



Malvern Hills
National
Landscape



Position Statement 4: Renewable Energy in the Malvern Hills National Landscape and its Setting

A quick note on terminology

On 22 November 2023, the Malvern Hills Area of Outstanding Natural Beauty (AONB) was re-branded as the Malvern Hills National Landscape. National Landscape is the new name for a designated AONB. Consequently, the name Malvern Hills National Landscape is commonly used throughout this document. However, since 'AONB' remains the legal name for the designation, this term is also used in appropriate places for example when referring to the Malvern Hills AONB Management Plan, which is a statutory plan, or when directly quoting from older documents. The name used for the partnership associated with the designation is the Malvern Hills National Landscape Partnership.

CONTENTS

- 1. **CONTEXT** 4
- 2. **PURPOSE OF THE POSITION STATEMENT** 6
- 3. **LEGISLATION, POLICY, AND GUIDANCE** 7
- 4. **PROTECTING THE SPECIAL QUALITIES OF THE MALVERN HILLS NATIONAL LANDSCAPE – GENERAL CONSIDERATIONS AND ASSESSMENT REQUIREMENTS** 8
 - 4.1 Landscape Character 8
 - 4.2 Other factors that contribute to natural beauty 9
 - 4.3 Manufacturing & De-Commissioning 11
 - 4.4 Restoring the site 12
- 5. **ASSESSMENT OF IMPACTS** 13
 - 5.1 Cumulative Impacts 13
 - 5.2 Major Development 14
 - 5.3 Mitigation Measures 15
 - 5.4 Development in the setting of the Malvern Hills National Landscape 15
 - 5.5 EIA 16
- 6. **TYPES OF RENEWABLE ENERGY** 18
 - 6.1 Heat Pumps 18
 - 6.2 Biomass 20
 - 6.3 Hydropower 24
 - 6.4 Solar Energy 24
 - 6.5 Wind Energy 33
- 7. **COMMUNITY-LED RENEWABLE ENERGY SCHEMES** 41

1. CONTEXT

- 1.1 Climate Change is the biggest threat to humanity and one of the greatest threats to biodiversity¹. Projections show a change towards warmer, wetter winters and hotter, drier summers, and an increasing frequency and intensity of extreme weather events which will continue to amplify as climate change intensifies. These changes pose risks to biodiversity; soil health; natural carbon stores and sequestration; crops and livestock; the supply of food, goods and services; the economy; and human health. Collectively, we need to proactively mitigate and adapt to the impacts of climate change.
- 1.2 The Malvern Hills National Landscape is a landscape whose distinctive character and natural beauty is so outstanding; it is in the national interest to safeguard it². The statutory purpose of AONB designation is to conserve and enhance the natural beauty of the area³. Many defining features and 'Special Qualities'⁴ of the AONB designation are threatened by climate change. They are also potentially threatened by responses to climate change, for example, due to the visual impacts of certain types of development. Action is urgent but needs to be well thought out and carefully implemented.
- 1.3 Within this context, the National Association for Areas of Outstanding Natural Beauty (NAAONB) committed to ensuring that by 2024, '*all AONB management plans include meaningful measures around climate change mitigation and adaptation, including clear, measurable targets to support Net Zero*'⁵. The current Malvern Hills AONB Management Plan (2019-2024) already advocates this through several Objectives and Policies – particularly Policies BD01, BDP2 and BDP8 – recognising a need to move towards a more energy efficient, low-carbon economy. The forthcoming Management Plan review will introduce further expectation, policies, and guidance to address the challenges of climate change within the National Landscape and its setting, whilst conserving and enhancing the natural beauty of this protected landscape.
- 1.4 A key component of climate change mitigation is to progress towards a more sustainable energy system by applying the energy hierarchy (Figure 1). The first two priorities aim to reduce the demand for energy and will be addressed in the forthcoming Management Plan review. However, we recognise that there is also a need to generate energy from renewable energy sources towards achieving 'net-zero.' This includes on-site provision of renewable energy in new development and, where appropriate, retrospectively. It is Priority 3, specifically renewable energy, that is the focus of this Position Statement.

1 The National Association of Areas of Outstanding Natural Beauty (2019) The Colchester Declaration (<https://landscapesforlife.org.uk/projects/colchester-declaration>).

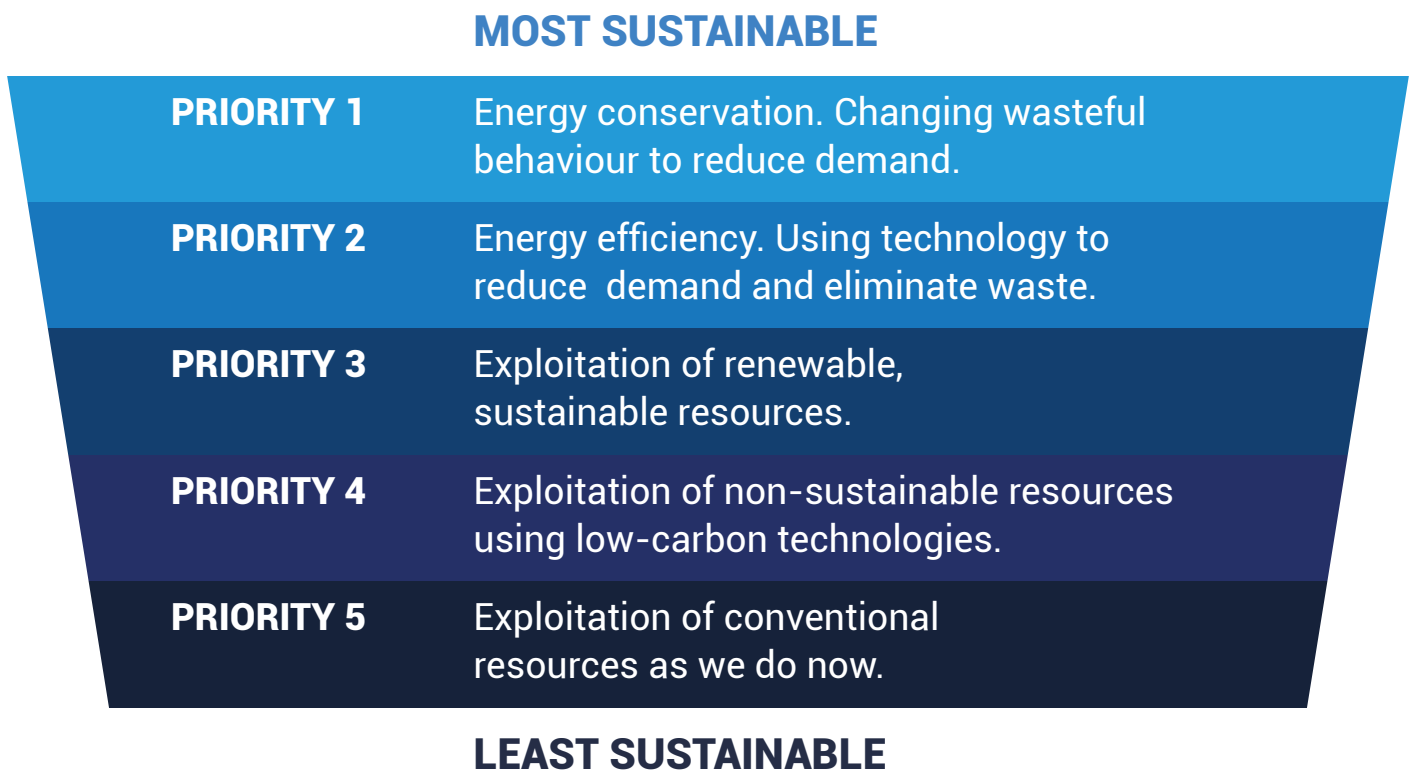
2 Section 82 of the Countryside and Rights of Way Act (2000)

3 Defra (2019) Areas of Outstanding Natural Beauty: technical support scheme (England) 2019 to 2020.

4 Page 9 of the Malvern Hills Area of Outstanding Natural Beauty Management Plan 2019-2024. AONBs are designated by reason of its special qualities; those aspects of the area's natural beauty which make the area distinctive and are the key attributes on which the priorities for its conservation and enhancement are based.

5 Refer to Footnote 1.

Figure 1. Energy Hierarchy⁶



- 1.5 Renewable energy has an important role to play in mitigating the impacts of climate change and is key to the commitment of reducing reliance on fossil fuels and achieving decarbonisation. There are various technologies available for producing electricity, heat, or both. However, without good design, their implementation in the Malvern Hills National Landscape and its setting may harm several National Landscape 'Special Qualities,' for instance through their scale or the introduction of uncharacteristic and potentially industrialising elements within the landscape. A key consideration is therefore to deliver aspirations in a way which is compatible with the statutory purpose of AONB designation.
- 1.6 The level of protection afforded to designated AONBs may mean that some of its renewable energy provision will need to be met outside of the Malvern Hills National Landscape, or even its setting⁷. However, the Malvern Hills National Landscape Partnership recognises the need to contribute to renewable energy provision where possible as, in addition to powering and heating homes, buildings and businesses, renewable energy brings social and economic benefits including, but not limited to, job creation in manufacturing, construction and maintenance industries.
- 1.7 To do this, a combination of renewable energy types, at appropriate scales, is needed. A carefully considered multi-functional approach can deliver positive outcomes for natural beauty, climate adaptation and mitigation, nature recovery and related issues, such as food production, in mutually supportive ways.
- 1.8 This Position Statement focusses on renewable energy as a means of mitigating the impacts of climate change. Measures to adapt to climate change are also important although beyond the scope of this Position Statement. This is a 'live' document, which will be updated to reflect changes in national planning and other policy, and renewable energy technologies.

⁶ <https://www.glasgowsciencecentre.org/our-blog/the-energy-hierarchy>

⁷ Refer to Malvern Hills National Landscape Partnership Position Statement 1 on Development and Land Use Change in the Setting of the Malvern Hills National Landscape.

2. PURPOSE OF THE POSITION STATEMENT

- 2.1 Position Statements expand on relevant policies in the current Malvern Hills AONB Management Plan, providing further context, guidance and recommendations concerning specific policies and associated issues. They do not create new policies. They intend to help local authorities, developers, and other relevant stakeholders:
- have regard and positively contribute to the purpose of AONB designation;
 - ensure the purpose of AONB designation is not compromised by development and that the natural beauty of the Malvern Hills National Landscape is conserved and enhanced;
 - fulfil the requirements of the National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) (or, where relevant, National Policy Statements) with regards to AONB designation and the factors that contribute to their natural beauty;
 - take account of relevant case law;
 - have regard to and be consistent with the Malvern Hills AONB Management Plan and guidance published by the Malvern Hills National Landscape Partnership;
 - emulate best practice in the Malvern Hills National Landscape and other protected landscapes; and
 - develop a consistent and coordinated approach to relevant issues across the whole of the Malvern Hills National Landscape and its setting⁸.
- 2.2 Relevant authorities⁹ are required by law, in exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty, must seek to further the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty¹⁰. In fulfilling this, it is important that relevant authorities have regard to guidance published by the Malvern Hills National Landscape Partnership, including its position statements.
- 2.3 Position statements are supplementary to the statutory Malvern Hills AONB Management Plan. However, the Malvern Hills National Landscape Management Plan 2025 - 2030 at policy PL7 states that *"All development proposals in the National Landscape and its setting should seek to further the conservation and enhancement of the natural beauty of the area... they should be compatible with the National Landscape Management Plan and guidance produced by the National Landscape Partnership, including the Malvern Hills National Landscape Partnership position statements..."*.
- 2.4 The Malvern Hills AONB Management Plan and, by extension, Partnership guidance and position statements, should be a material planning consideration.
- 2.5 In some instances, guidance and/or recommendations in Malvern Hills National Landscape publications may go further than some policies of current Local Planning Authority (LPA) development plans. As new iterations of LPA development plans are produced, we hope the recommendations will be incorporated into them as we believe they can positively help those who value and care for this area ensure that future development contributes to the local distinctiveness and a sense of place.

8 Three local authority areas overlap with the Malvern Hills National Landscape, with each with local authority having its own development plan. One of these local authorities (Malvern Hills) produces its development plan jointly with Worcester City and Wychavon in the form of a single local plan for South Worcestershire Councils.

9 In this context, 'relevant authority' includes any: Minister of the Crown; public body; statutory undertaker; person holding public office.

10 Section 85 of the Countryside and Rights of Way Act (2000) amended following the Levelling Up and Regeneration Act (2023). It is noted that this applies to land in a designated AONB in England only.

3. LEGISLATION, POLICY, AND GUIDANCE

- 3.1 Proposals for renewable energy development within the Malvern Hills National Landscape and its setting should have regard to:
- the statutory purpose of AONB designation, which is to conserve and enhance the outstanding natural beauty of the area;
 - national planning policy/guidance, particularly paragraphs 11, 180, 182 and 183 of the National Planning Policy Framework (NPPF) (December 2023);
 - the relevant local authority development plan, Neighbourhood Development Plans (if made), and other relevant local authority guidance and evidence.
- 3.2 Proposals should have regard to, and be compatible with Malvern Hills National Landscape Partnership publications, including Guidance and Position Statements.
- 3.3 It must be acknowledged that, in a plan-led planning system, it is the policies of the relevant adopted local authority development plan that have greatest weight. As such, within this plan-led planning system, the hierarchy is as follows¹¹:

Decision-making is taken in accordance with the adopted development plan unless material planning considerations indicate otherwise. The adopted development plan comprises the Local Planning Authority Development Plan, and the Neighbourhood Development Plan, if made.

The Malvern Hills AONB Management Plan, like the NPPF, are material planning considerations but do not form part of the adopted development plan. Malvern Hills National Landscape Position Statements and guidance documents supplement the Malvern Hills AONB Management Plan.

11 In England, Section 38(6) of the Planning and Compulsory Purchase Act 2004 states: "If regard is to be had to the development plan for the purpose of any determination to be made under the Planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise." The National Planning Policy Framework is itself a significant material consideration, although it is acknowledged regarding the presumption in favour of sustainable development under Paragraph 11, particularly in relation to plan-making and decision-making. On Wednesday 13 September 2023, the DEFRA Secretary of State tabled a [Written Ministerial Statement](#) setting out a package of measures to support nature recovery in Protected Landscapes. The package includes a commitment to new legislation through the Levelling Up and Regeneration Act (2023), which will enhance National Park and AONB Management Plans by placing a stronger requirement on partners to contribute to their delivery.

4. PROTECTING THE SPECIAL QUALITIES OF THE MALVERN HILLS NATIONAL LANDSCAPE – GENERAL CONSIDERATIONS AND ASSESSMENT REQUIREMENTS

4.1 Landscape Character

- 4.1.1 The Malvern Hills AONB Landscape Character Assessment (LCA) describes the 10 (plus urban¹²) different landscape character types (LCTs)¹³ of this protected landscape, including their key features/characteristics. These key features/characteristics are re-iterated in the Malvern Hills AONB Landscape Strategy & Guidelines. For each LCT, the Landscape Strategy & Guidelines identifies some 'local forces for change' and their potential implications and sets out guidelines for avoiding or minimising adverse effects arising from them. However, other forces for change may exist that are not yet included in these guidelines, such as large-scale ground-mounted solar installations¹⁴ or the planting of energy crops.
- 4.1.2 Landscape assessments for renewable energy project proposals should refer to the relevant landscape character area (LCA) as a starting point; and also will need to refer to the county wide historic landscape characterisation, where applicable¹⁵. Assessments should clearly demonstrate how the proposal responds positively to the existing landscape patterns and landforms, and how it seeks to conserve and enhance existing characteristic landscape elements such as vegetation and field boundaries, and important features. Key views should be identified and assessed. These should include identification and assessment of views and viewpoints within, from and to the National Landscape and its setting¹⁶.
- 4.1.3 Photomontages should be provided. Visualisation/Computer Generated Imagery (CGI) is a powerful tool for communicating the potential effects of new development on views and the character of the surrounding landscape. It can assist and inform decisions and gives decision-makers and stakeholders confidence in the appearance of a scheme and effectiveness of any proposed mitigation measures. The increased reliance on CGI in many applications means that proposals should also consider aspects that are not shown within CGIs such as, but not limited to, glint and glare¹⁷.

12 <https://www.malvernhillsaonb.org.uk/wp-content/uploads/2022/01/landscape-strategy-map.html> and <https://www.malvernhills-nl.org.uk/wp-content/uploads/2022/01/MalvernLandStratGuideLoResFinal.pdf>

13 Since publication of the Malvern Hills AONB Landscape Character Assessment, Herefordshire Council have published a revised Landscape Character Assessment, which includes new Landscape Character Types and names. Other LPAs are updating their respective Landscape Character Assessments, and the relevant Local Planning Authority should therefore be referred to in respect of the latest position on these matters.

14 Whilst the term 'solar farms' is commonly used, recent decisions issued by the Secretary of State for Levelling Up, Housing & Communities do not use this term as it is not a form of 'farming'. The most appropriate wording would be solar development, solar power stations and installations. The position statement is altered to that effect.

15 Note that there is not a [historic landscape characterisation](#) for Herefordshire, but there is for Worcestershire and Gloucestershire.

16 Refer to Identification of Key Views To and From the Malvern Hills Area of Outstanding Natural Beauty – A Report prepared by Cooper Partnership for the Malvern Hills AONB Partnership – March 2009

17 Further guidance on how CGIs and Photomontages could be approached is provided as part of wider guidance by the Landscape Institute on [Visualisation](#), as well as Section 8 of GLVIA3.

- 4.1.4 Regard should also be given to national, local authority and neighbourhood landscape character assessments and related evidence. However, it is important that the assessments include independent and more granular character baseline studies to identify localised differences in character which often occur within LCTs.
- 4.1.5 The Malvern Hills National Landscape Partnership Position Statement on Landscape-Led Development is particularly relevant for consideration.
- 4.1.6 Renewable energy projects should prioritise use of previously developed ('brownfield') land, where possible, unless that land can be demonstrated as less suitable for development than other potential sites (for example, by having a high biodiversity value). Where any site is proposed, but particularly any greenfield sites, projects should benefit the local rural economy, be supported, owned and/or benefit local communities, protect, conserve and enhance the landscape, bring net benefits to wildlife, avoid/minimise loss of productive agricultural land, and avoid adverse impacts on biodiversity, soils, hydrology, highways, landscape character, visual amenity, social/residential amenity, tranquillity, cultural heritage and the local economy.

4.2 Other factors that contribute to natural beauty

- 4.2.1 The extent to which a proposed renewable energy development might affect the landscape and scenic beauty of the Malvern Hills National Landscape and its setting is obviously a key consideration and, in planning terms, these effects should be given great weight¹⁸. Many factors contribute to the natural beauty of AONB designation, including, but not limited to:
- Natural heritage (including biodiversity);
 - Cultural heritage (including historic environment); and
 - Relative tranquillity¹⁹.
- 4.2.2 More information on the factors that contribute to natural beauty is provided in Natural England's 'Guidance for assessing landscapes for designation as National Park or Area of Outstanding Natural Beauty'²⁰.
- 4.2.3 The following issues concerning visual effects & tranquillity should be considered:

Siting – one of the 'Special Qualities' identified in the Malvern Hills AONB Management Plan is the '*dramatic scenery and spectacular views arising from the juxtaposition of high and low ground*'. Therefore, much of the designated AONB, and its setting, could be considered unsuitable for all but micro-scale renewable energy installations, and – potentially – some small-scale renewable energy projects. The conditions whereby there may be opportunity, and the specific considerations that should be assessed for each renewable energy source type, are discussed later in this position statement.

18 This 'great weight' is a factor in planning decisions when assessing the overall planning balance. In effect, it 'tilts the scales' towards a decision that would avoid harm to the landscape and scenic beauty of the affected designated AONB. The significance of applying this great weight partly depends on the significance of any adverse effects on the designated AONB. The overall planning balance will depend on the weight that should be given to other considerations.

19 For further clarification on the definition and more information on tranquillity, refer to the Technical Information Note published by the Landscape Institute - <https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2017/02/Tranquillity-An-Overview-1-DH.pdf>

20 Natural England (2011) Guidance for assessing landscapes for designation as National Park or Areas of Outstanding Natural Beauty - refer to Table 3 and Appendix 1.

Agricultural Land – normally renewable energy projects should not be located on useable agricultural land, particularly the most productive Grade 1, 2 and 3a land. Nor should they be on typically low-grade hillside land where their impact would be greatest. The grade should be stated on any application. As recognised within the Malvern Hills AONB Natural Capital Scoping Study 2017, much of even Grade 4 land in the designated AONB is sloping, meaning there are further considerations in terms of visual effects.

Screening – it is important to note that screening cannot reduce levels of adverse effects on landscape character. However, screening (and softening) in the form of hedges or tree belts may be appropriate to help reduce visual effects, providing it is in keeping with local landscape character, and does not result in the loss of key views, including from footpaths and bridleways crossing/in close proximity to the renewable energy project. It should be borne in mind that a hedge may well take ten years to grow to a height sufficient to provide effective concealment and tree cover longer. In addition, it may not be possible to screen views at all from elevated viewpoints where lower-lying development is seen more in plan-form, or where development is on sloping ground at a similar elevation to the viewer. Also, climate change itself and other factors, such as plant diseases, may have impacts on the long-term health and effectiveness of vegetation cover/screening.

Assessments – In line with the landscape-led approach, sufficient and appropriate landscape and visual assessment should be employed at the pre-application stage²¹ to describe local landform and key views and the likely effects on neighbouring properties, local character of a settlement and public rights of way etc. For example, solar panels, frames/supports, and/or other infrastructure, should not detract from the local character of a settlement. Designated heritage assets should be considered as individual visual receptors within an LVIA/LVA and should be considered when selecting viewpoints.

Materials & additional infrastructure –

- a) Measures to minimise glare and visual impact should be included as supporting documents accompanying a planning application.
- b) Bases should be easy to remove to permit restoration of the land.
- c) Security fences, if required, should be of a design sympathetic to the local landscape character. Any necessary security measures should not give rise to adverse landscape and/or visual effects. Significant security fencing which is inconsistent or incompatible with the local rural environment may render a development unacceptable. Consideration should be given for the minimal length and height of any necessary security fencing. Natural features, such as hedgerows, should be used to assist in site security and/or screen security fencing, where this is locally appropriate. In some instances, specialist fencing may be necessary to prevent access by deer, whilst appropriate measures should be in place to facilitate continued access by larger mammals, such as badgers and foxes.
- d) Where pole mounted CCTV facilities are proposed the location of these facilities should be carefully considered and designed to minimise visual/landscape impact. In exposed landscapes, such structures should be avoided.

21 The Partnership recognises that if a proposal is a EIA development, then a LVIA is required to establish the effects and whether the effects are significant or not. LVIAs are primarily relevant to EIA development. For other development, LVAs should firstly establish the proposed development's Zone of Theoretical visibility or Zone of Visual Influence. They can also be used at the pre-application stage which can help to understand local landform and key views and the likely effects.

- e) The use of security lighting should be minimised. Any lighting should utilise passive infra-red (PIR) technology and should be designed and installed in a manner which minimises glare, light pollution, and effects on biodiversity, in particular bats. Planning applications should contain full details and specifications of all security and lighting installations to allow an accurate landscape/visual/ecological assessment of the proposal to be made. Lighting features should be of a sympathetic design and installed to minimise light pollution, which is consistent with Malvern Hills National Landscape Guidance on Lighting.
- f) Buildings associated with renewable energy projects, such as transformer stations and inverter cabinets, should be unobtrusively sited, sympathetically designed, and suitably shielded to minimise visual impact.
- g) Accesses – new roads and tracks should be kept to an absolute minimum, and be sited, designed, and built to minimise impact on the landscape. Existing public rights of way should not be used except in exceptional circumstances, due to the risk to public safety. Existing access by the public to the countryside should not be lost and project proposals should consider preserving the amenity value for users of footpaths and bridleways and demonstrate how this will be achieved in the construction phase and thereafter.
- h) Grid connection – a key constraint to local renewable energy production is the connectivity of the location of a proposed renewable energy scheme with the National Grid. Significant upgrading may need to be undertaken to provide this connectivity, which may make a scheme unviable. The consideration of renewable energy schemes, including assessment of their acceptability, should take account of any necessary associated infrastructure such as access roads, cables (and whether these should be over or below ground) and ancillary buildings.
- i) Tranquillity – the impact of all factors affecting tranquillity²², both in construction and operation, should be carefully considered, especially given this may be proportionately more disruptive in otherwise quiet rural areas.

4.3 Manufacturing & De-Commissioning

- 4.3.1 The manufacture and construction of some renewable energy developments, as well as any decommissioning/demolition phase, has its own energy and carbon cost that should be considered when assessing the need for the development, weighing up that cost, alongside other impacts against the benefits the project may bring.
- 4.3.2 Decommissioning of energy sites at the end of their useful life (for solar, quoted as 35 to 40 years but likely to be much less as technology progresses) also poses issues which must be planned for.

4.3.3 As a result of the temporary nature of many of renewable energy technologies, the Partnership would expect LPAs to apply appropriate conditions to planning permissions requiring the removal of any buildings and any other structures at the end of the life of the proposed installation or when they become obsolete, whichever is the earlier. In accordance with the NPPF, sites granted temporary permission should not be considered as constituting brownfield land. Assessment of the potential for decommissioning stage effects, such as harm to archaeological features/assets due to the removal of piles and deep ploughing, should be made at the pre-application stage and consideration should be given to the requirement for an outline Decommissioning Environmental Management Plan (DEMP) to be submitted within a planning application for renewable energy development, or a DEMP to be secured via a condition of planning permission, where relevant.

4.3.4 In addition, LPAs should require proposals to demonstrate how solar panels and batteries will be recycled or how all types of waste will be disposed of, as part of relevant applications.

4.4 Restoring the site

4.4.1 Planning permission granted for some renewable energy projects, especially wind turbines and large-scale ground mounted solar installations, are generally considered temporary and granted for a restricted time period²³, after which they can be renewed, as appropriate. Restricting the development lifetime is a mechanism for ensuring that outdated/inefficient/redundant development is removed.

4.4.2 A site Restoration and Reinstatement Strategy, in the form of a legal agreement, should be sought and agreed with LPA Officers, in consultation with the Malvern Hills National Landscape Team, at pre-application stage, and subsequently secured by condition, if planning permission is granted, with a monitoring clause to ensure restoration of any relevant land to agricultural (or other) usage once the consent or use has terminated and a condition imposed that all equipment associated with the development is removed. The agreement should demonstrate how and when the site will be returned to a state that is in good landscape and ecological condition and in keeping with local landscape character and Biodiversity Net Gain obligations. New appropriate elements in the landscape may also be considered for inclusion in the Restoration and Reinstatement Strategy, such as a wildlife corridor that could contribute to a local nature recovery strategy or a new public right of way.

4.4.3 Food security is relevant given the UK imports 40% of the food it consumes, and this is rising²⁴. As global food prices rise, agricultural land, even of lower grades, should not be misused by change of use to inefficient renewable energy schemes. Restoration at the end of life of a scheme is important.

23 The Feed in Tariff for solar PV applies for a period of 25 years therefore developments should normally be regarded as temporary, hence the need for 'reversibility', and the ability for all structures to be removed and the land returned to its original use.

24 Food Matters: Towards a strategy for the 21st Century: http://webarchive.nationalarchives.gov.uk/+http://www.cabinetoffice.gov.uk/strategy/work_areas/food_policy.aspx

5. ASSESSMENT OF IMPACTS

5.1 Cumulative Impacts

- 5.1.1 The cumulative landscape and visual impact of a proposed renewable energy scheme (and any associated infrastructure) is a key consideration. The Government's PPG for Renewable and Low Carbon Energy states that: *"There are no hard and fast rules about how suitable areas for renewable energy should be identified, but in considering locations, local planning authorities will need to ensure they taken into account ... critically, the potential impacts on the local environment, including from cumulative impacts." (N.B. Underlining added for emphasis)²⁵.*
- 5.1.2 Cumulative landscape impacts and cumulative visual impacts are best considered separately. Cumulative landscape impacts are the effects of a proposed development on the fabric, character, and quality of the landscape. Cumulative visual effects concern the degree to which a proposed renewable energy development will become a feature in particular views (or sequences of views) and the impact this has upon the people experiencing those views²⁶. There is also a need to have regard to all the other likely cumulative effects, and inter- and/or intra-project.
- 5.1.3 With regards to cumulative visual impacts, this is particularly important for large-scale wind energy proposals, which can potentially be seen from many miles away. Infrastructure that is likely to result in cumulative effects includes: other wind developments; overhead powerlines; and telecommunications masts and other vertical structures²⁷.
- 5.1.4 Proposals should set out suitable assessments of effects on biodiversity, hydrology, archaeology, built heritage, landscape (including historic landscape features), amenity (including of existing public rights of way) etc. Transport assessments should consider access and vehicle movements during all stages of construction and development.
- 5.1.5 Renewable energy development should not create a "buffer zone" or ring around the Malvern Hills National Landscape. The potential impact of renewable energy projects close to the boundary will be a material consideration in the planning process.

25 <https://www.gov.uk/guidance/renewable-and-low-carbon-energy>

26 Further information on this is detailed within National Policy Statements EN1 and EN3. Planning Practice Guidance also recognises that the cumulative impacts of development on the landscape also need to be considered carefully.

27 Guidelines for Landscape and Visual Impact Assessment 3rd Edition (GLVIA3) talks specifically about cumulative effects and not just about consented and built development. Planning Practice Guidance also goes further on this specific matter.

5.2 Major Development²⁸

5.2.1 Consideration should be given to whether a proposed renewable energy development constitutes 'major development' in the context of paragraph 183 of the NPPF²⁹. Footnote 64 of the NPPF states that *'whether a proposal is major development is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated'*.

5.2.2 Paragraph 183 of the NPPF states that *'permission should be refused for major development other than in exceptional circumstances and where it can be demonstrated that the development is in the public interest'*. The NPPF requires several major development 'tests' to be applied, as outlined below.

5.2.2.1 Major Development Test A – assessing the need for the development

The priority given to climate change, through the declaration of the climate and ecological emergencies, would potentially make it easier to demonstrate 'exceptional need' for renewable energy proposals. Genuine community-led renewable energy schemes³⁰, which have robust evidence of need specific to the community and which have appropriate funding and administrative mechanisms in place, are more likely to demonstrate 'exceptional need' than schemes that meet a more generic need. It should be noted however that exceptional need does not necessarily equate to *exceptional circumstances*³¹. For example, there may be other, more suitable ways of mitigating the impacts of climate change (or delivering renewable energy) or less harmful locations for the proposed development.

5.2.2.2 Major Development Test B – assessing the cost of, and scope for, developing outside the designated area or meeting the need in some other way:

Case law has stated that *'no permission should be given for major development save to the extent the development met a need that could not be addressed elsewhere'*³². As such, all other things being equal, it could be argued that if there are areas outside the Malvern Hills National Landscape (within a local authority area) that are identified as having equal or lesser landscape sensitivity to the type and scale of renewable energy development being proposed, then preference should be given to locating the development in those locations. Consideration should also be given to whether the proposed scheme is the most effective way of mitigating the impacts of climate change or is the most appropriate form of renewable energy. Consideration should be given to whether there are suitable nature-based alternatives for mitigating the impacts of climate change.

28 For the relevance of this position statement, we recognise that Nationally Significant Infrastructure Projects (NSIPs) or Nationally Significant Projects (NSPs) may also need to be factored in, as they could be proposed within the setting of the National Landscape. The relevant NSIP/NSP process should always be followed in this regard. NSIPs constitute a small subset of the number of planning applications that could be considered major but for the purposes of this position statement, all planning applications for renewable energy projects need to be assessed as to whether they constitute major development.

29 Ministry of Housing Communities and Local Government (2023) National Planning Policy Framework - Paragraph 183

30 Genuine community-led schemes could include proposals included in neighbourhood plans or other projects, such as the Community Visioning schemes being piloted by CPRE and should have undergone appropriate community consultation processes.

31 This principle is recognised in relevant case law (*R (Mevagissey Parish Council) v Cornwall Council* [2013] EWHC 3684 (Admin) (link), paragraph 52): *'Even if there were an exceptional need ... that would not necessarily equate to exceptional circumstances for a particular development, because there may be alternative sites that are more suitable because development there would result in less harm to the AONB landscape'*.

32 *R (Advause) v Dorset Council v Hallam Land Management Ltd* [2020] EWHC 807 (link). Direct quote from paragraph 35.

5.2.2.3 Major Development Test C – assessing any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated:

In relation to this test, case law has stated that *'no permission should be given for major development save to the extent the development ... met that need in a way that to the extent possible, moderated detrimental effect on the environment, landscape and recreational opportunities'*³³. As such, renewable energy proposals that constitute major development should be required to demonstrate that they have a) avoided; and b) minimised any potential detrimental effects (to the extent possible) in this regard. The higher the level of landscape sensitivity associated with the scale and type of renewable energy development being proposed, the more this will weigh against permission being granted on the grounds of exceptional circumstances and public interest.

5.3 Mitigation Measures

5.3.1 Mitigation measures should be considered an integral part of the development; they should adequately offset any adverse historic environment, landscape and/or visual effects and be appropriate to the local landscape character. The mitigation and reduction of some adverse impacts can be achieved through considered detailed design.

5.3.2 Mitigation measures to address adverse effects are a minimum; they should also be accompanied with measures to maintain and enhance the value and condition of the landscape and contribute to local distinctiveness, for example, through the creation of appropriate new habitats³⁴. Landscape/visual mitigation cannot be double counted as landscape/visual enhancement.

5.3.3 Applicants will be expected to maximise the ecological potential offered by such circumstances by a) avoiding areas of ecological importance or sensitivity, b) encouraging and promoting a diverse range of habitats, such as wildflower meadows, within such facilities, and c) designing and adapting built structures, such as control buildings, to encourage and promote access by nesting, roosting or hibernating animals such as bats.

5.4 Development in the setting of the Malvern Hills National Landscape

5.4.1 Renewable energy development in the setting of the Malvern Hills National Landscape has the potential to adversely affect the natural beauty of the designated AONB, particularly with regards to impacts on views from and to the Malvern Hills National Landscape.

5.4.2 Paragraph 182 of the NPPF states that *'great weight'*³⁵ *should be given to conserving and enhancing landscape and scenic beauty'* in designated AONBs. Case law has clarified that this great weight should be applied to development outside a designated AONB, as well as to development within it, where the proposed development may adversely affect the landscape and scenic beauty of the AONB³⁶. Application of this particular case law example would consider effects on views from the designated AONB but not effects on views looking towards the Malvern Hills National Landscape³⁷.

33 R (Advearse) v Dorset Council v Hallam Land Management Ltd [2020] EWHC 807 (link). Direct quote from paragraph 35.

34 For the purposes of this position statement, mitigation is a measure proposed to remedy, reduce or avoid adverse effects, whereas enhancement are measures proposed to improve the baseline situation. GLVIA3 further clarifies what is meant by 'enhancement'.

35 This 'great weight' is a factor in planning decisions when assessing the overall planning balance. In effect, it 'tilts the scales' towards a decision that would avoid harm to the landscape and scenic beauty of the affected designated AONB. The significance of applying this great weight partly depends on the significance of any adverse effects on the designated AONB. The overall planning balance will depend on the weight that should be given to other considerations.

36 Stroud District Council v Secretary of State & Gladman Developments Ltd [2015] EWHC 488 (link). Paragraphs 20-22.

37 The Malvern Hills National Landscape Guidance on Views and Viewpoints and Guidance on Respecting Landscape in Views provides further assistance.

- 5.4.3 However, impacts on views towards the Malvern Hills National Landscape are still an important material consideration, particularly in relation to views looking towards the Malvern Hills, with these views being one of the 'special qualities' of the designated AONB. And in terms of the views from the Malvern Hills National Landscape, the topography means that a larger area may need to be considered in terms of potential effects on views than in a designated AONB without such elevations. This is especially the case for visual receptors on the Malvern Hills themselves³⁸. Other relevant considerations include the potential increase in traffic movements through the Malvern Hills National Landscape (or along its boundary) that may result from a proposed development.
- 5.4.4 Paragraph 182 of the NPPF states that '*development within [the setting of AONBs] should be sensitively located and designed in order to minimise adverse impacts on the designated area*'. The Malvern Hills National Landscape Partnership position statement on development and land use change in the setting of the Malvern Hills National Landscape and the Malvern Hills AONB Environs Landscape and Visual Sensitivity Study³⁹ provide some relevant information on this topic.

5.5 EIA

- 5.5.1 Where renewable energy proposals fall under Schedule 2 of the Environmental Impact Assessment (EIA) Regulations⁴⁰, consideration should be given to whether an EIA is required, particularly if the proposal is above the applicable thresholds and criteria for Schedule 2 development⁴¹.
- 5.5.2 EIAs are required where it is considered that the proposal is likely to have a significant effect on the environment. In such circumstances, it is highly likely that the proposal should also be considered major development, in the context of paragraph 183 and footnote 64 of the NPPF.
- 5.5.3 Consultation with the LPA and local community is encouraged at an early stage. The local community should be engaged, by the developer, at the pre-design, conceptual stage, ideally utilising a local exhibition/presentation where community views can be sought and recorded.
- 5.5.4 As a starting point, the proposal should be assessed against the selection criteria in Schedule 3 of the EIA Regulations. In general, an EIA is likely to be needed for Schedule 2 developments if the development is in a particularly environmentally sensitive or vulnerable location. In each case, it will be necessary to judge whether the likely effects on the environment of that development will be significant in that particular location.

38 The Malvern Hills National Landscape Guidance on Views and Viewpoints and Guidance on Respecting Landscape in Views provides further assistance.

39 Prepared as part of the supporting evidence base for the South Worcestershire Development Plan Review (SWDPR).

40 Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017

41 It is worth noting that the 'applicable thresholds and criteria' in Schedule 2 of the Environmental Impact Assessment Regulations do not apply in designated AONBs. This is because AONBs are classed as 'sensitive areas,' in this regard. As such, Schedule 2 development within the Malvern Hills National Landscape that is smaller than the applicable thresholds and criteria may also need to be screened to assess if an EIA is required.

In judging whether the effects of a development are likely to be significant it is necessary to have regard, in particular, to landscape character and visual amenity, and the degree to which these will be affected by the installation of the development, including also the possible cumulative effect with any existing or approved development. This should include situations where there is more than one application for development which should be considered together. Any views expressed by consultees should be considered. Advice should be sought from consultees where there is any doubt about the significance of a development's likely effects on a 'sensitive area' as defined in the EIA Regulations, including setting.

RECOMMENDATIONS

- The Malvern Hills National Landscape Partnership recommends that any renewable energy projects in the Malvern Hills National Landscape and its setting should prioritise 'brownfield' land.
- Greenfield sites should be avoided except in exceptional circumstances, for example if the risk of harm is considered lower than the brownfield site(s) available.
- All renewable energy projects should have regard to the considerations and guidance on mitigating impacts set out in this paper and other Malvern Hills National Landscape Partnership publications. In this way they will fulfil their obligations to protect, conserve, and enhance the distinctive character and natural beauty of the designated AONB and its setting, including its 'Special Qualities'.
- The cumulative impacts of a renewable energy development proposal should be assessed in decision making.
- Renewable energy proposals should demonstrate they have considered the whole-life impacts of a scheme, including construction and decommissioning phases, and restoration of the site.
- Larger projects should benefit the local rural economy, be supported and/or owned by local communities where possible and avoid unjustified loss of productive agricultural land.
- Renewable energy landscape and visual sensitivity assessments, including those commissioned by local authorities, should have regard to relevant guidance published by the Malvern Hills National Landscape Partnership.

6. TYPES OF RENEWABLE ENERGY

6.0.1 This position statement identifies six main types of renewable energy: heat pumps; biomass; hydropower; solar energy; wind energy; and battery storage. These are individually addressed in this section, including relevant considerations and key constraints specific to each type of renewable energy.

6.1 Heat Pumps

6.1.1 There are three main types of heat pump:

- **Ground-source heat pumps (GSHP):** takes low-level heat, which occurs naturally underground, and converts it to higher-grade heat using an electrically driven or gas-powered heat pump. GSHP systems collect or deliver heat using ground collectors (typically coils or loops of pipe laid in trenches in the ground or vertical boreholes), in which a heat exchange fluid circulates in a closed loop and transfers heat via a heat exchanger to or from the heat pump. Once installed, there are no externally visible features.
- **Air-source heat pumps (ASHP):** takes low-level heat, which occurs naturally in the air, and converts it to higher-grade heat by using an electrically driven or gas-powered pump. ASHP are typically mounted on an external wall (sometimes under a window). Increasingly, manufacturers are producing internally mounted air source heat pumps which only need louvers and/or roof vents for air supply/exhaust emissions (as in a conventional boiler). Once installed, the only externally visible structure may be the 'air conditioning unit' associated with the heat pump facility. Depending on the manufacturer, ASHP may be no louder than a central heating boiler.
- **Water-source heat pumps (WSHP):** extracts heat from a body of water and converts it into useful energy to heat the home.

6.1.2 Heat pumps are generally 'permitted development'⁴², although rights are restrictive with regards to listed buildings, conservation areas, scheduled monuments, and World Heritage sites. In most cases, proposals are likely to be domestic in scale and, due to relatively limited landscape impact, will normally be acceptable and supported. Any reinstatement of land should be carefully, and sensitively undertaken and historic landscapes should, wherever possible, be avoided.

6.1.3 If buildings are needed to house associated equipment, this may require planning permission and should be carefully sited and designed, using appropriate materials⁴³.

6.1.4 Fitting of heat pumps is likely to be easier for new development than retrofitting. However, retrofitting may be appropriate where there is available space.

42 Permitted development rights allow the improvement or extension of buildings or uses of such buildings without the need to apply for planning permission, where that would be out of proportion with the impact of the works carried out.

43 Refer to other guidance produced by the Malvern Hills National Landscape Partnership, including Building Design and the Selection and Use of Colour in Development.

6.1.5 Heat pumps use electricity so still potentially contribute to greenhouse gas emissions (depending on the source of the electricity). However, they can offer carbon emission savings of at least 20%, rising to 100% when their operation is compared with that of conventional gas boilers⁴⁴.

6.1.6 The following checklist should be considered:

- During construction, the laying of pipes linked to GSHP should avoid disturbing ground which would be difficult to restore, such as unimproved grasslands, semi-natural habitats, tree roots and archaeological remains. A LPA may require an archaeological survey before construction.
- Underground pipework associated with GSHP should be covered with soft or hard surfaces, which reflect local soils/geology and landscape character type.
- ASHP should be installed on the least visible elevations, if externally mounted.
- Measures should be taken to minimise impacts on neighbouring land uses.
- Quiet models should be selected, to minimise any impacts on tranquillity and other Special Qualities of the designated AONB.

RECOMMENDATIONS

- The Malvern Hills National Landscape Partnership supports the use of heat pumps, in principle, provided relevant considerations have been adequately addressed, including:
 - size and siting;
 - noise impacts;
 - impacts on historic landscapes and archaeology; and
 - safeguarding existing trees/hedgerows and priority habitats, particularly during construction and operation.
- Underground pipework should be covered with soft or hard surfaces which matches local soils and geology where possible.
- Reinstatement of land should be carefully and sensitively undertaken, to avoid compromising the 'Special Qualities' of AONB designation.

44 We accept that data does vary depending on the parameters of a study, the efficiency of the boiler to which the heat pump is being compared to, and the source of the electricity being used to run the heat pump. One research article for example suggests the 30% figure; notably it looks at the whole lifecycle analysis of heat pumps and gas boilers. <https://www.sciencedirect.com/science/article/abs/pii/S0378778821001493>. Meanwhile Hamworthy Heating (<https://hamworthy-heating.com/Knowledge/Articles/Heat-Pumps-Role-in-the-Net-Zero-Goal>) cite the Carbon Trust report of "heat pumps used for heating can offer carbon emission savings of around 30% when compared to conventional natural gas boilers but when heat pumps are partnered with a renewable electricity supplier, heat generation is 100% carbon neutral". Carbon Brief (<https://www.carbonbrief.org/heat-pumps-are-the-central-technology-for-low-carbon-heating-concludes-iea/>) reports that the International Energy Agency "estimates that heat pumps currently cut emissions by at least 20% compared to a gas boiler even when running on emissions-intensive electricity. This can rise to 80% when running on a cleaner grid.

6.2 Biomass

6.2.1.1 Biomass refers to the use of a wide variety of organic material for the generation of heat, electricity, or motive power. The two primary types of biomass energy are:

- Woody biomass (wood and energy crops).
- Wet biomass (food waste and farm wastes).

6.2.1.2 For electricity production, the heat/steam is used to turn a turbine. There are currently three basic categories of biomass plants:

- Plants designed primarily to produce electricity. These are generally the largest schemes, in the range of 10–40 MW. Excess heat from the process is not utilised. These are major multimillion pound developments and are unlikely to be suitable within the Malvern Hills National Landscape or its setting because of scale and associated traffic movements. They are not considered further and proposals for such would not be supported by the Malvern Hills National Landscape Partnership.
- Combined Heat and Power (CHP) plants where the purpose is the generation of electricity, but excess heat is utilised. Size range is 5-30 MW thermal total energy output but smaller 'packaged' schemes of a few hundred KW are possible.
- Plants designed for production of heat. These cover a wide range of applications from domestic wood burning stoves and biomass boilers to boilers of a scale suitable for district heating, commercial and community buildings and industrial process heat. Sizes range from a few KW to above 5 MW of thermal energy.

6.2.2 Wood

6.2.2.1 Use of wood for fuel boilers is not only a renewable energy source but may have additional benefits. For example, it can provide economic incentive to bring woodlands within the Malvern Hills National Landscape back into active management. Active management of deciduous woodlands through coppicing, pollarding, ride widening, and other forestry operations helps create warm, sunlit micro-habitats that benefit insects and wildflowers and provides better nesting habitat for many of our rarest woodland birds⁴⁵. Use of wood can have the benefit of recovering, from the waste stream, waste wood that would otherwise go to landfill. Care is needed however to ensure management of woodlands does not become unsustainable (e.g. because of over-exploitation) as demand increases. In respect of woodland ownership, it is recognised that the economies of scale required for cost-effective wood production are only occasionally achievable and that, other than in Forestry Commission woodlands, rarely is there adequate access for lorries of the size now commonly used for timber transportation.

6.2.2.2 New and on-going management of woodland will be required to facilitate nature recovery and mitigate impacts of climate change⁴⁶. Any new woodland/SRC would need to undergo an EIA for woodland by the Forestry Commission⁴⁷ and be UK Forest Standard compliant⁴⁸.

45 <https://www.worcswildlifetrust.co.uk/woodlands/managing-our-woodlands>

46 It is estimated that only 55% of woodland in the Malvern Hills AONB is actively managed currently. Many tree species are coming under acute stress from new pests and diseases and periods of intense weather (e.g., storms and drought). Loss of key species such as ash will accelerate change, particularly in unmanaged woodland – taken from Malvern Hills AONB Nature Recovery Plan (2022)

47 <https://www.gov.uk/government/publications/the-uk-forestry-standard>

48 <https://www.gov.uk/government/publications/the-uk-forestry-standard>

6.2.3 Fuel crops

- 6.2.3.1 There may be potential for biofuel from other crops (i.e., energy crops) such as miscanthus and short rotation coppice (SRC). Developments are likely to have limited impacts, if undertaken on a small scale. However, careful consideration will need to be given for larger-scale use of land for growing such crops as they are likely to have an adverse impact on landscape character (for example, as a monoculture that is alien to the locally-distinctive farmed landscape), biodiversity, water quality and soil quality (for example, as a result of winter harvesting) and visual amenity due to height and semi-permanent/permanent nature and, in the case of SRC, their long rotation cycle.
- 6.2.3.2 Large-scale fuel crop schemes would also likely conflict with other land use priorities, including food production, nature recovery and woodland planting.
- 6.2.3.3 Where fuel crops are being introduced, the potential for impacts on landscape character should be fully assessed, as should any potential impacts on sensitive sites, including permanent grassland, common land, SSSIs, other sites of nature conservation importance, and historic landscapes.

6.2.4 Wood and fuel crops – additional considerations

- 6.2.4.1 Whilst burning biomass does release CO² emissions, CO² is absorbed from the atmosphere during the growth of the source material and so the net lifecycle CO² emissions are theoretically zero, although the time over which this “carbon debt” is repaid can be long. In addition, all biomass fuels also have an associated CO² intensity due to the additional energy required for collection, processing, and distribution, as well as for the construction and maintenance of a biomass facility. Transportation can be a large element of this for raw fuels, whilst heavily processed fuels such as wood pellets will require additional energy input during the process stages.
- 6.2.4.2 For proposals involving energy production from biomass, consideration should be given to whether such proposals require an EIA, particularly where the development area exceeds 0.5ha⁴⁹. Consideration should also be given to whether a scheme constitutes ‘major development’⁵⁰.
- 6.2.4.3 Biomass boilers are also a potential source of air pollution, particularly with regards to particulates. Appropriate measures would need to be put in place to protect air quality. Firewood is now required to have a moisture content of 20% or less, which should help to address this issue, but industry should be encouraged to improve the efficiency of stoves and boilers to reduce harmful emissions. Use of domestic woodburning stoves should not be encouraged, due to potential impacts on air quality.
- 6.2.4.4 Transport of wood or crops to any energy production plant will increase vehicle movements unless the plant is adjacent to the source of fuel. To avoid unnecessary infrastructure, plants should be as close to the settlements or facilities they serve, so an appropriate locational balance must be struck. For this reason, and to avoid greater visual and other effects likely to be caused by large-scale plants, small-scale plants would be preferable. Suitable schemes could include heating schemes for country estates and small-scale community heating schemes.

49 Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. Development type 3(a).

50 In the context of paragraph 177 of the National Planning Policy Framework (2023).

- 6.2.4.5 Priority should be given to using existing buildings, to house biomass facilities and to dry or process wood and other biomass. Where new buildings are required, siting, scale, design, colour, and materials used should be carefully considered and be compatible with the AONB designation and its special qualities⁵¹.
- 6.2.4.6 Biomass provides a relatively small amount of energy per hectare of land used. For example, solar energy can provide over 40 times as much energy per hectare as biomass⁵². A very large area of land would be needed for energy crops to deliver significant levels of renewable energy in the Malvern Hills National Landscape. This is likely to adversely affect landscape character and scenic beauty, including tranquillity (due to related traffic movements), and may compromise food production, biodiversity, and nature recovery.

RECOMMENDATIONS

- **Wood:** In principle, the Malvern Hills National Landscape Partnership would be supportive of small-scale wood fuel schemes which use locally sourced wood from sustainably managed woodlands within the Malvern Hills National Landscape, provided relevant considerations have been clearly addressed.
- **Fuel crops:** In principle, the Malvern Hills National Landscape Partnership would be supportive of small-scale fuel crop schemes, provided that relevant considerations have been clearly addressed.
- **Woody Biomass:** Priority should be given to active management and utilisation of woodland (for supplying timber for wood fuel) in the Malvern Hills National Landscape over schemes that rely on the planting of energy crops, especially short rotation coppice.

6.2.5 Wet biomass – anaerobic digesters

- 6.2.5.1 Anaerobic digestion (AD) is a process in which bacteria break down organic material in the absence of oxygen to produce a methane-rich biogas, which can be combusted to generate electricity and heat. Anaerobic digesters utilise farm and food wastes. They make a significant contribution to reducing greenhouse gas emissions, reducing the quantities of methane released into the atmosphere, and providing a low carbon energy source that substitutes for energy generated from fossil fuels.
- 6.2.5.2 An AD plant typically consists of a digester tank, buildings to house ancillary equipment, a biogas storage tank, and a flare stack (3–10 metres in height). The digester tank is usually cylindrical or egg-shaped, its size being determined by the projected volume and nature of the waste. It can be part buried in the ground. There are two scales of anaerobic digestion plant:
- Small scale plants dealing with the waste from a single farm (generating in the region of 10kW) with the biogas potentially used to heat the farmhouse and other farm buildings in the winter when farm wastes are available.
 - A medium-sized centralised facility dealing with wastes from several farms supplemented by other feedstocks and potentially producing up to 2MW.

51 Having regard to position statements other guidance produced by the Malvern Hills National Landscape Partnership: <https://www.malvernhillsaonb.org.uk/our-work/planning/guidance-documents/>

52 <https://www.biofuelwatch.org.uk/2018/biomass-and-land-use/>

- 6.2.5.3 The effects that may arise from any development in terms of visual intrusion, noise, odour, associated traffic movements and associated infrastructure, including overhead powerlines and pylons or poles, must be carefully considered. AD plants serving a single or small number of local farms may be appropriate within the Malvern Hills National Landscape and its setting, provided the development can be incorporated within an existing farmstead; uses locally sourced, organic farm waste and/or sewage sludge material; is of an appropriate scale; is not visually intrusive; is constructed using appropriate materials; and is suitably landscaped to ensure the natural beauty of the area is conserved or enhanced, ensuring the 'Special Qualities' are not compromised.
- 6.2.5.4 Where crops are grown specifically as a feedstock for AD plants e.g. maize, this would raise similar issues to the growing of fuel crops in relation to competing land uses, water quality and impact on soils.
- 6.2.5.5 Large new buildings or structures on greenfield sites within the National Landscape or its setting are unlikely to be supported by the Partnership.

RECOMMENDATIONS

- In relation to wet biomass, in principle, the Malvern Hills National Landscape Partnership would be supportive of small-scale anaerobic digestion (AD) plant schemes that use locally sourced, organic farm waste and/or sewage sludge, provided relevant considerations have been clearly addressed, including:
 - Integrating or locating adjacent to existing buildings or farmsteads; greenfield sites should be avoided;
 - The digester tank should be part buried in the ground;
 - Installations should not be in prominent locations or exposed skylines – the flare stack can be prominent;
 - Installations should not affect the historical significance of designated industrial features, historic monuments and archaeological sites and remains, or the ecological value of semi-natural habitats;
 - Installations should not adversely affect the character and appearance of any Conservation Areas and listed buildings;
 - Suitable materials (such as cladding of buildings), and colours should be used that integrate structures with their surroundings;
 - Tree planting (using native species) that helps filter views of the AD plant should be considered; and
 - Measures taken to minimise any visual, odour and noise impacts on the amenity of neighbouring land uses associated with the operation of the plant and deliveries of feedstocks.
- Large new buildings and structures associated with AD plants within the Malvern Hills National Landscape or its setting, and/or schemes that import large quantities of material, are unlikely to be supported, because of the scale of the development and the vehicular movements required to supply feedstock, particularly in tranquil, rural areas where human influence is limited, and in areas of semi-natural habitat and/or historic landscapes.

6.3 Hydropower

- 6.3.1 Hydropower uses water flowing through a turbine to drive a generator that produces electricity. It is a highly site-specific technology, dependent on being near a water body that is both flowing and has a sufficient drop in level that can be exploited.
- 6.3.2 The potential for hydro-electric proposals is therefore very limited within the Malvern Hills National Landscape and its setting due to geographical and environmental restrictions, although there may be scope for micro- or small-scale projects.
- 6.3.3 For schemes involving installations for hydroelectric energy production, consideration should be given to whether they require an EIA, particularly where an installation is designed to produce more than 0.5 megawatts and/or where the area of the development would exceed 0.5 hectares⁵³. Consideration should be given to whether a scheme constitutes 'major development'⁵⁴. Consents from the Environment Agency will also be required. Consideration is needed to be given to the impacts of infrastructure e.g. cabling required to connect the hydropower development to the grid.

RECOMMENDATION

In relation to hydropower, the Malvern Hills National Landscape Partnership would be supportive of micro or small-scale schemes, provided that relevant considerations have been adequately addressed. Proposals should:

- Ensure equipment is placed either in existing buildings or new ones of an appropriate scale and design;
- Use the existing head of water from existing impoundments without affecting the river flow;
- Ensure noise levels do not adversely affect tranquillity;
- Ensure aquatic life is not detrimentally affected; and,
- Operate without prejudicing progress towards achieving ecological objectives under the Water Framework Directive.

6.4 Solar Energy

6.4.1 Solar Energy – general information

- 6.4.1.1 There are two types of solar energy:
- Photovoltaic panels or tiles that generate electricity from the sun's energy – these can be used at both domestic and commercial scale.
 - Solar panels or 'collectors' (flat plate or evacuated tubes) that use the sun's radiation to heat water – these are used at a domestic and commercial scale.

53 Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. Development type 3(h) and 3(a).

54 Refer to Footnote 15.

6.4.1.2 In addition to the considerations for all renewable energy schemes provided in Section 4 above, a checklist of further issues to be considered for solar energy proposals is provided below:

- Consider views both from and to the Malvern Hills themselves, local viewpoints, and from popular tourist and scenic routes.
- Avoid locating solar PV where they could be directly overlooked at close quarters from important or sensitive viewpoints.
- Maintain uninterrupted views from the Malvern Hills themselves to the internal landscape to preserve the area's remote and strong cultural and historic sense of place.
- Site freestanding solar PV development on flat landforms or on lower slopes/within folds in gently undulating lowland landscapes.
- Ensure the development does not comprise the distinctive characteristics of different LCTs e.g. by it spanning across two contrasting types of LCT.
- Although screening by vegetation is not considered to be appropriate or adequate mitigation for landscape and visual adverse effects and cannot be relied upon (see 4.2.3. above), siting developments in landscapes where screening is already provided by woodland, hedge banks or high hedges may be less harmful than in open countryside and should be considered. Where new screen planting is required the Malvern Hills National Landscape Partnership should be consulted on the appropriate choice of species.
- Avoid adversely affecting areas of semi-natural habitat and designated and non-designated historic assets and archaeological sites directly or indirectly.
- Protect the character and setting of Conservation Areas and the elements, as well as buildings which contribute to their special architectural or historic interest.
- Ensure that any PV developments do not detract from prominent landmarks.
- Protect the 'Special Qualities,' as detailed within the Malvern Hills AONB Management Plan.
- Measures should be taken to minimise any visual⁵⁵ and noise impacts on the amenity of neighbouring land uses, for instance residential and recreational use.
- Avoid siting PV developments across multiple fields in areas where a small-scale irregular field pattern is important and a particular feature of landscape character.
- Previous solar development proposals should not set a precedent or justification for further development due to the potential for adverse cumulative effects, and to avoid its landscape character description ending up as a solar landscape.
- Consider how panels and other infrastructure will be transported to site. Installations may require abnormally large delivery vehicles, and/or large fleets and frequency of vehicle deliveries. The impacts of these and the construction route, for example on important landscape and historic features or loss of these and to their users, and any amenity value, should be considered in decision making as well as mitigation measures embedded in any scheme.
- Suitable materials and colour finishes should be used to integrate any new buildings/structures/surfaces with their surroundings⁵⁶. Utilise existing buildings to house inverters wherever possible.

55 [Further guidance on this can be found within the Landscape Institutes' Technical Guidance Note on Residential Visual Amenity Assessment \(RVAA\)](#)

56 The Malvern Hills National Landscape Guidance on Building Design and Guidance on the Selection and Use of Colour in Development provides further supporting guidance on this point.

6.4.1.3 Ground-mounted arrays can result in direct habitat loss, habitat changes and disturbance or displacement of species and this should be carefully considered.

6.4.2 Small-scale solar energy – size thresholds

6.4.2.1 When considering size thresholds, the following is relevant in this regard:

- EIA Regulations specify that proposals should be screened for an EIA if the development area exceeds 0.5 hectares⁵⁷.
- Permitted development rights cover solar PV or solar thermal equipment on, or within the curtilage of, a dwellinghouse or block of flats⁵⁸.

6.4.2.2 However, it should be noted that these thresholds do not apply within designated AONBs (i.e., permitted development rights do not apply in AONBs⁵⁹ and solar energy proposals that are smaller than 0.5 hectares could potentially be screened for an EIA⁶⁰).

6.4.2.3 In many landscape sensitivity assessments (LSAs) for renewable energy, 'small scale' solar energy development are schemes covering an area of five hectares or less. Nevertheless, it is appreciated that given the small extent and far-reaching views from the Malvern Hills themselves, the Malvern Hills National Landscape, and its setting, is likely to have high landscape and visual sensitivity to all scales of solar energy development.

6.4.2.4 Based on the above, the following thresholds should be applied for small-scale solar energy development when considering this position statement:

- 0.5ha or less = micro-scale.
- 0.5 ha - 5ha = small/field scale.

6.4.2.5 The Malvern Hills National Landscape Team are increasingly receiving queries relating to micro- and small-scale solar PV arrays. There are several types of arrays:

1. Small-/Field-scale solar arrays on greenfield land (undeveloped/agricultural land)
2. Small-/Field-scale solar arrays on brownfield land (developed industrial/ commercial/ contaminated land)
3. Micro- and small-scale solar installations over car parks, alongside air strips, and other suitable external areas
4. Micro- and small-scale solar installations on new or existing industrial/agricultural buildings and other large-scale roofs

6.4.2.6 Site justification is vital, and identification of alternative sites should be considered. Ultimately proposed schemes will be judged on their own merits; however, array types 2, 3 and 4 offer more significant opportunities for the mitigation of potential adverse impacts upon the Malvern Hills National Landscape and its setting.

57 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017. Schedule 2. Development type 3(a).

58 The Town and Country Planning (General Permitted Development) (England) Order 2015. Part 14.

59 The regulations relating to permitted development rights (PDR) for renewable energy specify that these PDR do not apply in 'Article 2(3)' land, which includes designated AONBs.

60 The thresholds and criteria specified in Schedule 2 of the Environmental Impact Assessment Regulations do not apply in 'sensitive areas', including designated AONBs.

- 6.4.2.7 Proposals on, and within the curtilage of, residential properties not exceeding 0.5 hectares in size would need to be considered on a case-by-case basis where they are not permitted development. However, they are, in principle, likely to be acceptable in the Malvern Hills National Landscape and its setting, if compliant with relevant regulations and particularly the considerations outlined in this position statement.
- 6.4.2.8 Proposals for small-scale solar energy schemes larger than 0.5ha but smaller than 5ha are less likely to be acceptable in the Malvern Hills National Landscape and its setting due to the potential visual and/or landscape harm they present. Depending on the nature and siting of the scheme, they also may be considered major development, and if so, they should be assessed as such. Schemes that would constitute major development (in the context of paragraph 183 of the NPPF) should only be permitted in exceptional circumstances and where it can be demonstrated that the development would be in the public interest, in line with national planning policy. However, in specific circumstances and with adequate mitigation of potential adverse impacts on the Malvern Hills National Landscape and its setting, a small-scale solar energy proposal may be acceptable.
- 6.4.2.9 As such, any small-scale solar energy schemes should always be considered on a case-by-case basis against relevant planning policies and with regard to relevant considerations in Malvern Hills National Landscape Partnership published guidance and robust evidence provided of how any adverse impacts will be avoided or sufficiently mitigated.

6.4.3 Micro- and Small-scale solar - relevant considerations

- 6.4.3.1 This guidance primarily relates to such proposals being sensitively located⁶¹ and sited⁶². Location, siting, and design are also important considerations for schemes that relate to scheduled monuments, listed buildings, conservation areas and other heritage assets⁶³.
- 6.4.3.2 PV panels mounted on buildings are considered more suitable than those that are freestanding as they are likely to have fewer adverse effects, albeit there may be some effects visually that should be considered if located on buildings that can be viewed from above. In a few specific circumstances, ground mounted solar panels therefore may be more preferable, but this should be clearly justified. Ideally, PV panels can be used as a building material, integrated into the roof (or facades) of buildings e.g. using solar shingles, solar slates, solar glass laminates and other solar design solutions, and can be integrated with traditional tiles/slates⁶⁴, although it is acknowledged that this may not be viable for householder scale upgrades on existing buildings.
- 6.4.3.3 Solar collectors or evacuated tubes can be incorporated into the existing roof in the same way. Ideally, these require an angle of 30-40 degrees, facing south.
- 6.4.3.4 Consideration should be given to the effect of installations on the appearance of the building. It is a good idea to line panels up with existing windows and roof lights, ensuring the size of the panels are complementary to existing features on the building.
- 6.4.3.5 Consideration should be given to the colour and design of the panels and their frames and mounts/supporting structures. For example, panels with a dull, matt finish with anti-

61 'Located,' in this context, refers to the placement of the proposed development with regard to the landscape context, including the Malvern Hills National Landscape Partnership Position Statement on Landscape-led Development.

62 'Sited,' in this context, refers to the development's placement in relation to its immediate context.

63 'Relate to,' in this context, means 'on,' 'in the curtilage of' and / or 'in the setting of.'

64 The UK Government has estimated that there are currently 250,000 hectares (approx. 625,000 acres) of south-facing commercial roofs in the UK (Part 2 of the Government's UK Solar Photo-Voltaic (PV) Strategy).

glare options and non-reflective frames/grids are less conspicuous as are panels with dark surfaces which are likely to be acceptable on buildings with darker slate roofs or on new buildings in areas where black slate roofs are characteristic, to integrate into the landscape.

- 6.4.3.6 Rooftop solar panels can blend well with contemporary, industrial, business park and agricultural buildings. Use of panels on such buildings, including by retrofitting should be supported, where considerations such as those listed in this position statement are followed.
- 6.4.3.7 Small-scale freestanding solar arrays that are well screened in enclosed gardens or closely linked to existing buildings with no or minimal visual impact may be acceptable. There may be circumstances where ground mounted solar arrays to serve groups of properties, community buildings, such as village halls, agricultural properties or other businesses are acceptable, where these are clearly well screened within existing building complexes or by other existing landscape features such as hedgerows, walls or trees, and which do not detract from any architectural or historic/archaeological interest, or compromise protected species.
- 6.4.3.8 Arrays need to be positioned such that any associated screening does not shade the panels. Where new screening is proposed, care needs to be taken to ensure screening does not adversely affect visual amenity and/or landscape character or heritage assets. Consideration will also need to be given to the potential impact of paraphernalia associated with the installation and operation of the solar panels.
- 6.4.3.9 Retrofitted roof-mounted solar units on buildings can have a 'modernising' effect on their character and appearance, particularly when located on the principal elevation of a property. It is beneficial for panels to:
- Match roof materials;
 - Lie/Be 'flush' with the roof and mounted at the same angle, minimising contrast;
 - Mounted on an elevation where they are less visible, in the case of retrofitted panels, or incorporated as a garden feature, especially when associated with, for instance, older buildings; and
 - Be at a suitable angle to maximize the capture of the sun's energy. The impact on wildlife which may roost, nest or travel under the panels should be considered to ensure suitable measures are taken to protect them.
- 6.4.3.10 Roof-top panels on buildings have the added benefit of providing generation at the point of use, reducing transmission and distribution losses, and associated infrastructure impacts. Well-designed solar technology should be added as a mandatory part of building regulations for new build houses and all business/industrial development. Local planning authorities should support rooftop PV panels generation through planning conditions to mandate it on new development and refurbishments.

RECOMMENDATIONS

- In principle, the Malvern Hills National Landscape Partnership would be supportive of domestic and micro- (i.e. less than 0.5ha) solar schemes provided relevant considerations have been clearly addressed. They will still need to be considered on a case-by-case basis.
- Small-scale solar energy schemes (i.e. between 0.5ha and 5ha) within the Malvern Hills National Landscape and its setting, have greater potential to adversely affect the Special Qualities of AONB designation and are unlikely to be supported. Such proposals must be carefully considered on a case-by-case basis and will require robust evidence that relevant considerations have been clearly addressed. This includes having regard to visual effects, including the proximity to high ground and key vantage points within the Malvern Hills National Landscape, and consideration of effects upon landscape character. Where such schemes are considered 'major development' proposals, applicants should be required to demonstrate that exceptional circumstances apply and the scheme would be in the public interest, having regard to Paragraph 183 of the NPPF (December 2023).
- Building-mounted or roof-top panels on new and existing buildings should be at the top of the solar energy 'hierarchy' and would generally be considered more favourably over freestanding solar development proposals, subject to the relevant considerations listed in this position statement.
- Local planning authorities should support rooftop PV generation through planning conditions on new development and refurbishment/retrofitting, subject to the relevant considerations in this position statement.
- Solar technology should be introduced as a mandatory part of building regulations for new build development in local plan policies.

6.4.4 Large-scale solar energy

6.4.4.1 We consider 'large-scale' as over five hectares (5ha) although the Partnership acknowledges that, in the context of landscape sensitivity assessments, for example, a wider range of size thresholds may be used. Main features of large-scale ground-mounted solar PV installations include:

- Panels are often dark in colour although may appear paler depending on light conditions and type of panel. Panel surrounds and electric cable coverings may also reflect light. The relative absorptive properties of a solar panel should be considered on a case-by-case basis.
- Panels are visible from behind or the side, influencing how they are perceived.
- Panels are encased in an aluminium frame, supported by aluminium or steel stands mounted and secured either on pre-moulded concrete block 'anchors,' or foundations. Some developments contain panels that can be manually rotated and/or tilted to enable the arrays to track the sun. Technology does exist to allow for automatic tracking.
- Panels are held at a fixed angle between 20-40 degrees from the horizontal, facing south to maximise absorption of energy from the sun.

- Arrays are sited in rows with intervening gaps between them for access, and to ensure the individual panels are not in the shade of panels. The actual arrangement of the arrays varies scheme to scheme.
- The height of the racks of solar panels varies depending on manufacturer and installer but tend to be between 2-4 metres off the ground.
- The installations are usually accompanied by significant additional infrastructure including road access, on-site tracks, hard-standings, construction compounds, security fencing, CCTV, lighting, substations, battery storage, control buildings, control rooms, inverters, transformers, electrical cabling, / underground power cables, and SUDS / attenuation ponds.

- 6.4.4.2 Commercial-scale solar energy schemes usually require an area of at least five hectares to be viable⁶⁵. Community-led schemes may also require a substantial land area.
- 6.4.4.3 An important consideration is landscape sensitivity. This is a measure that considers susceptibility to change and also value. It has benefit by being evidence based and adding rigour to assessing development proposals.
- 6.4.4.4 The local planning authorities that overlap the Malvern Hills National Landscape should undertake a landscape sensitivity and capacity assessment (LSCA) for wind and solar energy, as part of their evidence base for development plans (i.e. Local Plans).
- 6.4.4.5 Landscape and Visual Impact Assessments (LVIAs) or LVAs will help to identify the levels of landscape and visual effects on a case-by-case basis⁶⁶. Cumulative effects also need to be considered. In terms of landscape value, given the designation as an AONB, the Malvern Hills National Landscape should be attributed the highest category possible in such assessment⁶⁷. Agricultural land that is designated, for example for the protection of wildlife, should be avoided. LVIAs should contain a clear description of the site's agricultural classification and all other relevant designations.
- 6.4.4.6 The Malvern Hills National Landscape has the Special Quality of 'dramatic scenery and spectacular views arising from the juxtaposition of high and low ground.' As a result, and for the reasons set out in this position statement, the Partnership is unlikely to support, in principle, solar energy schemes within the Malvern Hills National Landscape and its setting over 5 ha as it is unlikely that sufficient mitigation would be possible to avoid adverse effects to the landscape and visual baseline. Hence, supporting such a scheme would not be consistent with the statutory purpose of AONB designation.
- 6.4.4.7 Schemes that would constitute major development (in the context of paragraph 183 of the NPPF) should only be permitted in exceptional circumstances and where it can be demonstrated that the development would be in the public interest, in line with national planning policy.
- 6.4.4.8 Further guidance and recommendations on landscape sensitivity assessments and how they might be applied to identify 'suitable areas' for renewable energy in local planning authority development plans is provided in Section 6.6. Further guidance on the issue of major development is provided in Section 4.

65 Anecdotal evidence provided by consultants involved in commercial-scale solar energy proposals.

66 EIA development considers significance.

67 It is also necessary to go beneath the blanket of the designation and identify other value factors. This should be carried out in accordance with the [Landscape Institute's Technical Guidance Note | 02/21 Assessing landscape value](#) outside national designations, which is relevant for such studies within nationally-designated landscapes as well as within their settings.

- 6.4.4.9 Many considerations outlined in relation to small-scale solar energy schemes are applicable to large-scale schemes, including EIA thresholds. In addition to the impact of the solar panels themselves, consideration should be given to the impacts of any additional infrastructure that is required for the scheme, including road access, on-site tracks, hard-standings, construction compounds, security fencing, CCTV, lighting substations, battery storage, control buildings, control rooms, inverters, transformers, electrical cabling, underground power cables, and SUDS/attenuation ponds. Many of these require engineering works, especially where flat platforms are required on sloping ground. Consideration should be given to potential conflicts with other land uses, such as food production (particularly on best and most versatile land), nature recovery, woodland/wetland creation, and recreation/access.
- 6.4.4.10 Another consideration is the proximity of the railway and road network, PROWs (public rights of way), and residential areas. The provision of any reflective material used on the panels should not interfere with the line of sight of train drivers and road users (for public safety reasons). In addition, potential for glare or reflection of light from the panels that may impact upon signalling should be considered⁶⁸. Similarly, the effect of the siting of solar panels, particularly in terms of their reflectivity of both sunlight and moonlight, should be considered in relation to views to and from the Malvern Hills and the impacts that may have on such users, as well as views from PROWs and from residential properties.
- 6.4.4.11 Large-scale solar PV installations occupy substantial areas of ground which may be highly visible, especially where sites are viewed from adjacent higher ground. Key landscape effects of large-scale solar PV developments are that they may:
- Be highly visible in open landscapes, when looking out from high ground, and on the upper slopes of hillsides, especially where covering significant areas;
 - Lead to a perceived increase in human/industrialising influences on the landscape;
 - Result in land use change and the appearance of one or more fields, affecting land cover textures and patterns;
 - Introduce a regular edge (to the panels) that can be particularly conspicuous in more irregular landscapes (especially where the panels do not follow contours);
 - 'Overtop' hedgerows where panel heights rise to 3-4m, potentially reducing the visual prominence of field boundaries, a particular issue where several adjacent small fields are developed;
 - Change the character of enclosure with security fencing and screen planting (including hedges allowed to grow out) around solar PV developments;
 - Damage landscape elements and features during construction;
 - Result in a significant adverse change in the character of wild or natural landscapes which are valued for their high nature conservation value and qualities of remoteness;
 - Introduce ancillary buildings that can be uncharacteristic in the landscape; and
 - Result in glint and glare from the panels⁶⁹.

68 Currently, there is no formal glint and glare assessment guidance exists, apart from at a very high level, by the Civil Aviation Authority. Informal guidance has been produced by industry consultants, but it is not clear whether this can be relied upon as an appropriate form of guidance.

69 See footnote above.

6.4.4.12 Vegetation will grow under some large-scale solar development, and may require management, particularly to avoid the site becoming overgrown with noxious weeds and assist with the eventual restoration of the site, normally to agriculture. Few of the management techniques usually recommended, such as mowing, strimming, spraying or mulching, are regarded as sustainable, particularly on sites up to 15ha⁷⁰. Grazing is a preferred opportunity, where practicable, although it has its own complications, with little evidence of its viability that has not been developer led, and anecdotal evidence to the contrary⁷¹.

6.4.4.13 The Feed in Tariff for solar PV applies for a period of 25 years therefore developments should normally be regarded as temporary, hence the need for 'reversibility', and the ability for all structures to be removed and the land returned to its original use. A restoration strategy⁷² should demonstrate how the site will be returned to a state that is in keeping with local character and in good condition. To facilitate grazing, if grazing is planned, within the ground-mounted solar installation, it is advised that solar panels are positioned at least 700mm above ground level and all cabling etc is suitably protected.

RECOMMENDATIONS

- In relation to large-scale solar energy, the Malvern Hills National Landscape Partnership would not be supportive of solar energy schemes within the Malvern Hills National Landscape or its setting larger than five hectares in size.
- Applicants for large-scale solar energy schemes above 5ha should be required to robustly demonstrate that the scheme will protect, conserve and enhance the natural beauty of the Malvern Hills National Landscape and/or its setting, and will conserve and enhance the historic environment. In addition to the impact of the panels themselves, consideration should also be given to the impacts of any additional infrastructure that is required for the scheme, particularly during construction, operation, maintenance, and decommissioning.
- Poorer grades of agricultural land that are designated, for example for the protection of wildlife, should be avoided.
- For 'major development' proposals, applicants should be required to demonstrate that exceptional circumstances apply, and the scheme would be in the public interest, having regard to paragraph 183 of the NPPF (December 2023).

70 If the land is arable, it will tend to be of high fertility soil and therefore would be unable to establish wildflower, and furthermore, at the end of the development life, the land is normally proposed to restore to the previous level of fertility, and therefore a proposal should explain how this will be achieved.

71 For example, the quality of the grass as fodder can decline over time under solar panels and additional feed or supplements may therefore be required. Cattle, horses, pigs, and goats are likely to be too 'physical' with the solar arrays, but sheep, chickens or geese could be acceptable, although the latter would be prey to foxes.

72 Although it is argued that large scale ground-mounted solar developments are temporary and reversible, there is no precedent to by which to judge this as no UK solar sites have yet been subject to restoration and agricultural reversion. In practice, solar developments are, or can become, more permanent features. Many are planned to operate for 40 years, and/or they extend their operating licence, and the practicality of the effective implementation of a restoration strategy after such an extended period of time is unknown.

6.5 Wind Energy

6.5.1 Wind Energy – general information

- 6.5.1.1 Wind turbines use the wind's lift forces to rotate aerodynamic blades that turn a rotor creating a mechanical force that generates electricity. The amount of energy derived from a turbine depends on wind speed and the swept area of the blade.
- 6.5.1.2 Wind turbines can be deployed singly, small clusters, (2–5 turbines) or larger groups as wind farms.
- 6.5.1.3 Wind turbines consist of the tower; a hub; blades; a nacelle (which contains the generator and gear boxes); and a transformer that can be housed either inside the nacelle or at the base of the tower. Additional infrastructure is still required such as access and it must be noted that one must ensure that large scheme elements can be delivered to site without damage to / loss of landscape elements / features.
- 6.5.1.4 Wind energy developments are unique in that they introduce a source of movement into the landscape. In current designs, the turbine blades turn around a horizontal axis but can turn around a vertical axis. Two-bladed turbines are available.

6.5.2 Small-scale wind energy – size thresholds

- 6.5.2.1 The following height thresholds provide a useful starting point:
- EIA Regulations specify that proposals should be screened for an EIA if the hub height of any turbine (or height of any other structure that forms part of the scheme) exceeds 15 metres and/or the development area exceeds 0.5 hectares⁷³.
 - Permitted development rights cover⁷⁴:
 - Wind turbines on (i.e., attached to) detached houses, which do not exceed 15 metres in height (or protrude more than 3m above the highest part of the roof, excluding the chimney); and
 - Stand-alone wind turbines within the curtilage of houses or blocks of flats that do not exceed 11.1 metres.
- 6.5.2.2 Such thresholds do not apply within designated AONBs (i.e., these permitted development rights do not apply in AONBs⁷⁵ and turbines in AONBs that are smaller than 15 metres in height could potentially be screened for an EIA⁷⁶). Having regard to the 'Special Quality' of 'dramatic scenery and spectacular views arising from the juxtaposition of high and low ground', effectively means that only stand-alone wind turbines within the curtilage of farm or office buildings, houses or blocks of flats may be acceptable in the Malvern Hills National Landscape and its setting. However, they would also need to comply with the relevant regulations and accord with guidance, primarily relating to proposals being

73 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017. Schedule 2 (link). Development type 3(i) and / or 3(a). The EIA threshold also relates to wind energy development of any height (including smaller than 15m hub height) where there are more than two turbines.

74 The Town and Country Planning (General Permitted Development) (England) Order 2015. Part 14

75 The regulations relating to permitted development rights (PDR) for renewable energy specify that these PDR do not apply in 'Article 2(3)' land, which includes designated AONBs.

76 The thresholds and criteria specified in Schedule 2 of the Environmental Impact Assessment Regulations do not apply in 'sensitive areas', including designated AONBs.

sensitively located⁷⁷ and sited⁷⁸.

6.5.2.3 It is noted that the EIA threshold of 15 metres relates to the hub-height of the turbine. The blade tip height can be several metres higher. It is also worth noting that wind turbines with a blade tip height smaller than 25 metres are often classed as 'small' in landscape sensitivity assessments.

6.5.2.4 Based on the above, and for the purposes of this Position Statement, small-scale is viewed as wind turbines that are 25 metres or less, in height, to the blade tip. Wind turbines of this scale are most likely to be used for individual properties or small groups of properties, rather than commercial schemes.

6.5.3 Small-scale wind energy – location

6.5.3.1 With regards to 'location,' consideration should be given to landscape sensitivity and capacity. This means having regard to the potential sensitivity and capacity of the landscape character type/area where the development is proposed and to the type of energy generation proposed. This is addressed in more detail in relation to the AONB designation considerations in (Section 4 of this position statement and in the identification of 'suitable areas' in Section 6.6).

6.5.4 Small-scale wind energy – siting and design

6.5.4.1 The size of a wind turbine should relate to the scale of its surroundings. Turbines should not dominate existing buildings or landscape features but be in proportion.

6.5.4.2 The relationship between a turbine and the slope of the landform is a key consideration of wind energy development, particularly regarding the degree of landscape and/or visual impact. Ideally, turbines should be located below the skyline and towards lower slopes. The top of a steeply inclined slope is also not appropriate because the steep incline creates wind turbulence, reducing operational efficiency.

6.5.4.3 Choosing appropriate colours for the turbines (and associated infrastructure) may help reduce visual impact e.g. darker colours may be appropriate when the turbine is likely to be viewed against woodland or against a backdrop that is below the skyline.

6.5.4.4 Consideration should also be given to:

- **Impacts on visual receptors:** Particularly in relation to impacts on views from residential and publicly accessible locations. Visual receptors on the Malvern Hills, on named / promoted walking, cycling or horse-riding routes and at important viewpoints (for example, those marked on OS maps, or identified in NDPs, are particularly sensitive in this regard. Where there are several potential locations for the wind turbine(s), priority should be given to the least prominent location.
- **Ecology:** Both large- and small-scale turbines have the potential to adversely effect bird species and habitats. During construction, care should be taken to avoid removal or fragmentation of existing vegetation. Consideration should be given to potential impact on bats.

77 'Located,' in this context, refers to the placement of the proposed wind development with regard to the landscape context.

78 'Sited,' in this context, refers to the development's placement in relation to its immediate context.

- **Impacts on historic environment and cultural heritage assets/designations and their settings:** Particularly scheduled monuments, listed buildings, conservation areas, and registered/unregistered historic parks and gardens.
- **Noise and shadow flicker:** Wind turbines generate two types of noise – mechanical noise, created by its gearbox, and aerodynamic noise, produced by its moving blades. Shadow flicker occurs when the sun passes behind a turbine's rotating blades and casts a shadow that appears to rapidly flicker on and off. Proximity to neighbouring properties is particularly important in this regard.
- **Cumulative impacts:** This includes other wind developments, overhead powerlines, and telecommunications masts and other vertical structures.

RECOMMENDATION

- In relation to small-scale wind energy, only stand-alone wind turbines within the curtilage of farm or office buildings, houses or blocks of flats are, in principle, likely to be acceptable in the Malvern Hills National Landscape and its setting, provided that relevant considerations have been clearly addressed.
- Each proposal should be assessed on a case-by-case basis and should protect, conserve and enhance the natural beauty of the Malvern Hills National Landscape and its setting.

6.5.5 Large-scale wind energy

- 6.5.5.1 'Large-scale' means turbines larger than 25 metres in height, to the tip of the turbine (taking account of the definition of 'small scale', provided above). In the context of landscape sensitivity assessments, a wider range of size thresholds is likely.
- 6.5.5.2 As outlined in relation to small-scale wind energy above, the issue of visual sensitivity is also an important consideration.
- 6.5.5.3 Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs) will help to identify the significance of landscape and visual effects on a case-by-case basis.
- 6.5.5.4 The Malvern Hills National Landscape has the Special Quality of 'dramatic scenery and spectacular views arising from the juxtaposition of high and low ground'. As a result, the Partnership is unlikely to support, in principle, large scale wind energy schemes within the Malvern Hills National Landscape, and/or its setting, as it is unlikely that sufficient mitigation would be possible to avoid adverse change to the landscape and visual baseline, and hence supporting such a scheme would not be consistent with the statutory purpose of AONB designation.
- 6.5.5.5 Wind energy schemes that would constitute major development (in the context of paragraph 183 of the NPPF) can only be permitted in exceptional circumstances and where it can be demonstrated that the development would be in the public interest, in line with national planning policy.
- 6.5.5.6 Further guidance on landscape sensitivity assessments and how they might be applied to identify 'suitable areas' for renewable energy in local planning authority development plans is provided in Section 6.6. Further guidance on the issue of major development is provided in Section 4 of this position statement.

- 6.5.5.7 Many of the considerations outlined in relation to small-scale wind energy schemes are also applicable to large-scale schemes, including EIA thresholds. In addition to the impact of the wind turbines themselves, consideration should be given to the impacts of any additional infrastructure that is required for the scheme, such as road access, on-site tracks, turbine foundations, hard standings, anemometer masts, construction compounds, electrical cabling, battery storage, sub-stations, and control buildings. Other relevant considerations are addressed in Section 4.
- 6.5.5.8 Consideration should be given for the effect of wind development upon landscape designations, geological and nature conservation designations, and historic assets near the development, and the wider landscape context.

RECOMMENDATION

- In relation to large-scale wind energy, the Malvern Hills National Landscape Partnership would not be supportive of large-scale wind energy schemes within the Malvern Hills National Landscape and/or its setting.
- Applicants for large-scale wind energy schemes should be required to robustly demonstrate that the scheme could be accommodated without adversely affecting the landscape and/or scenic beauty of the AONB designation and/or its setting.
- For major development proposals, applicants should be required to demonstrate that exceptional circumstances apply and that the scheme would be in the public interest, as per Paragraph 183 of the NPPF (December 2023).

6.6 Wind & Solar Energy – Identification of 'Suitable Areas'

- 6.6.1 Paragraph 160 of the NPPF states that to help increase the use and supply of renewable and low carbon energy and heat, plans should '*consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development*'. In practice, identification of 'suitable areas' for renewable energy development in development plans primarily focuses on both wind and solar energy.
- 6.6.2 There is a strong onus on identifying 'suitable areas' for wind energy in LPA development plans, with the NPPF stating that '*a proposed wind energy development involving one or more turbines should not be considered acceptable unless it is in an area identified as being suitable for wind energy development in the development plan...*⁷⁹. If LPAs do not identify suitable areas for wind energy in their development plans, then they are effectively ruling out wind energy development in their LPA areas.
- 6.6.3 The Malvern Hills National Landscape Partnership recommends that the identification of 'suitable areas' should be based on a combination of:
- Landscape sensitivity and capacity assessments;
 - Constraints mapping; and
 - Technical consideration including wind speed and grid connectivity.

6.6.4 As stated in the PPG for Renewable and Low Carbon Energy, 'there are no hard and fast rules about how suitable areas for renewable energy should be identified, but in considering locations, local planning authorities will need to ensure they take into account'... *critically, the potential impacts on the local environment, including from cumulative impacts.*' The PPG goes on to state, in relation to the identification of suitable areas, that:

'In considering impacts, assessments can use tools to identify where impacts are likely to be acceptable. For example, landscape character areas could form the basis for considering which technologies at which scale may be appropriate in different types of location.'

6.6.5 It is important to note that the PPG says 'could' rather than 'should,' in this regard. However, in the context of nationally designated protected landscapes, such as designated AONBs, and their settings, we consider that it is essential that the identification of suitable areas should be underpinned by a landscape sensitivity assessment. Guidance on this topic has been published by Natural England.

6.6.6 When 'suitable areas' are being identified, regard should be given to the purpose of conserving and enhancing the natural beauty of the Malvern Hills National Landscape. Identification of 'suitable areas' should be underpinned by a landscape sensitivity and capacity assessment and by consideration of the constraints that relate to the natural beauty of AONB designation, including nature conservation and historic environment designations (in addition to infrastructure constraints and other technical considerations).

6.6.6.1 Wind and solar energy schemes should be steered towards areas of lower landscape sensitivity and away from key constraints. The Government's PPG on Renewable and Low Carbon Energy states, in the context of identifying 'suitable areas,' that *'there is a methodology⁸⁰ available from the Department of Energy and Climate Change's website on assessing the capacity for renewable energy development'⁸¹.*

6.6.6.2 The methodology sets out a five-step process for addressing AONB designation:

- Step 1: Identify the purposes of the landscape area (reasons for designation)
- Step 2: Identify which technologies might affect these purposes/ integrity of the designation
- Step 3: Identify how each technology might affect the purposes/ integrity
- Step 4: Identify the type and level of renewable and low carbon infrastructure that could be accommodated without compromising the purposes/ integrity of the designations
- Step 5: Provide guidance on how to integrate renewable/ low carbon energy without compromising the purposes/integrity

6.6.6.3 The methodology identifies whether 'constraints,' such as infrastructure and nature conservation and heritage conservation designations, should be excluded from further consideration (i.e., not considered suitable for renewable energy development) and whether there should be a 'buffer zone' around these features. The consideration of relevant constraints and buffer zones is reflected in the evidence-base of many current development plan consultations.

6.6.7 Areas that are identified as having 'high' landscape sensitivity to the type and scale of renewable energy being proposed should be excluded from the suitable area mapping.

80 LUC and SQW Energy (2010) Renewable and Low-carbon Energy Capacity Methodology. Methodology for the English Regions. Commissioned by the Department of Energy and Climate Change (DECC) and the Department of Communities and Local Government (CLG).

81 <https://www.gov.uk/guidance/renewable-and-low-carbon-energy>. Paragraph 005.

- 6.6.7.1 It is recognised that in having regard to the 'Special Quality' of 'dramatic scenery and spectacular views arising from the juxtaposition of high and low ground' means that landscape and visual sensitivity is high across much of the Malvern Hills National Landscape and its setting. Where landscape sensitivity is evaluated or classed as 'High' or 'Very High' (depending on the point scale used), key characteristics and qualities of the landscape will be more vulnerable to change from the proposed scale of wind and solar energy development. Such development is more likely to result in a significant (adverse) change in landscape character. In designated AONBs, such development is likely to have a significant adverse effect on the statutory purpose of AONB designation, which is to conserve and enhance natural beauty. The same is true for such development in the setting of designated AONBs in cases where the impact on views from and/or to the designated landscape is an important consideration in landscape sensitivity ranking⁸².
- 6.6.7.2 In order for a landscape sensitivity assessment to have a meaningful role in the identification of suitable areas for wind and solar energy we recommend that areas within designated AONBs that have higher sensitivity to particular scales of wind or solar energy development should not be included within 'suitable area' maps in local authority development plans. The same principle should also apply to higher sensitivity areas in the setting of a designated AONB, where the impact on views from and / or to the designated AONB is an important consideration in the landscape sensitivity ranking.
- 6.6.8 Consideration will also need to be given to types and scales of renewable energy that are identified as being of higher landscape sensitivity.
- 6.6.8.1 Development is likely to be 'major development' in the context of paragraph 183 of the NPPF, for which there is, in effect, presumption against granting planning permission, other than in exceptional circumstances.
- 6.6.8.2 Key characteristics and qualities of the landscape are also vulnerable to change from wind and solar energy development when the landscape sensitivity is moderate. However, there may be some limited opportunity to accommodate wind turbines/ solar panels in such areas without significantly changing landscape character. Ideally, the landscape sensitivity assessment would specify the circumstances, or locations, where this might be the case. Given the fact that there may be opportunity (albeit limited) to accommodate such development without significantly changing landscape character, it might not be appropriate to automatically exclude such areas from 'suitable area' maps in local authority development plans.
- 6.6.8.3 However, where the scale of wind or solar energy development within a designated AONB (or its setting) is such that the landscape sensitivity would be moderate, such development is still likely to have a significant adverse impact on the natural beauty of the AONB designation. Such development is likely to constitute 'major development,' in the context of paragraph 183 and footnote 64 of the NPPF⁸³.

82 Case law (see also footnote 21) has clarified that the requirements of what is now paragraph 182 of the National Planning Policy Framework (NPPF) should apply to the impact of development outside a designated AONB on views from the designated AONB. In other words, great weight should be given to the impact of such development on these views. Further guidance on this can be found in the Malvern Hills National Landscape Position Statement on Development and Land Use Change in the Setting of the Malvern Hills National Landscape. Although the same principle, clarified in the case law example, does not apply to the impact of such development on views towards a designated AONB, these views may still contribute to the 'special qualities' of the designated AONB. This is especially the case for the Malvern Hills, the views towards which are considered one of the 'special qualities' of the Malvern Hills National Landscape.

83 Footnote 64 of the NPPF specifies that 'for the purposes of paragraphs 182 and 183 [of the NPPF], whether a proposal is 'major development' is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purpose for which the area has been designated or defined'.

- 6.6.9 Renewable energy proposals within a 'suitable area' will need to be assessed on a case-by-case basis against relevant policy considerations, factoring in relevant AONB designation considerations.
- 6.6.10 Renewable energy LSAs that are commissioned by local authorities are normally based on a local authority's own Landscape Character Assessment. However, in fulfilling the statutory duty to have regard to the purpose of AONB designation, they should have regard to relevant documents published by the Partnership, including:
- Landscape Character Assessments;
 - AONB Management Plans, with regards to policies and 'special qualities';
 - Position Statements; and
 - Other guidance relating to landscape character and landscape sensitivity e.g. Natural England's National Character Area profiles.
- 6.6.11 In the case of wind energy, they will also need to demonstrate that they have local community support. Where multiple renewable energy developments would be inter-visible, cumulative impacts are also be a key consideration.

RECOMMENDATION

- The Malvern Hills National Landscape Partnership supports the identification of suitable areas for wind and solar energy in local planning authority development plans.
- Identification of 'suitable areas' should be underpinned by a landscape sensitivity and capacity assessment and by consideration of relevant constraints and technical considerations.
- Suitable area maps should exclude areas of high/very high landscape sensitivity (and least within the designated AONB and its setting) and where there are key constraints.
- Renewable energy schemes should be targeted towards areas of relatively low landscape sensitivity (preferably low/very low landscape sensitivity) within the LPA area. Renewable energy landscape sensitivity and capacity assessments, commissioned by local authorities, should have regard to relevant guidance published by the Malvern Hills National Landscape Partnership.
- In relation to large-scale solar energy and wind energy, within the highly sensitive context of the designated AONB and its setting, a Landscape and Visual Impact Assessment (LVIA) or Landscape and Visual Appraisal (LVA) should be carried out from pre-application stage and be submitted alongside a planning application. It should be produced to a high standard, follow best practice guidance (Guidelines for Landscape and Visual Impact Assessment 3rd Edition, 2013), and demonstrate the proposal does not compromise the AONB designation and its primary purposes. The appraisal should identify the Zone of Visual Influence (ZVI) or Zone of Theoretical Visibility (ZTV) and assess the development's impact upon key viewpoints both within and towards the designated AONB, and also its setting.

6.7 Energy Storage

6.7.1 Renewable energy is intermittent in nature. It is important to provide energy storage systems that can be charged during periods of excess renewable energy generation and discharged at times of increased demand. Energy storage can be used to store electricity bought from the grid at cheaper times of the day, with dynamic energy tariffs that vary in price throughout the day.

6.7.2 Energy storage systems include

- Pumped hydro involves pumping water uphill at times of low demand, storing it in a reservoir and, in high demand periods, releasing it through turbines to create electricity.
- Thermal energy storage involves storing excess energy to be used later for heating, cooling, or power generation; thermal energy can be stored in liquids, such as water, or solids, such as sand or rocks. Chemical reactions or changes in materials can also be used to store and release thermal energy.
- Mechanical energy storage involves harnessing motion or gravity to store electricity. For example, a flywheel is a rotating mechanical device that is used to store rotational energy that can be called up instantaneously.
- Batteries involve converting stored chemical energy into electrical energy. Advances in technology and falling prices mean grid-scale battery facilities that can store increasingly large amounts of energy are becoming common.

6.7.3 For small-scale forms of renewable energy, including householder energy generation, that are advocated in this position statement, the most common form of energy storage is likely to be battery storage. In this context, battery storage solutions could be advantageous although battery size, and therefore consideration of its potential impact, will depend on energy usage and the size of the technologies installed. Some, but not all, battery storage systems can be installed outdoors.

6.7.4 Where planning permission is required, relevant considerations include:

- Location and design of the structure that the batteries are to be stored in (including the potential use of existing buildings, such as barns), or garages for domestic installation;
- Fencing, substation, and other structures/infrastructure associated with the storage system;
- Access and maintenance arrangements;
- Noise impacts; and
- Sustainability and environmental impact of materials used (e.g. lithium).
- Risk of fire/explosion;
- Potential impacts on heritage assets and the historic environment.

RECOMMENDATION

In relation to energy storage, in principle, the Malvern Hills National Landscape Partnership would be supportive of energy storage schemes that provide effective storage of renewable energy that is generated in the Malvern Hills National Landscape and its setting, providing relevant considerations have been adequately addressed.

7. COMMUNITY-LED RENEWABLE ENERGY SCHEMES

- 7.1 Account should be taken of the economic and social needs of local communities. An important component of this is how energy and heating requirements of these communities are met.
- 7.2 National planning policy states that 'local planning authorities should support community-led initiatives for renewable and low carbon energy'⁸⁴, although they will still be required to go through the same processes as non-community led schemes. In the case of wind energy, national planning policy also states that a proposed wind energy development involving one or more turbines should not be considered acceptable unless, inter alia, the ⁸⁵
- 7.3 As such, the extent to which a proposed renewable energy scheme: (i) explicitly helps to meet the energy needs of the individual local community; and/or (ii) is community-led, is an important consideration. Care should be taken that community-led schemes are genuine and not developer-driven. More appropriate schemes are those that may be part of Neighbourhood Plans (NDPs) or initiatives such as the Community Visioning projects being piloted by CPRE⁸⁶.
- 7.4 Proposals for community-led renewable energy should be supported by evidence of the current carbon footprint/energy use of the community, and the impact that the renewable energy proposal will have on reducing this.
- 7.5 Renewable energy schemes can support rural diversification and educational opportunities, and community-owned renewable energy projects can provide incentives and ownership, as well as promoting self-sufficiency.

RECOMMENDATION

- In relation to community-led renewable energy schemes, in principle, the Malvern Hills National Landscape Partnership would support community-led schemes more favourably, provided that considerations have been clearly addressed, than those which are not community-led.
- Renewable energy schemes should demonstrate economic, social and environmental benefits to the local community⁸⁷.

84 Ministry of Housing Communities and Local Government (2023) National Planning Policy Framework - Paragraph 161.

85 Ministry of Housing Communities and Local Government (2023) National Planning Policy Framework - Footnote 58. The revisions to the NPPF in 2023 changed the requirement for community 'backing' to community 'support'. 'Support' is, arguably, a (slightly) lower threshold than 'backing.' However, community backing, or support is likely to remain a requirement for wind energy proposals to be approved.

86 <https://www.cpre.org.uk/what-we-care-about/climate-change-and-energy/renewable-energy/community-energy-visioning-showcasing-renewables-done-well/>

87 Other benefits can be employment, wellbeing/economic/energy security, as well as environmental (pollutants, carbon emissions, biodiversity/habitat). For example, heat pumps and roof solar would reduce domestic running costs in social housing, benefiting residents; and remove the need for oil deliveries (less heavy transport, less risk of oil spillage, less CO² emissions).

- V1 – DRAFT produced for Malvern Hills AONB Joint Advisory Committee (JAC) meeting of 10 November 2023. Footnote 64 of the NPPF specifies that ‘for the purposes of paragraphs 182 and 183 [of the NPPF], whether a proposal is ‘major development’ is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purpose for which the area has been designated or defined’. November 2023 to endorse as a consultation draft – October 2023 (JB/SH/PE)
- V2 – DRAFT produced for consultation incorporating ‘National Landscape’ re-brand following endorsement of draft for consultation by Malvern Hills AONB JAC meeting of 10 November 2023 – December 2023 (JB/PE)
- V3 – DRAFT Tracked Changes incorporating updated National Planning Policy Framework (20 December 2023), Levelling Up and Regeneration Act (2023) and consultation responses to consultation DRAFT – April 2024 (JB/SH)
- V4 – Accept Tracked Changes to be produced for Malvern Hills National Landscape Joint Advisory Committee (JAC) Meeting of 26 April 2024 for endorsement – April 2024 (JB/SH)
- V5 – Final grammar check post Malvern Hills National Landscape JAC Meeting of 26 April 2024 – June 2024 (JB)

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Malvern Hills National Landscape
Manor House, Grange Road
Malvern, Worcestershire WR14 3EY

Tel: 01905 845057
Email: aonb@worcestershire.gov.uk
Web: www.malvernhills-nl.org.uk



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