Planning Pembrokeshire's Future
Local Development Plan

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Background Paper for Local Development Plan 2:

Supplementary paper on Renewable Energy – 1km exclusion zone around the Pembrokeshire Coast National Park boundary for Solar Photovoltaics

Pembrokeshire County Council

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Contents

Glossary of terms

LDP	Local Development Plan (the current Plan)
LDP 2	The Replacement Local Development Plan
PCC	Pembrokeshire County Council
PCNPA	Pembrokeshire Coast National Park Authority
PPW	Welsh Government's Planning Policy Wales
Solar PV	Solar Photovoltaic
REA	Renewable Energy Assessment
RE Toolkit	Welsh Government's Renewable Energy Toolkit
TAN	Welsh Government's series of Technical Advice Notes

1 Introduction

1.1 Pembrokeshire County Council published a Renewable Energy Assessment (REA) in April 2017. This was prepared for the Council by the National Energy Foundation, in collaboration with Lovell Johns.

1.2 The REA provides a robust evidence base on this topic, to inform Pembrokeshire County Council's Local Development Plan Review. It takes account of the requirements of the Well-being of Future Generations (Wales) Act, 2015 and of Welsh Government's Planning Policy Wales and Renewable Energy Toolkit documents, amongst other things.

1.3 The REA is structured in terms of the four key evidence base options contained within Welsh Government's Renewable Energy Toolkit for Planners. This is explained in more detail on page 6 of the REA.

1.4 Welsh Government was asked by the Council to check through the REA and advise if any matters required further attention. One of the issues that Welsh Government picked up was that an exclusion zone for solar PV proposals, around the National Park boundary, had been included in the REA. Its advice to the Council, presented in the Preferred Strategy response, was that:

In relation to solar PV resources, the separation exclusion zone of 1km along the boundary with the National Park Authority should be justified.

1.5 At a meeting with Welsh Government's Plans Team on 21st March 2019, Welsh Government suggested that it would be helpful if a short supplementary evidence base paper could be prepared to elaborate on this particular matter. This paper has been prepared in response to that request.

2 The solar PV potential of the Council's planning area

2.1 Section 3 of the REA presents an area-wide renewable energy assessment, setting out:

'Details of the accessible renewable energy resources in the Pembrokeshire County Council area, the variation in technologies that may need to be employed to utilise these resources and the different outputs (electricity and / or heat) for each technology'.

2.2 Sub-section 3.7 focuses on the Solar PV Resource of the Council's planning area. It provides a summary assessment of the potential for Solar PV Farms in that area.

This section sets out background information on Solar PV Arrays and also discusses their mapping. In accordance with the RE Toolkit, the REA uses *'GIS constraints mapping to facilitate a visual representation of 'usable' land resource for large-scale 'stand-alone' PV developments'* within the Council's planning area. A six-step approach was taken to this, based on RE Toolkit Sheet K:

- Step 1 – Map locations of built-up areas and infrastructure;
- Step 2 – Map further environmental and heritage constraints;
- Step 3 – Map areas of suitable slope and topology;
- Step 4 – Addressing cumulative impact;
- Step 5 – Assess potential installed capacity and energy output; and
- Step 6 – Map locations of suitable Agricultural Land Classification and apply further constraints as necessary.

2.3 Step 4 – addressing cumulative impact – notes that the main cumulative impact affecting the deployment of stand-alone solar PV within Pembrokeshire is the proximity of the Pembrokeshire Coast National Park. It notes that the Council requested a 1km exclusion zone to be applied along the boundary with the National Park. It adds that *'the presence of existing solar PV farms within this exclusion zone can be noted'*.

The context for doing this was to inform the assessment of the potential for Solar PV Farms in the Council's planning area. It was not to imply that such development would never be permitted in such areas in the future, or to pre-judge the policy stance of LDP 2.

2.4 Map 3.7.5 of the REA shows the borders shared with the Pembrokeshire Coast National Park, together with a 1km exclusion zone, which has been applied along the non-National Park side of the boundary. This map does not show the cumulative impact of stand-alone Solar PV, as no fixed distance between stand-sites is proposed for the purposes of assessing Solar PV potential – it follows from this that at application stage, each application would be considered on its merits.

2.5 LDP 2 has two policies that relate to renewable energy, these being GN 4 on Resource Efficiency and Renewable and Low-carbon Energy Proposals and GN 5 on Renewable Energy Target and Allocations. The latter includes allocations for Solar PV installations. However, at the time of preparation of the Renewable Energy Assessment for LDP 2 (in 2017) the policies had not been drafted. For the purposes of preparing the REA, the likelihood of refusal of Solar PV proposals on landscape impact grounds was considered to be significantly greater within the 1km exclusion zone. This was because of the inter-visibility between the National Park and the remainder of the County. For that reason, for the REA it was assumed that there would be no new consents within this area for the purposes of assessing future potential.

2.6 The background to the Council setting the 1km exclusion zone along the National Park boundary is a statement in the RE Toolkit (page 56), which says:

'Similarly, the impact of solar PV farms on landscape character has not been taken into account. Whilst a detailed methodology for undertaking these assessments is outside the scope of this toolkit, it should be noted that a GIS approach can be utilised to constrain sensitive areas and local authorities wishing to adopt a robust approach should seek to undertake such works'.

PCC has set the 1km exclusion zone distance, in the context provided by the RE Toolkit statement, which acknowledged that landscape character had not been taken into account. However, it should be made clear that the exclusion zone has been created for the purpose of assessing future potential, rather than as a planning policy in its own right.

That seems a reasonable approach, given that National Park designation is indicative of the highest quality landscape category available in Wales – and that therefore the prospect of Solar PV proposals within the zone being refused is high. This is a reflection of the high degree of inter-visibility between National Park and non-National Park locations in many locations in Pembrokeshire.

The broader context is that although the National Park boundary is long, and therefore the exclusion zone covers a significant land area, much of the Council's planning area nonetheless lies outside the affected area.

2.7 In terms of the distance chosen for the 1km exclusion zone, background research on approaches taken by other Welsh authorities indicated that several had set a separation distance for wind turbines but were either silent on Solar PV arrays, or had deferred a decision on the matter. However, Powys County Council had set a 3.5km separation distance for solar farms, exactly half the distance chosen by them for wind turbine clusters.

2.8 Assessment of the cumulative impact of solar farms requires a different approach to that used for wind turbines. Some of the salient points on this are set out below:

- Solar PV arrays don't extend very high above the ground surface and the panels are generally black.
- On buildings, Solar PV panels are often roof-mounted and blend in well with the roofing materials.
- Solar PV arrays can cover a large surface area, sometimes extending over many hectares, although smaller arrays are also to be found which may have very little visual impact. This matter varies on a case-by-case basis.
- Solar reflection from panels can be an issue.
- Organisation of PV panels is frequently linear, but other options are available, for instance those that follow the contours of the land on which they are mounted.
- Because the vertical element to solar PV structures is significantly less than for wind turbines, the visual impact may be less. However, other factors, such as angle of slope, slope direction and boundary treatments, will affect visibility in the landscape.

3 Conclusions

3.1 The conclusions reached on this matter, for the purpose of moving forward the REA, was that:

a) A separation distance should not be set for Solar PV installations, as impacts varied so much from case-to-case; and
b) Instead, a buffer zone should be set along the National Park boundary, reflecting the universal sensitivity of the National Park area to large-scale solar proposals.

3.2 The buffer zone width that was used for the REA was of a lesser distance than that used with regard to the separation of wind turbines clusters. It was also significantly less than the separation distance for solar farms proposed in Powys. The chosen distance is what seemed reasonable, taking into consideration matters such as those set out in paragraph 2.8.

3.3 The 1km buffer zone around the National Park for Solar PV is that used by the REA for the purposes of assessing the potential solar PV contribution in the Council's planning area. For the purposes of this study, it is therefore assumed that solar PV proposals within the zone would be less likely to be consented than elsewhere, because of the inter-visibility issue.

3.4 The 1km buffer zone around the National Park for Solar PV is not a planning policy for LDP 2. The use of the 1km buffer zone should not therefore be taken to imply that solar PV developments would never be permitted in such areas in the future, or to pre-judge the approach to be taken by LDP 2.