



**South Downs**  
National Park Authority

**Agenda Item 10**  
**Report PC21/22-11**

Report to	<b>Planning Committee</b>
Date	<b>9 September 2021</b>
By	<b>Director of Planning</b>
Title of Report	<b>Response to Rampion Extension Development Ltd's Section 42 Statutory Consultation on the Rampion 2 Offshore Wind Farm</b>
Purpose of Report	<b>To update Planning Committee on the SDNPA's draft Rampion 2 consultation response</b>

**Recommendation: The Committee is recommended to consider and provide comments on the contents of the draft response to be provided by the Chief Executive of the Authority as part of the Section 42 Statutory Consultation.**

### **Executive Summary**

Members are being asked for views on the formal response (attached as **Appendix 1**) to the Rampion 2 offshore windfarm consultation that will be approved and submitted by the Chief Executive Officer, as the consultation period ends before the next meeting of the full National Park Authority.

Officers are advising that based on Preliminary Environmental Information Report (PEIR), the SDNPA objects to the proposed development and suggestions have been made as to how the concerns raised could be addressed.

Key matters for consideration are:

- the placement of the new turbines and their height,
- the landing point for the onshore cable route,
- the impacts of the cable corridor as it runs through the National Park, and
- the availability of reasonable alternatives or appropriate mitigation and compensatory measures.

### **I. Introduction**

- I.1 This report is seeking Planning Committee's views on the draft consultation response (**Appendix 1**) to the Rampion Extension Development Ltd (RED) proposals for an offshore wind farm adjacent to the existing Rampion wind farm with associated infrastructure. The SDNPA Chief Executive will use provisions for urgent actions set out in Standing Order 18 following the meeting of the Planning Committee in order to agree and submit the final response on this strategic consultation, which closes on 16 September 2021, as the consultation deadline is before the next full Authority meeting. This is in line with Standing Orders.

## 2. Background and Policy Context

- 2.1 A statutory consultation by RED is underway, which is required before they submit a 'Development Consent Order' (DCO) application to the Planning Inspectorate (the Inspectorate). Consultees and other interested parties have been invited to comment on the information made available on Rampion 2 website. This information includes:
- A Preliminary Environmental Information Report (PEIR) which provides an initial statement of the main environmental information available, along with descriptions of likely environmental effects and mitigation measures envisaged for the Scheme (copy not attached to report however this can be viewed via web link listed under the background documents below);
  - The maximum design scenario for the turbines (**Appendix 2**);
  - Works plans indicating the proposed cable route; and (**Appendix 3**),
  - A draft Development Consent Order.
- 2.2 Wind power is at the heart of the UK Government's recent Ten Point Plan for a Green Industrial Revolution, which has set a target to deliver at least 40 gigawatts (equivalent of just over 1/3) of the UK's electricity through offshore wind capacity by 2030. The first (and currently only) windfarm off the south coast was granted consent in 2014. This development known as Rampion 1, is now fully operational and has an installed capacity of 400 MW that generates electricity equivalent to supplying 350,000 homes.
- 2.3 The current proposal for Rampion 2 would have an installed capacity of up to 1,200 MW, with the offshore components comprising:
- Up to 116 offshore wind turbine generators (WTGs), associated foundations and interarray cables, with the wind farm generating an installed capacity of up to 1,200MW;
  - Up to three offshore substations;
  - Up to four offshore export cables, each in its own trench within the overall cable corridor; and
  - Up to two offshore interconnector export cables between the offshore substations.
- The windfarm area of search would cover approximately 270 km<sup>2</sup> and would be located between 13km -25km offshore.
- 2.4 The key onshore elements of the proposal are:
- a single landfall site at Climping, West Sussex;
  - buried onshore cables, which comprise 4 cable circuits in separate trenches in a single corridor approximately 36km in length and 50m in width; and
  - a new onshore substation that will connect to the existing National Grid Bolney substation, Mid Sussex, via buried onshore cables.
- 2.5 The proposal on which the PEIR has been based is following the 'Rochdale Envelope' approach. This is employed where the nature of the proposed development means that some details have not been confirmed, and flexibility is sought to address uncertainty. In this instance this includes the height, location and layout of the turbines, the final substation locations and the route of the cable corridor at Warningcamp. This effectively means that a 'maximum design scenario' or 'worst case' scenario is presented and assessed by consultees. In this particular instance, the maximum design scenario in respect of the turbines would be 75 x 325m high, located to the east and west of the existing Rampion 1 array. Officers have based their comments on this scenario.
- 2.6 As part of the PEIR, environmental measures have been 'embedded' into the proposals and summarised as part of a Commitments Register. Current proposed mitigation measures include:

- Burial of onshore cable route;
- Onshore working width reduced as far as practicable at sensitive crossing locations;
- Appropriate storage of topsoil and subsoil to be used for reinstatement purposes;
- Trenchless methods such as horizontal directional drill techniques (HDD) for sensitive crossings;
- Design plan will be developed to mitigate landscape and visual effects;
- The South Downs Way and Downs Link will be managed in a way that minimises any closures or diversions; and
- Development of a Planting Plan to reinstate landscape elements such as trees, woodland and hedgerows, which have been removed as a result of construction.

2.7 Following a Member Briefing in December 2020, officers wrote to the applicant to outline the key matters raised by Members in respect of the scheme. These were:

- Whether sufficient information had been provided in order to demonstrate that exceptional circumstances whereby Major Development could be undertaken in a National Park had been provided, in respect of the onshore cable corridor;
- The inclusion of the area east of the existing Rampion I array, which had been designated as an Exclusion Zone for turbines as part of the Development Consent Order, as part of the application boundary;
- The greater landscape impact of the turbines themselves on the National Park, as a result of the significantly increased height; and
- Delivery of an extensive mitigation strategy to offset the landscape, visual and ecological harm resulting from the proposals.

Officers have used these 4 areas as a framework for the consultation response.

2.8 Under the NSIP process, once the application is submitted to the Inspectorate for consideration, the Authority will be invited to produce a 'Local Impact Report' and a written representation on our views of the proposal. We will be invited to take part in the examination hearings. Discussions with RWE on all aspects of the scheme are expected to occur throughout the lead up to the submission (for example on a Statement of Common Ground) and right up to and including the actual examination hearings. This is usual.

2.9 RWE's timetable indicates that the application will be submitted to the Inspectorate in early 2022.

### 3. Issues for consideration

3.1 Planning Committee is asked to consider and provide comments upon the proposed response of the Chief Executive to the consultation (as set out in **Appendix I**) which is an objection to the proposed scheme due to:

- Lack of proper consideration to the alternatives to a cable corridor through the National Park, with insufficient information provided to back up choices made,
- The inclusion of the area east of the existing array in the application boundary,
- The significantly greater impact of turbines more than twice the height of the existing turbines on the seascape as viewed from the National Park, and
- Insufficient mitigation and compensation measures in a number of respects and in particular, with regard to landscape reinstatement and mitigation of visual effects of the proposed array and cable corridor.

3.2 The lack of detailed information and clarity and certainty around the mitigation and compensation measures has resulted in the Authority being unable to make a fully informed assessment of all the impacts and the required mitigation and compensation measures.

3.3 The response has been structured around the four key priority areas raised by Members at the Briefing on 03 December 2020 (as referred to in paragraph 2.7 above).

#### 4. Cost implications

4.1 A considerable amount of officer time has already been invested in preparing an evidence base and in meetings with the applicant. Officers have secured a Planning Performance Agreement with the applicant to mitigate these costs.

#### 5. Next steps

5.1 Planning Committee is recommended to note the response (set out in **Appendix I**). The views provided by Planning Committee will be incorporated into the final response that will be agreed by the Chief Executive who will use provisions for urgent actions set out in Standing Order 18 and submit to the applicant by 16 September 2021, when the consultation formally closes.

#### 6. Other Implications

Implication	Yes/No
Will further decisions be required by another committee/full authority?	No - This is the last legally required formal consultation before Rampion Extension Development Ltd (RED) submit the DCO application (unless RED choose to carry out another consultation). This response will form the basis for any Authority response to the DCO application and examination in due course.
Does the proposal raise any Resource implications?	Yes – officers have agreed a Planning Performance Agreement with the applicant to mitigate these costs (capped at £65,000).
How does the proposal represent Value for Money?	N/A
Are there any Social Value implications arising from the proposal?	N/A
Have you taken regard of the South Downs National Park Authority’s equality duty as contained within the Equality Act 2010?	Yes – no equalities implications arise directly from this paper. The Planning Inspectorate and Secretary of State will have to have regard to this equality duty in their assessment of RED’s proposals.
Are there any Human Rights implications arising from the proposal?	No
Are there any Crime & Disorder implications arising from the proposal?	No
Are there any Health & Safety implications arising from the proposal?	No
Are there any Data Protection implications?	No
Are there any Sustainability implications based on the 5	Yes - this contributes to the following Sustainability Strategy

principles set out in the SDNPA Sustainability Strategy?	principles: <ul style="list-style-type: none"> <li>• Living within environmental limits, and</li> <li>• Using sound science responsibly.</li> </ul>
--	---

## 7. Risks Associated with the Proposed Decision

Risk	Likelihood	Impact	Mitigation
Reputational Risk from objecting (or not objecting) to the Scheme	Medium	Low	Risks are mitigated by acting in the best interest of the National Park's purposes, being evidence led, being clear what we are asking for and holding regular meetings with the applicant and other stakeholders.

### TIM SLANEY

Director of Planning

South Downs National Park Authority

Contact Officer:

Vicki Colwell, Principal Planning Officer

Tel:

01730 819280

email:

[Vicki.colwell@southdowns.gov.uk](mailto:Vicki.colwell@southdowns.gov.uk)

Appendices

1. SDNPA's proposed response to RWE
2. Maximum Design Scenario for Wind Turbine Generators
3. Onshore cable route (proposed)

SDNPA Consultees

Director of Countryside Policy and Management; Director of Planning; Chief Finance Officer; Monitoring Officer; Legal Services

External Consultees

None

Background Documents

- Rampion 2 Offshore Windfarm Section 42 Consultation – <https://rampion2.com/consultation/consultation-proposals/>
- Rampion 2 Offshore Windfarm Commitments Register
- White Consultants Offshore Wind Farms Buffer Study for the SDNPA (Draft Response Appendix 3)



**XX** September 2021

Mr Vaughan Weighill  
Project Manager for Rampion 2 Offshore Windfarm

**Sent via email only**

Dear Mr Weighill,

**Rampion Offshore Wind Farm  
Statutory Consultation – 14 July to 16 September 2021  
Section 42(1) (b) of the Planning Act 2008 and Regulation 13 of the Infrastructure  
Planning (Environmental Impact Assessment) Regulations 2017**

I am writing on behalf of the South Downs National Park Authority (SDNPA) regarding the above Scheme.

In summary, on the basis of the information available, the effect on the South Downs National Park has been downplayed throughout the document and therefore the SDNPA currently **OBJECTS** to this proposal. This is based on our overarching comments in this covering letter and more detailed technical comments in the attached **Appendices 1 and 2**. I hope following the consultation we are able to continue to work with yourself and other stakeholders, in order to ensure sufficient consideration and action is taken to address the issues raised.

**Major Development**

The South Downs National Park is given the highest status of protection in relation to landscape and scenic beauty. Nevertheless, consent for NSIPs may be granted in exceptional circumstances. In such instances, as stated in paragraph 5.9.10 of National Policy Statement EN-1, development should be demonstrated to be in the public interest and should include an assessment of 3 criteria, which are covered below. Whilst the Preliminary Environmental Information Report (PEIR) acknowledges the proposed scheme will have adverse effects on the South Downs National Park, it does not provide sufficient analysis of the cost and scope for delivering outside of the this nationally protected area, or demonstrate that alternatives to the proposed route have been adequately considered. Furthermore, we are concerned that the mitigation measures proposed in order to moderate the environmental effects are currently inadequate, based both on the downplaying of these effects and also on a recent review of the mitigation and reinstatement measures that were undertaken as part of the first Rampion windfarm cable corridor.

Need for the Scheme

The SDNPA recognises the national need for offshore wind generation and a recognition of the important role this will play in tackling climate change. This is however different to the particulars of the scheme, which are outlined as part of our response below.

Cost and scope for developing outside of the designated area

The SDNPA acknowledge that RWE are aware of their requirement to demonstrate that exceptional circumstances exist that justify developing in the National Park, as per paragraph 5.9.10 of EN-1, and have been in discussion with you regarding how best this can be addressed through the PEIR and subsequent ES. To this end, Chapter 3 (Alternatives) of the PEIR seeks to demonstrate

that the cost and scope for developing outside of the National Park is not achievable. Despite having raised repeatedly the importance of being able to demonstrate this, and whilst acknowledging that more information has been made available since our first discussion, we are disappointed that you have still not been able to address many of our fundamental points.

Crucially, there cannot be a separation of onshore and offshore elements when undertaking this assessment, as it is all part of the same proposal. Therefore the choices for where to make landfall, which impact on whether the cabling needs to go through the SDNP, have to consider the subsequent impact on the National Park. This should not be a purely commercial decision, as the assessment criteria outlined in the NPS makes clear.

The lack of consideration of the National Park is made clear by Graphic 3.2 in Chapter 3, which explains the overall onshore site selection process. Step 2 is to 'take account of SDNP', which is both the wrong test and incorrect in applying this as a single step; substantial weight needs to be applied at each stage of the process.

Overall, this chapter does not appear to recognise the National Park as a key determinant at all, despite it being a national designation afforded the highest level of protection.

Other reasonable alternatives that haven't been considered in any detail, in respect of the cost and scope of developing elsewhere are:

- Why can't a substation be constructed to the south of the Park?
- Why can't HDD drilling be used in more locations?
- A 30m wide cable route is proposed in places – why not others, which could open up more options for alternative routes outside the Park?
- Why does the route to Lovedean take such a circuitous route through the Park? The explanation given is not sufficient.

#### Extent to which effect on environment, landscape and recreational opportunities could be moderated

Unfortunately based on the options provided in Chapter 3 of the PEIR, we do not believe that the information to enable an assessment as to the extent to which the options effect National Park purposes has been adequately provided, nor have sufficient details of extent to which they could be moderated.

Without prejudice to the above comments, we have used the maximum design scenario when providing a response to the Proposed Development in respect of the topic-specific chapters. These are summarised below, with more detailed technical comments provided in **Appendix I**.

#### **Offshore**

As you are already aware, the SDNPA has commissioned White Consultants (April 2021) to consider seascape character sensitivity with regard to views and the character of the seascape. The final report, which has previously been shared with RWE is included in **Appendix 3**. Based on this detailed analysis, 6 seascape character zones (SCZ) were identified, which were then used to identify the sensitivity to offshore windfarm development. Key findings from this assessment were that the SCZ east of the existing Rampion 1 array was highly sensitive and turbines of any height should not be installed in this area (see fig.1). There was medium sensitivity found in the SCZ west of the existing array and therefore further turbines should not exceed 225m in height.

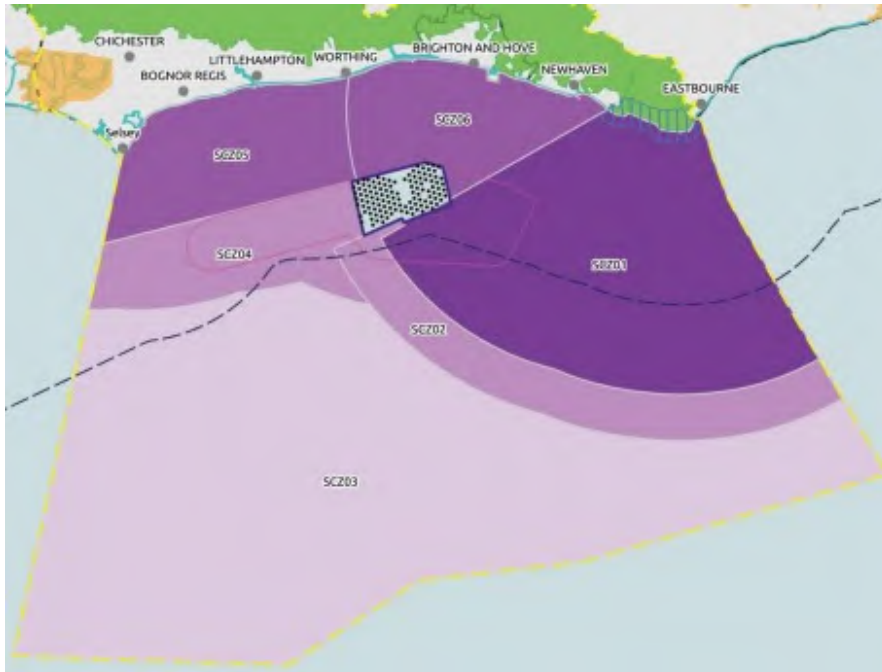


Fig. 1 – Seascape Character Zones; White Consultants; April 2021

White Consultants, on behalf of the SDNPA have completed a review of the SLVIA included in the PEIR. This is included in full at **Appendix 2**. The report comprises a review of the SLVIA in terms of approach to seascape character, sensitivity and cumulative effects, a comparison of the seascape character assessment in the SLVIA with the SCZ established in the April 2021 report, and makes recommendations on how the scheme could be improved and effects mitigated.

The SDNPA consider the SLVIA has downplayed the impacts of the turbines, in terms of sensitivity, visual effects and significance. As a result of this understatement, it does not sufficiently guide development away from locations which significantly detract from views from the National Park and Heritage Coast to the east, or reduce the size of the turbine proposed. Little regard seems to have been had to the statutory purposes of the Park and the requirement that the applicant has to give weight to its setting. This is in part a result of the assessment applying definitions for magnitude that are not based on accepted definitions, nor indeed being in line with those used in the assessment of other windfarm proposals. Although the SLVIA mentions documents which specifically address seascape and offshore wind energy in its references, it does not appear to take on board the more detailed and focused approach and context of these documents.

Therefore, the SDNPA do not believe that the proposed worst-case scenario being assessed has taken appropriate consideration of the significant effects and taken steps to avoid these through the application boundary and design. Furthermore, despite suggesting the application boundary reflects the consented area for Rampion I, it continues to include a significant part of the Exclusion Zone identified in the Development Consent Order for the original windfarm.

We therefore continue to object to the extent of the application boundary, particularly as it extends to the east of the existing array and believe the maximum design scenario should reduce the height of the turbines to 225m.

Whilst it is appreciated that the April 2021 study arrived too late to be taken into consideration in the PEIR SLVIA, we request that it is referenced in the final SLVIA in the Environmental Statement.

### **Onshore**

As with the offshore assessment of landscape and seascape, the SDNPA consider the approach taken in the LVIA has been to under-assess and down play the effect of the construction of the



onshore cable route. For example in the assessment of Wepham Down viewpoint F, the construction work has been likened to standard farming practices in the South Downs National Park. We disagree with this assessment as agricultural practice in this location does not involve removing swathes of field boundaries, disregarding field patterns, or the excavation required for the proposed development. See the figure at **Appendix 4**, which demonstrates this. It also contradicts the decades-long projects for enhancing field margins and boundary planting to support farmland bird habitat as well as other benefits to the National Park purposes. We request that the likely impacts of the construction activity are reconsidered to adjust the assumption that it will be 'agricultural'.

Topography in its widest sense is a highly sensitive landscape feature that does not appear to have been set out in the assessment, based on the assumption there would be no change due to reinstatement following construction works. Our experience subsequent to Rampion 1 is that this was not the case. Greater emphasis of topography in the assessment is needed to ensure the need for adequate and high quality reinstatement works are carried out.

The scarp slope is a key and fundamental characteristic of the National Park designation in terms of ecology, landscape and cultural heritage. Sullington Hill itself is a highly vulnerable and sensitive location in terms of the intact landscape of the scarp – see fig.2 below. Further information is required to understand the methodology for Horizontal Directional Drilling and further viewpoints are also requested at this location in order to inform the assessment.



Fig.2 – Sullington Hill scarp: August 2021

The absence of studies such as an arboricultural report also undermines and brings into question the findings of the LVIA. It is noted that these studies will be undertaken in order to inform the Environmental Statement and therefore we believe the LVIA findings should be treated as provisional, pending completion of this survey work.

Whilst we welcome the omission of Options A and D for the cable route as it enters the National Park at Warningcamp, we remain highly concerned of the impacts the remaining options would have on the special qualities of the National Park. Both present their own different, but of equal concern, issues that based on the information presented to date, do not enable a preference to be advised upon. This suggests that this may not be the correct location for the cable route at all.

## Mitigation and Compensation Measures

There is a general lack of detail and dynamism within the commitments for mitigation and the embedded environmental measures that have been presented in Appendix 4.1 of the PEIR. The profusion of qualifications and caveats in the register (e.g. 'where possible', 'where practicable', 'will be considered') reduce the environmental value and performance of the commitments. Further detail of some of the areas we consider need further attention is provided at **Appendix I**, and we welcome the opportunity to discuss with you and the team appropriate opportunities to secure mitigation and compensatory works, linked to existing strategies within the National Park, such as our Re-Nature campaign and the People and Nature Network. The Environmental Statement and other information which will accompany the Development Consent Order application needs to set out in detail how the specific mitigation measures will be delivered and secured. If these specific measures are not secured through any Development Consent Order then they cannot be taken into account when assessing the likely significant effects of the proposed Scheme.

We have frequently advised through our pre-application meetings that we do not believe the Rampion I cable route to have been as successfully reinstated as RWE have suggested. We are therefore disappointed that this has not been recognised within the PEIR and the Commitments Register. In July 2021, we undertook our own flyover of the previous cable route, which reveals the cable corridor to be clearly visible for much of its length. See fig.3 and fig.4 below. Further images can be made available on request.



Fig. 3 – Lambleys Farm; Sealand Photography July 2021



Fig. 4 – Freshcombe Farm; Sealand Photography July 2021

This continued visibility could be down to a number of factors, including:

- Poor working practices during construction that have irreparably damaged the quality of the soil structure, therefore harming the integrity of the landscape,
- The presence of the cable itself, changing the soil quality and therefore having noticeable effects above ground,
- Incorrect species/sizes being used to replace hedgerows and trees, and
- Poor land management following completion of the works, such as over grazing, which has left a noticeable scar, which would not have occurred in these discrete areas, if the cable corridor had not been in place.

The proposed cable corridor is far greater in size, and brings with it additional concerns regarding the ability to store the proposed turves and soil without causing irreparable damage; we estimate that 1-2 million cubic metres of soil and subsoil to be moved in the National Park. The SDNPA therefore consider that a far more robust, specific and wide-ranging mitigation package would be required, should the cable route continue to run through the National Park. Part of this mitigation and compensatory work would need to be secured through a Section 106 Agreement and we continue to welcome the opportunity to work with the applicant to reach agreement on the terms for this document.

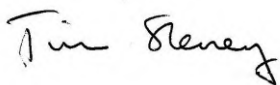
We note following our discussions that it is RWE intention to deliver biodiversity net gain as part of the proposed development, which we welcome and look forward to working with you to create a package of measures appropriate to the landscape character and ecological needs of the National Park.

### Conclusion

Whilst continuing to support the overall aims of the project in respect of meeting the Government's target of achieving net zero carbon, the SDNPA objects to the Scheme as currently presented. We would welcome however the opportunity to work with RWE with a real commitment on both sides to address matters properly, to try and resolve these issues prior to a Development Consent Order application being submitted in early 2022.

If you have any queries regarding the above please contact Vicki Colwell (Principal Planning Officer) on 01730 819280 or [vicki.colwell@southdowns.gov.uk](mailto:vicki.colwell@southdowns.gov.uk).

Yours sincerely



Tim Slaney  
Director of Planning  
South Downs National Park Authority

## **Introduction**

The following detailed comments are structured around the PEIR Chapters and other Technical Documents. We have provided comments only on those chapters that are of relevance to the National Park.

The SDNPA expects the issues set out below to be addressed and the SDNPA afforded the opportunity to comment before the Development Consent Order (DCO) application is submitted. Whilst the ETG groups that have been organised by RWE and their consultants have been constructive and useful for high level themed discussions, the SDNPA consider that more focused meetings may be more appropriate as the level of detail being presented increases.

### **Chapters 2 and 3 - Policy, Legislative Context and Alternatives**

Although referenced in Chapter 2 as part of the general policy context, the substantial weight afforded to National Parks has not been demonstrated through the PEIR. Notably, Chapter 3: Alternatives does not refer to paragraph 5.9.10 of National Policy Statement EN-1 at all. One of the results of this is that the embedded environmental measures do not take account of the National Park setting and character.

Indeed, although the National Park is mentioned throughout these chapters, as well as within the topic-based chapters, there appears to be little understanding of how it should be taken into account as part of the assessments. In Chapter 3, when giving examples of 'hard' and 'soft' constraints neither include the National Park; this confusion or omission has contributed to the lack of weight and consideration being afforded this sensitive location.

We would also query why, in Chapter 2: Policy and Legislative Context, paragraph 2.5.5 separates the South Downs Local Plan from other Local Plans. These should be afforded the same weight. As a Local Planning Authority, the SDNPA is the same status as the Districts and West Sussex County Council. The manner in which it has been treated appears to undermine the significance of the Park's role and designation.

It is not clear from the Alternatives chapter how the cost of mitigation, and in particular the additional steps that would need to be taken as a result of the cable corridor traversing the National Park, has been factored into this assessment? At what point does an option tip from 'viable' to 'unviable'? Further clarification on this point would be welcomed.

There is equally no evidence provided to demonstrate why the alternative cable routes have been dismissed as unviable. For example, based on our opinion that a 1200MW capacity array will not be achievable owing to the more limited application boundary we consider to be acceptable, Lovedean could be an option, with a route that does not need to enter the National Park.

Therefore, in terms of addressing PINS Scoping Opinion requirement for the assessment of the alternatives, the SDNPA consider that there has been insufficient comparison of the environmental effects and that the 'reasonable alternatives' have not been comprehensively assessed, bearing in mind the high bar provided for the developing in a National Park as stated in NPS EN-1.

### **Chapter 16 – Seascape, Landscape and Visual Impact Assessment (please also see Appendix 3)**

It is disappointing that the scoping boundary still includes the area east of the existing array and references it being in line with the design principles for Rampion I, which is not the case given the exclusion zone included as part of the previous DCO. Furthermore, the design principles for Rampion I were relevant for turbines far smaller than the current proposals.

Despite there having been a reduction in the application boundary following the scoping opinion, no analysis has been presented on how this amendment would impact the Theoretical Field of View. From the earlier baseline tables these all look to increase significantly from all the VP's within the

SDNPA and Heritage Coast. The figures presented in the baseline tables are repeated later – so this suggested there is no reduction from the ‘amended’ scheme. This does not support the claim that this is being offered as an effective mitigation measure.

There are several references to the 2011 South Downs Integrated Landscape Character Assessment, although we believe this may be a typo as the descriptions reflect 2020 version. However, the assessment has not picked up on the key sensitivities for each character area and therefore further clarification and consideration is required.

Paragraph 16.7.19 refers to the ‘maximum adverse effects being balanced between receptors east and west’. This suggests that the impact to the West, and on the Isle of Wight AONB specifically, needs to be balanced. This suggests an additional design principle is being applied – this wasn’t discussed at the technical working group. Greater weight should be given to the combination of National Park and Heritage Coast designations, as advised in the Offshore Energy Strategic Environmental Assessment: Review and update of Seascape and Visual Buffer Study for Offshore Windfarms (2020) BEIS/Hartley Anderson. The distance of the array from the IoW AONB is greater – so this seems a spurious justification for balancing out the quantum of development East to West.

### **Chapter 18 – Socio-economics**

The majority of the track at Sullington Hill Local Wildlife Site, which is proposed for use as an access, is a public bridleway however no reference is made to this. A long section of this PROW has a chalk surface and in places steep chalk banks which are characteristic of the landscape. We would wish to better understand how this route would be ‘upgraded’ and how public access will be managed.

There is a general lack of user data for most PROW and even the SDW counters are not always reliable. Use of the Strava Global Heatmap is therefore acceptable but the findings should be caveated as Strava is known to be used mainly by cyclists and would not capture a large portion of ramblers or local walkers/dog walkers that may be using both the heavily trafficked routes such as the SDW and also some of the paths that appear to have very low usage.

#### *Mitigation*

- Opportunities should be explored for improving access to Open access land, e.g. the unnamed parcel at TQ0086113, from existing nearby bridleways.
- Table 18-17 - relevant embedded environmental measures:
  - Welcome development of crossing methodology for PROW and ambition to construct in discrete sections with backfilling in as short a time as possible, however with sections up to 1km long, the length of time trenches will be open is likely to be significant and mitigation for users should take this into account, particularly where paths run parallel to exposed trenching. See also comments on Landscape and Visual.
  - Signage and diversions of PROW on site should be accompanied by appropriate advance information online. Signage should be installed in advance of closures.
  - Request National trail Officer be involved in the detail of arrangements for any diversions impacting on the South Downs Way. National Trail standards should be taken into account.
  - SDNPA to be included in any consultation on PROW Management Plan.
  - Works on open access land should be notified in advance on site and online.

### **Chapter 19 – Landscape and Visual**

The topography of the SDNP is a highly sensitive landscape feature that does not appear to have been set out in the assessment, on the basis of the assumption that no change will be made to the topography due to reinstatement. However SDNPA experience with Rampion I is that this is not



the case, and the smooth, open rolling character of the Downs is interrupted by the shadow of the excavations. The topography is vulnerable due to the arable and pastoral nature of the open downland which reveals archaeology from 6000 years ago. Greater emphasis of topography in the assessment is therefore needed to ensure that the need for adequate and high quality reinstatement works are carried out. The National Park is not an ordinary landscape and its land use and topography with combinations of mini scarps and unenclosed lands makes the Park character highly vulnerable to modern earthworks.

Sullington Hill is a highly vulnerable and sensitive location in terms of the intact landscape of the scarp (Medieval unenclosed landscape which runs most of the length of the SDNP - much designated SSSI). The scarp slope is a key and fundamental characteristic of the National Park designation in terms of ecology, landscape and cultural heritage. Further information is required to understand the methodology for use of HDD within the scarp slope in order to identify the impacts and inform the assessment. Further Viewpoints are also required from:

- Sullington Hill along the proposed cable route
- From the former Underhill Lane (Bridleway) along the scarp foot at Sullington Barn.

The absence of an arboricultural report undermines and brings into question the findings of the LVIA and also the embedded environmental measures. We recommend that the LVIA findings are treated as provisional pending completion of the vegetation survey. Confirmation that the vegetation survey, vegetation retention and vegetation protection proposals will be prepared in accordance with BS5837 should also be provided. The impact of the findings of the Arboricultural Assessment in accordance with BS5837 should then be incorporated and assessed as part of the LVIA for the Environmental Statement. Furthermore, the permanent easement for the cable route of 25m for trees and woodland does not appear to be factored into the assessment of the operational stage. This is connected to the request for a fully compliant BS5837 assessment so that trees and woodlands which cannot be replaced due to the easement can be offset close by.

The assessment of Middle Arun Valley Floor LCA No. 34 has not taken account of the importance of the historic landscape features. **Appendix 4** includes excerpts of the Sussex Historic Landscape Character maps, which show the Middle Arun Valley floor as a clearly discernible feature crossed by the proposed cable route. The valley floor is a network of medieval floodplain grazing dating from AD1066 where individual fields are enclosed by 'wet hedges' – ditches. These systems are called 'Brooks Innings' in Sussex and there are only 2 areas where they exist – in the Arun valley and at Pevensey Levels. This feature is contiguous with the valley floor within the SDNP and has significant landscape cultural and ecological importance as part of the continuous landscape setting beyond the SDNP. We recommend re-evaluation of the setting of the SDNP and the context and features of the Arun valley.

#### *Assessment of Viewpoints*

Whilst viewpoints were agreed with the SDNPA, following the review of the LVIA, it has become clear that some refinement and reconsideration is necessary.

- Wepham Down (viewpoint F), North of Blackpatch Hill (viewpoint F3) and Chantry Hill (viewpoint G) - The proposed development is an NSIP and will not be perceived in the landscape as agricultural activity. The proposals require the topsoil stripping of a 50m wide corridor which crosses fields in a swathe passing through field boundaries and disregarding the field patterns and topography. Excavations to achieve up to 4 trenches for receipt of electric cable bundles. Haul and access routes alongside, in addition to construction compounds, HDD compounds, storage of excavated materials and materials to be incorporated in the backfilling, cable laying machinery and the cables themselves. The activities are more related to open cast mining rather than seasonal crop rotations, which involve a tractor with a driver, working on the topsoil surface of an intact field system, one field at a time. There are no crop rotations carried out in the SDNP which require a 50m

wide excavated corridor which crosses many landowners' holdings at a time. The effect of this approach in the LVIA is to under-assess and down play the effects of the construction of the onshore cable route. We recommend the appraisal of the likely impacts of the construction activity is reconsidered to adjust the assumption that it will be perceived as agricultural.

- Chanctonbury Hill (viewpoint I) - Chanctonbury Ring is clearly visible and intervisibility between the chalk ridge and the proposed works is clearly shown in viewpoints J1 (Figure 19.42) and J2 (Figure 19.43). We advise this is revisited.
- South Downs Way Sequential Assessment - The viewpoints Ia, G1, G2, G3, G4, G5 are not shown on Figure 19.4c or included in the LVIA. These should be added to the viewpoint list and included as part of the assessment in the LVIA.
- Intervisibility with offshore elements – despite statements within the LVIA to the contrary, when comparing the ZTV for the whole development, there are significant overlaps in theoretical visibility between the offshore and onshore elements. This element of the LVIA appears to be under assessed, potentially due to viewpoint selection. Further research to inform the LVIA on this aspect by the identification of joint viewpoints and sequential visibility for the whole development. (See SDNPA Viewshed Study 2015) should be undertaken.

#### *Proposed Mitigation*

- All removed trees, hedgerows and woodland should be replaced on a 1:1 basis along the cable route, as close to original location as the 25m easement will allow and in consideration of other woodland and tree features and patterns of the LCA.
- Replacement planting will be undertaken to maintain levels, types of vegetation and landscape patterns within each Landscape Character Area.
- New Hill construction corridor – consider use of HDD, as 30m corridor remains too large.

## **Chapter 20 – Air Quality**

*Awaiting Final Officer Comment*

## **Chapter 21 – Soils and Agriculture**

In terms of Table 21-2: South Downs Local Plan Policy SD2 and its relevance to assessment, carbon is also locked up in soils. Carbon in forest soils is particularly important, as a greater proportion is often stored in the soil than the tree biomass. The methodology should incorporate the right interventions to minimise emissions of greenhouse gases, such as carbon dioxide, due to damage to soils.

Whilst it is understood that the cables will avoid woodland areas, proximity to woodlands/trees in the Arundel/Crossbush and Washington areas (some TPO and isolated woodland blocks) should be taken into consideration in more detail. Impact on non-designated woodlands and trees should also be assessed. Potential effects resulting on the construction site close to non-designated woodlands/trees or ancient/veteran trees and/or TPO should be included as part of the assessment, not only veteran trees and ancient woodland sites. Connectivity between sites and protection of soil (avoiding compaction and erosion) are also important elements which require assessment.

The Commitments Register does not give much comfort that there will be a robust system for protection of Ancient Woodland or non-designated sites. For example, reference to avoiding ancient woodland where practical does not provide reassurance that a robust system for protection of non-designated sites would be in place. Additionally, woodland/forest soils are not properly considered.

Measures for soil protection and protection of neighbouring trees needs to be included and further detail provided.

**Chapter 22 – Noise and Vibration***Awaiting final officer comment***Chapter 23 – Terrestrial Ecology and Nature Conservation**

We were grateful for the opportunity to meet with the terrestrial ecology team on 18 August 2021, for an update on progress and the next steps in terms of the field survey work being undertaken. There has been general concern regarding the lack of survey information, however we are pleased that further field study work is proposed and welcome the opportunity to continue working with the team and WSCC in developing an appropriate scheme of mitigation based on a robust evidence base. Generally, further information is needed regarding the mitigation measures, for example avoiding damage/destruction to active nests, young or eggs. i.e. when/how/by whom and methods used. The mitigation programme would be an opportunity for the applicant to contribute to the SDNPA Re-Nature programme.

As discussed at the meeting, the SDNPA advise approaching the Game and Wildlife Conservation Trust (GWCT), who's Sussex Study on the South Downs includes a large area of farmland that will be directly affected by Rampion 2. The Study is the longest running project in the world (since 1968) that measures changes in farming on the fauna and flora of arable land. Similarly, the Norfolk Estate have been undertaking bird breeding surveys since 2003 – may have useful information.

Arable habitat, although common in the Assessment Boundary, is of particular importance between Wepham and SDW - as some of it forms part of the Peppering Project. A key element of this Project established in 2003 has been to subdivide large fields into smaller ones, planting of hedgerows and infield conservation measures such as beetle banks and field margins. These measures have been key in the recovery of the grey partridge and other farmland birds as well as arable weeds and hares. Data to demonstrate this held by the Norfolk Estate and GWCT. We therefore request that the assessment recognises the importance of the arable farmland and the Peppering Project, the results it has produced in reversing the decline of Grey Partridge and other farmland birds plus other benefits. The Rampion 2 construction route and inevitable disturbance could potentially have a significant impact on the positive results achieved to date.

Paragraph 23.10.52 advises that reinstatement will occur through the replacement of turves that were cut, labelled and maintained to allow replacement from the location that they were stripped from. The SDNPA has serious reservations about whether this will work and there are a number of queries that require further clarification, for example:

- How long will the turves be stored for?
- Where will they be stored?
- What time of year will they be re-laid?
- How will they be maintained once re –aid and who will the work be overseen by?

Whilst it is good to keep the chalk grassland turf it doesn't store well and as you are aware, Tottington had a poor recovery rate. Further consideration needs to be given to a worst-case back-up plan of locally collected seed (by Kew), which could be used to assist recovery. Good method statements will be required and a skilled operator is essential.

Compensation opportunities should be widened (23.10.53 and 23.10.64, 23.10.71, 23.10.79, 23.10.86). It will be essential to understand extend of woodland loss and location and extend of compensatory planting.

Paragraph 23.5.27 – the SDNPA wish to highlight importance of dew ponds in the chalk landscape. These should be preserved and avoided if they fall within the corridor. These are also usually non-designated heritage assets as well.



Table 23.13 – Native, species-rich hedgerows/native species poor hedgerows and standing water have been scoped out. They are both important linear habitats that provide an important function in habitat connectivity and are degraded through fragmentation. They should not be scoped out at this stage.

### **Chapter 24 – Transport**

*Awaiting final officer comment*

### **Chapter 25 – Ground Conditions**

The chapter is inconsistent in its reference and understanding of the South Downs National Park Authority as the Planning Authority. This should be clarified. The SDNPA work closely with our colleagues at West Sussex County Council in respect of mineral safeguarding and on this occasion we would refer you to the comments made by WSCC in this respect. We would like the proposed development to consider ‘prior extraction’ of minerals, but would defer to our colleagues at WSCC for further comment.

### **Chapter 26 – Historic Environment**

There are several omissions and typos within the policy context for this chapter. For example:

- Table 26.1 (TCP (LB and CA) Act 1990) - Omits reference to potential impacts on the setting of listed buildings and conservation area which would be covered by this legislation;
- 26.2.4 and table 26.3 – no reference to relevant SDNP Local Plan policies (e.g. SD12 – Historic Environment);
- Table 26.4 – Geoarchaeology publication from Historic England was updated in 2015.

In respect of non-designated heritage assets, as identified in Table 26-6, the receptors appear to exclusively be archaeology. We consider built heritage should also be included and further detail provided of how this will be identified.

The SDNPA does not agree with the statement within the Future Baseline section that continuing intensive arable cultivation will result in the progressive disturbance of any archaeological remains, particularly given the growth in holistic farming methods, greater awareness of historic environment, SHINE data guidance on crop locations. It is also highly unlikely that continued arable farming would require disturbance at a depth even close to that required for the onshore cable route. In terms of Coastal Processes, which are also referenced in this section, at least one of the scheduled sites mentioned has been partially lost to cliff collapse in the last 2 years.

#### *Mitigation*

- C79 of the Commitment Register - Paleo-environmental mitigation must be designed and led by a recognised specialist contractor with a strong, proven understanding and familiarity with the South Downs paleo-archaeological landscape and geology (inc. Sussex raised beaches). Investment should be made in the WSCC HER to adequately record and disseminate paleo-environmental data, which may require a degree of upgrade to their current HER software. Would urge that early conversations are held with the WSCC HER Officer and County Archaeologist as to any upgrades, enhancements or additions that could be made to the HER in order to make paleo-environmental data recordable and publically accessible on the County HER.
- Appropriate curation/deposition of the site archive - The impact of an infrastructure project of this size and scale on the relevant archaeological archive repositories (which will include The Novium, Brighton Museums etc.) is likely to be significant. Early conversation needed with the relevant archaeological archive repositories to confirm whether they have capacity to collect and if not, what measures might be taken to potentially put them in a position to collect. This might be investment in collecting infrastructure such as shelving or racking to store anticipated large amounts of material from such a major project; alternatively, it may

be an agreement to cover costs at DeepStore for a specified period from deposition. However, assuming that there will be space to archive archaeological material is a mistake, and the mitigation / enhancement package could include investment in publically funded / not for profit collecting repositories, which will also enable fulfilment of this stated measure.

- Table 26-37 – please also include SDNPA Conservation Officer.

### **Chapter 27 – Water Environment**

As per our comment above in Terrestrial Ecology section, there is no mention of Dewponds on the Norfolk estate and other downland sites. Chalk springs may not be designated but are a very important unpolluted habitat and should be given higher status. Please ensure both are identified and protected.

In terms of specific mitigation measures, if concrete is to be used as a base in watercourses then there should be a methodology for reinstatement of the natural bed after construction.

### **Draft Development Consent Order**

We are grateful for the opportunity to review the draft Development Consent Order (DCO), and in particular, the Requirements within Schedule I. As there remains field survey work outstanding, and significant concerns regarding the scope of the proposed development we anticipate that these requirements will change prior to the submission of the proposed development to the Planning Inspectorate. We have therefore not sought legal advice on the wording and terms of the draft DCO. It is noted that several requirements refer specifically to the South Downs National Park Authority, whereas others refer only to the Local Planning Authority. For the avoidance of doubt, whilst there may be specific requirements for the particular that are different to other Authorities (e.g. within the Landscape and Environmental Management Plan), the SDNPA would also be the relevant Local Planning Authority for requirements such as the Code of Construction Practice. We request that the DCO and/or the Explanatory Note is revised to make this clearer.

In respect of the time given to consider and determine requirements (Schedule I4) we request that a minimum of 56 days is allowed to determine the requirements. The level of detail required by many of these conditions would involve multiple members of staff and liaison across the stakeholders in order to discharge the requirements. Furthermore 10 working days to consider the information in order to decide whether further information is required is inadequate. We request this is increased to 20 working days.

### **Report to Inform Appropriate Assessment**

The sites of relevance for the SDNPA are Arun Valley SPA/ Ramsar/SAC, The Mens (Bats) and Itchen Valley SAC for migratory fish. Generally, officers concur with the current stage of the assessment and welcome the consideration of the Sussex Bat protocol and the issue of habitat connectivity for bats. Whilst the site is right on the edge of the 12-mile flight path zone, we consider there will be opportunities for habitat enhancement post-construction and welcome the opportunity to continue to discuss these with the applicant.

In respect of the Arun Valley SAC, whilst it is understood that the site can be scoped out on the grounds of distance from the proposed development, it should be noted that there is considerable connectivity of ditch systems in the lower Arun Valley, outside of the designated area and the designated feature *Anisus vorticulus* has previously been found in ditch systems further south than the SAC.



## **Rampion 2 PEIR Review**

---

### **Seascape, landscape and visual impact assessment**

**Final Report**

for

South Downs National Park Authority

August 2021

Email: [sw@whiteconsultants.co.uk](mailto:sw@whiteconsultants.co.uk)  
Web: [www.whiteconsultants.co.uk](http://www.whiteconsultants.co.uk)  
Tel: 029 2236 2416



# CONTENTS

1. Introduction.....	2
2. Review of PEIR SLVIA method .....	3
3. Effects on seascape character .....	6
4. Recommendations on assessments and advice on scheme improvements.....	7
Appendix A Extract from East Anglia TWO SLVIA method .....	8

## 1. Introduction

- 1.1. White Consultants were appointed in June 2021 to review the proposed Rampion 2 offshore wind farm Preliminary Environmental Information Report (PEIR) seascape, landscape and visual impact assessment (SLVIA) findings in relation to the offshore wind farms buffer study<sup>1</sup> prepared for South Downs National Park Authority (SDNPA) and to make recommendations on how the proposals should be modified to minimise effects on the National Park purposes and special qualities. This report should be considered as an annex to the buffer study which is referred to in this report as ‘SDNPA, 2021’.
- 1.2. This report sets out to:
  - Review the SLVIA in terms of approach to seascape character and sensitivity and cumulative effects.
  - Review how the proposed scheme affects seascape zones set out in the White Consultants, April 2021 study and compare this with the seascape character assessment.
  - Make recommendations on how seascape zones should be taken into account in the final SLVIA and scheme.
  - Give advice on how the scheme may be improved or effects may be mitigated.
- 1.3. The PEIR SLVIA will also be reviewed by in-house SDNPA landscape architects in terms of other matters, although there may be overlap between the reports. This report should be considered in conjunction with this other work. If any conflict or inconsistency is perceived, SDNPA should be contacted to clarify its position.
- 1.4. In addition to the SDNPA, 2021 report, the following guidance and contextual reports have been taken into account:
  - Landscape Institute and IEMA, 2013, Guidelines for Landscape and Visual Impact Assessment. (Referred to in this report GLVIA 3).
  - MMO, 2020, An approach to seascape sensitivity assessment. (Referred to in this report MMO, 2020).
  - BEIS/Hartley Anderson, 2020, Offshore Energy Strategic Environmental Assessment (OESEA): Review and update of Seascape and Visual Buffer study for Offshore Wind farms. (Referred to in this report BEIS, 2020).
  - Natural England, 2012, An approach to seascape character assessment. NECR105.
  - DTI, 2005, Guidance on the assessment of the impact of offshore wind farms: seascape and visual impact report. (Enviros). (cited in NPS EN-3)
  - Scottish Natural Heritage, March 2012, Assessing the cumulative impact of onshore wind energy developments. (Referred to in this report SNH, 2012).
  - Scottish Natural Heritage, 2005, An assessment of the sensitivity and capacity of the Scottish seascape in relation to wind farms. (University of Newcastle, Commissioned Report no.103). (Referred to in this report SNH, 2005).
- 1.5. The report is carried out within the context of national and local policy including the UK National Policy Statements EN-1 and EN-3, and the South Downs Local Plan: Adopted 2 July 2019 (SDLP) and South Downs Partnership Management Plan 2020-2025. The relevance of these to the method and assessment are set out in the White Consultants, April 2021 report.
- 1.6. The PEIR SLVIA and this report are based on the maximum design scenario of 75 turbines 325m high to blade tip with a rotor diameter of 295m and a minimum of 1,720m between turbines.
- 1.7. This report is a desk study - no site visits have been carried out as part of this review although a series of site visits were undertaken as part of the SNDPA, 2021 study in April 2021. It has been prepared by Simon White who is a Fellow of the Landscape Institute with 35 years’

---

<sup>1</sup>SDNPA, April 2021, South Downs National Park Offshore wind farms buffer study. (White Consultants).

experience and reflects his views, not necessarily SDNPA's.

- 1.8. The method used in the PEIR SLVIA is considered in Section 2, a comparison between consideration of marine character areas and seascape zones derived from the White, 2021 report are set out in Section 3, and recommendations on how seascape zones should be incorporated in the final SLVIA and advice on scheme improvements are considered in Section 4.

## 2. Review of PEIR SLVIA method

- 2.1. The detailed method is set out in Appendix 16.2. All references in brackets are within this Appendix unless otherwise stated.
- 2.2. The method is 50 pages which is long. One page addresses cumulative effects- this is very short and therefore does not seem proportionate.
- 2.3. The method relies heavily on GLVIA 3 which has less than half a page dedicated to seascape character assessment (GLVIA 5.6). Though the PEIR SVIA mentions documents which specifically address seascape and offshore wind energy in its references, it does not appear to take on board the more detailed and focused approach and context of these documents. GLVIA 3 states that methods to assess seascape character are being developed and practitioners should refer to the latest available guidance (GLVIA 5.6). For instance, MMO seascape sensitivity guidance, 2020, states that it is relevant to both SVIAs for specific developments and strategic assessments (MMO, 2020, 1.2). As such it refines and considers in more detail and precision the factors which should be considered in determining the sensitivity of any given area. As Rampion 2 is a large-scale development set within a seascape this is proportionate to use.
- 2.4. The iterative assessment and design section (1.3) is stated as aiming to design out significant effects. The maximum development scenario assessed clearly does not achieve this. As the SLVIA understates the effects, it does not sufficiently guide development away from locations which significantly detract from views from the National Park and Heritage Coast to the east, or reduce the size of turbine proposed.

### Effects on seascape character (Section 1.5)

- 2.5. Key factors to be considered in sensitivity- value:  
Various factors mentioned in the assessment in 1.5.11 are mixed together under three headings (designations, quality and experience) which does not aid clarity. This reinforces the need to assess the effect on the seascape zones set out in the SDNPA, 2021 study with a clearer underpinning rationale. For example, the contribution of the seascape to the wider setting of the National Park and Heritage Coast, and to specific relevant special qualities, should be taken into account.
- 2.6. Key factors to be considered in sensitivity- susceptibility:  
Various factors mentioned in the assessment in 1.5.12-1.5.13 are mix of landscape and seascape which leads to unclear criteria in some cases. For example, the nature of the coastal edge and visual characteristics such as the presence of key views and intervisibility are not included. The differentiation between coastal and seascape pattern and focii would also be helpful. As above, this reinforces the need to assess the effect on the seascape zones with a clearer underpinning rationale.
- 2.7. Table 1-3 sets out the seascape/landscape magnitude of change ratings. It is not clear how 'large scale' and 'medium scale' elements are defined. The intermediate categories are stated as a 'combination of criteria' rather than defined intermediate scales and extent of change which would be more helpful.
- 2.8. The study just assesses the effects on the national Marine Character Areas eg Table 16.25 and 16.30. It does not subdivide or refine these spatially. Different parts of MCA 5 are given different levels of sensitivity or magnitude of change, but this is not shown graphically. This is an imprecise approach. Effects on MCAs remain valid as they apply to all receptors in the study area but they should be refined.
- 2.9. It is appreciated that the White Consultants, 2021 study was not available to RWE until April

2021. However, it now forms the most detailed and focused study on sensitivity to wind farms with boundaries which reflect the characteristics of the area and the relationship between Rampion 1 and the potential Rampion 2 area with the National Park. As such, the effects of the proposals on zones set out in the SDNPA, 2021 study should be carried out in parallel with the MCA assessment using an improved method based on the comments above. In our view, the sensitivity study zones better reflect the National Policy context of EN-1 and EN-3 in regard to offshore wind turbine development and effect on them should be assessed as part of the tools to avoid or minimise effects on the national designation of the National Park.

**Visual effects (Section 1.6)**

- 2.10. The visual impact assessment can underpin and contribute to the assessment of impact on seascape character. Therefore it is important that the method and assumptions underpinning this assessment are reasonable. Table 1.5 sets out the definitions for the magnitude of change with examples of that change. It is of concern that there are no clear definitions for medium-high and medium-low magnitudes of change (as for landscape/seascape Appendix 16.2 Table 1-3). Of most concern is the following:
- 2.11. The size and scale of *medium* change is stated as a *prominent* change to the view, and *low* change is characterised by a *noticeable* change. It would be expected that a prominent change to the view would coincide with a medium-high magnitude and a noticeable change would coincide with a medium magnitude of change. The definitions as they stand therefore has a strong potential to underplay visual effects. They do not coincide with accepted definitions used in many SVIAs and included in the SNH University of Newcastle Study (2002) and more recently in the White Consultants OESEA background study (2020) page 34- see below:

5.8. Useful definitions of magnitude of change are set out to assist consistency of approach in Table 5.2. These are derived originally from the University of Newcastle Study (2002).

**Table 5.2 – Magnitude of change: names, descriptors and definitions**

Magnitude/ size class	Other terms used	Name	Descriptors – appearance in central vision field	Definition
Very Large	High, very high substantial, very substantial,	Dominant	Commanding, controlling the view, foremost feature, prevailing, overriding	Proposed offshore wind farm causes very large alteration to key elements / features / characteristics of the baseline seascape or visual conditions (pre-development) such that there is a fundamental change.
Large	Medium- high, moderate - substantial	Prominent	Standing out, striking, sharp, unmistakable, easily seen	Proposed offshore wind farm causes large alteration to key elements / features / characteristics of the baseline seascape or visual conditions (pre-development) such that there is an unmistakable change.
Moderate	Medium	Conspicuous	Noticeable, distinct, catching the eye or attention, clearly visible, well defined	Proposed offshore wind farm causes moderate alteration to elements / features / characteristics of the baseline seascape or visual conditions (pre-development) such that there is a distinct change.
Small	Low, slight, minor	Apparent	Visible, evident, obvious, perceptible, discernible, recognisable	Proposed offshore wind farm causes small loss or alteration to elements / features / characteristics of the baseline seascape or visual conditions (pre-development) such that there is a perceptible change.
Very Small	Low, slight or minor-negligible	Inconspicuous	Lacking sharpness of definition, not obvious, indistinct, not clear, obscure, blurred, indefinite, subtle	Proposed offshore wind farm causes very small loss or alteration to elements / features / characteristics of the baseline seascape or visual conditions (pre-development) such that there is a distinguishable change.
Negligible		Faint	Weak, not legible, near limit of acuity of human eye	Proposed offshore wind farm causes negligible loss or alteration to elements / features / characteristics of the baseline seascape or visual conditions (pre-development) such that there is no legible change.

- 2.12. The definitions used in the SLVIA are also not consistent with the definitions used by the same consultant (OPEN) for the recent East Anglia TWO offshore wind farm SLVIA (see extract in Appendix A). Here *high* magnitude of change is described as the development forming the prevailing influence and introducing substantially uncharacteristic elements into the baseline



view, also displaying visual *prominence*. *Medium* magnitude of change is described as the project being plainly visible and forming a *readily apparent* influence introducing elements that are potentially uncharacteristic on the receiving view, resulting in a *moderate* incremental change. These are reasonable definitions which are broadly in line with guidance unlike the Rampion 2 method, which is therefore likely to understate the level of both visual and seascape effects.

### Cumulative effects (Section 1.7)

- 2.13. The method (1.7.1) cites SNH, 2012 as being relevant guidance for assessing cumulative effects alongside GLVIA 3. It defines cumulative effects as the additional changes caused by a proposed development in conjunction with other similar developments or as the combined effect of a set of developments, taken together. In order to fully assess the effects on the National Park our view is that both should be undertaken. Rampion 1 is the only other windfarm nearby and is a known, measurable quantity. Rampion 2 directly abuts it and extends it in easterly and westerly directions and so the assessment is straightforward with a clear rationale. The assessment of both would be meaningful as it would explore the extent of effects of the long term but non-permanent renewable energy developments on the National Park.
- 2.14. It is accepted that the key development to be considered in the cumulative assessment in addition to Rampion 2 is Rampion 1. The key principle about cumulative impact, and which makes it differ from the main SLVIA, is that the existing development is not considered as part of the baseline character. This means that existing and proposed developments can be considered together as part of the cumulative impact assessment. The logic of this is reinforced by the fact that the developments are not permanent, though they are long term, and so theoretically the seascape character will revert to one with no wind farms, dependent on changes in technology.
- 2.15. It would therefore be expected that the following assessments will take place:
  - A combined cumulative impact assessment of Rampion 1 and Rampion 2 together at least on seascape character and visual receptors and resultant effects on the purposes and special qualities of the National Park. Others may also require effects on landscape character to be assessed. Evidence will include a combined ZTV and consideration of factors like the aesthetic relationship between the size and spacing of turbines of the two developments.
  - A cumulative impact assessment of the additional effect of Rampion 2 as a contribution to the combined cumulative impact of both windfarms. Evidence will include a ZTV showing the additional areas intervisible with Rampion 2 over and above Rampion 1. Consideration of factors like the aesthetic relationship and contrast between the size and spacing of turbines of the two developments will also be needed.

### Significance (Section 1.8)

- 2.16. In Table 1-6 evaluation of seascape, landscape and visual effects, the calibration of where effects may be significant or otherwise, appears to be low. For instance, medium magnitude of change effects on medium-high receptors are stated only as moderate, which may or may not be significant. The SLVIA approach therefore has the potential to underestimate the level and number of significant effects and should be reconsidered. BEIS (2020) sets out significance in Table 5.3 (see below) where high sensitivity is the equivalent of medium/high as the second highest level (page 35).
- 2.17. Whilst it is appreciated that ultimately a judgement has to be made on the likely effects and related significance, matrices act as a transparent guide and help underpin judgements.

Table 5.3 - Significance of effects

Landscape and visual sensitivity	Magnitude of change				
	Very large	Large	Moderate	Small	Very small
Very high	Major	Major	Major	Major/moderate	Moderate
High	Major	Major	Major/moderate	Moderate	Moderate/minor
Medium	Major	Major/moderate	Moderate	Moderate/minor	Minor
Low	Major/moderate	Moderate	Moderate/minor	Minor	Minor/none
Very low	Moderate	Moderate/minor	Minor	Minor/none	None

Note: Those boxes of significance of effects shaded orange are considered to be significant effects, those shaded yellow may be significant. Those which are not shaded are considered not to be significant.

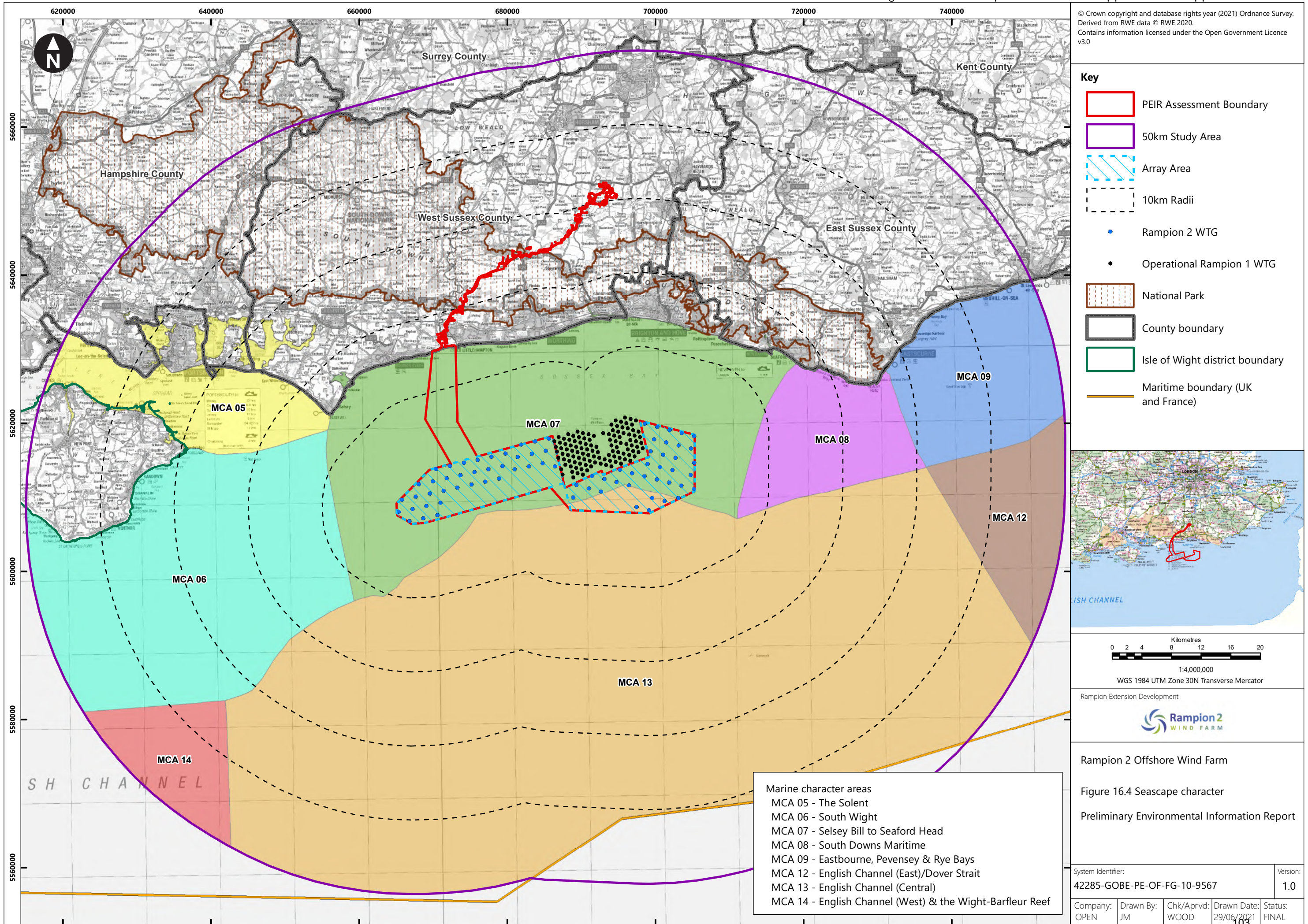
### Effects on special qualities

- 2.18. It is important for the SLVIA to acknowledge that the special qualities of the National Park including the ‘breathtaking views’ were described before Rampion 1 was built, and therefore it does not form part of the accepted characteristics or qualities of the National Park.

## 3. Effects on seascape character

- 3.1. The structure of the impact assessment on seascape character is structured in false divisions which do not allow full expression of the effect on the National Park and associated seascape character. In the section on the National Park only MCA 08 is considered as the ‘associative setting’ (16.15.8). However, the spread of effect is much larger, as demonstrated by the SDNPA, 2021 study. The MCA 07 description notes the relationship with the National Park/Heritage Coast to the east and as such this should be considered in the seascape effects on the National Park. The National Park also has a strong relationship with MCA 13 and would undergo effects from development within this area and should be considered. MCA 07 also has a relationship as demonstrated by the numerous viewpoints from the downs to the north and west. All these MCAs should be considered as part of the SDNP effects section. This also flags up the need to consider the effects of the development on the seascape zones in the SDNPA, 2021 study which are helpful in expressing different levels of sensitivity in relation to the National Park. This information can then feed into the discussion of effects on the purposes and special qualities of the National Park.
- 3.2. It is important to note, as the SDNPA, 2021 report states, that, in designating the area, the Inspector left the maritime boundary of the National Park open. In our view the SDNPA, 2021 report seascape zone boundaries (especially SCZ01) better reflect this sentiment in considering wind turbine development than the boundaries of MCA 08 (which do not reflect static features on the sea surface or the boundaries of likely visibility of structures). Nevertheless it is recognised MCA 08 is a valid receptor to consider as part of the Marine Plan evidence base.
- 3.3. The assessment of effects on the following seascape character zones should be undertaken: SCZ01, SCZ02, SCZ04, SCZ05, SCZ06.
- 3.4. The consideration of the SLVIA findings and a preliminary assessment of the effects on the seascape zones derived from the SDNPA, 2021 study are set out in the following pages. For reference, the MCAs assessed within the SLVIA and the seascape zones in the SDNPA, 2021 study are copied into this report overleaf.

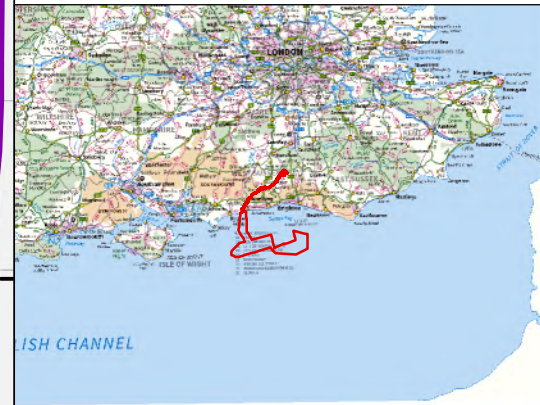




© Crown copyright and database rights year (2021) Ordnance Survey. Derived from RWE data © RWE 2020. Contains information licensed under the Open Government Licence v3.0

**Key**

- PEIR Assessment Boundary
- 50km Study Area
- Array Area
- 10km Radii
- Rampion 2 WTG
- Operational Rampion 1 WTG
- National Park
- County boundary
- Isle of Wight district boundary
- Maritime boundary (UK and France)



0 2 4 8 12 16 20  
Kilometres  
1:4,000,000  
WGS 1984 UTM Zone 30N Transverse Mercator

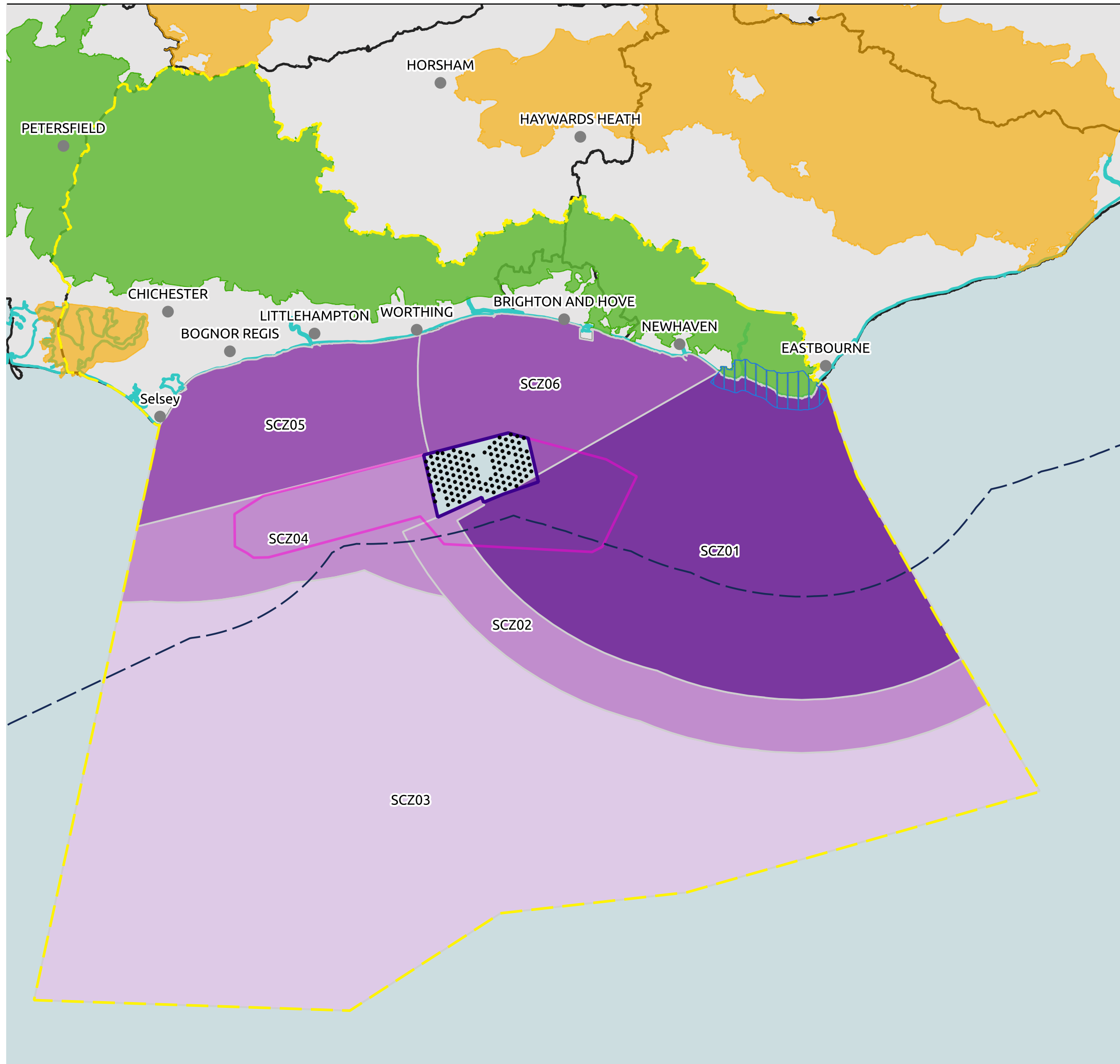
Rampion Extension Development

Rampion 2 Offshore Wind Farm  
Figure 16.4 Seascape character  
Preliminary Environmental Information Report

Marine character areas  
MCA 05 - The Solent  
MCA 06 - South Wight  
MCA 07 - Selsey Bill to Seaford Head  
MCA 08 - South Downs Maritime  
MCA 09 - Eastbourne, Pevensey & Rye Bays  
MCA 12 - English Channel (East)/Dover Strait  
MCA 13 - English Channel (Central)  
MCA 14 - English Channel (West) & the Wight-Barfleur Reef

System Identifier: 42285-GOBE-PE-OF-FG-10-9567		Version: 1.0
Company: OPEN	Drawn By: JM	Chk/Prvd: WOOD
Drawn Date: 29/06/2021	Status: FINAL	

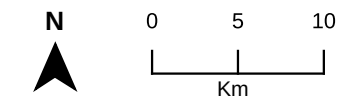




**KEY**

-  Study Area
  -  County Boundaries
  -  South Downs National Park
  -  Sussex Heritage Coast
  -  AONBs
  -  High watermark/coastline
  -  12 nautical mile limit
  -  Rampion 1 implemented turbines
  -  Rampion 2 offshore array scoping area
- Seascape sensitivity zones (offshore wind farms) (High to Low)**
-  High
  -  High/medium
  -  Medium
  -  Medium/low

Note: The sensitivity of seascape zones relate to offshore wind farms only and to receptors in the South Downs National Park only.



Ordnance Survey, © Crown Copyright 2021. All rights reserved. Rampion Extension Development Limited, Natural England, MMO. UKHO 2021

[www.whiteconsultants.co.uk](http://www.whiteconsultants.co.uk)

02/03/21 | v0 | Drawn: JW | Checked: SW



South Downs National Park Offshore wind farms buffer study

**Figure 8**  
**Seascape sensitivity to offshore wind farms**

	Wood/OPEN assessment in relation to South Downs NP					
Seascape receptors	Sensitivity	Magnitude	Significance of effect	Nature of effect	Relevant seascape zones identified in SDNPA, 2021 study which should be assessed for effects	This report comment
MCA 08 South Downs Maritime	High	Medium to medium-high	Major to major/moderate	Indirect, long term, reversible	SCZ01	<p>Sensitivity- agreed. The combined National Park/Heritage Coast to the north of this area is highly sensitive.</p> <p>Magnitude of change- not agreed. Though the effects are indirect, the proposals are at least prominent when viewed from this MCA and contrasting in scale and spacing with Rampion 1 forming an awkward juxtaposition of structures. Seascape effects are likely to be at least medium-high.</p> <p>Significance- not agreed. It would be expected that the effects would be major and would be considered significant.</p>
MCA 07 Selsey Bill to Seaford Head	-	-	-	-	SCZ01, SCZ02, SCZ04, SCZ06	<p>Only considered in relation to inland SDNP viewpoints, not in relation to National Park/Heritage Coast receptor. An assessment such as the above is relevant on the combined National Park/Heritage Coast to the east and south of Rampion 1, with a separate assessment of the effects on the National Park to the north and east.</p>
MCA 13 English Channel (Central)	-	-	-	-	SCZ01, SCZ02	<p>Not assessed though turbines are located within the area and directly adjacent. The area contributes to open views from the National Park and so is relevant. An assessment such as the above is relevant on the combined National Park/Heritage Coast to the east.</p>

**EFFECTS ON SEASCAPE ZONES: PRELIMINARY SUMMARY ASSESSMENT**

Seascape receptors	Sensitivity	Nature of effect	This report preliminary summary assessment comments
SCZ01	High	Negative	<p>Magnitude of change- the proposals extend into the area some way and are much closer to the National Park/Heritage Coast covering an area of open sea and skyline, reducing openness and adversely affecting the unspoilt character of the seas east of Rampion 1. The proposals are <i>at least</i> prominent when viewed from the National Park/Heritage Coast and would be seen on more days a year than Rampion 1. They detract from the breathtaking panoramic views from the distinctive coast including the South Down’s Way and Beachy Head, and they interrupt and reduce the strong sense of tranquillity and wildness which the seascape contributes to the coast. These factors relate to the National Park’s special qualities. They extend the spread of turbines of Rampion 1 and contrast in scale and spacing forming an awkward juxtaposition of structures. Though there is shipping and some leisure use within the area this is transitory and at a smaller scale, shipping passing some way offshore and there are a limited number of detractors and lighting both along the coast and offshore. Seascape effects are likely to be at the high end of the scale.</p> <p>Significance- it would be expected that the effects would be significant at the high end of the scale.</p>
SCZ02	Medium	Negative	<p>Magnitude of change- the proposals form a small part of the area adjacent to Rampion 1 and lie 30-37km from the combined National Park/Heritage Coast and 24km average from the edge of the SDNP to the north. The area contributes to an extent to the National Park’s setting but the proposed turbines would be visible and apparent behind the existing array although are contrasting in scale and spacing forming an awkward juxtaposition of structures. This contrast increases the magnitude of effect. Seascape effects are likely to be at the lower end of the scale.</p> <p>Significance- it would be expected that the effects would not be considered significant although the relationship between the proposed and existing turbines is visually conflicting.</p>
SCZ04	Medium	Negative	<p>Magnitude of change- the proposals extend substantially into the area and are visible in elevated views from the ridges in the hinterland out to sea including views from the South Downs Way and Monarchs Way, mainly across the open sea west of Rampion 1. The turbines cover a large area of open sea and skyline and are between noticeable and prominent when viewed from the National Park to the north due to the width of horizon affected. They substantially reduce the undeveloped nature of the zone which acts as part of the setting of the National Park and reinforces the sense of tranquillity of the ridge tops where there are limited views of development on the coastal plain, which relates to the National Park’s special qualities. The proposals extend and contrast in scale and spacing with Rampion 1 adjacent to the east forming an awkward juxtaposition of</p>

			<p>structures. Though there is shipping and some leisure use this is transitory and at a smaller scale. Seascape effects are likely to be at the higher end of the scale.</p> <p>Significance- it would be expected that the effects would be considered significant.</p>
<b>Seascape receptors</b>	<b>Sensitivity</b>	<b>Nature of effect</b>	
SCZ05	High/medium	Negative	<p>Magnitude of change- the proposals lie directly to the south and are visible in elevated views from the ridges in the hinterland out to sea including views from the South Downs Way and Monarchs Way, mainly across the open sea west of Rampion 1. The turbines cover a large area of open sea and skyline to the south and are between noticeable and prominent when viewed from the National Park to the north. Due to their size and scale they substantially reduce the undeveloped character of the zone which acts as part of the setting of the National Park and reinforces the sense of tranquillity of the ridge tops where there are limited views of development on the coastal plain, which relates to the National Park's special qualities. The proposals extend and contrast in scale and spacing with Rampion 1 adjacent forming an awkward juxtaposition of structures. Though there is shipping and some leisure use this is transitory and at a smaller scale. Seascape effects are likely to be at the higher end of the scale due to the scale and extent of turbines.</p> <p>Significance- it would be expected that the effects would be considered significant.</p>
SCZ06	High/medium	Negative	<p>Magnitude of change- the proposals form a relatively small part of the area adjacent to Rampion 1 but extend further to the east within the zone closer to the combined National Park/Heritage Coast and to the south and west of Rampion 1.</p> <p>The turbines would be seen in breathtaking views along the Heritage Coast in juxtaposition with the unspoilt cliffs including the iconic Seven Sisters and often with the developed coast hidden from view by landform within the National Park such as Seaford Head. Whilst in front of Rampion 1 they are contrasting in scale and spacing forming an awkward juxtaposition of structures and would be seen for more days of the year. This would further erode the strong sense of tranquillity, wildness and openness which the seascape setting contributes to the coast, all of which relate to the Natural Parks special qualities. The turbines would be between noticeable and prominent especially from the west of the Heritage Coast.</p> <p>When viewed from the north they would be seen extending Rampion 1 with contrasting scale and spacing and would be between noticeable and prominent. Though there is shipping and some leisure use this is transitory and at a smaller scale. The developed coast and coastal plain is apparent in some views (but not all) from the National Park to the west of the Heritage Coast and this, to an extent, modifies the relationship between the downs and the sea but there is a clear delineation with the sea itself which is open with no structures apart from Rampion 1 to the west. Seascape effects are likely to be at the higher end of the scale due to the scale of turbines. This contrast increases the magnitude of effect.</p> <p>Significance- it would be expected that the effects would be significant.</p>

## 4. Recommendations on assessments and advice on scheme improvements

### Recommendations on assessments

- 4.1. We recommend that the definitions, calibration and factors included in the seascape character and visual effects assessments should be amended in line with the above comments.
- 4.2. We recommend that a separate assessment on the effects of the proposals on the SDNPA, 2021 seascape zones should be carried out to complement the MCA effects and contribute to the evidence base considering the effects on the SPNP purpose and special qualities.

### Advice on scheme improvements

- 4.3. It is stated that the SVIA is part of an iterative EIA process which aims to design out significant effects including avoidance and design (Appendix 16.2 1.3). It is clear that the worst-case scenario being assessed does not reflect this approach.
- 4.4. The SDNPA, 2021 study summarises the findings on seascape zones in Section 5 and these are still highly relevant as they considered turbines within the PEIR scoping area. It is acknowledged that the worst-case scenario extent to the east has now been reduced slightly.
- 4.5. Taking into account the PEIR including its visualisations with this response and the SDNPA, 2021 findings for each SCZ, it is recommended that development should only occur within the Extension Area west of Rampion 1 and that turbines should not exceed 225m to blade tip in height ie the smaller 210m turbine scenario would be most appropriate (see SDNPA, 2021). In addition, it is recommended that there is clear separation between Rampion 1 and 2 to minimise the horizontal extent of arrays east to west along the horizon and the turbine layout is designed in coherent blocks. It is considered that the full north to south extent of the extension area should be utilised to maximise the size of east/west gaps between the arrays.



## **Appendix A Extract from East Anglia TWO SLVIA method**

**East Anglia TWO Offshore Windfarm**  
 Environmental Statement

sensitivity and magnitude, to allow a final judgement to be made on whether each effect is significant or not significant.

- 65. For the purposes of the assessment, it is assumed that the proposed East Anglia TWO project would have an operational life of at least 25 years. Therefore, the proposed East Anglia TWO project would be considered a permanent feature, although its visual effects would be reversible.

**28.4.2.4 Magnitude of Change Rating – Views/ Visual Receptors**

- 66. An assessment of the magnitude of change resulting from the proposed East Anglia TWO project on each visual receptor and viewpoint will be made by assessing the size or scale of change. The geographical extent over which this change takes place will also be assessed. The basis of the assessment is made clear using evidence and professional judgement. There may also be intermediate levels of magnitude of change, such as medium-high or medium-low, where the change falls between the definitions. The levels of magnitude of change that can occur on views are defined in **Table A28.7**.

**Table A28.7 Magnitude of Change – Visual Effects**

Magnitude of change	Visibility level	Magnitude of Change Definition
High	The proposed East Anglia TWO project will be the prevailing feature in the view and will form the major focus of visual attention due to its large vertical scale and lateral spread, filling a large proportion of the field of view. Contrasts in form, line, colour, texture, luminance or motion may contribute to the prevailing influence. Moving objects associated with the proposed East Anglia TWO project may contribute substantially to drawing viewer attention. The visual prominence of the proposed East Anglia TWO project will detract noticeably from views of other seascape/ landscape elements.	The proposed East Anglia TWO project will result in a high level of alteration to the existing view, forming the prevailing influence and/or introducing elements that are substantially uncharacteristic in the baseline view. The addition of the proposed East Anglia TWO project will result in a major incremental change, loss or addition to the baseline view.
Medium	Plainly visible, so will not be missed by casual observers, but does not strongly attract visual attention or dominate the view because of its apparent size. The proposed East Anglia TWO project is obvious and will have sufficient size to contrast with other seascape/ landscape elements, but with insufficient visual contrast to strongly attract visual attention and insufficient size to occupy most of an observer’s field of view.	The proposed East Anglia TWO project will result in a medium level of alteration to the baseline view, forming a readily apparent influence and/or introducing elements that are potentially uncharacteristic in the receiving view. The addition of the proposed East Anglia TWO project will result in a moderate incremental change, loss or addition to the baseline view.

**East Anglia TWO Offshore Windfarm**  
Environmental Statement

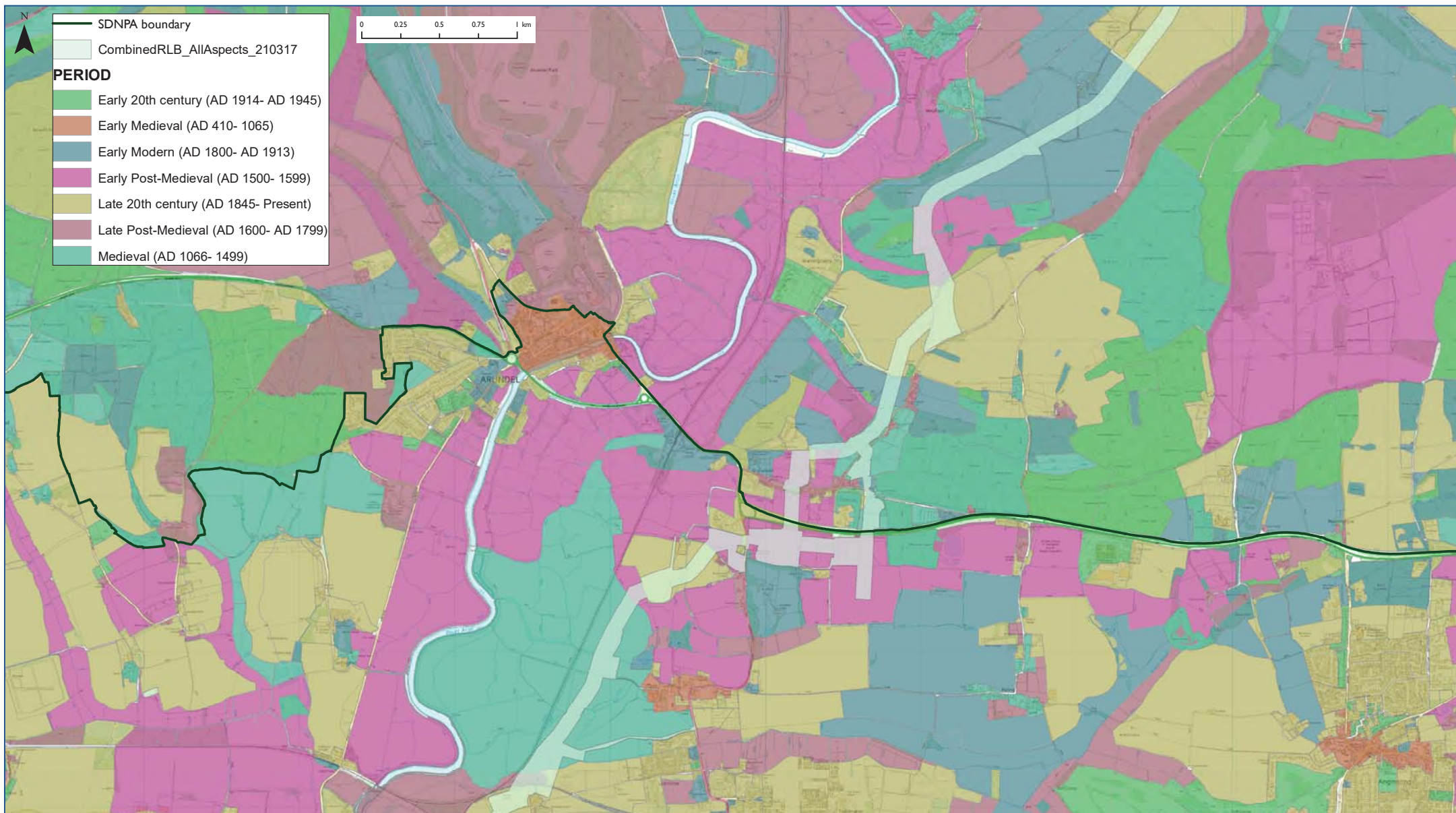
Magnitude of change	Visibility level	Magnitude of Change Definition
Low	The proposed East Anglia TWO project will be visible when scanning in its general direction; otherwise it may be missed by casual observers. Very small and/or faint, but when the observer is scanning the horizon or looking more closely at an area, can be detected and sometimes noticed by casual observers; however, most people would not notice it without some active looking.	The proposed East Anglia TWO project will result in a low level of alteration to the baseline view, providing a slightly apparent influence and/or introducing elements that are characteristic in the receiving view. The addition of the proposed East Anglia TWO project will result in a low incremental change, loss or addition to the baseline view.
Negligible/None	Visible only after extended viewing. The proposed East Anglia TWO project is near the limit of visibility or is not visible. It would not be seen by a person who was unaware of it in advance and looking for it. Even under those circumstances, it may be seen only after looking at it closely for an extended period.	The proposed East Anglia TWO project will result in a negligible or no alteration to the existing view. If visible it may, form a barely discernible influence and/or introduce elements that are substantially characteristic in the baseline view. The addition of the proposed East Anglia TWO project will result in no change or a negligible incremental change, loss or addition to the baseline view.

67. Criteria that tend towards higher or lower magnitude of change are set out in **Table A28.8**.

**Table A28.8 Magnitude of Change – Views/Visual Receptors**

Criteria tending towards higher or lower magnitude		
Size or scale of change	Higher	Lower
	<p>Large scale change in the view resulting from loss and/or addition of features and changes in its composition.</p> <p>Proposed development located in close proximity to the viewpoint and will form large scale component of the view.</p> <p>All or majority of the proposed East Anglia TWO project will be visible in the view e.g. full towers and rotor sweep.</p> <p>The proposed East Anglia TWO project affects a large proportion of available field of view.</p> <p>The proposed East Anglia TWO project has a high degree of contrast/ low degree of integration with existing seascape/ landscape elements, in terms of scale, form, mass, line, height, colour and texture.</p> <p>The proposed East Anglia TWO project appears inconsistent; in a different</p>	<p>Small-scale change in the view resulting from loss and/or addition of features and changes in its composition.</p> <p>The proposed East Anglia TWO project is located at long distance from the viewpoint and will form a small scale component of the view.</p> <p>Limited amount of the proposed East Anglia TWO project will be visible in the view e.g. extremity of blade tips.</p> <p>The proposed East Anglia TWO project will affect a small proportion of available field of view.</p> <p>The proposed East Anglia TWO project has a low degree of contrast/ high degree of integration with existing seascape/ landscape elements, in terms of scale, form, mass, line, height, colour and texture.</p>

# Rampion 2 Sussex HLC, Field Patterns and onshore proposed route

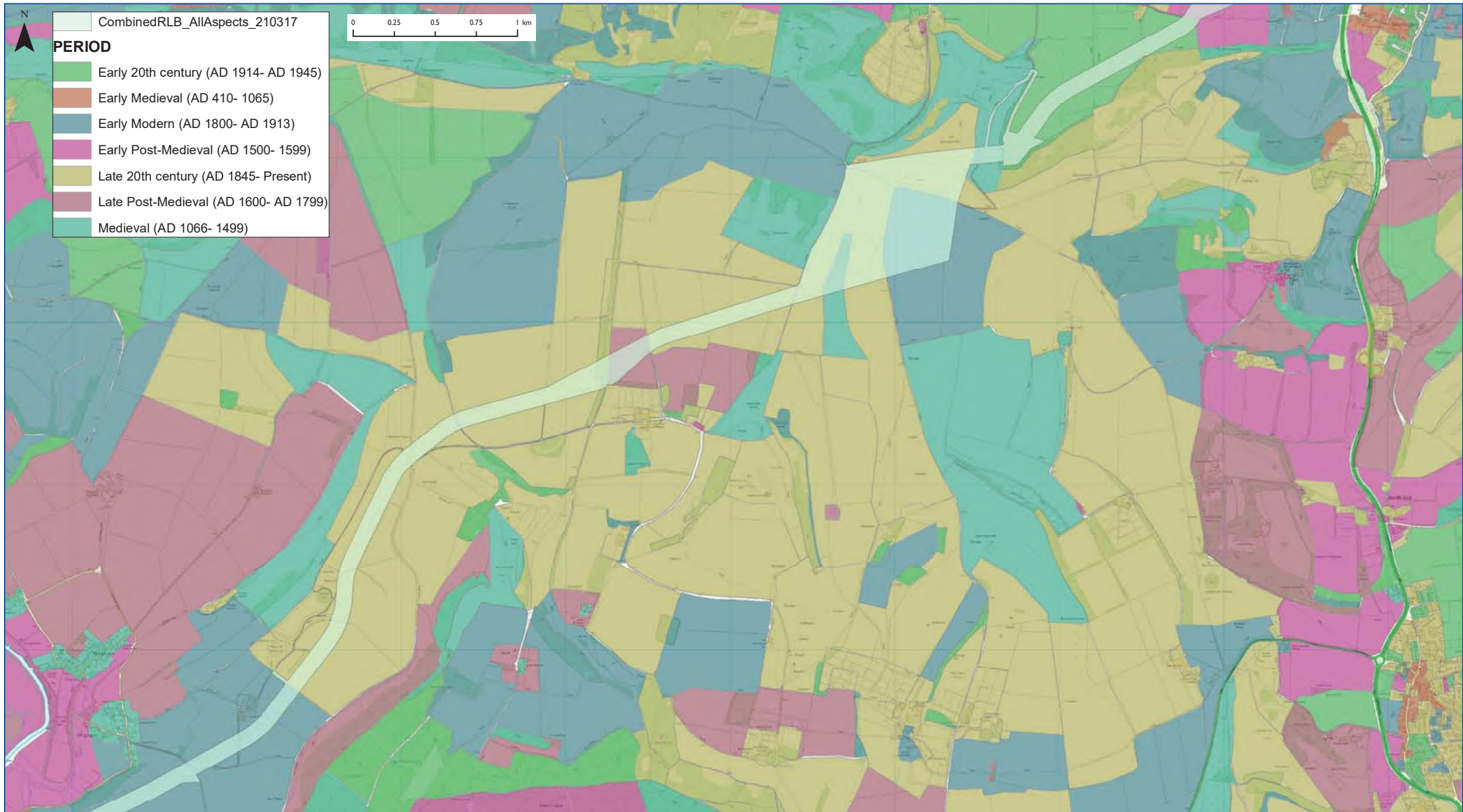


© Crown copyright and database rights 2021 Ordnance Survey 100050083.  
Source: CPRE, SDNPA

Scale at A3 1:23,170



# Rampion 2 Sussex HLC, Field Patterns and onshore proposed route



© Crown copyright and database rights 2021 Ordnance Survey 100050083.  
Source: CPRE, SDNPA

Scale at A3 1:21,912

### Maximum Design Scenario for Wind Turbine Generators

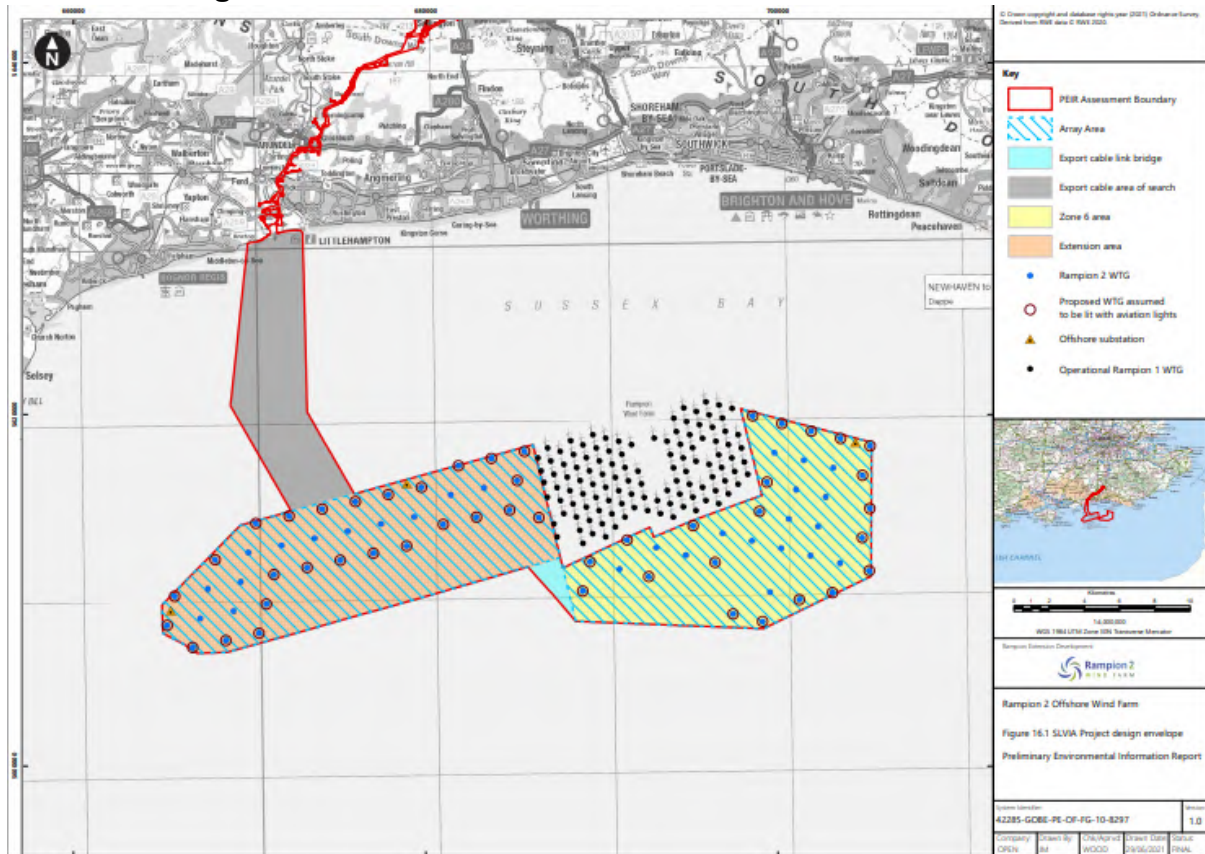
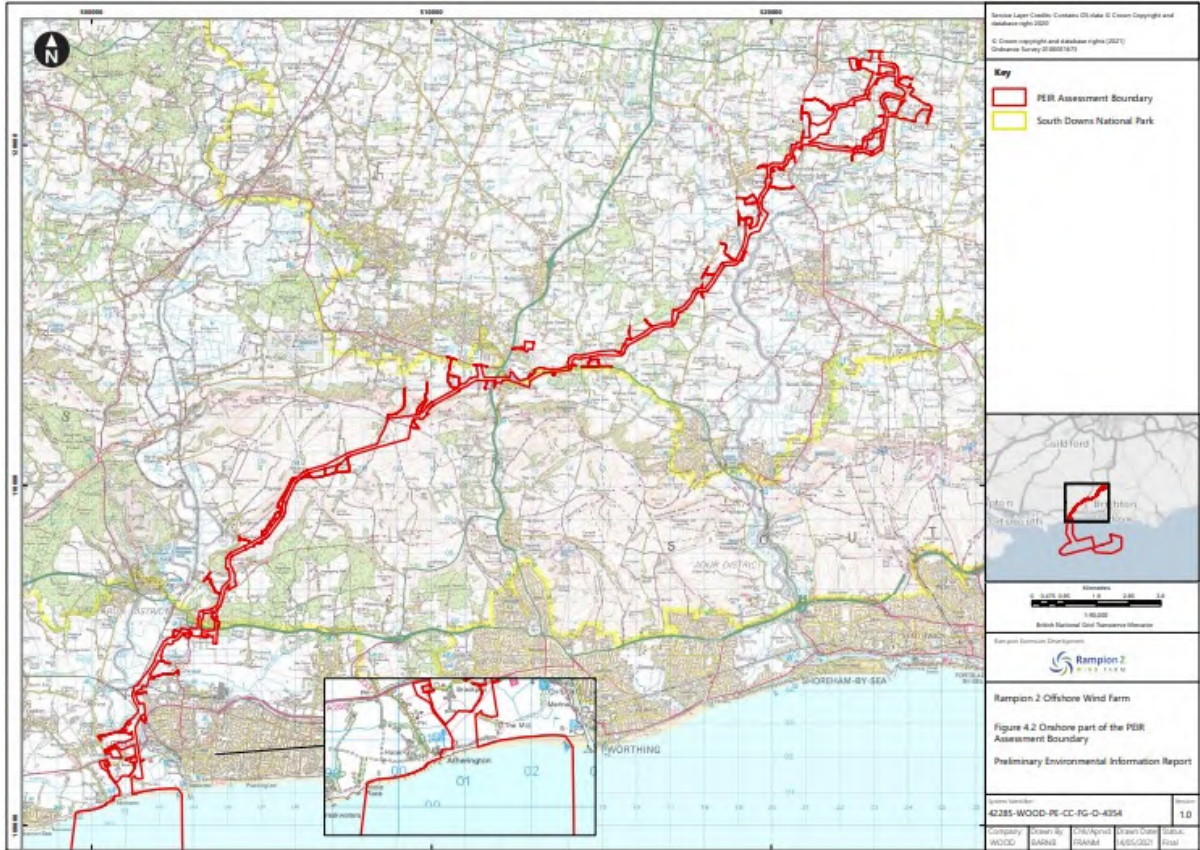


Table 4-3 WTG maximum design assessment assumptions

Assessment assumption	Smaller WTG Type	Larger WTG Type
Total capacity	1,200MW	1,200MW
Maximum number of WTG	116	75
Rotor diameter	172m	295m
Minimum air gap above Highest Astronomical Tide (HAT)	22m	22m
Maximum blade tip height above Lowest Astronomical Tide (LAT)	210m	325m
Maximum Chord (blade width)	5.4m	11m
Maximum RPM	10.5 RPM	6.5 RPM
Minimum to Maximum Blade pitch	-4 to 90 degrees	-4 to 90 degrees
Minimum turbine spacing	860m	1,720m



**Proposed Onshore Cable Route and Illustrative Section**



Graphic 4-19 Temporary cable corridor cross section

