

~~will be set for non-residential buildings, according to their end use. Achieving these targets will need to be demonstrated through an Embodied Carbon Assessment.~~

~~The report for the West of England Authorities 'Embodied carbon of domestic and non-domestic buildings', (WSP 2021) demonstrates that significant reductions in embodied carbon can be achieved at no net additional cost. This can be achieved through better design (including durability to replacements), better onsite management (to avoid wastage), better choice of materials (with lower embodied carbon) and through the removal of unnecessary finishes. In order to demonstrate that measures to reduce the risk of the building overheating have been integrated into all developments, the Good Homes Alliance Tool and Guidance – Overheating in New Homes should be used.~~

~~The four-principle approach set out in this policy is compatible with Part L Building Regulations and the Future Homes Standard (FHS) without conflict. This is because the metrics used within Building Regulations and the proposed FHS calculate both the energy and the carbon intensity of a building.~~

~~The **Creating sustainable buildings and places** A Supplementary Planning Document (SPD) will be prepared **updated** to set out how the specific requirements of this policy can be implemented.~~

Policy DP7: Large scale renewable and low carbon renewable energy

~~Proposals for wind turbines and solar photovoltaic arrays will be supported in principle within the Search Areas shown on the Policies Map, subject to the other requirements of the Plan and it being demonstrated that there are no adverse impacts on living conditions including those from vibration, noise, shadow flicker, glint, glare and air quality.~~

~~Proposals for wind turbines and solar photovoltaic arrays at locations outside of the Search Areas may also be acceptable, although these locations are likely to be subject to additional constraints.~~

~~Proposals for wind turbines of the appropriate number and size as identified within the maps are encouraged in order to make the most efficient use of the available wind resource at that location.~~

~~**Proposals which maximise for energy generation from renewable and low carbon sources including wind turbines, solar photovoltaic arrays, biomass and hydropower (marine, river and tidal) schemes will be supported subject to no unacceptable impact on:**~~

- **Ecological assets, including local, national, and international designated sites and impacts on biodiversity.**
- **The historic environment, including heritage assets and their settings.**
- **Townscape and landscape character.**
- **Living conditions from vibration, noise, shadow flicker, glint, glare and air quality; and**
- **Infrastructure assets including power lines, roads, rail and aircraft safety.**

Priority will be given to proposals with potential for positive cumulative impacts with other renewable energy schemes, developments on previously development land and solar photovoltaics on roof tops. On greenfield sites, all proposals should seek to support continued agricultural use and biodiversity improvements.

Particular support **Priority** will be given to renewable and low carbon energy generation developments that are led by and/or meet the needs of local communities. Support will be given to community energy schemes which provide energy for local facilities or development areas. **Commercial led energy schemes with a capacity over 5MW must, subject to viability, provide an option to communities to own at least 5% of the scheme.**

Where community support is identified for a specific technology at a given location, this will be identified as a preferred location for that technology.

Any proposals which include renewable energy of equal to or greater than 1MW generation capacity are encouraged to include energy storage, or private wire supply **provide a direct connection to the energy user.**

~~Priority will be given to developments on previously development land. On greenfield sites the proposal should support continued agricultural use and biodiversity improvements.~~

~~Proposals for wind and solar PV farms to re-power at the end of their operational life will be permitted, as long as the turbines and/or solar panels are replaced with new equipment of either the same or larger installed capacity subject to compliance with statutory, site-specific, and other constraints.~~

~~Proposals for biomass and bioenergy developments will be approved provided they are of a scale and type which is appropriate to the location and do not have a detrimental impact on air quality. Support will be given to community energy schemes. These developments should be located away from urban areas (and preferably in areas off the gas grid)~~

Proposals for biomass/bioenergy developments will be approved provided they are of a scale and type which is appropriate to the location ~~and do not have a detrimental impact on air quality.~~ **Support will be given to community energy schemes.** These developments should be located away from urban areas ~~(and preferably in areas off the gas grid)~~ **and must not have a detrimental impact on air quality.** A whole life carbon benefit will need to be evidenced. All schemes using crops should demonstrate a positive impact on local biodiversity.

The development of heat networks will be encouraged provided that:

- They use renewable and low carbon forms of energy generation; and
- Individual developments make all reasonable efforts to meet net zero standard onsite, before connecting to a heat network.

~~Development proposals within 0.5km of an existing heat network fed from a renewable source of energy should connect to this network.~~

~~Proposals for development that will host energy intensive activities and are likely to generate excess heat (or power) are expected to be located within 0.5km of a heat demand cluster, as identified on the Policies map. Where wind and solar PV farms are proposed within 0.5km of an identified heat demand cluster, these proposals should investigate providing electricity for powering heat pumps to these areas, as part of a private wire/district heat network.~~

Justification

This policy is intended to encourage increased levels of renewable energy generation across the district. This is an important part of the Climate Emergency Declaration and the aim of carbon neutrality by 2030.

Accelerating the decarbonisation and decentralisation of the energy system in the UK is essential to mitigating climate change. It can also bring wider environmental and economic benefits and improve the security of our energy supply. North Somerset has the opportunity to increase renewable energy generation and facilitate development to enable a more flexible, smart, decentralised energy system. Fossil fuel-based energy installations will no longer be acceptable.

~~The purpose of developing this new policy is to encourage increased levels of renewable energy generation across the district. This is an important part of the Climate Emergency Declaration and the aim of carbon neutrality by 2030.~~

~~Large scale renewable energy generation is defined as those installations which are freestanding or standalone, are not building mounted or wired through a building to support the onsite energy balance.~~

The Search Areas identified on the Policies Map show the locations with likely best potential for wind turbine and solar PV developments, once constraints have been applied. These have been reproduced from the Renewable Energy Resource Assessment Report (AECOM, 2021). For wind turbines this will include wind turbines of 500kW (small), 1MW (medium) and 2MW (large) scale wind turbines. The mapping which accompanies the report primarily identify opportunities for large-scale developments of larger than 5MW generation capacity. This is considered to be the minimum size of development that could be financially viable without additional incentives.

The constraints include both primary constraints (e.g., international nature conservation/heritage designations) and local constraints. Local constraints for wind turbines will include wind speed, residential/ noise buffers, topple distances and for solar PV arrays will include land orientation and inclination. The Search Areas also exclude land slivers, Fire Breaks and Tracks and parcels of land too small to support a large-scale development.

Further consideration will be given to refining the Search Areas, particularly for solar PV developments. This may include excluding areas with issues of grid capacity and landscape sensitivity, Best and Most Versatile Agricultural Land, AONB, Natural England's Solar Impact Risk Zones, flood risk zones and potentially land inside the Green Belt.

Community energy projects are particularly encouraged for the wider benefits of involving the local community in local leadership, control, and local engagement. These schemes can be fully owned/ controlled by the community or through a partnership with commercial or public sector parties. Community energy projects can include community-owned renewable electricity installations such as solar PV panels, wind turbines or hydroelectric generation.

Where community support is demonstrated for a specific technology at a given location, this will be identified and included as an allocation through a Neighbourhood Plan or in the Local Plan.

The NPPF states that when located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. In such cases developers will need to demonstrate very special circumstances if projects are to proceed. Such very special circumstances could include schemes which support rural diversification, can be visually contained, demonstrate local community benefits and those which provide significant biodiversity enhancements.

North Somerset Wind Energy and Solar PV Supplementary Planning Documents will be updated to highlight potential locations identified as most technically suitable areas for renewable energy schemes from the Renewable Resource Assessment Study (2021). The SPD will also provide

guidance in relation to the Landscape Sensitivity Assessment (2021), which assessed the landscape sensitivity of different parts of North Somerset in relation to solar PV and wind turbine development.

Energy storage has a vital role to play in enabling a zero carbon electricity system. Energy storage is required to reduce the impact from intermittency of electricity output which varies according to weather conditions and to address grid capacity constraints. Renewable energy storage provides reserves for use when demand is high, when supply is low, or at times of system stress.

Policy DP8: Efficient use of land

All new development proposals must demonstrate that they have made effective and efficient use of land. Proposals will be supported which:

- Enable the reuse and regeneration of previously developed land;
- Ensure that all parts of the site have a positive purpose; and
- Prioritise higher densities at more accessible locations such as town centres, local centres and transport hubs.

The minimum target density will be 40 dwellings per ha, but this should be higher at accessible locations. In all cases density should respect and complement the character of the surrounding area.

Justification

Encouraging development on vacant and previously developed land has both a positive role in encouraging the recycling and regeneration of land and also reduces the pressure for development on greenfield sites. Redevelopment can also help increase the effectiveness of existing infrastructure.

The NPPF does not specify minimum density targets and considers that density levels should be set by local authorities to reflect local circumstances. Within North Somerset the target is a minimum of 40 dwellings per ha. **However, this is an average and the appropriate density will vary depending on local circumstances.** Within accessible locations such as town and local centres and transport hubs ~~we will be looking for~~ **there will be a presumption in favour of** higher densities as this can help increase vitality and viability in these areas, support public transport and provide different types of accommodation.

There may be instances where encouraging increased density may compromise the character of the surrounding area or be constrained by other factors. In areas of low density housing, for example, a new development may appear incongruous. In such circumstances the design approach will be to make effective use of the land subject to no adverse impact on the surrounding area or the living conditions of residents. ~~In other areas, the ecological or heritage~~