PROTECT COASTAL SUSSEX

Examination Deadline 2 for EN010117 – Rampion 2 Offshore Wind Farm

Comment on Protect Coastal Sussex REP1-145

EN010117-000998-Rampion Extension Development Limited

Comment on Three Written Representations (Consolidated under REP1-145)

WR-1: Local Impact Assessment (LIA)
WR-2: Due Diligence on claims about the performance, benefits, and impacts
WR-3: Consideration of Alternatives in the Rampion 2 Examination

PCS Comment to the Rampion 2 Examination Authority (ExA) Deadline 2

Submitted by Protect Coastal Sussex (PCS) in affiliation with community groups and civil society organisations on the Sussex Coast and project affected inland areas

PCS: IP Registration Number: **20044835**
Submission Date: **20 March 2024**

Submitted By:

The Secretary
Protect Coastal Sussex
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On behalf of PCS Co-Chairs

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PURPOSE OF THIS COMMENT

This comment addresses concerns regarding the accessibility and consideration of three substantive Sussex community organisation representations submitted for the Rampion 2 Examination Deadline 1 of 28 Feb 2024 under Protect Coastal Sussex (PCS).

In that interest, herein we provide one-page of bullet points on each representation along with the original Prefaces and Summaries as Annexes to this comment.

That helps to ensure local perspectives of residents and communities who would actually be the ones required to "host" the Rampion 2 infrastructure are not lost or inadvertently overlooked in this Examination process.

The context is that initially, these representations were not included in the first batch of submissions published by the Planning Inspectorate (PINs) on its website in early March 2024. When they were added to the PINs Examination Library PDF later they were consolidated into a single large document as **Representation REP1-145**.

This comment is motivated by the importance of treating each community organisation representation separately, as they were submitted with their own Prefaces and Summaries, underscoring their individual significance within the Examination process.

Given the tight timeframe and volume of material involved in this Examination, and the well documented challenges faced during the developer-led pre-application consultation by residents and communities who engaged in good faith with this DCO process, we feel it is extra important and relevant that local voices are fully considered and given weight alongside other views and those of the Applicant at this important stage.

CONTENTS OF THIS COMMENT

ONE-PAGE OF BULLET COMMENT ON EACH WRITTEN REPRESENTATION

General: Guidance from the Examining Authority (ExA)

Interested Parties (IPs) in the Rampion 2 Examination were advised by the ExA that two overriding considerations in the Examination are that the Rampion 2 Application must be decided, ***"in accordance with any relevant NPS … subject to certain provisos. Essentially, the provisos are that the application must not breach legal or treaty obligations, and any adverse impact of the Proposed Development would not outweigh its benefits."***

Equally, we felt that a third overriding proviso was important and relevant, which is stated and implicit in the NPS and in wider national policy: the judgement as to whether Rampion 2 would advance, or risk undermining the achievement of sustainable development on the south coast of England and affected inland areas for both current and future generations.

Undermining sustainable development has implications for both provisos referred to by the ExA.

While we accept the Examination task is complex and multifaceted, our conclusion looking at evidence from different perspectives (local and local-to-national) is we disagree with the well-meaning, but what we see as misinformed or misplaced views that Rampion 2 should be consented at any cost. In part that is understandable due to the conflation of strong public support for renewable energy with support for this Rampion 2 proposal, as we observed in the commercial developer's consultation narrative and in the Application itself.

The evidence and analysis that we offer in three comprehensive representations indicates that consenting Rampion 2 is not in the local or national interest. It would lead to an inequitable and unfair distribution of the benefits, adverse impacts and risks in UK society, with affected coastal and inland communities bearing the adverse impacts unnecessarily.

Rather urgent attention to viable low-emission electricity generation alternatives is indicated in the evidence that we offer as a "least regret's" path to decarbonise power supply by 2035, with less risk consistent with NPS policy and as regard to critical National Priorities (CNP) in the NPS (Nov, 2023). Otherwise, respect for environmental and social safeguards should be given substantial weight in the Rampion 2 Examination in the national, wider public and local interest.

It is a matter of interpretation of policy and common sense. Here we refer to the European Landscape Convention (ELC)[1] and closely aligned UK policy, advice and law including the Offshore Energy SEA (OESEA-4, 2022) interpretation of the ELC, the Marine Policy Statement (MPS, 2021) and the Levelling up and Regeneration Act (2023).

One page of bullet points on each of the three Sussex community organisation Representations made under the Protect Coastal Sussex (PCS) umbrella are as follows.

[1] Note the European Landscape Conventions (ELC) and European Convention on Landscapes (ECL) are used interchangeable in this Comment due to translations.

WR#1: Local Impact Assessment (LIA)

- This first substantive representation offers the Examination information and evidence on how local community organisations view local impacts as well as national-to-local impacts. It cross-references corroborating information in the Principle Areas of Disagreement (PAD) Statements that reach similar conclusions, and it tracks relevant NPS provisions.
- This identifies the need to establish whether Rampion 2 is in breach of the European Landscape Convention (ELC) and the closely aligned and reinforcing UK Marine Policy Statement (MPS, 2021) and the Levelling up and Regeneration Act (LRA, 2023).
- Specifically, in terms of interpretation of an ELC breach in the Rampion 2 case, the Government's own Offshore Energy SEA programme in its latest OESEA-4 (2022) states its very objective is:

> *To accord with, and contribute to the delivery of the aims and articles of the European Landscape Convention and minimise significant adverse impact on seascape/landscapes including designated and non-designated areas."*

- We understand the OESEA visual buffer advice already interprets what is required to conform to the ELC, which means wind turbines the size and scale of Rampion 2 should be greater than 25 miles from designated landscapes and highly sensitive visual receptors. That conforms to the interpretations of the ELC in other EU jurisdictions, including German law (the WindSeeG - Offshore Wind Act, 2017), that would not permit "a Rampion 2".
- Even if the ExA were to recommend setting aside the OESEA interpretation of the ELC - which a recommendation to consent would imply - Rampion 2 challenges any reasonable interpretation of the ELC aims and aligned UK policy and law. The Levelling up and Regeneration Act (2023) specifically imposes a new active duty for such developments to enhance the designated functions of National Parks and the protection of Designated Landscapes (i.e., the South Downs National Park in this case).
- Each Chapter of our LIA otherwise provides evidence, perspective, and local knowledge that concludes there are **no net positive gains** across the social, economic or environment objectives of sustainable development due to the Rampion 2 construction and operation. We believe that should inform the judgement on whether Rampion 2 contributes to or undermines the three principal objectives of sustainable development (including Biodiversity Net Gain, BNG) a stated objective of the National Planning Policy Framework (NPPF, 2023) that is aligned to the PA (2008, updated) along with the NPS and the DCO process, and whether the combined adverse impacts of Rampion 2 outweigh its national benefits (less its national disbenefits).
- Our conclusion is that consenting to Rampion 2, poses a clear and unacceptably high risk of undermining sustainable development on the south coast and affected inland areas where we live and work; this due to its sheer scale, and the consequent location-specific significance of its adverse ecological, social and economic effects, as well as sitting in a sensitive inshore marine ecosystem and physically disrupting protected designated landscapes.
- Overall, the construction and operation of Rampion 2 risks making sensitive marine and terrestrial ecosystems already under multiple pressures even more vulnerable and less resilient to the effects of long-term climate change.
- This Application otherwise fails to recognise that as a national climate response, more UK citizens will be encouraged by government at all levels to remain on these islands for recreation and vacations to reduce their travel carbon footprints. Protecting the integrity of our natural coastal assets and designated landscapes with all its intrinsic values and national benefit for both current and future generations should be paramount and central to holistic Examination thinking.

WR#2: Local Community Due Diligence: On the Applicant's Claims about the Performance, Benefits and Adverse Impacts of Rampion 2

- This second substantive representation offers due diligence on claims made in the developer-led statutory consultations and the Application about the performance, benefits and impacts of Rampion 2 that we believe lack credibility and any evidence.
- Due diligence is routine on a £3-4 billion infrastructure investment and typically covers all aspects of benefit and risk for investors. The same principle applies to local communities who would essentially be forced to host the Rampion 2 infrastructure, if consented, and ultimately help to pay for the development costs (and opportunity costs) through local electricity bills and taxes, including the investors' commercial rate of return, incentives, risk guarantees and other costs.
- One concern is a demonstrable "chilling effect" in a planning context, which we observed suppressing the appetite for engagement in the consultations and participation in the Examination. [2] That also allowed the commercial Applicant to successfully advance a narrative which conflates strong public support for renewable energy with support for Rampion 2. We believe the Applicant significantly inflated or exaggerated local and national benefits (conscious of these effects) and at the same time, understated or underplayed the adverse impacts.
- While the chilling effect put off many people from objecting who might otherwise have objected, it also shaped the nature of comment and feedback on the proposed design and awareness of the likely scale and significance of the adverse effects that Rampion 2 would have on residents and communities in transforming the character of the area, and its impact on nature.
- In terms of understating adverse effects: These are also seen in the Principal Areas of Disagreement (PAD) Statements of statutory consultees on the environment and socio-economic effects and adequacy of proposed mitigation measures. It includes the Applicant's categorical rejection that safeguards such as the OESEA visual buffers even apply to Rampion 2.
- In terms of inflation of benefits: the Applicant claims Rampion 2 will reduce UK carbon emissions 1.8 million tonnes/yr, implying over its economic life of 20-25 years from 2030 to about 2050 (40-45 million tonnes Co2). Though in fact, the carbon benefit from Rampion 2 would only be for 5 years, 2030 to 2035, if consented.
- That is because the UK power sector is to be fully decarbonised by 2035 (NPS); thus there will only be low emission generation on the national grid from 2035 on. That will include renewables and NetZero ready gas-fired power stations with full carbon capture (and hydrogen ready) and nuclear, such as small modular reactors SMRs in the bulk generation supply mix.
- Rampion 2 thus will not displace carbon after 2035; only compete with other low emission generation sources on a price and power system impact basis – i.e., what may be needed to keep the lights on, keep the grid from collapsing and supply demand growth due to mandated electrification - and at what cost to society and the environment. Rampion 2 will simply be part of a complementary low-emission generation mix operating in a comparatively lower efficiency location for wind turbines compared to truly offshore locations (as seen in load duration curves).

[2] The chilling effect in the context of the UK's Development Consent Order (DCO) planning process for offshore wind developments refers to the dampening effect on community engagement and participation caused by perceived or actual difficulties in the planning and approval process. When communities feel that their input is not being valued or that the process is too complex and burdensome, or feel developers are not transparent or acting in good faith, they become less willing to actively engage in the planning process. This can lead to a lack of trust between developers and communities, as well as decreased willingness to cooperate, negotiate and participate. For affected inland communities it may relate to compulsory acquisition of land or rights. Chilling effect also applies to warning away potential investors due to slow or uncertain regulation. Chilling effect was entertained but not upheld due to insufficient evidence in a windfarm High Court Judicial Review in 2022.

WR#3: Consideration of Alternatives in the Rampion 2 Windfarm Examination

- This third representation responds to a case-specific policy requirement in the Rampion 2 Examination (to assess, "*the cost of, and scope for, developing all or part of the development elsewhere outside the designated area, or meeting the need for it in some other way*)", u*nder "Developments Proposed within Designated Landscapes"*, EN-1 (2011) paragraph 5.9.10. The assessments are to be made under NPS, EN-1, Section 4.4, "*Alternatives".*
- This is because Rampion 2 affects nationally designated landscapes, both physically and visually (i.e. adversely affecting the statutory functions of the SDNP (which objected to Rampion 2 on these and other grounds). The Levelling up and Regeneration Act (2023) also applies.
- Consenting Rampion 2 means accepting an inefficient location for wind generation in respect to indicators such as lower wind energy density, and lower capacity factor leading to less power output[3] at a cost of £3-4 billion to be repaid via consumer power bills and taxes. Rampion 2 has serious economic opportunity costs, including those from needing to import incrementally more liquefied natural gas (LNG) from international markets (with high carbon emissions in processing and transport) together with incrementally more import of costly power from the Continent (neither being the best help for UK energy-self reliance).
- At the same time, there are practical and viable alternatives for low emission generation to feed the National Grid over the same economic life of Rampion 2 and longer, which can do more for less money than Rampion 2. Among these alternatives are those that the UK Government calls "game changers", which do more to achieve decarbonisation of the power sector by 2035 and are now identified as critical national priorities (CNP) in the NPS (Nov, 2023).
- We identified three alternatives for the required NPS Section 4.4 assessment and conformance to CNP.[4] We then offer a simple benchmarking and ranking exercise as a way to help break down and understand the national benefits and disbenefits of Rampion 2 in the Examination. [5]
- For the 11 NPS-relevant indicators assumed, as set out in the WR#3:
  - Extending a recent offshore wind licence on Dogger Bank to include the equivalent capacity (GW) of Rampion 2, where turbines will be more efficient. The indication is that it would lead to 1.3 times more national benefit than Rampion 2. Economies of scale are also possible, if not likely. Plus there is also potential to link to an offshore ring grid to minimise on-shore transmission and facilitate connection to EU grids for more advantageous 2-way power trade.
  - Retrofitting an existing natural gas-fired power station with carbon capture (CCGT/CC) and adding Rampion 2 equivalent new capacity at that site (or at a replacement power station fitted with CC, or a new power station with CC) in the south where existing transmission and gas infrastructure is already in place; with multi-fuel capability to switch to hydrogen when it is available. That would lead to 1.7 times more national benefit than Rampion 2.
  - Co-locating a small modular reactor (SMR) at a decommissioned large nuclear site or at an existing / under construction nuclear site, or a decommissioned coal-fired or gas-fired power station site in the south could lead to twice the national benefit as Rampion. Power connections are already there to reduce transmission needs. That can bring the UK genuine home-grown technology, industry, export, and job creation benefits; and give the UK real capacity to help developing countries on their low emission journeys.

[3] Subject of a separate PCS Deadline 2 representation as "Comment on the Applicant's Response in REP1-018 to the ExA's Action Points Arising from Issue Specific Hearing 1 (ISH1) - Item 2: Applicant to make a response in detail as to the level of wind resources in the Channel (Sussex Bay Inshore).

[4] NPS guidance was "… three key elements of the Government's strategy for moving towards a decarbonised, diverse electricity sector by 2050: (i) renewables; (ii) fossil fuels with carbon capture and storage (CCS); and (iii) new nuclear". NPS (Nov, 2023) designates each as Critical National Priorities (CNP).

[5] In the absence of power system value modelling (which we argue for) this technique uses Rampion 2 as a baseline to rank order the options, thus qualitatively benchmarking Rampion 2 against the three alternatives.

ANNEXES

Annex 1: Preface and Summary PCS WR #1

Local Impact Assessment (LIA)

PREFACE

Many Residents firmly believe that the industrial transformation of our south coast by the proposed Rampion 2 wind-farm development would disproportionately and adversely affect people and the environment on the coast of West Sussex and affected inland areas.

Moreover, it would degrade our designated landscapes and inevitably our natural capital, in the process, making it even less resilient to climate change.

Given not all windfarms are the same and must be examined case-by-case, we assert that the evidence clearly indicates this Rampion 2 Application systematically understates its likely adverse and cumulative impacts across the social, environmental, and economic objectives of sustainable development. It overstates the national benefits, and it ignores national disbenefits.

In fact, that same pattern of claims is clearly seen looking at the DCO Examination Reports of two previous south coast windfarm applications and the respective Secretary of State Decision Letters; namely for: the existing Rampion 1 wind-farm installation consented in 2014, and the Navitus Bay Wind Park application refused consent in 2015.

We argue the evidence shows that overall the adverse impacts far outweigh its national benefits. Local benefits are certainly limited and temporary and far outweighed by adverse local impacts.

We believe it is important and to consider in the Examination whether the Rampion 2 infrastructure is in breach of the European Landscapes Convention (ELC) and closely aligned and reinforcing UK Marine Policy Statement (MPS 2021) and the Levelling up and Regeneration Act (LURA, 2023).

Specifically, in terms of interpretation of any breach of commitments in the Rampion 2 case, the Government's own Offshore Energy SEA programme in its latest OESEA-4 (2022) states that its very objective is, "To accord with, and contribute to the delivery of the aims and articles of the European Landscape Convention and minimise significant adverse impact on seascape/landscape including designated and non-designated areas."

The UK Government's own strategic environment advice, to be in accord with the ELC, is to provide visual buffers of 25 miles for turbines of the scale proposed for Rampion 2, up to 325m tall. That is higher than the 310m Shard building in London – up to 90 of them – If we could even imagine that infrastructure development along the Thames River?

Those concerns are dismissed outright by the Applicant as being irrelevant. The double irony is that the £3-4 billion Rampion 2 scheme, as proposed by the Applicant, a German-based multinational, would not be permitted under German law (the WindSeeG - Offshore Wind Act, 2017)!

This community-led Local Impact Assessment (LIA) is a highly collaborative effort that brings together local perspectives, knowledge, and multi-disciplinary evidence. It indicates that the Rampion 2 development risks undermining, rather than supporting the achievement of sustainable development on the south coast and affected areas.

Moreover, Rampion 2 would lead to net biodiversity loss both offshore and onshore. Those disruptions, many of which cannot be mitigated, would leave fragile ecosystems and natural capital even more vulnerable to multiple pressures – including long-term climate change.

Herein, we identify a range of adverse local effects across the mutually reinforcing social, environment and economic dimensions of sustainable development where net gains are to be achieved for each objective – for such infrastructure to be legally considered as sustainable and contributing to sustainable development. We cross-reference our concerns with those local effects with similar concerns that statutory consultees set out in their Principal Areas of Disagreement Statements (PADS) in Nov 2023, which also reflect their previous consultation responses and many Relevant Representations made in the Pre-Examination period.

We believe the evidence indicated that consenting Rampion 2 poses an unacceptably high risk of undermining, rather than advancing the achievement of sustainable development on the south coast and affected inland areas. That is due to the nature, sheer scale and location-specific significance of its adverse environment, social and economic impacts.

Stepping back, the UK is now preparing for a low-carbon future, where UK residents will be increasingly encouraged, even required, to limit travel abroad for recreation, vacations and to pursue new less carbon-intensive ways of life - at least for the foreseeable future. We will be encouraged to spend more time and money visiting, exploring, and enjoying our natural coasts and seascape.

As a caring and responsible society and for common sense future proofing, we should not despoil, put at risk or otherwise degrade these natural assets. They are a wonderful natural and heritage endowment for the enjoyment of current and future generations. We are all responsible for care-taking our environment as well as promoting local environment stewardship. We must respect, and heed national environmental and social safeguards put there to avoid unnecessary local harms as well as national self-harm and national disbenefit.

We sincerely hope the Rampion 2 Examination Authority will give these local concerns that we and others offer the substantial weight they deserve in framing their recommendations to the Secretary of State.

Apart from what we see through the OESEA is an apparent breach of commitments under international conventions and aligned UK policy and law, we believe that refusing the Rampion 2 Application development consent would be profoundly in the local, wider public, and national interest. This is also given the national benefit that alternatives for more efficient and dependable low emission generation are available, and these alternatives are now designated as critical national priorities in the NPS (Nov, 2023) update.

Moreover, the threat Rampion 2 poses to the achievement of sustainable development on the South coast and affected inland areas and the forcing of area residents to be “host communities” is avoided. We feel that is unfair as benefits and costs need to be share equitably in society in the energy transition.

SUMMARY

Community-Based Local Impact Assessment (LIA)

Rampion 2 Windfarm Application (Project Reference: EN010117)

The Development Consent Order (DCO) Application for the 1,200 MW Rampion 2 windfarm proposal of the south coast of England submitted by the German-based multinational (RWE) in August 2024 was accepted for Examination by Planning Inspectorate (PINs) in early September 2023.

In the Applicant's PEIR 2021, the estimated development cost of Rampion in 2019 cost terms is £2.87 billion. Escalating market prices for these turbines (20-30%) in the past few years and dramatic construction cost escalations of late suggest the development cost of Rampion 2 through to 2030 or more would be closer to £3-4 billion.

Guidance from the Examination Authority

2-1. As Interested Parties (IPs) we were advised by the ExA's Rule 6 Letter that two overall or overriding considerations in the Examination are that the Rampion 2 Application must be decided, *"in accordance with any relevant NPS, "... subject to certain provisos. Essentially, the provisos are that the application must not breach legal or treaty obligations, and that any adverse impact of the Proposed Development would not outweigh its benefits*."

2-2. We feel it is important and relevant to note a third overarching consideration or proviso that is implicit in the NPS and national policy. That is the question as to whether Rampion 2 would advance, or risk undermining the achievement of sustainable development on the south coast of England and affected inland areas for both current and future generations.

2-3. In the interest of simplifying what is accepted to be complex and multi-faced, we see this is the sustainable development lens is important to consider local impacts.

2-4. We thus see a trio of overriding and overlapping NPS policy issues as critical to inform the societal decision on whether to consent or refuse consent on the Rampion 2 Application or whether to advance alternatives for low emission alternatives that offer the same or greater national benefit as Rampion 2, with less cost and a smaller footprint.

Core values and key community concerns on local impacts

At the heart of local community concerns about this Application include a number of substantive ones. The statements here in the Summary are supported by argument, research, local knowledge, perspective, and hard evidence offered in topic-specific Chapters that follow in the main LIA and its Attachments.

Where possible, we cross-reference the local impacts we highlight with corroborating information and views in Principal Areas of Disagreement (PAD) Statements of statutory consultees and the Relevant Representations of interested Parties.

We also cross-reference relevant representations by Interested Parties, as well as how we see the relevant National Policy Statements (NPS) are best interpreted and applied in the Rampion 2 case.

Substantive Concerns on overriding considerations:

1. Whether the Rampion 2 breaches international treaty obligations and aligned UK national policy, advice, and law.

- This consideration applies to both the proposed design and location of the offshore and onshore infrastructure elements of Rampion 2.

In the case of the offshore infrastructure:

- Whether the Rampion 2 is in breach of the European Convention on Landscapes (ECL) and closely aligned and reinforcing UK Marine Policy Statement (MPS 2021) and the Levelling up and Regeneration Act (LRA,2023), as set out in Chapters 2 and 3.
- Specifically, in terms of interpretation of an ECL breach in the Rampion 2 case, the Government's own Offshore Energy SEA programme in its latest OESEA-4 (2022) states its very objective is, "To accord with, and contribute to the delivery of the aims and articles of the European Landscape Convention and minimise significant adverse impact on seascape/landscape including designated and non-designated areas."
- The OESEA updated its strategic environmental advice on visual buffers in 2020 to meet that ECL objective based on a comprehensive review of domestic and international experience at policy, spatial area planning and project levels in that regard.
- As we know the Rampion 2 design is clearly "off the scale" at the extreme end of the visual impact spectrum as regards to protection of areas of natural beauty, designated landscapes, and people (residents and visitors).
- Even if the ExA were to recommend setting aside the OESEA interpretation of the ECL, which a recommendation to consent would imply, Rampion 2 challenges any reasonable interpretation of the ECL aims and aligned UK policy and law.

In the case of the onshore infrastructure:

- The proposed Rampion 2 transmission route through (and disrupting) designated landscapes such as South Downs National Park (SDNP) clearly challenges its statutory objectives and functions and the Levelling up and Regeneration Act (2023)
- We very much appreciated the interest the ExA showed in the Topic Specific Hearing Days 1 and 2 in that respect (i.e., avoiding SDNP) and the relevant NPS policy requirement EN-1 Section 4.4 for the consideration of Alternatives in this Examination.
- As highlighted by the ExA's Rule 6 Letter, we feel these are highly important and relevant matters that should be given substantial weight in the Examination.

2 The adverse impacts of Rampion 2 would demonstrably outweigh the National benefits. Adverse impacts will be felt by both current and future generations of

residents and visitors, as well as wider UK society nationally in the form of opportunity costs.

- We believe a judgement on whether "adverse impacts outweigh National benefits" needs to balance considerations using clear criteria and quantitative metrics to the extent possible, on both sides of the equation (adverse impacts and benefits). The criteria should be explicit, understandable to stakeholders and transparent.
- In relevant representations it was argued as we do in this LIA:

To weigh Adverse Impacts:

- Sustainable development is an important lens to consider adverse impacts across social, economic, and environmental dimensions and consider whether they are "net positive" in each dimension. That resonates with the 3rd overarching criteria in this Summary, that of contributing to the achievement of sustainable development - not undermining it.

To weigh national benefits:

- National benefits need to be broken down and considered in respect to the underlying aims of National Policy Statements, not done superficially as a "tick box" exercise such as if it is green and offshore the benefits automatically outweigh adverse impacts.
- In many relevant representations it was argued that judgement is best informed by a proper system value analysis to calibrate and measure the contribution to the National benefits with metrics for the National benefits explicitly specified in NPS.
- System value analysis modelling of with and without the proposed development, together with quantitatively benchmarking the economic value (and national benefits) against alternatives is offered in other DCO (Energy) Examinations.[6]
- There are also disbenefits at the national level to consider, such as the opportunity cost of not pursuing other critical national priority (CNP) infrastructure for efficient low emission supply that would offer the same, or more national benefit across all policy metrics in the NPS, and at less cost to society than Rampion 2.

3. ***Consenting to Rampion 2 poses an unacceptably high risk of undermining, rather than advancing the achievement of sustainable development on the south coast and affected inland areas. This is due to the nature, sheer scale and location-specific significance of its adverse environment, social and economic impacts.***

- Sustainable development is the stated "objective of the UK planning system" as noted in the National Planning Policy Framework (NPPF, 2023). It connects UK policy from international level commitments and treaties to National and down through local planning and development policies.
- Sustainable development is interpreted in policy and in NPS EN-1 (2011, Overarching):
- Ensuring balance across mutually reinforcing environment, social and economic objectives to achieve net gains under each objective.

[6] Teesside Net Zero Carbon capture power station DCO Examination.

- EN-1 Para 2.2.4, *"It is important that …. the planning system ensures that development consent decisions take account of the views of affected communities and respect the principles of sustainable development."*

- and EN-1 Para 2.2.7, *"The Government's wider objectives for energy infrastructure include contributing to sustainable development and ensuring that our energy infrastructure is safe … Sustainable development is relevant not just in terms of addressing climate change, but because the way energy infrastructure is deployed and affects the well-being of society and the economy. For example, the availability of appropriate infrastructure supports the efficient working of the market to ensure competitive prices for consumers."* [7]

Figure 1: Sustainable Development

- Each of the LIA Chapters provide evidence, perspective, and local knowledge in respect to whether there are net positive gains across each dimension to better calibrate whether Rampion 2 contributes or undermines the principal objection of sustainable development.

Additional substantive considerations

Other considerations emerging from this community base LIA work that we feel are important and relevant to the Examination include.

4. The inshore location in Sussex does not respect the Government's own strategic environmental advice on where to put exceptionally large turbines such as Rampion 2 to avoid unwarranted multiple social, environmental, and economic harms in coastal areas and undermine the protection of designated landscapes.

- This links to the overriding consideration of whether the offshore infrastructure is in breach of the European Convention on Landscapes and aligned UK policy and law.
- The UK's OESEA strategic environmental advice for locating large wind turbines, for the Rampion 2, case means providing a visual buffer of 25 miles (40km) from designated landscapes and highly sensitive visual receptors on the shore.
- The Applicant's (ES) repeatedly dismisses the UK Government's OESEA advice as essentially irrelevant and as being only, "*a high level 'buffer' study … it is a strategic tool and is not guidance or a roadmap for placing of wind farms …*".

5. Comparisons of the local impact and public acceptance of the proposed Rampion 2 development with the far smaller Rampion 1 installation lack credibility and merit.

[7] The latter (competitive markets) also refers to the cost of electricity services. Thus, the social and socio-economic dimension includes the impact on local tariffs in turn that leads to considerations of value for money and generation efficiency, as we address in the LIA in Chapter 5 on economic effects and in companion Written Representations.

2 There is no equivalence of 400Mw Rampion 1 and 1,200 MW Rampion 2 infrastructure as consistently claimed by the Applicant.

3 Rampion 1 turbines are 140m tall versus Rampion 2 turbines up to 325m - not only 2.5 times taller, but also wider in profile and far more visible. Rampion 2 would also have far greater occupation of the horizon (spread along the coast) and greater occupation of the sea area (km 27.5 km2 for R1 versus 75 km2 for R2)

4 There are cumulative impacts of Rampion 2 on top of Rampion 1 to consider across all dimensions of sustainability, including ecological, social and economic opportunity costs not only visual impacts that dramatically transform the character of the area.

5 We argue that lessons from the Examinations of the other two DCO Applications for windfarms on the south coast: Rampion 1 (consented in 2014) and the Navitus Wind Park (refused consent in 2015) are helpful points of reference for this Examination.

6. As cited in the PAD Statements there is high risk, uncertainty, and high probability that conservation benefits claimed in the Rampion 2 Environmental Statement (ES) will not be achieved due to limited, weak, or ineffective mitigation measures. There are considerable concerns about the adverse impacts on biodiversity due to the construction and operation offshore and onshore infrastructure

- Among these concerns we reinforce and agree with include those cited in PAD Statements by Natural England (NE) and the Marine Management Organisation (MMO).
- We believe the evidence clearly indicates construction and operation of Rampion 2 will degrade the natural capital on the Sussex Coast and affected inland areas already under multiple pressures.
- We, like others, believe Rampion 2 will adversely set back current efforts for nature and natural capital improvement now underway in the south, including kelp restoration after the ban on inshore trawling and biodiversity improvement efforts on land such as interrupting biodiversity corridors, as cited in Relevant Representations.
- Moreover, there is probable risk the 4–5-year construction and subsequent 20–25-year operation will lead to net biodiversity loss in the coastal marine environment, as well as in the air affecting migrating birds and flying insect populations moving cross-channel in massive numbers, the latter linking to loss of pollination services on both-sides of the channel and ultimately impacting food security. It is a cumulative impact.
- Overall, the construction and operation of Rampion 2, because of its unique setting, risks making sensitive marine and terrestrial ecosystems even more vulnerable and less resilient to long-term climate change.

7. Consideration of alternatives for low emission generation is a case-specific policy requirement for the Rampion 2 DCO Examination.

- Rampion 2 encroaches nationally designated landscapes, both physically and visually eroding natural beauty (i.e. adversely affecting statutory functions of SDNP (where SDNPA has objected to Rampion 2 on these and other grounds).

- EN-1 para 5.9.10, stipulates*, "The development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of: … the cost of, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way, taking account of the policy on Alternatives set out in Section 4.4".*
- The Section 4.4 assessment can be rapidly facilitated by and efficiently accommodated in this Examination with system value modelling as mentioned under consideration 2 in this Summary. That in turn helps the EN-1 1.1.2 calculation on "whether adverse impacts outweigh benefits ", by providing an approach, metrics, and information to better inform discussion and ExA judgment on that aspect, as is warranted for a £3-4 billion investment commitment. Including opportunity cost as discussed in Chapter 5.
- It speaks to value for money on how the £3-4 bn is to be directed by the DCO process in the local and national public interest.

8. The Applicant otherwise fails to recognise that as a national climate response more people will be encouraged by governments at all levels to remain on these islands for recreation and vacations to reduce their travel carbon footprint.

- *Hence protecting the integrity of our natural coastal assets with all its intrinsic values and national benefit, and designated landscapes should be paramount and central to holistic thinking in the Examination.*
- *It means, as we argue, respect for the full application of available environmental and social safeguards such as the OESEA visual buffers advice should be given substantial weight in the Rampion 2 Examination in the national, wider public and local interest.*

Annex 2: Preface and Summary PCS WR #2

Due Diligence on claims about the performance, benefits, and impacts

PREFACE

This Representation offers due diligence and perspective to help the Examination Authority (ExA) and Interested Parties (IPs) consider the Rampion 2 Application.

Due Diligence is routine on a £-3-4 billion infrastructure investment. It typically covers all aspects of the benefits and risks for investors. The same principle applies to local communities who would essentially be required to host the Rampion 2 project, if consented, and ultimately pay for the development costs through local electricity bills and taxes, including the commercial investors' rate of return, the cost of investor incentives, public risk guarantees and the CfD subsidy.[8]

We view this as important and relevant in the Rampion 2 case, especially considering how Rampion 2 proceeded through a pre-Application process that was so challenging for everyone, not the least including Covid-19 restrictions on meetings and social interactions.

The purpose and relevance of this written representation is thus threefold.

1. To highlight what many see as the Applicant's claims about performance, benefits, and adverse impacts of Rampion 2 infrastructure that we believe lack credibility, and thus mislead and misinform stakeholders;
2. To highlight how that contributed to what we witnessed as a "chilling effect" in the planning context. That is where residents, groups and organisations ended up less informed about the actual project being assured that it is a simple extension to an existing installation. As one consequence many were disinclined to object, or to even participate in the DCO process; and
3. To otherwise help inform the key judgment the ExA will make on whether the "adverse impacts of Rampion 2 outweigh its national benefits".

This is one of three Written Representations that Protect Coastal Sussex (PCS) offers the ExA and all stakeholders to help in the complex task of weighing and balancing the benefit-risk tradeoffs of the Rampion 2 Application.

We sincerely hope the Examination Authority can consider the facts and perspective offered herein to inform its recommendations to the Secretary of State.

[8] Contract for Differences (CfD) is the subsidy that replaced the Renewable Obligation Subsidy in 2017 for commercial offshore wind developers. The upward limit of the CfD was raised by the UK Government by 66% in Sept 2023.

SUMMARY

Due Diligence on claims about the performance, benefits, and impacts

This written representation offers a due diligence on claims the Applicant has made in statutory consultations and in the Application about the performance, benefits and impacts of the proposed Rampion 2 windfarm development that we believe lack evidence and credibility.

Some significant claims are concerning in several important respects, one of which is the demonstrable "chilling effect", in a planning context, that we observed on the appetite for engagement in the Applicant-led pre-application consultations, as well as to influence whether people registered as interested parties for the Examination to contribute in a meaningful way.

While that chilling effect served to put off many people from objecting who otherwise might have objected, it also shaped the nature of comment and feedback on the proposed design, as well as actual awareness of the likely scale and significance the adverse impacts Rampion 2 would have on residents and communities, the character of the area and nature.

The concerns are both in terms of where we believe the Applicant has significantly inflated or exaggerated the benefits in terms of the performance of the infrastructure and role in the power system given its variable output, and at the same time, understated the adverse impact.

The understatement of adverse impacts is reflected in a number of the Principal Areas of Disagreement (PAD) statements of statutory consultees. There is a Local Impact Report (LIR) mechanism to address adverse impacts. The exaggeration of performance in terms of power and energy and carbon reduction, where most of the benefits derive, is a more problematic issue.

Benefits are largely "assumed" and ride on the fact we all want more renewable and low emission generation. Moreover, the Applicant's claims as regard to national benefit have gone without scrutiny and accepted at face value unchallenged. [9] What the developer claimed is not challenged, and its narrative was free to shape what people's impressions of the Rampion project are today.

<u>On the inflation of benefits of Rampion 2:</u>

Up to the time of the Application, the applicant was indicating the power benefits were that Rampion 2 would supply the power requirements of Sussex, across all sectors. This claim was made in project community liaison group (PLG) meetings consisting of town and parish council representatives and undoubtedly also in the remote online briefings to Councils and other statutory consultees.

When in reality, at times there would be no output or very low power at all, while at other times there would be full capacity supply.

[9] There was no opportunity to really challenge or refute the claims made about the likely national benefits in the pre-application consultations being Applicant-led, where authorities at all levels remained silent for various reasons including the need for impartiality. Questions raised in that regard were ignored by the Applicant. The Reality is very few people in the statutory consultant groups or the ExA have technical expertise or experience to enable them to scrutinize the benefit claim areas such as power system benefits, or impacts on power system price or actual effects in respect to reliable and secure power supply and the inherent intermittency of Rampion output.

When the Application was filed the benefit claim changed in the Applicant's Press Release to "*Rampion and Rampion 2 combined will be able to power the equivalent of all of the homes in Sussex twice over".* Which would also be nice, if true; but of course at times no or little output is available, whereas at time more power.[10] We present information on that aspect in the main part of this Representation and in the Annexes.

There were also claims about that number of households supplied, cited in the promotion literature and on the Applicant's website that are based on national figures for average annual household electricity use, not figures where West Sussex annual household demand is 33% higher than the national average. Thus, the million households served would be 30% lower. Due diligence would also question whether the Applicant has taken into account the increase in electricity needed per household due to mandated electrification space heating (electric heat pumps) and the charging of electric vehicles (EVs); either nationally or in Sussex.

A far more significant aspect is the Applicant claims Rampion 2 will reduce UK carbon emissions by around 1.8 million tonnes/yr, implying that is every year over its economic life. Rampion 2 will operate 2030-2050 or so, then be decommissioned or replaced after a 20-25 years of economic life. Though in fact, using standard methodologies the carbon benefit from Rampion 2 would only be for 5 years, 2030 to -2035, if consented.

That is because the UK power sector is to be fully decarbonised by 2035 (NPS). There will only be low emission generation supplying the national grid from 2035 on. That will include renewables and NetZero read gas-fired power stations with full carbon capture [11](and hydrogen ready) and nuclear such as small modular SMRs in the mix).

Rampion 2 will not displace carbon after 2035. In those terms, Rampion 2 will only compete with other low emission generation sources on a price and power system impact basis – i.e. what may be needed to keep the lights on, the grid system from collapsing and at what cost to society and the environment. It is not a nuanced point. Rampion 2 will simply be part of a complementary low-emission generation mix.

As to the claims about CO2 reduction over its life, due diligence would suggests that, as Rampion 2 only offers 5 years of carbon emission reduction benefit (2030 to 2035), the calculation of all the imbedded co2 in Rampion 2 in the mining, processing, smelting, manufacture, construction, operation and maintenance would be helpful. That would help understand if greater or lesser CO2 emissions are imbedded than the 5 years savings (10 million tonnes at the assumed 2 million tonnes Co2 a year to 2035 (i.e., considering the quantum of rare earth and critical minerals mined and steel and concrete involved in turbines and the offshore and onshore works).

That is important again in due diligence on the Applicant's claim that Rampion 2 is essential to save nature and ecosystems by reducing carbon emissions, as in its promotional literature. There is a trade-off against the disruption and harm to ecosystems that construction and operation entails, where all adverse ecological impacts, marine and terrestrial, certainly cannot be mitigated as accepted in the NPS and PAD Statements.

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[10] Load duration curves show 15% of the time equivalent on average to 1 day a week there is no power from Rampion 1. 40% is equivalent to nearly 5 months (4.86 months) that Rampion 1 output is less than 40% of its installed capacity. Rampion 2 located in the same wind regime will perform similarly though slightly better due to its larger size.

[11] Also called abated gas-fired generation. Abated meaning no carbon emissions from gas turbines as a point source emitter similar to the NetZero 750 MW Teesside power station consented in Feb 2024. Gas turbines may be hydrogen ready and otherwise multi-fuel.

PCS argues in our companion Local Impact Assessment (LIA) with evidence that Rampion 2 in fact will leave fragile inshore marine ecosystems on the South Coast that are already under multiple pressures even less reliant and susceptible to long term climate change.

The evidence as seen in load duration curves and capacity factors of Rampion 1 since commissioning in 2017 which show that the Sussex Bay inshore is a lower wind regime relatively, and that wind turbines here are less efficient in power output with longer periods of little or no output.

What that means as regards to Energy Security and energy self reliance, is Rampion 2 would need more back up to keep the lights on to avoid grid collapse. Thus, for the foreseeable future and well beyond 2035 this will lead to relatively more imported energy to back Rampion 2 than for turbines in a more favourable wind regime: whether that back up is through more price-volatile liquefied natural gas (LNG) imports from Qatar or the USA, or more imports via undersea cables from the continent.

In either case, that has adverse energy security and energy self-reliance effects leaving the UK more reliant on the behaviour of other states and volatile European and international energy markets. It increases the opportunity cost of consenting Rampion 2 that cascades down to place upward pressure on local household energy bills.

Again, the concern is the chilling effect in a planning context, to the extent those claims made in all the Applicant's marketing material and the local media repetition of the Applicant's messaging had on suppressing feedback and essential and informed critique of the Rampion 2 proposal.

On Understating of Adverse Impacts

Detailed concerns about the scale and significance likely social, environmental and economic impacts and the efficacy of the mitigation measure will be addressed in the statutory LIRs and in community written representations such as the PCS LIA. We appreciate that the ExA is very much attuned to those concerns as seen in the first hearings in Brighton in Feb 2024.

There are also some big narrative-setting claims relating to adverse impacts that lack credibility, which again speak to the chilling effect in the planning context. These included what we see is misrepresentation of the scale of the potential impacts on residents and local communities, and how the Applicant responded to consultation comments that serve to limit awareness and the prevalence of objections.

To illustrate, the Applicant was to offer a "worst case" scenario for statutory consultation using what is called the Rochdale Envelope as set out in the Planning Act (2008) and NPS.

The Preliminary Environment Impact Report (PEIR, 2021) offered two 'worst-case' scenarios for stakeholders to consider: either 75 large turbines each 325m high **or** 116 turbines each 210m high. The Applicant announced its commercial preference after consultation was to have up to 90 turbines up to 325m tall - 20% over the worst-case of 75 larger turbines consulted on. Yet that was promoted by the Applicant and in local media as reduction from 119 turbines to 90 turbines.

We believe that the jump from 75 to 90 turbines at 325m is well outside the flexibility allowed for use of the Rochdale Envelope, which is NPS and Planning Act relevant. This fact was also picked up in the Planning Inspectorate (PINs) Section 51 Advice Note to Applicant issued at the same time the Rampion 2 was accepted for Examination in early Sept 2023 as seen on the PINs website.[12]

[12] PCS details those concerns in the companion representation on the local impact assessment in chapter 1.

Much was also made by the Applicant of the reduction in sea area to be covered by Rampion 2, claiming that was a response to consultations.

In the case of Rampion 2, these areas have come out at 315km sq, 270Km sq and 160 m sq respectively, a normal narrowing process to be expected and has little or nothing to do with listening to consultations. In fact, the existing Rampion 1 wind farm followed the same process where the "scoping "area of 167km sq, was reduced to 122 km sq (PEIR) and then to 72km sq at the DCO stage. That same is true for all windfarms.

We do appreciate that the Applicant accommodated some of Natural England's (NE) concerns about providing a gap between the existing arrays and Rampion 2 due to the considerable size differences and other shipping and recreational boating access reasons. And the slight reduction in the westward expansion of the Rampion 2 arrays along the Sussex Bay past Bognor Regis.

However, the application was not dramatically reduced in scale, or almost halved, as claimed in the Applicant's marketing campaign and repeated in local media.

On conforming to policy, law and guidelines

A further overall concern raised constantly by residents and statutory consultees was the fact that the Applicant argued repeatedly in statutory consultations and continued in its Environment Statement (ES) that the UK Offshore Energy SEA visual buffers did not apply to Rampion 2.

PCS also addressed that in the companion LIA submission where we show it is abundantly clear that the European Convention on Landscapes (ECL), the OESEA visual buffer advice, the Marine Policy Statement (MPS, 2021) and the new Levelling-up and Regeneration Act (2023) all come to play in the consideration of Rampion 2. They reinforce the connection between landscapes and seascapes as indivisible and being afforded equal protection.

The Applicant categorically and emphatically does not recognise the OESEA as applicable.

Specifically, in terms of interpretation of any breach of legal commitments in the Rampion 2 case, the Government's own Offshore Energy SEA programme in its latest OESEA-4 (2022) states that its very objective is, "*To accord with, and contribute to the delivery of the aims and articles of the European Landscape Convention and minimise significant adverse impact on seascape/ landscape including designated and non-designated areas*."

It was frustrating to many residents expressing serious concerns in this regard that the Applicant dismissed these outright with slogans such as, "beauty is in the eye of the beholder". That was throughout the pre-application consultations. We believe it served to reduce scrutiny and objections and was repeated in print and social media.

Summary due Diligence Conclusions

This due diligence is from the perspective of community organisations that have proactively and in good faith, engaged in the Rampion 2 DCO process from early 2021. It is what we witnessed and experienced and have taken the time to put on paper on various occasions.

Overall, we feel the chilling effect in a planning context had a material impact on reducing meaningful feedback during the application consultation and it limited actual and effective stakeholder participation in the Examination itself to a measurable degree from speaking to others or Community and Councillors – essentially why bother, if its is just a simple extension to the existing installation as claimed.

It is also important to recognise that many residents remain unaware of the scale of the proposed development or the likely significance of the impacts, or the project development costs (£ 3-4 billion) or the environmental and economic opportunity costs both in terms of the national economy, which we believe are considerable and quantifiable, or the cascading effects that will have including upward pressure on household electricity bills for a long time.

There is also total confusion and we sense obfuscation, over the legal status of the proposed Rampion design in respect to the European Convention on Landscapes (ECL) and in particular the OESEA-4 interpretation of the ECL and application of the government's own strategic environmental advice on locating such large turbines that impact designated landscapes.

We hope the Examination Authority and Interested Parties can take these factors into account alongside other considerations.

Table 1 that follows identifies the issues and evidence we offer with evidence in the Main Representation in support of this due diligence.

Table 1: Due Diligence topics addressed with evidence in the main Representation and Annexes

PART 1: THE CONTEXT, CHILLING EFFECT AND CONSEQUENCES OF MISDIRECTION

PART 2: THE INFLATION OF THE BENEFITS OF RAMPION 2

1) Rampion 1 and 2 combined will generate sufficient electricity to power the entire needs of the whole of Sussex across all sectors.
2) Rampion and Rampion 2 combined will be able to power the equivalent of all the homes in Sussex twice over.
3) Rampion 2 will power a million households.
4) The south coast of England is a high wind area for energy generation.
5) Rampion 2 will drive down the cost of energy.
6) Rampion 2 is even more critical than before and to save 2million tonnes CO2 /yr.

PART 3: THE UNDERSTATEMENT OF RAMPION 2 ADVERSE IMPACTS

1) Rampion 2 was reduced almost half in size and area as a result of consultations.
2) Rampion 2 respects the Rochdale envelope in consulting on the worst case.
3) There is no evidence (anywhere) that windfarms impact tourism.
4) Beauty is in the eye of the beholder.

PART 4: THE UNDERSTATEMENT OF RAMPION 2 ADVERSE IMPACTS

1) The UK Government's OESEA Strategic Environmental advice on visual buffers for locating offshore wind turbines does not apply to Rampion 2.
2) Rampion 2 design complies with all relevant Government policy and standards.

Annex 3: Preface and Summary PCS WR #3

Consideration of Alternatives in the Rampion 2 Examination

PREFACE

This Representation offers information and perspectives to help the Examination Authority (ExA) and Interested Parties (IPs) address the National Policy Statement (NPS) requirement for the consideration of alternatives in the Rampion 2 windfarm Examination.

That is a case-to-case specific requirement because the Rampion 2 infrastructure intrudes on designated landscapes, including the South Downs National Park and areas of Natural Beauty, and it interferes with statutory functions of those designations.

Here we argue for consideration of three viable alternatives for clean, low-emission generation systems that are consistent with the NPS energy policy and otherwise are essential in the drive to decarbonise power supply to the National Grid by 2035.

The purpose of this written representation is threefold.

4. To help respond to the NPS case-specific policy requirement to consider alternatives in the Rampion 2 Examination – in a meaningful way;

5. To help to break down transparently, and benchmark the national benefits and disbenefits of Rampion 2 aiming to inform key judgments the ExA will make on whether "adverse impacts of Rampion 2 outweigh its national benefits"; and

6. To highlight realistic opportunities for a better way forward, should Rampion 2 be refused consent on legal or other grounds, given the importance of decarbonisation of UK power supply in an affordable, realistic and common-sense manner in little over a decade.

This is one of three Written Representations that Protect Coastal Sussex (PCS) is offering to the Examination Authority (ExA) and all stakeholders to help weigh and balance the benefit-risk tradeoffs of the Rampion 2 project.

We sincerely hope the Examination Authority (ExA) can give weight to facts, information and evidence offered herein in its deliberations. And also, that the ExA is open to proactively call for relevant written, or oral expert testimony on Alternatives and for important system value modelling analysis prepared by competent power sector authorities that will add considerable value.

SUMMARY
Consideration of Alternatives in the Rampion 2 Examination

When weighing up what's more important, our health and physical and mental well-being and nature, or more wind turbines on display in the Sussex Bay inshore, the response many residents and local community organisations have is simple. But of course, the question is far more complex.

For those who have engaged in the DCO process for Rampion 2, challenging as it was over a 3-year period since early 2021 and during Covid-19 lockdowns, and especially considering the inshore location proposed for up to 90 wind turbine generators (WTGs) up to 325 meters tall, as well as the physical and visual disruption of designated landscapes, our understanding of evidence is that:

1). Rampion 2 would likely breach UK international commitments on landscape /seascape protection and in aligned UK national advice, policy and law;

2). Consenting Rampion 2 means we accept comparatively inefficient infrastructure (or rather an inefficient location for WTGs in terms of wind energy density and output).

3). That has serious opportunity costs, including the requirement to import relatively more expensive and price volatile liquefied natural gas (LNG), which has high carbon emissions in processing and transport, together with more import of costly power from undersea cables from the Continent. That is limited help for UK energy-self reliance; and

4). At the same time, there are practical and viable alternatives for low emission generation to feed the National Grid, which can do more for less money than Rampion 2, among which alternatives the UK Government calls “game changers”.

The consideration of alternatives in the Rampion 2 Examination is a case-specific policy requirement in the NPS (2011), EN-1 Section 4.4 (Alternatives) that is carried forward to the NPS (Nov, 2023), which can be taken into account by the Secretary of State in the Rampion 2 decision.

Our analysis and conclusions offered in this Written Representation are the three alternatives we looked at by applying NPS Section 4.4 Alternatives criteria and offer equal, or more benefit to UK society across most, if not all metrics of national benefit stated in the NPS, including energy security, energy self-reliance and climate change objectives and low emission power.

Nor would consenting Rampion 2 be in the interest of the equitable sharing of benefits and costs in UK society. That is due to uniquely disproportionate effects it would have on coastal and inland communities required to “host” the infrastructure, and thereafter accept the industrial transformation of the character of the area. It impinges on areas of natural beauty, designated landscapes and conservation areas, including the South Downs National Park, that are a high status protected endowment for current and future generations to enjoy and derive intrinsic benefit.

Protect Coastal Sussex (PCS) submitted a written representation on what we see as the adverse local impacts of Rampion 2 in the form of a community-led Local Impact Assessment or (LIA).

In that LIA, we also set out how we believe the Rampion 2 design challenges the interpretation of the European Convention on Landscapes (ECL). We understand the ECL is already interpreted by the UK Government's own Offshore Energy SEA (OESEA) as the strategic environmental advice for the visual buffers it offers, and which we understand apply to Rampion 2. The commercial Applicant has argued quite vigorously otherwise.

In this respect, the OESEA-4 clearly states that the UK's objectives and indicators for seascape / landscape protection include:

- *"Objective: To accord with and contribute to the delivery of the aims and articles of the European Landscape Convention and minimise significant adverse impact on seascape/landscape including designated and non-designated areas".*

This companion PCS written representation focuses on three alternatives for low emission generation that are fundamentally important to decarbonise UK power supply by 2035 as stated in the NPS. Otherwise, we believe it is reasonable to take a close look at alternatives when considering whether to grant consent for a £3-4 billion infrastructure investment, one that has such significant economic and environmental opportunity costs as Rampion 2.

Moreover, as the analysis of the former Business, Energy and Industrial Strategy (BEIS) group noted:

> ***"Clearly there are choices within the future electricity system pathway over which technologies to build, when to build them, and how to operate them."***
>
> Source: Electricity Networks Strategic Framework: Enabling a secure, net zero energy system, Department of Business, Energy and Industrial Strategy, August 2022

We thus offer a simple benchmarking and ranking exercise as a way to help break down and compare national benefits and disbenefits of Rampion 2. That is in summary form here and in more detail in the main representation.

As noted in relevant representations that were previously submitted in Nov 2023, we also believe it is important for the ExA to proactively invite expert testimony on the consideration of alternatives in this Examination, as is provided in Planning Act Guidance on calling expert witnesses.[13]

Moreover, given the UK is at a crossroads, and feeling its way forward given that changes in policy recently, and with £3-4 billion at stake, we feel this is a timely opportunity for PINs and DESNZ together with the relevant power authorities (e.g. Ofgem) to undertake power system modelling analysis expeditiously to support the ExA in this task and inform this Examination.

We identified three alternatives to consider based on conformance to NPS requirements (as in Annex 2 of this Representation). Additionally, the NPS guidance we assumed is:

i. NPS 2011, para 3.5.6, *"New nuclear power therefore forms one of the three key elements of the Government's strategy for moving towards a decarbonised, diverse electricity sector by 2050: (i)I renewables; (ii) fossil fuels with carbon capture and storage (CCS); and (iii) new nuclear"*.

[13] Here we note the PA (2008) Procedure Rules allow," the Examining Authority to call expert witnesses to give evidence on specific points at hearings. They may also consider requests from the applicant and other interested parties to call expert witnesses in support of representations they make about the application."
Reference: Planning Act 2008: Guidance for the examination of applications for development consent", DCLG, 2015. Thus we remain hopeful the ExA may reconsider any decision not to invite, pursue or allow relevant expert witnesses in the Examination.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/418015/examinations_guidance-__final_for_publication.pdf

ii. NPS (Nov, 2023) which designates each of the three alternatives that we consider to be Critical National Priorities (CNP), namely: in addition to offshore wind, carbon abated gas-fired power stations that are NetZero ready, and new nuclear, where we emphasize small modular reactors (SMR) for obvious reasons explained in the main representation.

The Section 4.4 requirements state that the alternatives must be a realistic opportunity for the UK, and otherwise offer equal or greater national benefits as Rampion 2 over its economic life (roughly 2030 to 2050), and especially to support the ambition of decarbonisation of power supply to the National Grid by 2035 which among all the technology specific targets we see is most important and meaningful to focus on.

Consideration of Alternatives

These alternatives also conform to what Ofgem calls "least regret" choices, as they are wholly consistent with technology specific NPS. They include:

Alternative 1

Rather than extending the Rampion 1 installation, extend a recent licence award for an offshore windfarm in the North Sea area.

Specifically, facilitate incremental investment in an equivalent number of wind turbines (as proposed for Rampion 2) in southern Dogger Bank area where the Rampion 2 developer RWE has recently acquired two licences under the Crown Estate's fourth offshore wind bid round in Jan 2023. RWE only confirmed in Sept 2023 that it would proceed, when the UK increased the Contract for Differences (CfD subsidy) for offshore wind developers by up to 66%.

That reasonably re-directs £3-4nb of foreign capital investment to an area of higher wind power density, where the same Rampion 2 turbines would be more efficient; generating higher and more constant output. That affords the opportunity to take advantage of economies of scale with shared facilities like offshore substations, power evacuation cables and National Grid transmission connection to reduce costs. That reduces opportunity cost in the system (less costly LNG import) and can free up UK borrowing capacity for other strategic infrastructure. That also offers greater scope for 2-way power exchange with the continent and access to an offshore ring grid.

Those new North Sea projects are due to be completed around 2030 (about the same as Rampion 2). They are still in very preliminary stages of project preparation and design. It is a situation where good-faith negotiations can take place between the relevant parties (i.e., Crown Estates and RWE) with outcomes that are mutually beneficial for RWE and UK society.

Alternative 2:

Retrofit existing and new high efficiency combined cycle gas-fired turbines (CCGT) with carbon capture (CC) on the south coast near load centres in a sensible phased manner.

Putting carbon capture (CC) on existing and new gas-fired power stations to make them net-Zero ready as they will have no carbon emissions. New combustion turbines alongside existing turbines in power stations to extend their capacity, or a new gas power station fitted with carbon capture on the same site or new site can also be multi-fuel (i.e., and hydrogen ready).

This makes them NetZero as point source emitters for the 2035 decarbonisation drive. Locating that dependable and flexible abated gas generation capacity in the south of England minimises costs where grid connection and gas supply infrastructure are available. That reduces pressure on the need for infrastructure for north south power transfers. CO2 storage would initially be handled by barge transport to one of three offshore carbon storage "clusters" the UK is to have ready by 2030, and thereafter flexibly phasing in CCUS (carbon capture, use and storage) as appropriate.

The approach is based on the Net Zero Teesside Power (NZT Power)) 850 MW abated gas-fired project consented by the Secretary of State in February 2024. It is all existing and proven technology. The final investment decision will be taken by the owners in Sept 2023. The project is expected to be online in the 2026-2028 timeframe.[14]

The south has many efficient combined cycle gas turbine (CCGT) power stations where it is likely additional CCGT capacity can be added to existing power stations with carbon abatement, or building a new power station on the same site with carbon capture that will provide essential firm power to help meet mandated load growth and back-up variable RE generation. It will take time pressure off the costly north-south transmission expansion, and improve system flexibility for load balancing to reduce the risks of societal disruption from costly power shortages and blackouts across the south. The point is all UK gas-fired power stations must have carbon capture by 2035.

Alternative 3:

Deployment of factory built, flexible Small Modular Reactors (SMRs) that use enriched uranium or thorium to raise steam to drive steam turbines. SMRs have a small footprint. They are to be co-located appropriately at decommissioned large nuclear sites, existing or under construction large nuclear power stations, or decommissioned coal or gas power stations.

While the new UK entity Great British Nuclear (GBN) opted for a competition between UK and international/ national supplies and expects to announce winning bids by April 2023, Rolls-Royce has a 470 MW modular, factory-built commercial power SMR that up-scales its military reactors that it has been manufacturing and maintaining for over 60 years.

In February 2024 Rolls Royce announced it aims to have its civilian SMR operational by 2029 in Eastern Europe based on memorandum of understanding with a number of Governments, after previously announcing it has provisional orders and financing.

[14] https://www.bp.com/en_gb/united-kingdom/home/news/press-releases/net-zero-teesside-power-and-northern-endurance-partnership-award.html

The UK Government' Great British Nuclear (GBN) was established in 2023 with the following mandate: [15]

- Great British Nuclear to drive rapid expansion of nuclear power at an unprecedented scale and pace
- government kickstarts competition for game-changing small modular reactor (SMR) technology, which could result in billions of pounds of public and private sector investment in SMR projects
- plans will boost energy security, create cheaper power and grow the economy - creating better-paid jobs and opportunity right across the country

Comparison of National Benefits and Disbenefits

Table 1 at the end of this Summary is a check list and simple benchmarking and ranking exercise as a way to help break down and compare national benefits and disbenefits of Rampion 2 and weigh those against the three alternatives.

Table 1 shows the raw aggregate score for **12 NPS Policy-Relevant National Benefit Indicators** where the score shown is simply the sum of the scores for each criteria under each indicator. There are a different number of criteria under each indicator (criteria are scored 1 to 4).

This is elaborated and explained in the main representation in Section 4 Conclusions. In Table 6 on Section 4 all the detailed criteria and the scores are shown.

In the absence of systems value modelling (we argue this should be undertaken to inform the Examinations) this is a fall-back technique that uses Rampion 2 as a baseline to rank order the four options, thus qualitatively benchmarking Rampion 2 against the three alternatives.[16]

Obviously, there are limitations and complexities. These indicators aim to help make the determination of essential NPS policy interpretations less subjective, more transparent and clearer. In applying this technique people or groups may wish to chose different indicators and criteria and apply weights them. We simply assume using the same weight on each Indicator and criteria.

It informs the Section 4.4, EN-1 policy requirement as well as how national benefits may be weighed in the Examination "on adverse impacts of Rampion 2 outweighing its benefits".

Summary Conclusions:

Considering Alternatives under NPS EN-1 Section 4.4 is helpful to break down and benchmark the national benefits of Rampion 2 to inform Examination decisions about Rampion 2, for the three purposes set out in the Preface of this Representation.

Rampion 2 has national benefits.

Our simple benchmarking and rating analysis results shown in Table 1 indicates that all three alternatives offer a better way forward than Rampion 2, in respect to national benefits overall. It suggests they are in the local, national and wider public interest as compared to a £3-4 billion capital

[15] https://www.gov.uk/government/news/british-nuclear-revival-to-move-towards-energy-independence
[16] This weighting, rating and ranking technique is recommended in the World Commission on Dams for the consideration of Alternatives as a Strategic Priority which the UK government co-funded (WCD, 2000).

investment in Rampion 2. The alternatives do not have the same high economic and environmental opportunity costs and risk as Rampion 2.

Extending an existing offshore wind licence on Dogger Bank would for example lead to 1.3 times the national benefit than granting consent to a £3-4 billion Rampion 2. That would be at less cost. The economic opportunity cost of Rampion 2 could be quantified via power system value modelling. For these assumptions as set out in the main submission in Part 4 Alternative 3, and SMRs could lead to twice the national benefit.

The method and assumptions used for the benchmarking, the 12 national policy indicators used to break down National Benefits, and the detailed criteria and scoring is elaborated in Part 4 of the main representation. That includes the detail matrix presented as Table 6 of Part 4.

In summary

Rampion 2 and three NPS Section 4.4 Alternatives	**Benchmarking Indicator score (high being better)**	**Relative to Rampion 2**
<u>Rampion 2 – the Baseline</u> Extending the installation of turbines in the Sussex Bay with up to 90 WTGs up to 325m tall and transmission through designated landscapes	115	1.0
<u>Alternative 1:</u> Extending an existing Dogger Bank windfarm licence with equivalent capacity (up to 90 WTGs up to 325m tall) where they are more efficient, economies of scale and potentially link to an offshore ring grid to minimise onshore transmission and better facilitate connection to EU grids.	156	1.4
<u>Alternative 2:</u> Retrofitting an existing natural gas-fired power station with carbon capture (CCGT/CC) and adding a Rampion 2 equivalent new capacity at that site (or replacement power starting with CC, or a new power station with carbon capture in the south with multi-fuel capability to switch hydrogen when ready.	201	1.7
<u>Alternative 3:</u> A Small Modular Reactor (SMR) (located in decommissioned large nuclear site (or existing / under construction site) or decommissioned coal-fired or gas-fired power station sites)	236	2.1
For assumptions noted and policy relevant criteria indicated in Part 4 and Table 6 in Part 4		

It also raises a simple question: at least to 2035, when decarbonisation of the power sector is hopefully achieved and until energy storage systems are viable, affordable and deployed at scale some decades later: which is more environmental friendly and helpful for National Energy Security and UK energy-self reliance: (a) if the UK sources natural gas domestically from the North Sea fields, or (b) imports liquefied natural gas (LNG) transported over great distance from Qatar or the USA in the form of price vulnerable LNG.

That choice of (a) or (b) has real carbon emission implications, and whether those emissions appear in the UK's national carbon accounts or not.

An optimal "least regret" strategy can be highlighted when Alternatives are brought into Rampion 2 Examination. That may be for the UK to move in parallel with all three alternatives as complementary additions to the UK generation mix to achieve decarbonisation of the power sector by 2035 – rather than committing to an upfront £3-4 bn Rampion 2 capital investment at this time - is suggested by this analysis.[17]

[17] Ofgem 2021 strategic review of power system endorses a "least regrets" strategy.

Table 1: Benchmarking National Benefits of Rampion 2 against realistic Alternatives

		Baseline	Three NPS EN-1 Section 4.4 Alternatives		
	Criteria and National Benefit / Disbenefit Indicators	**Rampion 2 (Sussex Bay inshore & transmission via a SDNP route)**	**Wind Turbines extending Dogger Bank Licence**	**Abated Gas Turbines with carbon capture (CCGT/CC) In South UK**	**Small Modular Reactors (SMR) (in decommissioned Large nuclear sites or decommissioned coal or gas sites)**
	Date Ready to deliver power	~2030	Possible Before 2030	Possible Before 2030	Possible Before 2030 Policy Dependent
	Average annual plant factor	37-40%	60-65%	100% on demand	95% always on expected
		Both weather dependent			
	Estimate build time (years)	4-5 yrs	4-5 yrs	1-4 yrs for CCGT/CC	2-3 yrs is claimed
	Economic Life	20-25 yrs		Longer than Rampion 2	60+ yrs Expected
	Capital Cost (per project)	£3-4 bn	Depends on infrastructure sharing	Location specific CCGT has low capital costs	£2-2.5 bn claims
	12 NPS Policy-Relevant Indicators				
1	Likely contribution to decarbonisation of the UK Power Sector by 2035:	5	9	13	16
2	Likely contribution to UK Energy Security and Energy Self-reliance:	10	13	14	22
3	Effects on National Grid operation, quality and reliability of power supply:	**9**	**15**	**28**	**34**
4	Affordability Effects (National to Local):	**8**	**11**	**20**	**24**
5	Project Financability, Investability and Market Risk:	**16**	**16**	**16**	**17**
6	Job Creation Opportunity and Benefits (Local to National):	**7**	**7**	**16**	**22**
7	UK Industry Strategy, UK export and UK developing country assistance: Opportunity and Benefits	**4**	**4**	**12**	**16**
8	Adverse Environmental Footprint and Impacts:	**24**	**28**	**26**	**27**
9	Environmental Externalities:	**12**	**12**	**9**	**10**
10	Avoidance of compromising the achievement of sustainable development in coastal and inland areas	**8**	**19**	**20**	**20**
11	Distribution and Equity Effects (national to local)	**4**	**9**	**8**	**8**
12	Lowering Opportunity Costs: Economic, social and environment opportunities forgone	**8**	**13**	**19**	**20**
	Total Count (Un weighted)	**115**	**156**	**201**	**236**