

## 1 Non-technical summary

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The Staffordshire County-wide Renewable / Low Carbon Energy Study has been conducted by Camco on behalf of the authorities of Cannock Chase, East Staffordshire, Lichfield, Newcastle-under-Lyme, South Staffordshire, Stafford, Staffordshire Moorlands, Tamworth and Staffordshire County Council.

The aim of the study is to inform the partner authorities about the technical potential, the viability and the deliverability of various renewable and low carbon options through the preparation of a local evidence base. This evidence base has been developed with the project steering group and includes:

- Analysis of low carbon generation resource potential
- Investigation of suitable carbon standards for new development
- Recommendations for planning policy and associated non-planning measures to support effective planning policy.

The study also included a review of a number of major development sites within the study area to examine the viability and delivery implications for achieving higher carbon standards in practice, which is covered by a separate report<sup>1</sup>. During the course of the study, a consultation workshop was held<sup>2</sup> to review and test the principal recommendations with a range of stakeholders.

It is important to note that the primary analysis and reporting of this work was completed at the beginning of 2010. Since that time (and this final version of the report), a new government has come to power and a number of significant policy shifts have been announced, with some being enacted. Some of these have a bearing on the analyses included in the study and affect the certainty of some of the assumptions used and the recommendations made. Commentary in this final version of the report has been added to highlight where policy changes may affect the base of evidence, which overall remains valid. Of particular note is the revocation of West Midlands Regional Spatial Strategy which has been used in the study to inform (along with other evidence) the recommended policy of carbon targets for new development. It should also be noted that the evidence base collated to support the preparation of the regional spatial strategy remains, and can be used by authorities to support local policy.

The intention of this work is for the authorities to draw upon the relevant evidence and recommendations in preparing their Local Development Frameworks in accordance with the requirements of Planning Policy Statements 1 and 22 and the West Midlands Regional Spatial Strategy, which has since been revoked. In addition, the report presents a series of non-planning recommendations that are included in recognition of the need to support the achievement of the principal goals of the increased uptake of low carbon energy and to enable the delivery of viable low carbon development.

The study considers the period up to 2026 in line with the West Midlands Regional Spatial Strategy period.

The key conclusions of the study are shown below, with summaries for each authority included in Appendix I.

<sup>1</sup> *Staffordshire development-specific sustainable energy strategies – worked examples, August 2010*

<sup>2</sup> *18th March 2010, Cannock*

## **1.1 Policy overview**

The challenge of achieving climate change mitigation through delivering more carbon efficient development and implementing a significant increase in low carbon energy generation requires strong and effective local planning policy and enforcement.

The new government will doubtless seek to adjust the policy and regulatory frameworks in this area, particularly with respect to its stated strategic approach to devolved governance, i.e. 'localism', and also it addresses the current national macro economic problems and future uncertainties. This may see some of the policy mechanisms proposed by the previous government scrapped or modified. However, it is expected that climate change mitigation measures including renewable energy generation and lower carbon development will be maintained as high priority and therefore that the overall thrust of the policy recommendations included here will remain valid for the purposes of preparing Local Development Frameworks.

In tandem with new planning policies, non-planning strategies need to be implemented in key areas such as biomass market stimulation, identifying and supporting the implementation of district heating infrastructure and the provision (or facilitation) of financing mechanisms, e.g. a carbon investment fund, to address economic barriers to low carbon solutions.

The challenge to implement the proposed new planning policy and related non-planning measures is best met on a cooperative basis. This study has been directed by a steering group representing all the authorities involved and a key recommendation is for a similar steering group to be formed to manage coordinated implementation. The remit of this group would be to:

- Identify and develop shared resources for policy implementation and enforcement (particularly where specialist knowledge is required); and
- Implement key non-planning measures that will benefit from up-scaling, for example, a carbon investment fund for Staffordshire (which will be a more efficient solution than a fund for each authority).

## **1.2 Carbon standards for new development**

Local Authorities have the power to establish carbon targets ahead of national building standards. During the course of the study a range of carbon standards were considered in detail, across the range of expected domestic development. Where the standards exceed those proposed nationally, the resulting additional net costs for domestic development were reviewed (accounting for potential revenue from national financial incentives). The analysis concluded that for large development, or where developments have access to low cost solutions (e.g. directly connected wind energy or connection to existing district heating networks), then setting targets beyond national levels presents limited additional burden. Because there are significant benefits such as achieving greater carbon savings and early mobilisation of local supply chains, acceleration of low carbon standards, where it is viable, is considered warranted. It is important to note that burden is significantly limited where financial support is available as is currently proposed with the Feed-in-Tariff (now operational) and Renewable Heat Incentive (proposed for 2011). Furthermore, with the introduction of a mechanism to support offsite carbon reduction ("Allowable Solutions") the price of off site solutions can be capped. The latter measure would provide important contributions to a Carbon Investment Fund.

Non-domestic development has been more difficult to consider since the roadmap to national carbon standards are yet to be resolved in this area. National consultation was concluded on this in February 2010 but no response from government has been issued.

As a result of the analysis, a framework of carbon standards has been proposed, presenting a range of standards that authorities can require developers to achieve depending on the nature

of the development proposed and period in which the development occurs. The framework is intended to be a flexible planning tool dealing with both economic uncertainty and the variability of the development and its economic viability, which will be a key determinant in establishing the targets for individual schemes. In essence, the framework provides a set of minimum and maximum carbon (and low carbon generation) targets encouraging higher standards where they are achievable.

Whilst framework itself has been demonstrated to present limited burden and is justified in terms of its intended consequences, it is necessary for authorities to conduct further viability tests to determine whether other development goals, e.g. affordable housing, development rates, S106 contributions are not adversely affected.

As part of the carbon framework the study recommends the establishment of specific low carbon renewable energy generation targets on new development (all housing and non-domestic development above 1,000m<sup>2</sup>), i.e. Merton-rule policies. These also have a limited cost impact particularly where the previously mentioned financial incentives are available.

The following are a summary of the key recommendations made in support of delivering low carbon development:

- Accelerate local development carbon targets ahead of national policy, as set out in a flexible framework which will support the process of dealing with concerns over viability yet maintain a focus on driving up carbon standards
- Establish a multi-authority / county carbon investment fund to channel developer contributions towards carbon reduction projects with the local/county area and provide “allowable solutions” that will be required to deliver zero carbon standards on new buildings (2016 from homes and from 2019 for most other buildings)
- Establish a county-wide low carbon energy generation / low carbon development steering group (with representation from all authorities involved). The principal aims of this group will be to oversee and support:
  - the implementation of joint initiatives
  - the development of shared capabilities and resources
  - consistency of planning policy across the county
  - consistency development control practices of across the county
- Develop a shared technical support service, principally to review compliance to carbon standards in new development seeking planning permission

### 1.3 Potential for low carbon / renewable energy generation

There are significant low carbon energy generation resources within the study area which are estimated to be able to provide between 8% and 11% of energy consumption by 2021. This is arguably within the range required for the local areas to support the national target of 15% (with large centralised generation significantly contributing towards this and thereby displacing the need for additional local generation) by the same period. The estimate of resource potential for the study area excludes the contribution from co-firing of biomass (particularly relevant to Cannock Chase) and production of renewable fuels for transport. Stand-alone wind energy and biomass energy present significant opportunities as do district heating (in urban centres and on larger development sites) and microgeneration (on new development and within the existing built environment).

The resources available to each authority vary considerably, as is shown in Energy Opportunity Map below (Figure 1) and the authority summaries in Section 10. Resources are dependent on a range of technical factors (e.g. wind speed, access to biomass resources and

quantum of existing and new development) and the technical, economic and practical constraints that exist.

Over the period considered (up to 2026) approximately 57,000 new dwellings are forecast to be built (as projected in the West Midlands Regional Spatial Strategy). Much of this development will be zero carbon (homes from 2016 and non residential properties from 2019), requiring the incorporation of high standards of energy efficiency, on-site low carbon generation and additional off-site carbon reduction. The relative contribution that development makes to the total low carbon energy generation potential for each authority is highly variable from 5% to 25% (of project consumption in 2021). The marked differences between authorities are largely due to the variation in quantum of development forecast.

Overall, some authorities have much more potential than others, with a number likely to fall well short of the benchmark range of the 7.5% to 10% of energy consumption in 2020 supplied from local renewable energy. This suggests that those authorities with greater resource need to exceed the benchmark range to enable the study area / county as a whole to achieve the benchmark range. However, each authority should seek to maximise the use of the low and zero carbon resource available to them and where they do not have access to specific resources such as wind energy or biomass then they should explicitly focus on those other solutions that are possible, such that they make a fair contribution.

The study highlights district heating / CHP as having an important contributory role to both maximising the level of low carbon generation and enabling low carbon development. The study draws together various sources of information to highlight zones/areas that may support district heating. It is recommended that detailed technical and market studies are conducted in these zones to determine whether schemes (which can be affected by a wide range of constraints) are viable or not.

Other areas of important work following this study are the development of implementation strategies to support the market development of biomass supply chains across the study area and to supplement the information included in report on hydro energy with the results from a more detailed study due to be completed in 2010 by Environment Agency.

The key policy recommendations concluded from the study are:

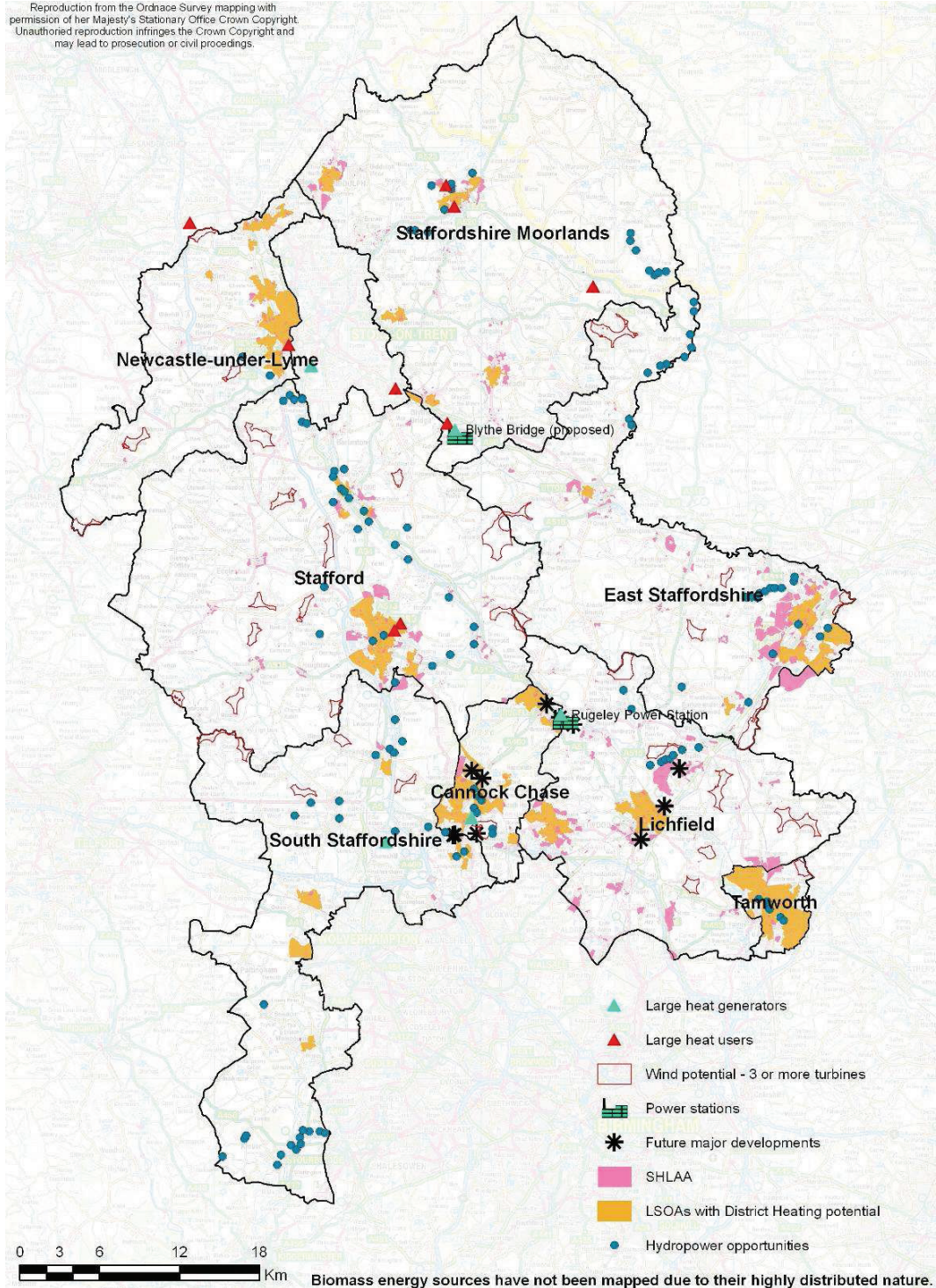
- Publish details of the resource study conducted (and reported here), within relevant spatial plans including an Energy Opportunities Map (as shown in Figure 1).
- Develop and implement criteria-based policies around key low carbon / renewable energy generation technologies. Planning policies need to be supportive of all energy generation technologies but particularly wind energy, biomass and microgeneration, as these have the greatest potential within the study area. A criteria-based approach will enable objective decision-making, in what can be a controversial area.
- Establish authority-wide targets for generation and establish effective monitoring to assess performance on an annual basis.

In addition, the following key non-planning measures are recommended to help support the delivery of new generation:

- Support the establishment of a Carbon Investment Fund (as discussed above). By combining planning obligation revenue with a range of the other financial resources, e.g. CESP, CERT, Pays As You Save (Green Deal) funds, public sector borrowing and commercial investment, this could deliver significant carbon reduction projects. These could include generation project alongside energy efficiency measures.
- Develop and implement strategies to support the emergence of solutions for reducing carbon emission within existing buildings
- Develop and implement strategies to support areas / communities that are not connected to the natural gas network to enable fuel switching from conventional energy sources to low carbon energy sources



- Secure public sector (notably Local Authority) commitment to lead by example and develop low carbon exemplar projects and support programmes



**Figure 1 Energy Opportunities Map**