

RWE

PEMBROKE GREEN HYDRO- GEN PROJECT: A PEM- BROKE NET ZERO CENTRE PROJECT

Chapter 8: Cumulative Effects



Glossary

| Term | Definition |
|-------------|---|
| BESS | Battery Energy Storage System |
| CCS | Carbon Capture Storage |
| CEA | Cumulative Effects Assessment |
| EIA | Environmental Impact Assessment |
| ES | Environmental Statement |
| PCC | Pembrokeshire County Council |
| PCPNA | Pembrokeshire Coast National Park Authority |
| PNZC | Pembroke Net Zero Centre |
| ZoI | Zone of Influence |

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8 INTRODUCTION

Introduction

- 8.1. This chapter of the Environmental Statement (ES) provides a summary of the likely significant cumulative effects associated with the Proposed Development. The chapter draws together the individual cumulative effects assessments (CEA) carried out for Landscape and Visual Impact (Chapter 6) and Terrestrial Ecology (Chapter 7).
- 8.2. Chapter 4: Environmental Assessment Methodology sets out an overview of the methodology which has been adopted to assess cumulative effects in this ES. This chapter provides a further description of methodology which has been adopted specifically to the CEA for each individual topic chapter of this ES.
- 8.3. **Appendix 4.7** of this ES identifies the long list of cumulative developments which have been identified for assessment in the CEA. In issuing its Scoping Opinion on 5 February 2024 (**Appendix 1.4**), PCC confirmed that the following developments should be assessed in the CEA:
- Pembroke Net Zero Centre (PNZC) Carbon Capture Storage (CCS) Project (within Pembroke Power Station)
 - PNZC Synchronous Condenser (within Pembroke Power Station)
 - PNZC Battery Project (within Pembroke Power Station)
 - Lambeeth BESS (0.5km south)
 - Greenlink Interconnector (1.2km south)
 - Goldborough Road BESS (1.3km south-east)
 - Erebus Wind Farm onshore cable route & substation (1.4km south to Erebus substation)
 - Dragon Energy Park (2.2km north)
 - Pembroke Dock Infrastructure Phase 2B (3.5km west)
 - Criterion Quay FLOW Development, Pembroke Dock (4.5km north-east)
 - Llŷr 1 Wind Farm (onshore cable route and substations) (1.1km east)
- 8.4. Whilst the above list is comprehensive, each topic chapter has only assessed those cumulative developments which are within the Zone of Influence (ZoI) for that topic, or those developments which have been deemed relevant in the topic-specific CEA. The process for identifying the short list for each topic is set out under the relevant section below.

Assessment of Cumulative Effects: Landscape and Visual Impact

- 8.5. This section sets out the potential cumulative effects which may arise as a result of the Proposed Development in respect of Landscape and Visual Impact.
- 8.6. The CEA is essentially the same as for the assessment of the primary landscape and visual effects, in that the level of landscape and visual effect is determined by assessing the sensitivity of the landscape or visual receptor and the magnitude of change. The CEA, however, considers the magnitude of change posed by multiple developments.
- 8.7. A cumulative landscape or visual effect simply means that more than one type of development is present or visible within the landscape. Other forms of existing development and land-use such as woodland and forestry, patterns of agriculture, built form, and settlements already have a cumulative effect on the existing landscape that is already accepted. These features often contribute strongly to the existing character, forming a positive or adverse component of the local landscape. However, landscapes will have a finite ability to accommodate cumulative developments, beyond which further new development would result in landscape character change and could result in the creation of a 'new landscape' where development rather than the existing land use pattern has become the dominant characteristic.
- 8.8. This assessment distinguishes between 'additional' cumulative effects that would result from adding the Proposed Development to other cumulative developments and 'combined' cumulative effects that assesses the total cumulative effect of the Proposed Development and other cumulative developments. In the latter case a significant cumulative effect may result from the Proposed Development or one of more other existing, under-construction or consented applications.
- 8.9. Types of cumulative effect are defined as follows:

Cumulative Landscape Effects

- 8.10. Cumulative landscape effects arise where more than one development may have an effect on a landscape, land use, land cover, designation or particular area of landscape character as defined by LANDMAP aspect areas.

Cumulative Visual Effects

- 8.11. Cumulative visual effects arise when the cumulative or incremental visibility of developments that may combine to have a cumulative visual effect occur. These can be further defined as follows:

- Simultaneous or combined: where two or more developments may be viewed from a single fixed viewpoint simultaneously, within the viewer’s field of view and without requiring them to turn their head.
- Successive or repetitive: where two or more developments may be viewed from a single viewpoint successively as the viewer turns their head or swivels through 360°.
- Sequential: where a number of developments may be viewed sequentially or repeatedly at increased frequency, from a range of locations when travelling along road, Sustrans national or regional cycle route or promoted long distance route within the LVIA Study Area.

8.12. **Table 8.1** below sets out the relevant factors which inform the judgment about the significance of visual effects.

Table 8.1 Judgement of the Degree of Cumulative Landscape Effects

| Degree of effect | Indicative criteria |
|-------------------------|--|
| Substantial / Major | Cumulatively, the developments dominate the view, seeming to define a new visual aesthetic. |
| Moderate | Large scale effects arising from new, non-characteristic or discordant or intrusive elements into the view of highly sensitive receptors, or at recognised and important viewpoints, or from recognised scenic routes. |
| Minor | Cumulatively, the developments are seen as a characteristic of the landscape in the view, but not of sufficient dominance to be a defining characteristic of the visual amenity. |
| No Change / Negligible | Cumulatively, the developments are separate isolated elements of the landscape in the view, too infrequent and of insufficient importance to be perceived as a characteristic of the area. |

8.13. As the construction phase of the identified cumulative developments will be temporary and unlikely to be undertaken all at the same time, this LVIA does not generally assess the cumulative visual effects of the construction phase, unless otherwise stated. Instead, this section will consider the effects of the identified cumulative developments once they have been completed and will include the permanent alteration in the associated operational phase. This assessment therefore presents an assessment of the worst-case scenario, as it cannot be determined that all developments identified will eventually be constructed.

8.14. **Table 8.2** below sets out the initial assessment process of the long list of cumulative developments which has informed which developments are considered in the CEA.

Table 8.2 Cumulative Assessment Developments

| Cumulative Development | Distance | Description of Development | Planning Status | Included in CEA |
|--|--|--|---------------------------|--|
| Dragon Energy Park DNS ref. CAS-01859-K1M7Y6, PPC ref. 23/0349/ NS | 2.2km north | Construction of up to three wind turbines (149.9m high), and ancillary equipment and infrastructure, together with access improvements, landscaping, ecological mitigation / enhancement and associated works | Pending determination | Yes - Proposed turbines create invisibility with the Proposed Development |
| PNZC Synchronous Condenser (RWE) Ref. 23/0349/ PN | Adjacent - within Pembroke Power Station | Application proposes the erection of plant / machinery and construction of buildings associated with the delivery of a Synchronous Condenser (up to 14.5m high) | Approved (September 2023) | Yes - Adjacent to the boundary of Development Site, intervisibility anticipated |
| PNZC BESS (RWE) Ref 23/0497/SC)EIA | Adjacent - within Pembroke Power Station | Application proposes the installation of a Battery Energy Storage System with associated infrastructure - up to 11m high for the transformer, although most elements are 6m or lower | Scoping Opinion | Yes - Overlaps part of the boundary of Development Site, intervisibility anticipated |
| PNZC CCS Project (RWE) | Adjacent - within Pembroke Power Station | CCS Project, currently at pre-application stage and there is therefore limited publicly available information | Pre-Application stage | No - Insufficient information available |
| Greenlink Interconnector (Greenlink) Ref. 20/0044/PA and 20/0041/PA (PCC) or NP/20/0222/FUL (PCNPA) | 1.2km south | Consists of two applications: - Installation of underground electricity cables (including below ground jointing bays and three above ground link pillars) - Development of a converter station and upgraded permanent access road from Walston Cross to the converter station, plus associated landscaping, drainage and other | Full planning permission | No - Mostly already constructed and effects considered in the landscape and visual assessments |

| | | | | |
|--|----------------------------------|--|---|--|
| | | supporting infrastructure associated with the development | | |
| Lambeeth BESS (Sirius Renewable Energy Ltd) Ref. 23/0330/ SO | 0.5km south | Proposal for the construction of a Battery Energy Storage System (BESS) across a total area of 1.39 ha and includes the access track and the cable run to the proposed point of connection. No information available on height | Scoping Opinion Submitted. | Yes - Adjacent to Development Site, potential intervisibility |
| Goldborough Road BESS (Enso Energy) Ref. 23/0402/ SC | 1.3km south-east | Proposal consists of a 120 MW Battery Energy Storage System (BESS) on land south of Goldborough Road. | Planning Application Submitted (January 2024) | No - Insufficient information available and main part of the site outside of the ZTV |
| Erebus Wind Farm onshore cable route & substation (Blue Gem Wind, a joint venture between Simply Blue Energy and Total Energies) Ref. 3251528 | 1.4km south to Erebus substation | Erebus Wind Farm onshore cable route & substation (15m high building in a compound of 128m x 88.5m), connecting the 6 to 10 wind turbine that are situated approximately 44km off the southwest coast of Pembrokeshire | Approved (March 2023) | Yes - Pipeline route within the ZTV for the Proposed Development |

Dragon Energy Park

- 8.15. The Energy Park is situated on the north side of the Haven and approximately 2.0 km to the north of the Development Site Boundary at the location of the electrolyser. The site, which is within a solar farm, is situated adjacent to an oil storage terminal, which already has 4 large wind turbines.

Landscape Resources and Receptors:

- 8.16. The wind turbine site is situated within LANDMAP Visual and Sensory aspect area Hill Mountain (PMBRKVS068) – **Medium** sensitivity – and in LCA 10 The Haven North –

Low sensitivity. The Proposed Development is situated in aspect areas and LCAs to the south of the Haven – **Low to Medium** sensitivity – with the waterway creating clear separation between the Proposed Development and the wind turbine site. Together these two developments would increase the power generation context and its land use around the Haven, while also adding new vertical infrastructure. Due to the existing land uses, these developments would create a small change to the land use and context of each site, and when interpreted together within the context of their wider setting and the Study Area, the magnitude of impact would be **Low**. The cumulative effect would be **Negligible to Minor Adverse** within the host aspect areas and LCAs.

Viewpoint Receptors Cumulative Effects:

- 8.17. The two completed developments may be seen in combination from higher ground with open views around the Haven, including from some sections of the Pembrokeshire Coast Path / Wales Coast Path around Viewpoints 02, 03 and 08, from high ground to the south of the Development Site (Viewpoints 04 and 05) and in the east from Pennar and the ridgeline to its east (Viewpoint 06). In these views the turbines would be the most prominent new features with the Proposed Development being read as part of the context of its setting adjacent to Pembroke Power Station, although the new turbines would be interpreted in a similar manner to the existing four nearby in the views.
- 8.18. The sensitivity of the visual receptors at these viewpoints ranges from **Very High** (walkers on the National Trail) to **Low** (passersby on minor roads). Due to the distance between the sites and the separation created by the Haven, it is unlikely that these visual receptors would interpret the two developments in combination from any locations, which would form a Low magnitude of impact. The cumulative effect is considered to be **Negligible to Minor Adverse** on the visual amenity of these receptors. Although the walkers are of very high sensitivity, the existing industrial context of the views they will have experienced along the National Trail as it skirts the Haven will have desensitised them to some degree to views of large-scale developments, while the combination of the two cumulative developments would not be prominent together in any views.

PNZC Synchronous Condenser

- 8.19. The Synchronous Condenser site is situated approximately 250m to the east of the Main Electrolyser Area and adjacent to Pembroke Power Station, where it is currently largely used as a car park. The PNZC BESS site, Lambeeth BESS and the Erebus Wind Farm substation site are located to the south of the Development Site.

Landscape Resources and Receptors:

- 8.20. The Synchronous Condenser site is situated with the LANDMAP aspect area that covers Pembroke Power Station (PMBRKVS090 – Low sensitivity), whereas the Development Site at the location of the electrolyser, is in the adjacent aspect area (PMBRKVS061 – Medium sensitivity). Similarly, the Synchronous Condenser is situated in LCA 23 – Low sensitivity – and the Proposed Development in the neighbouring

LCA 25 – Medium sensitivity. While the Proposed Development would extend the industrial context of Pembroke Power Station slightly to the west, although a change of land use and land cover, both the Proposed Development and the Synchronous Condenser are on previously developed and disturbed ground and would be interpreted as part of Pembroke Power Station complex. Although extended slightly in area, Pembroke Power Station would retain its identity as an industrial complex that is separate from those nearby. This would result in a **Negligible** magnitude of impact, creating an overall **Negligible Adverse** scale of effect due to the cumulative impact on these landscape receptors.

Viewpoint Receptors Cumulative Effects:

- 8.21. The only location where the two sites would be seen in combination is from the Pennar area to the east (Viewpoint 6). The location and size of the Synchronous Condenser would see it largely screened and interpreted in combination with the adjacent the Power Station, while in these views only a small part of the Proposed Development would be visible and would also be interpreted in combination with Power Station and the Valero oil refining complex beyond. Receptors in this area include residents and passersby, ranging in sensitivity from **High** to **Low** respectively. The largely screened appearance of both sites and the much more prominent energy infrastructure in their immediate context in the view would see both sites being interpreted as part of this existing setting and would not as separate sites, which would form a **Negligible** magnitude of impact, which when combined with sensitivity, would result in the cumulative effect being considered to be **Negligible** to **Minor Adverse** on the visual amenity of these receptors.

PNZC BESS

- 8.22. The BESS site is situated in farmland approximately 450m to the southeast of the Development Site at the location of the electrolyser. The under construction Greenlink interconnector site is situated nearby to its southeast, with the Lambeeth BESS site just beyond and the PNZC Synchronous Condenser site shortly to its north.

Landscape Resources and Receptors:

- 8.23. Both the Proposed Development and the cumulative site are situated in LANDMAP aspect area PMBRKVS061 – Medium sensitivity – and landscape character area LCA 25 – Medium sensitivity. Although intervening woodland creates separation between the two sites, they would both be close enough to each other and to Pembroke Power Station to be interpreted as part of the energy context setting of the latter, extending this context further to the west and south. This would form a localised change and of a scale in context with its setting, leading to a **Low** magnitude of impact on the landscape receptors, which when combined with sensitivity, would result in the cumulative effect being considered to be **Minor Adverse**.

Viewpoint Receptors Cumulative Effects:

- 8.24. Due to the intervening woodland and the relatively low heights of both developments, they are expected to be few places where the two sites would be seen in combination, with high ground to the east (Viewpoint 6) and southeast (Viewpoint 8) being the most likely locations. Receptors at these viewpoints include passersby, residents and walkers on the National Trail, who range in sensitivity from **Low** to **Very High**. However, in these views the sites are either distance or would be difficult to identify against the much larger scale industrial features in the views, with only small parts of the highest elements of each site potentially visible. The combination of these sites would be of a small scale in relation to their setting and occupy a very small part of the view, forming a **Negligible** magnitude of impact. Combining the magnitude of change with sensitivity, the cumulative effect is considered to be **Negligible** to **Minor Adverse** on the visual amenity of these receptors, with the scale of effect on walkers on the National Trail not being larger due to the distance and existing industrial features existing in the view that is already considered to be a large-scale industrial landscape.

Lambeeth BESS

- 8.25. The BESS site is situated on the northern side of the Lambeeth Farm access road and approximately 1.1km to the southeast of the Development Site at the location of the electrolyser. It is set in farmland with the under construction Greenlink interconnector site immediately to its west and the Erebus Wind Farm substation site across the access road to the south.

Landscape Resources and Receptors:

- 8.26. Both the Development Site and the cumulative site are situated in LANDMAP aspect area PMBRKVS061 – Medium sensitivity – and landscape character area LCA 25 – Medium sensitivity. The BESS site is offset sufficiently from both the Development Site and Pembroke Power Station that, unlike the Proposed Development, it would not necessarily be interpreted as part of the one industrial complex and context. However, the scale and size of both developments is both small and compatible with the wider industrial setting of Milford Haven waterway in which they are located. In combination, the addition of these developments to this setting would form a **Negligible** magnitude of impact. Combining the magnitude of change with sensitivity would result in an overall cumulative impact of **Negligible Adverse** on these landscape receptors.

Viewpoint Receptors Cumulative Effects:

- 8.27. The two developments are likely to be seen in combination from the Pembrokeshire Coast Path / Wales Coast Path to the northwest (Viewpoint 2) and the southeast (Viewpoint 8) and from the north side of Pembroke River (Viewpoints 6 and 7). As the Scoping Opinion for the cumulative development did not include any information on site layout or height of features, it is assumed that they would be similar to those proposed for the PNZC BESS application with most elements being below 6m. Visual receptors at these viewpoints range in sensitivity from **Low** to **Very High** and include

passersby and residents, to the north of the river, and walkers on the National Trail, to the south. There is potential for receptors at all these viewpoints to see the two developments in combination, although both developments would be partly screened with only the higher elements visible. The context of these views would also include a lot of much larger scale industrial infrastructure, making the cumulative developments difficult to identify in relation to each other. This would form a cumulative **Negligible** magnitude of impact, combined with sensitivity, would result in a cumulative scale of effect considered to be **Negligible** to **Minor Adverse** on the visual amenity of these receptors.

Erebus Wind Farm onshore cable route & substation

- 8.28. The proposed substation, which is the primary above ground element of this application in the Study Area, would be situated on the south side of the access road to Lambeeth Farm and 1.2km southeast of the Development Site at the location of the electrolyser. It is set in farmland with the under construction Greenlink interconnector site to its north and the Lambeeth BESS to its northeast, both on the opposite side of the access road.

Landscape Resources and Receptors:

- 8.29. Both the Development Site and the cumulative site are situated in LANDMAP aspect area PMBRKVS061 – Medium sensitivity – and landscape character area LCA 25 – Medium sensitivity. The substation site is situated on a flat-topped spur, allowing the topography to create a degree of separation between it and the Development Site, which is further strengthened by woodland around the latter. These intervening features and distance create sufficient separation between the two sites for them not to be interpreted together in the landscape, or for the substation station to be immediately connected to Pembroke Power Station, which the Proposed Development is. This would form a **Negligible** cumulative magnitude of impact, when combined with sensitivity, would result in an overall **Negligible Adverse** scale of effect due to the cumulative impact on these landscape receptors.

Viewpoint Receptors Cumulative Effects:

- 8.30. Visual receptors who are likely to have views that include both the Proposed Development and the substation walkers on the Pembrokeshire Coast Path / Wales Coast Path (Viewpoints 2 and 8 – Very High sensitivity) and people viewing from residential properties and roads to the north of Pembroke River (Viewpoints 6 and 7 – Low to High sensitivity). There is potential for receptors at all these viewpoints to see the two developments in combination, although both developments would be partly screened with only the higher elements visible. The context of these views would also include a lot of much larger scale industrial infrastructure, making the developments difficult to identify in relation to each other. This would form a cumulative **Negligible** magnitude of impact, when combined with sensitivity, would result in a cumulative scale of effect considered to be **Negligible** to **Minor Adverse** on the visual amenity of these receptors.

Overall Cumulative Effects

- 8.31. Should all of the proposed cumulative developments be constructed, there would be a notable change in character to the land use to the south of the Development Site, changing it from farmland to an energy related industrial landscape. The start of this change has already been established with the addition of the Greenlink interconnector building and its associated infrastructure, while the BESS sites and the substation would expand further on this land use change.
- 8.32. In comparison, the Development Site is offset from these developments and shares its setting and context with the adjacent Pembroke Power Station, which it would be interpreted as being part of rather than an extension into an area of different character. The majority of the Proposed Development and the cumulative developments are located within aspect area PMBRKVS06, which is a receptor of **Medium** sensitivity. The combined addition of the Proposed Development, the Synchronous Condenser, the BESS sites and the Greenlink Interconnector to the landscape, although in scale and context with their setting, would extend the area of power generation context, most notably to the south. This would form a **Medium** magnitude of impact, which when combined with sensitivity, would result in a **Moderate Adverse** overall cumulative scale of effect; although this is in the context of the Local Development Plan site allocation which establishes an acceptance of landscape change.

Assessment of Cumulative Effects: Terrestrial Ecology

- 8.33. The only key receptors assessed to have likely significant residual effects from the Proposed Development are as follows:
- Lowland mixed deciduous woodland Priority Habitat (Parish): minor impact
 - Reedbeds Priority Habitat (Parish): minor temporary impact
 - Otter (Parish): possible minor impact during construction period (disturbance only)
 - Hedgerows Priority Habitat (Local): minor temporary impact
 - Rivers Priority Habitat (Local): minor temporary impact
 - Badgers (Local): minor impact
 - Reptiles (Local): minor to moderate impact
- 8.34. All these key receptors relate either to habitats, or to localised effects on species. On this basis, it is assessed that the only proposals requiring consideration in terms of cumulative effects on these key receptors are those situated in the immediate local vicinity, specifically the following:

- PNZC Synchronous Condenser (RWE) (within Pembroke Power Station) – Prior Approval Notification (ref 23/0349/PN). Bioscan (the author of this CEA) is fully familiar with this project.
- PNZC Battery Project (RWE) (within Pembroke Power Station) – EIA scoping opinion (ref 23/0497/SC). Bioscan is fully familiar with this project.
- PNZC CCS Project (RWE) (within Pembroke Power Station) – Pre-Application Stage. Bioscan is fully familiar with this project. The detail of this project is yet to be developed and is subject to change, given that the project is at pre-application stage.
- Greenlink Interconnector (Greenlink) (1.2km south) – full planning permission (ref 20/0044/PA and 20/0041/PA (PCC) or NP/20/0222/FUL (PCNPA). Bioscan have reviewed the relevant ecological documentation associated with this project. Only the section of the Greenlink development local to the Development Site is considered.
- Lambeeth BESS (Sirius Renewable Energy Ltd) (0.5km south) – Scoping Opinion (ref 23/0330/SO).
- Goldborough Road BESS (Enso Energy) (1.3km south-east) – planning Application (ref 23/0857/PA).
- Llŷr 1 Wind Farm (onshore cable route and substations) (1.1km east) – Pre-Application Consultation.

8.35. Each of the key receptors with likely significant residual effects from the Proposed Development is considered in turn below. Where outside the Development Site, aerial photograph interpretation has been used to estimate likely effects.

Lowland Mixed Deciduous Woodland Priority Habitat (Parish)

8.36. The following cumulative developments are anticipated to affect local woodland:

- PNZC Battery Project (RWE) – minimal effects anticipated, only for connection to power station.
- PNZC CCS Project (RWE) – anticipated to impact a significant area of woodland at the western end of woodland W7.
- Goldborough Road BESS – connection route mapped to pass through thin woodland strips.

8.37. Cumulatively, the residual impact on local woodland is anticipated to be **Moderate to Major**, with the CCS project representing by far the greatest contribution (much greater than the Proposed Development). Notwithstanding, the Proposed Development would seek to provide mitigation in the form of woodland planting within the wider PNZC site.

Reedbeds Priority Habitat (Parish)

- 8.38. No other cumulative developments are anticipated to affect local reedbed.
- 8.39. As such, the cumulative residual impact on local reedbed is anticipated to remain **Minor** (and temporary).

Otter (Parish)

- 8.40. The following cumulative developments are anticipated to have a significant possibility of affecting otter:
- PNZC Battery Project (RWE) – possibility of minor effects if connection to Power Station needs to cross stream ST1.
 - Goldborough Road BESS – connection route mapped to cross a stream.
 - The PNZC CCS Project (RWE) is not anticipated to have any impacts on otter, though its layout is potentially subject to change.
- 8.41. Cumulatively, the residual local impact on otters is anticipated to remain **Minor** and restricted to disturbance only (temporary).

Hedgerows Priority Habitat (Local)

- 8.42. All of the cumulative developments (with the potential exception of the PNZC CCS Project) are anticipated to affect local hedgerows, though in all cases impacts are anticipated to be minor and for access only (as opposed to the removal of entire sections of hedgerow).
- 8.43. As such, the cumulative residual impact on local hedgerows is anticipated to be **Minor** (with the impacts on hedgerows from the Proposed Development also being temporary).

Rivers Priority Habitat (Local)

- 8.44. The following cumulative developments are anticipated to have a significant possibility of affecting streams:
- PNZC Battery Project (RWE) – possibility of minor effects if connection to Power Station needs to cross stream ST1.
 - Goldborough Road BESS – connection route mapped to cross a stream.
- 8.45. The PNZC CCS Project (RWE) is not anticipated to have any impacts on streams, though its layout is potentially subject to change.
- 8.46. Cumulatively, the residual impact on local streams is anticipated to be **Minor** (with the impacts on streams from the Proposed Development also being temporary).

Badgers (Local)

8.47. The CEA for badgers is set out within confidential **Appendix 8.1** (which should have a limited circulation on animal welfare grounds).

Reptiles (Local)

8.48. The following cumulative developments are anticipated to have the potential to impact on local reptile populations:

- PNZC Synchronous Condenser (RWE) – laydown on semi-improved grassland at eastern end of field 23. Tetra Tech’s 2022 reptile survey recorded 3 common lizards and 2 slow worms in this field. The laydown area was progressively trimmed to minimise impacts on reptiles.
- PNZC Battery Project (RWE) – 2023 reptile survey recorded maximum counts of 4 grass snakes, 1 common lizard and 2 slow worms around the improved grassland field margins (which are anticipated to be retained).
- PNZC CCS Project (RWE) – 2023 reptile survey recorded maximum counts of 6 slow worms, 1 grass snake and 1 common lizard around the field margins beneath the anticipated footprint of the cumulative development. Additional impacts from selection of laydown areas are to be confirmed and could potentially significantly increase impacts.
- Greenlink Interconnector – the Greenlink connection to Pembroke Power Station passes through the western edge of field 15, which comprises semi-improved grassland and is considered likely to support reptiles. The remainder of the local part of the Greenlink Project is based on arable land / intensively managed agricultural land and considered unlikely to support significant numbers of reptiles.
- Goldborough Road BESS – the connection to Pembroke Power Station passes through field 15, which comprises semi-improved grassland and is considered likely to support reptiles. The main site may support reptiles, but any reptile populations here would be well removed from the Proposed Development.

8.49. Lambeeth BESS is situated within an arable field and considered unlikely to significantly impact reptiles.

8.50. The majority of these cumulative developments are anticipated to have no greater than a **Minor** impact on reptiles, though the PNZC CCS Project (RWE) is likely to have a **Minor** to **Moderate** impact, depending on the final choice of laydown areas.

8.51. Cumulatively, the residual local impact on reptiles is anticipated to be **Moderate**, with the Proposed Development and the PNZC CCS Project (RWE) likely to constitute the highest levels of impact. In response to the findings of the cumulative impact assessment, a Reptile Mitigation Strategy will be produced to avoid any significant impacts to reptiles. Given the numbers of reptiles present, it is envisaged that a reptile translocation will be required. In areas with fewer reptiles (e.g. along the pipeline route), it is proposed that habitat manipulation is employed to minimise impacts on reptiles.

Overall Cumulative Effects

8.52. To conclude, should all the above cumulative developments go ahead then the key receptors with likely significant residual effects considered likely to be impacted at a significantly higher level in light of cumulative effects are:

- Lowland mixed deciduous woodland Priority Habitat (Parish) – increase from **Minor** impact to **Moderate** to **Major** impact (due mainly to PNZC CCS Project (RWE)).
- Reptiles (Local) – increase from **Minor** to **Moderate** impact to **Moderate** impact (due mainly to Proposed Development and PNZC CCS Project (RWE)).

8.53. Details of proposed avoidance and mitigation measures are set out in Chapter 7 of this ES.

8.54.

8.55.