

Welsh Government

**Priority Areas for Wind and Solar
Energy**

Executive summary stage 1 and 2

4.5

Issue | 12 July 2019

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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1 Introduction

Welsh Government commissioned Ove Arup and Partners Ltd. (Arup) to undertake an assessment of large scale (10MW+) on-shore wind and solar energy development constraints and opportunities in Wales. The objectives of the study (as defined by Welsh Government) were to assist them in identifying the most appropriate locations for large on-shore wind and solar energy development in Wales to inform the preparation of an Energy Atlas and the National Development Framework (NDF).

2 Policy context

In April 2019, Welsh Minister for Environment, Energy and Rural Affairs, Lesley Griffiths declared a climate emergency for Wales. The May 2019 UK Committee on Climate Change report¹ recommended a 95% reduction on Welsh 1990 emissions by 2050.

In June 2019, the Minister for the Environment, Energy, and Rural Affairs, set out Welsh Government's ambition to bring forward a target for Wales to achieve net zero emissions no later than 2050². This demonstrates a clear appetite and drive in Wales towards a low carbon economy and tackling climate change.

The above followed previous ministerial announcements which set a 70% renewable electricity target for Wales by 2030, a commitment which is recognised through Planning Policy Wales, Edition 10 (December 2018)³.

The 20-year National Development Framework (NDF) must reflect the changes that will be required across the Wales to mitigate climate change. The scale of development required to support Wales decarbonise its energy production has the potential to lead to changes in terms of landscape, visual, and wider effects. This needs to be understood and balanced in the context of a need to reduce carbon emissions and tackle climate change.

3 Method

This project was delivered over two stages between August 2018 – July 2019. An overview of the approach is set out in figure 1 below.

¹ UK Committee on Climate Change, *Net Zero – The UK's contribution to stopping global warming*, May 2019 <https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>, Accessed May 2019

² <https://gov.wales/written-statement-response-committee-climate-changes-net-zero-report>, Accessed June 2019

³ <https://gov.wales/sites/default/files/publications/2019-02/planning-policy-wales-edition-10.pdf>

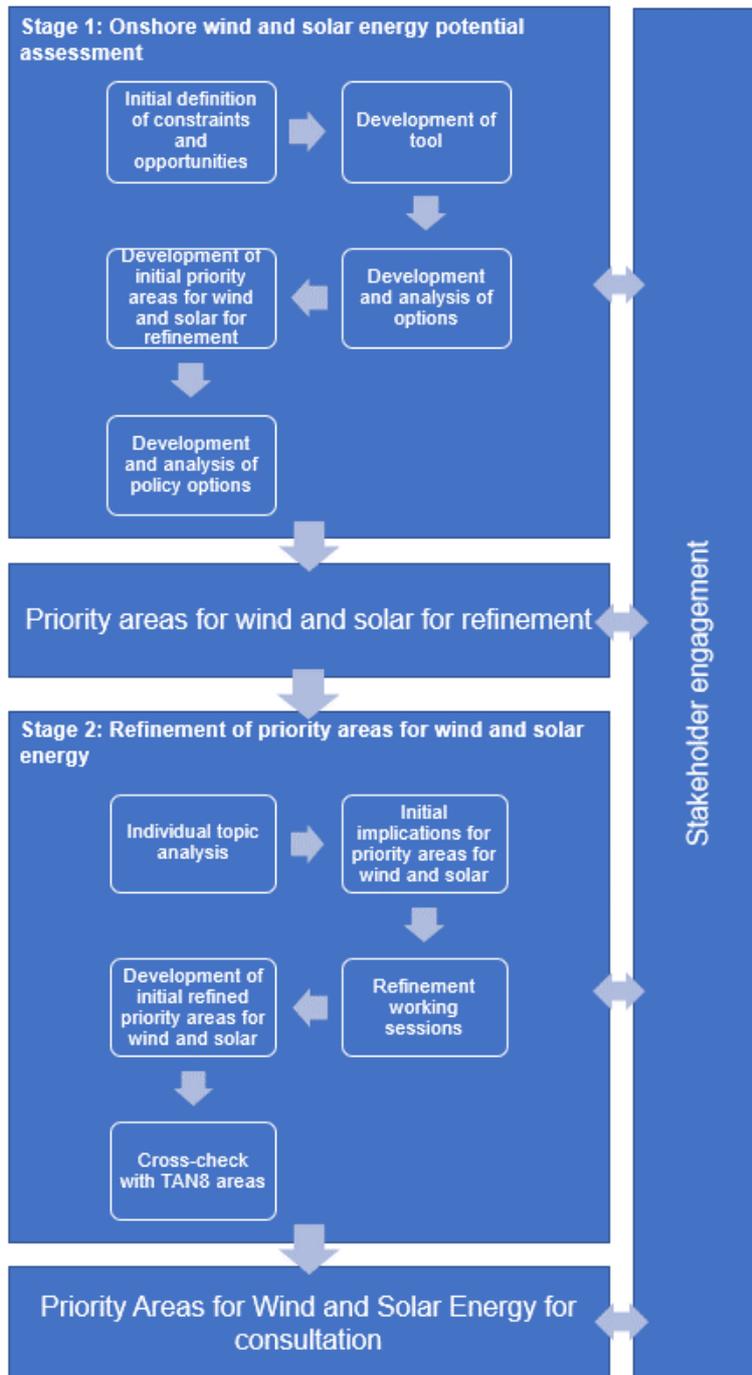


Figure 1: Overview of study approach

3.1 Stage 1

In stage 1, we developed an interactive tool, with variables and assumptions defined at a national level in collaboration with Welsh Government and wider stakeholders. The tool was designed to enable Welsh Government to test variables and assumptions. Key steps in stage one were:

- Initial definition of constraints and opportunities, working with stakeholders and experts
- Initial development of digital tool

- Development and analysis of options, working closely with stakeholders to test and refine these
- Development of initial priority areas for wind and solar refinement
- Development and analysis of policy options, recognising that the areas could be subject to a range of approaches to policy

The criteria applied in the interactive tool were agreed with Welsh Government and wider stakeholders as principal areas for consideration in on-shore wind and solar potential.

3.2 Stage 2

In stage 2, we sought to carry out further analysis in the broad areas identified in order to further refine Priority Areas for Solar and Wind Energy, considering in further detail certain constraints, as follows:

- Landscape and visual assessment
- Centres of population
- Vehicular access
- Ecosystem services and resilience
- Historic environment

Following the collaborative technical assessments, a cross-check with TAN 8 SSAs was undertaken, before a set of Priority Areas for Solar and Wind Energy were developed.

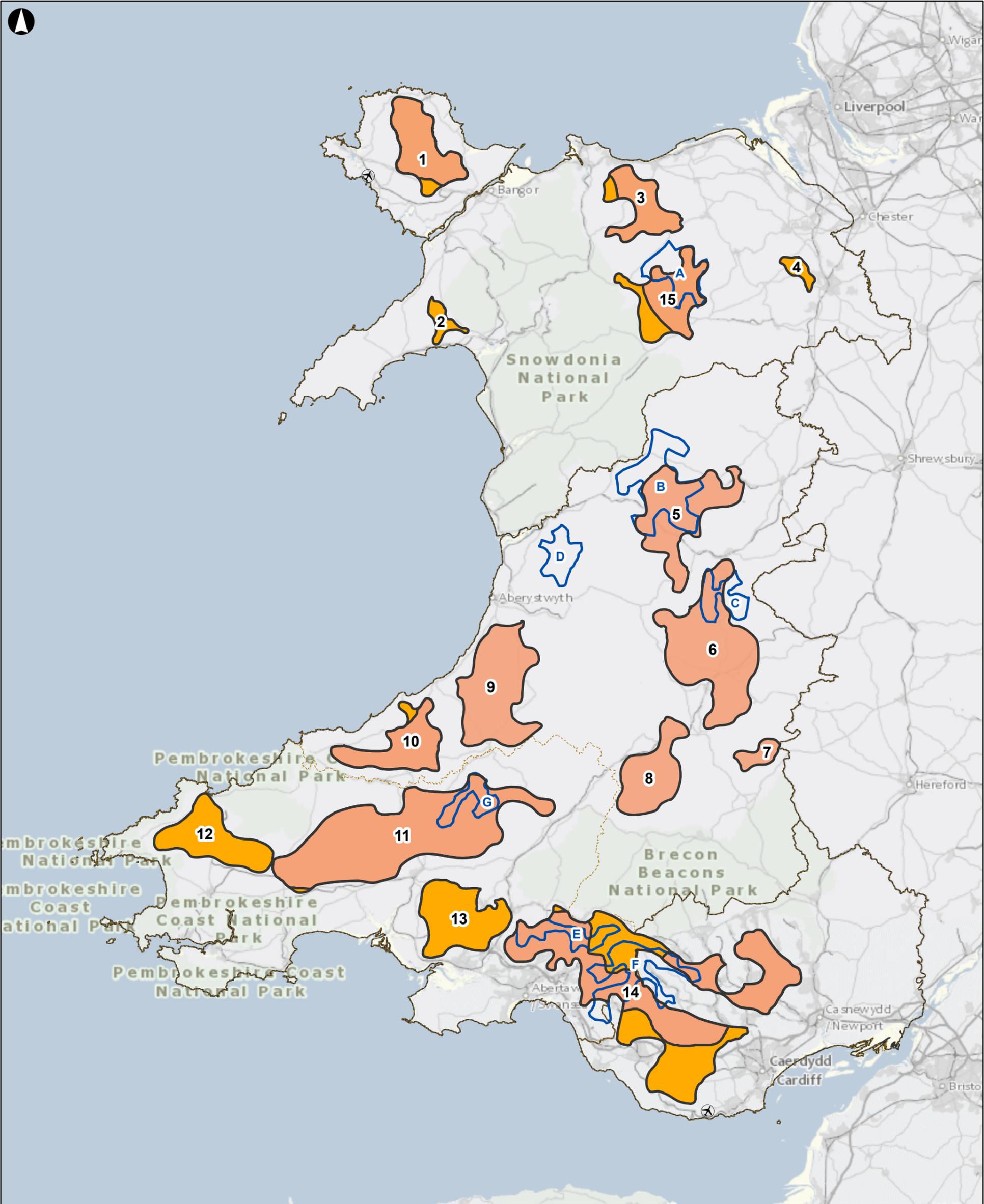
Given the national / strategic nature of the commission, this process did not seek to identify development sites, rather, it utilised known constraints in order to identify broad areas considered to be of greatest opportunity. It is accepted that wider matters, at a site-specific level, will need to be considered in the context of more detailed planning as sites come forward.

4 Findings

As a result of the analysis and engagement carried out by Arup, working closely with Welsh Government and its partners, the study identified 15 refined Priority Areas for Solar and Wind Energy. These are based on key areas of analysis, featuring environmental designations, heritage designations, high-level landscape assessment, and aviation constraints and represent the areas of greatest opportunity in Wales when these features are applied.

The analysis and assessment presented has been carried out at a level appropriate to national decision-making / policy formulation. The maps outputs are therefore not designed to present site-level accuracy and should be viewed at a scale no more detailed than 1:250,000.

These 15 areas are set out on the map overleaf.



Legend

- Priority Area for Solar and Wind Energy
- TAN8 SSA
- Priority Area for Solar and Wind Energy
- Priority Area for Solar Energy

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Client
Welsh Government

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1:800,000

Priority Areas for Solar and Wind Energy and TAN8 SSAs

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5 Recommendations and next steps

The 15 Priority Areas for Solar and Wind Energy represent a high-level national analysis for the areas of greatest opportunities based on a desk study. The analysis has not been able to consider more local level constraints at the level that would be undertaken for a site-specific / project analysis.

Arup recommends that robust policy and design guidance should be developed to accompany the Priority Areas for Solar and Wind Energy within the NDF.

It is understood that Welsh Government is currently working towards three levels of policy in relation to the Priority Areas for Solar and Wind Energy within the NDF:

- The priority areas, where large scale wind and solar development has in principal support;
- National Parks and Areas of Outstanding Natural Beauty (AONBs), where large scale on-shore wind and solar development is not acceptable; and
- Other areas, where development may be acceptable, on the basis of key policy criteria.

It is recognised that the Priority Areas for Solar and Wind Energy themselves still have constraints, and there are a number of site specific issues, which cannot be dealt with at a national level. Therefore, this policy is important to provide an appropriate evidential position to inform decision-making at planning application stage.

There are opportunities for Welsh Government to use the findings from this study to inform strategic discussions around the grid, and in developing an integrated approach to regional energy planning. Welsh Government should maximise the opportunities to use the evidence, tool and findings in these activities to further its policy aims and objectives.