in this statement and whether this statement could be regarded as reliable.

### **Land at Bramford**

21. Scottish Power's proposals on behalf of itself and on behalf of National Grid to acquire and use agricultural land at Friston should be considered in the context of Scottish Power's and National Grid's existing land ownership at Bramford.
22. Appendix 1 shows a Google Earth image of the Bramford substation site. The bottom half of the image shows the National Grid infrastructure at Bramford which serves Sizewell B and Scottish Power's EA1 windfarm and which will serve a Scottish Power's EA3 windfarm. The top half of the image shows the EA1 substation which is the completed structure to the left and the construction site of the EA3 windfarm. This should be compared to Appendix 4 which is a plan from the DCO application for EA3 in 2015, the relevant document can be found here:

[https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/EN010056/EN010056-000275-6.2.4%20Volume%20%20Chapter%204%20Site%20Selection%20and%20Alternatives%20Figures%20\(Fig%204.1%20-%204.4\).pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/EN010056/EN010056-000275-6.2.4%20Volume%20%20Chapter%204%20Site%20Selection%20and%20Alternatives%20Figures%20(Fig%204.1%20-%204.4).pdf)

23. Appendix 2 shows details of the title numbers of the land and the registered owners of the land.
24. Appendix 4 shows the location of the EA1 substation, the proposed location of the EA3 substation and also shows a substation location for a future Scottish Power windfarm project.
25. Appendix 3 shows Appendix 2 overlaid on Appendix 1. It is clear from Appendix 3 that both National Grid and Scottish Power already own undeveloped land at Bramford which, judging from the land available and the fact that in 2015 Scottish Power was planning to construct at least one further substation there – see Appendix 4, could be sufficient to accommodate substation for each of EA1N and EA2 and expansion of the existing National Grid infrastructure to serve EA1N and EA2.
26. As is evidenced by a note of a meeting between the Planning Inspectorate and Scottish Power on 6 July 2016 the original intention was that both EA1N and EA2 would connect at Bramford and connection agreements. Under the heading of "Grid connections update" it is recorded that "*The Applicant was previously in a joint venture with Vattenfall and had agreements with National Grid for three projects to connect from the landfall at Bawsdey to Bramford, Suffolk. These were East Anglia ONE (EA1), East Anglia THREE (EA3) and East Anglia FOUR (EA4 - subsequently withdrawn). The grid agreements have now been modified by the Applicant to accommodate EA2 and EA1N.*" The note of the meeting is attached at Appendix 5.

## Compliance with Planning Policy

27. EN-1 at paragraph 5.10.8 states that *“Applicants should seek to minimise impact on the best and most versatile agricultural land”*. Scottish Power through defective site selection seems to be seeking to maximise impact on the best and most versatile agricultural land.
28. By choosing a sensitive landscape and heritage location 22.78 ha of BMV land, over 60% of the total land take, is required in an attempt to mitigate the landscape and heritage impacts. Expressed in another way the amount of BMV agricultural land required to mitigate the substation infrastructure is approximately 180% of the land required for that infrastructure.
29. By selecting a site with a high surface water flood risk more BMV agricultural land has to be made over to two large SuDs ponds.
30. By choosing a site which is difficult to access, a very long and wide operational access road (1700m x 8m) is required which consumes at least another 1.4 ha of BMV agricultural land.
31. Further as noted in the Written Representations concerning the Rochdale Envelope and the draft Development Consent Order the area being proposed for the National Grid connection hub and the Scottish Power substations has not been subject any serious attempt to improve the efficient use of land by good design nor has there been any independent scrutiny of such requirements.
32. Given these facts the EA1N and EA2 projects do not comply with the requirements of EN-1. In fact they fly in the face of them.
33. In the context of the proposed use of BMV agricultural land at Friston should be contrasted with the fact that both National Grid and Scottish Power own land at the Bramford substation site which they have chosen not to develop and which could accommodate the substation complex.

## Cumulative Impact

34. Scottish Power has not undertaken a cumulative impact assessment in respect of the additional loss of agricultural land, much of which will be of the best and most versatile grades, in respect of the six other projects which will be brought ashore in the AONB and which will either definitely or almost certainly connect at the National Grid connection hub at Friston.
35. We know from the NGV FAQ document, page 5 (May 2020 – **Ref.1**) that the National Grid connection hub will need to be expanded and this will require 3 acres for each of its Nautilus and Eurolink interconnector projects. It would seem to be a reasonable assumption that a similar amount of land will be required in order to connect each of the Five Estuaries windfarm, the North Falls windfarm, the SCD1 interconnector and the SCD2 interconnector.

36. In addition to the land required in order to connect at the National Grid connection hub, each of those projects will require land for converter stations or substations in the same manner as for the Scottish Power windfarms and the NGV interconnectors. Whilst that land may not be at Friston it will for technical reasons have to be in the vicinity of Friston.
37. The land required for each Scottish Power substation is 3.61 ha. NGV has stated that the land required for each of converter station is 12 acres (May 2019 Briefing Pack, page 4 – **Ref.2**) which converts to 4.86 ha. It would seem to be a reasonable assumption that a similar amount of land will be required for the substation required for each windfarm and the converter station required for each interconnector. The table below sets out the total amount of land which these projects will require before taking account of the land that will be required to mitigate the landscape and heritage impacts of these projects or the operational access roads which will be required.

| <b>Project</b>                     | <b>National Grid connection hub expansion(ha)</b> | <b>Substation/convertor station(ha)</b> |
|------------------------------------|---|---|
|                                    |   |   |
| NGV Nautilus                       | 1.21  | 4.86                                    |
| NGV Eurolink                       | 1.21  | 4.86                                    |
| Five Estuaries                     | 1.21  | 3.61                                    |
| North Falls                        | 1.21  | 3.61                                    |
| SCD1                               | 1.21  | 4.86                                    |
| SCD2                               | 1.21  | 4.86                                    |
|                                    |   |   |
| National Grid connection hub Total | 7.28  |   |
|                                    |   |   |
| Substation/Convertor station Total |   | 26.7                                    |
|                                    |   |   |
| <b>Overall Total</b>               |   | <b>33.98</b>                            |

38. This figure of 33.98ha is before any account is taken of the land required for landscaping, SUDS ponds, operational access roads etc. Given that Friston according to SPR's site selection exercise is meant to be the least damaging location, one can only assume that the amount of land required for landscape mitigation will be at least as extensive as that required at Friston. As mentioned above the amount of land required for landscaping at Friston is 180% of the land required for the Scottish Power substations and National Grid connection hub – see paragraph 12 above. A somewhat rash assumption could be made that no further landscaping will be required at Friston as a result of the expansion of the National Grid connection hub. However no such assumption can be made in respect of the additional two substations and the four converter stations which will be required for these projects given their size.
39. Accordingly based on the same ratio of land required for landscaping relative to the land required for substations and converter stations (and excluding the expansion of the National Grid connection hub), landscaping will require an additional 48.1 ha of land.

40. Therefore in total these projects will require another 82ha of land in and around the Friston area and this is before the land required for operational access roads. Given the nature of the Friston area one can assume that a large proportion of this land if not the substantial majority will be grade 2 and 3 agricultural land.
41. Therefore in total the siting of a new national grid connection hub at Friston which will involve the location of eight offshore energy projects in or around Friston may well require 119.2ha (approximately 295 acres) of land which given the local geography will almost certainly be agricultural land of which a very high proportion will be the best and most versatile agricultural land.
42. No analysis has been carried out in relation to the environmental stewardship scheme or other relevant matters but clearly there are significant implications given the amount of agricultural land at risk of permanent loss.

### **References**

1. NGV FAQ document <https://www.nationalgrid.com/document/132456/download>
2. NGV May 2019 Briefing Pack <https://www.nationalgrid.com/document/125601/download>

## Appendices

### 1. Image of Bramford substation site - 2020



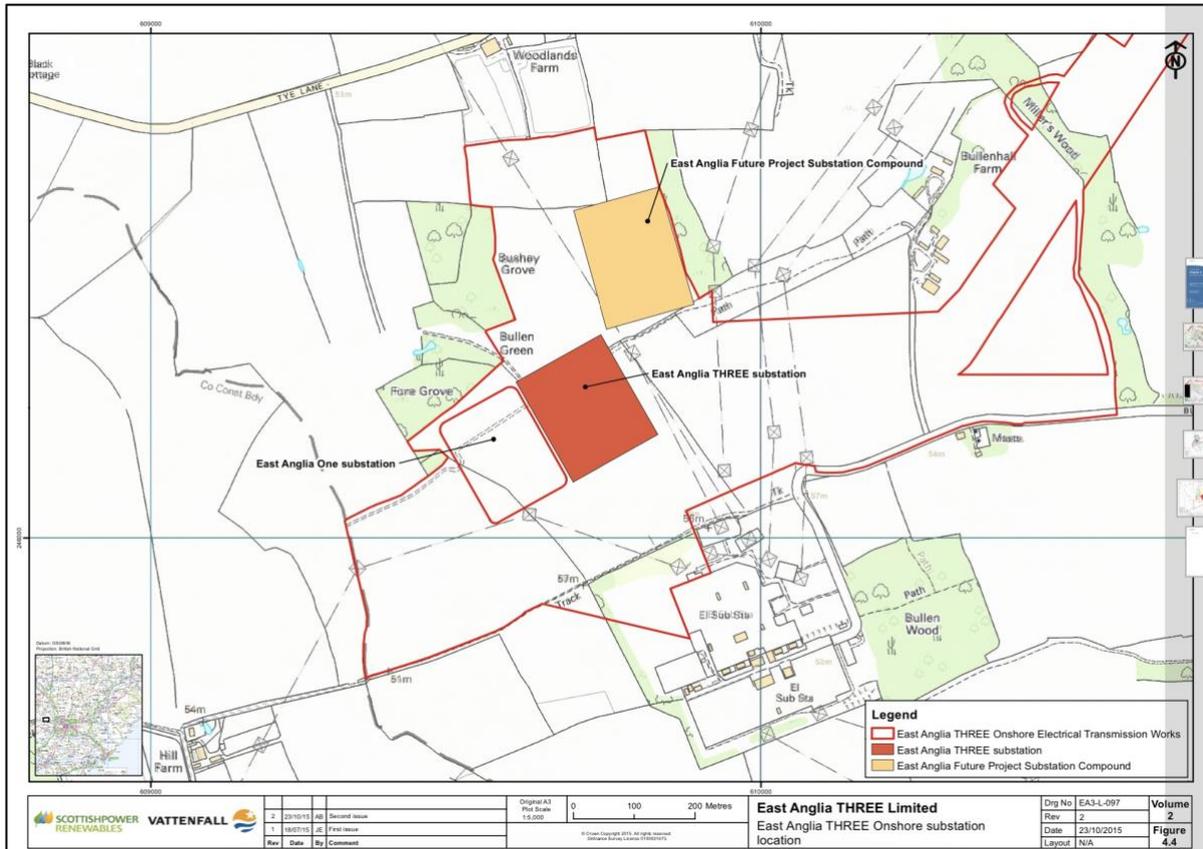
### 2. Ownership plan



3. Ownership plan overlaid on substation site



4. 2015 plan from EA3 DCO



5. PINS Meeting Note - 6 July 2016

# Meeting note

**File reference**  
**Status**  
**Author**  
**Date**  
**Meeting with**  
**Venue**  
**Attendees**

EN010077 and EN010078  
**Final**  
 Marie Evans  
 6 July 2016  
 Scottish Power Renewables (SPR)  
 Temple Quay House, Bristol  
**Scottish Power Renewables (UK) Ltd (the Applicant)**  
 Helen Walker (Senior Project Manager)  
 Mandy King (Planning and Environmental Advisor)  
 Julia Bolton (Assistant Project Manager)  
**The Planning Inspectorate (the Inspectorate)**  
 Tom Carpen (Infrastructure Planning Lead)  
 Marie Evans (Senior EIA and Land

Rights Advisor)

**Meeting objectives**  
**Circulation**

Project update meeting  
All attendees

**Summary of key points discussed and advice given:**

**Introduction**

The meeting was held under the Inspectorate's openness policy along with the requirement under s.51 of the Planning Act 2008 (PA 2008) for the Inspectorate to publish any advice it provides on making an application. Advice given did not constitute legal advice upon which the applicant (or others) can rely.

**Actions from last meeting 19 May**

All actions from the previous meeting were noted as complete.

**Grid connections update**

The Applicant provided an overview of the historic and current situation in respect of the proposed grid connection agreements for the East Anglia ONE North (EA1N) and East Anglia TWO (EA2) projects.

The Applicant was previously in a joint venture with Vattenfall and had agreements with National Grid for three projects to connect from the landfall at Bawsdey to Bramford, Suffolk. These were East Anglia ONE (EA1), East Anglia THREE (EA3) and East Anglia FOUR (EA4 - subsequently withdrawn). The grid agreements have now been modified by the Applicant to accommodate EA2 and EA1N. [Following the end of the joint venture, Vattenfall is responsible for its own connection agreements.]

**Onshore cable routing and ducting**

Requirement 29 of the EA1 DCO requires the installation of cabling for EA1 and cable ducting for future projects (EA3 and EA4) to be undertaken at the same time. The aim of this requirement is to minimise local disruption by pre-installing cable ducts for all expected projects at the same time.

The reduction in the size of EA1 has led to a change in the transmission technology from Direct Current (DC) to Alternating Current (AC). The alternative (AC) technology will require a greater width of cable corridor than was previously anticipated. This means that, at certain locations, it will not be practicable to install ducting for all future projects. For this reason, a decision has been made to install cabling for EA1 and ducting for EA3 only. The Applicant wrote to the Department of Business, Energy, Industry and Strategy (BEIS, formerly known as the Department of Energy and Climate Change, DECC) on 27th June 2016, setting out this position.

Therefore, the Applicant will be looking in some locations for a new routing strategy for the EA1N and EA2 projects and will be seeking separate consents for the installation of the ducting and cabling. Public consultation will also be undertaken on the route options.

The Applicant confirmed that as per the consented EA1 project and the EA3 project currently in examination, the EA1N and EA2 projects intend, where

possible, to follow the same offshore and onshore grid connection route and connect to the National Grid at Bramford as per their connection agreements. The EA1N and EA2 projects are likely to be smaller in scale and capacity than EA3 and therefore, SPR are also looking at an AC solution for these projects. EA3 remains a DC project.

### **Evidence plan and stakeholder engagement**

The Applicant is finalising the initial Evidence Plan for EA1N and EA2. The next Steering Group meeting is likely to be in September 2016. A Benthic Expert Topic Group will also be held in September.

It was confirmed that offshore bird surveys are planned to commence in September 2016, together with a review of existing bird data.

The Applicant queried whether the EIA Scoping and its associated consultation could be used as a broader public consultation on matters including the route selection. The Inspectorate advised that the Scoping Opinion would only address EIA matters, in accordance with the EIA Regulations, and that the consultation undertaken as part of this process is the Secretary of State's consultation with prescribed consultation bodies, as set out in legislation and explained in PINS Advice Notes 3 and 7. The Scoping Opinion would not include responses from other persons/groups that had not been directly consulted by the Secretary of State. Additional responses, if received, would be forwarded directly to the Applicant. The Applicant will consider their approach further.

### **Programme update**

The routing strategy is currently being looked at by the Applicant. Initial discussions with Local Authorities have taken place and wider consultation will be undertaken. Engagement with the Local Authorities regarding the Statement of Community Consultation (SOCC) is likely to take place late autumn 2016, with the SOCC issued late 2016. Scoping for both projects is anticipated in early 2017.

### **Specific decisions / follow up required?**

PINS to inform SPR of availability for a meeting in September 2016