

OUTLINE PLANNING APPLICATION FOR ERECTION OF UP TO 500 RESIDENTIAL DWELLINGS

ENERGY STATEMENT

LAND NORTH OF THOMPSONS FARM, KERESLEY

ON BEHALF OF LIONCOURT STRATEGIC LAND

**TOWN & COUNTRY PLANNING ACT 1990 (AS AMENDED)
PLANNING AND COMPULSORY PURCHASE ACT 2004**

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1. INTRODUCTION

- 1.1 This Energy Statement relates to the outline planning application for the erection of up to 500 residential dwellings at Land North of Thompsons Farm, Keresley.
- 1.2 The aim of the Statement is to investigate the opportunities for ensuring energy efficiency and integrating renewable / low carbon energy sources into the proposed new development. The Statement will outline a range of renewable energy sources and energy efficiency measures available to ensure the proposed development accords with Local and National policy requirements.
- 1.3 The following section outlines what options and technology can be considered as the detailed design of the proposal is progressed.

2. POLICY CONTEXT

2.1 This Energy and Sustainability strategy for the proposed development has been developed in accordance with the relevant national and local planning policy.

The National Planning Policy Framework 2018

2.2 The National Planning Policy Framework (NPPF) 2018 sets out the Governments planning policies for England and how these should be applied in Local Plan preparation and decision-making. The NPPF constitutes a material consideration.

2.3 Chapter 14 'Meeting the challenge of climate change, flooding and coastal change' is relevant to the proposal. The chapter sets out policies that guide the planning system to support development to transition to a low carbon future in the face of changing climates. This includes reducing greenhouse gas emissions, minimising vulnerability, improving resilience, encouraging the reuse of resources and the conversion of existing buildings.

2.4 **Paragraph 150** states:

"New development should be planned for in ways that:

a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards."

National Planning Practice Guidance

2.5 On identifying decentralised energy opportunities, the National Planning Practice Guidance (NPPG) paragraph 009 (Ref. ID 5-009-20140306) states that there is "*an important contribution to be made by planning that is independent of the contribution from other regimes such as building regulations*".

2.6 With regard to optional technical standards for housing the NPPG paragraph 002 (Ref. ID 56-002-20160519) states that "*local planning authorities have the option*

to set additional technical requirements exceeding the minimum standards required by Building Regulations in respect of access and water [...]. Local planning authorities will need to gather evidence to determine whether there is a need for additional standards in their area, and justify setting appropriate policies in their Local Plans”.

- 2.7 With regard to water efficiency NPPF paragraph 014 (Ref. ID: 56-014-20150327) states that *“all new homes already have to meet the mandatory national standard set out in the Building Regulations (of 125 litres/person/day). Where there is a clear local need, local planning authorities can set out Local Plan policies requiring new dwellings to meet the tighter Building Regulations optional requirement of 110 litres/person/day”.*

The Coventry City Local Plan 2017

- 2.8 The Coventry City Local Plan (CCLP) was adopted in December 2017.

- 2.9 **Policy EM1: Planning for Climate Change Adaption** is applicable to the proposal. It states:

“1. All development is required to be designed to be resilient to, and adapt to the future impacts of, climate change through the inclusion of the following adaptation measures:

a) using layout, building orientation, construction techniques and materials and natural ventilation methods to mitigate against rising temperatures;

b) optimising the use of multi-functional green infrastructure, including tree planting for urban cooling, local flood risk management and shading,

c) incorporating water efficiency measures, such as the use of grey water and rainwater recycling, low water use sanitary equipment

d) minimising vulnerability to flood risk by locating development in areas of low flood risk and including mitigation measures including SUDS in accordance with Policy EM4;

e) Where applicable, maintain and enhance the canal network to reflect the canals’ role in urban cooling.

f) seek opportunities to make space for water and develop new blue infrastructure to accommodate climate change.

2. Applicants will be required to set out how the requirements of the policy have been complied with including justification for why the above measures have not been incorporated.

3. Where justification for non-compliance with the requirements is based on viability, this will need to be clearly demonstrated through an open book financial appraisal."

2.10 **Policy EM2: Building Standards** is also applicable to the proposal. It states:

"1. New development should be designed and constructed to meet the relevant Building Regulations, as a minimum, with a view to:

- a) Maximising energy efficiency and the use of low carbon energy;*
- b) Conserving water and minimising flood risk including flood resilient construction;*
- c) Considering the type and source of the materials used;*
- d) Minimising waste and maximising recycling during construction and operation;*
- e) Being flexible and adaptable to future occupier needs; and*
- f) Incorporating measures to enhance biodiversity value.*

2. In meeting the carbon reduction targets set out in Building Regulations, the Council will expect development to be designed in accordance with the following energy hierarchy:

- a) Reduce energy demand through energy efficiency measures*
- b) Supply energy through efficient means (i.e. low carbon technologies)*
- c) Utilise renewable energy generation*

3. A Sustainable Buildings Statement should demonstrate how the requirements of Climate Change policies in this Plan and any other relevant local climate change

strategies have been met, and consider any potential coal mining legacy issues including land stability.

4. A comprehensive update of the Delivering a More Sustainable City SPD incorporating the approach to Building Sustainability Standards will be developed.”

Other Considerations

- 2.11 Coventry City Council published their 'Delivering a More Sustainable City' SPD in 2009. This SPD is now out of date as the Local Plan 2017 has superseded this document specifying an updated version of the SPD will be produced. There is no available information on the timeline for the adoption of the document available online.

3. ENERGY STRATEGY

- 3.1 This section outlines the proposed energy strategy to be incorporated into the project and achieve policy compliance. Potential technologies and measures are laid out below.
- 3.2 Low carbon buildings offer many benefits including better design and operation, better internal environment and lower carbon emissions. One of the most popular benefits is usually the lower running cost of the building. Additional benefits include better Energy Performance Certificates and improved market/retained value.
- 3.3 Development can achieve resilience and adapt to climate change impacts by using layout, orientation, sustainable construction techniques (including natural ventilation, fenestration sizes and durable materials). These techniques are passive design measures that improve energy efficiency by reducing energy demand. The Indicative Concept Masterplan submitted shows how the site can be laid out, it also exemplifies how the site can contribute to improving energy efficiency.
- 3.4 Efficient building layouts and appropriate orientation can ensure buildings get good levels of natural light, reducing the need for artificial lighting and therefore reducing energy consumption; The energy consumption of artificial lighting can be further improved using energy saving bulbs. Dwellings can be designed to have generously sized principal windows facing south, which will provide natural light to the main living areas; this will reduce the need for artificial lighting in the most commonly used spaces. Natural ventilation can also be utilised to prioritise airflow to cool buildings and reduce the energy cost of mechanically ventilating the building.
- 3.5 The Indicative Concept Masterplan has considered how the site can be laid out to ensure all proposed dwellings will have adequate space and orientation to maximise solar gain. The concept masterplan shows a majority of roads orientated east to west, which means a majority of dwellings proposed will have north / south facing fenestrations. Further information will be provided in a reserved matters application to show the layout of individual building plots and the orientation of buildings.
- 3.6 In designing buildings consideration should be given to maximising energy efficiency and using low carbon energy. Low carbon energy and decentralised grids can be expensive to introduce and there are limited decentralised energy projects nearby. The feasibility of Low and Zero Carbon (LZC) technologies can be reviewed in a more detailed statement to support the reserved matters application; considering the following technologies:

- Wind Turbines
- Photovoltaics
- Solar Thermal
- Ground Source Heat Pumps
- Air Source Heat Pump
- Biomass Boilers

3.7 Using appropriate materials to insulate buildings alongside design and energy considerations discussed above can further improve the energy efficiency of buildings. More specific details on the method taken and materials to be used will be provided with a Reserved Matters application. One option is to adopt a 'fabric first' technique, which involves designing buildings to help reduce the amount of energy consumed. For example, a design can aim to reduce thermal bridging where heat transfer can happen with greater ease (particularly at floor/wall junctions), which will ensure that air leakage, U-values and heat loss are minimised. If necessary, the design of the scheme can also reduce large unwanted internal heat gains through minimising excessive glazing and utilising solar shading. Triple glazing can further increase energy savings as part of the development.

3.8 The type and source of materials used can also improve the environmental impact of development. Priority should be given to using quality renewable and low impact materials such as wood, stone, tiling and concrete; sourced from local suppliers where possible. Further information on this will be provided within a reserved matters application.

3.9 Buildings can introduce external measures to improve the water efficiency of development. Rainwater and grey water recycling can reduce the use of fresh water in new development, internal features can also be installed to minimise the use of water. Rainwater collection measures are particularly effective in reducing surface water run-off from non-permeable surfaces, therefore reducing flood risk and increasing the reuse of resources.

3.10 Land around buildings can be utilised to provide green infrastructure and tree planting, such spaces should be designed to be multi-functional. Green infrastructure can provide spaces for recreation and leisure in central locations to

where they live; most importantly trees and planting (including specific SuDS features) can provide solar shading and effective drainage. Blue infrastructure (in the form of water features, streams and ponds) can also contribute to the cooling of urban areas and the retention of surface water. New SuDS features can be designed to provide a mix of blue and green spaces to achieve this effect.

- 3.11 The Indicative Concept Masterplan demonstrates how the proposal can provide extensive Green Infrastructure to benefit energy and water efficiency and biodiversity throughout the site. SuDS features, and new green space is proposed across the site. SuDS features are balanced and respond to the topography, their locations ensure that that surface water run-off is directed to appropriate locations for dispersal or reuse. Extensive planting and open space is proposed along the main routes of the site and in gardens, with retained and enhanced planting along the borders of the site. This Green Infrastructure will improve drainage and solar shading on site and will provide result in the enhancement of existing natural features such as the central pond.
- 3.12 Biodiversity enhancements can be incorporated into individual dwellings to improve the energy efficiency of buildings. Green roofs and walls can improve the insulation of buildings and cooling around buildings, however they can be costly additions to buildings. Providing planting around the perimeter of buildings and on boundaries can have a similar desired effect. Further information on landscaping around individual buildings will be provided within a reserved matters application.
- 3.13 As discussed above, the concept masterplan offers a substantial amount of retained and enhanced green infrastructure that will improve the energy and drainage efficiency of the site. In addition, the proposed development of this site will improve the sites contribution to biodiversity in and around the site. By increasing planting, SuDS and open space and, by enhancing the environment around existing ponds, habitats and connectivity for local wildlife will be increased. This is a considerable improvement to the existing quality of the site and surrounding land which is used for growing crops, and does not support biodiversity across a significant area of the land. In comparison, the concept masterplan proposes to retain the majority of existing hedgerows and trees, incorporating new planting and landscaped areas which connect across the site in all directions.
- 3.14 Regard can be given to the need for future residents to adapt to changing circumstances. In addition to the above, this can include providing appropriate

waste storage equipment (prioritising recycling), providing space for cycle storage, and making rainwater goods accessible to allow personalised water storage.

Summary

- 3.15 Appropriate measures have been identified to improve the energy efficiency and sustainability of individual buildings and the site as a whole. Such measures include the utilisation of natural features to improve drainage, climate and biodiversity; using quality materials, design and layout to improve energy efficiency and reduce heat loss; and implementing decentralised energy projects.
- 3.16 The indicative concept masterplan provided to aid the determination of the outline planning application demonstrates how a potential layout can incorporate the above measures and maximise the potential benefits. Further information will be provided within a reserved matters application to further demonstrate that the proposal can sufficiently meet the policy requirements as set out in Policies EM1 and EM2 of the CCLP 2017.

4. CONCLUSION

- 4.1 This Energy Statement has demonstrated that the proposed development is in general accordance with both local and national planning policy with regards to energy and sustainability.
- 4.2 This Statement has examined the potential measures that can reduce energy use and improve the ability of the proposed development to adapt to changing environmental factors. A reserved matters application will provide further detail on the measures and technologies to be adopted in the final version of the scheme. This will ensure that the proposed development will comply with the Council and Government's aims to pursue the sustainable use of resources and adaption to climate change.