

Newark and Sherwood Allocations and Development Management DPD Examination

Egdon Resources (Reference Number 033)

Hearing Statement – Matter 9 (Environment) v2

Issue 1 - Whether the policies relating to climate change and the natural and built environment are positively prepared, justified, effective and consistent with national policy

Policy DM8 – Development in the Countryside

9.29 – Overall, will the Plan contribute to the achievement of sustainable development? Are any main modifications necessary for soundness?

Background

Egdon Resources (“Egdon”) submitted representations in response to both the First and Second Allocations and Development Management DPD in November 2022 and November 2023 respectively. Both sets of representations were in respect of draft policies DM4 and DM8. The Proposed Main Modifications (CD05) published by the Council in February 2024 do not meet our concerns about the soundness of the Plan.

National Planning Policy Framework (NPPF)

Paragraph 157 of the NPPF states that the planning system should support renewable and low carbon energy and associated infrastructure.

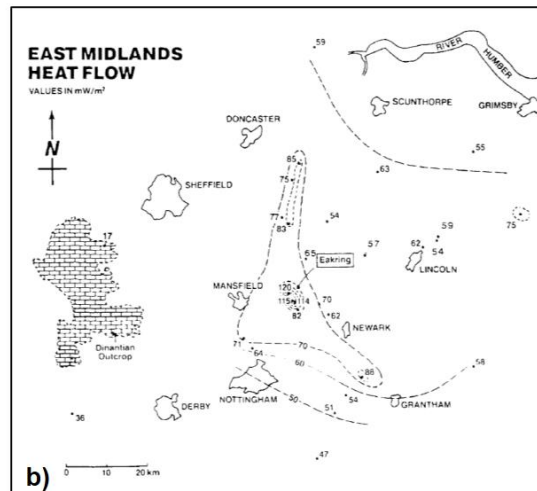
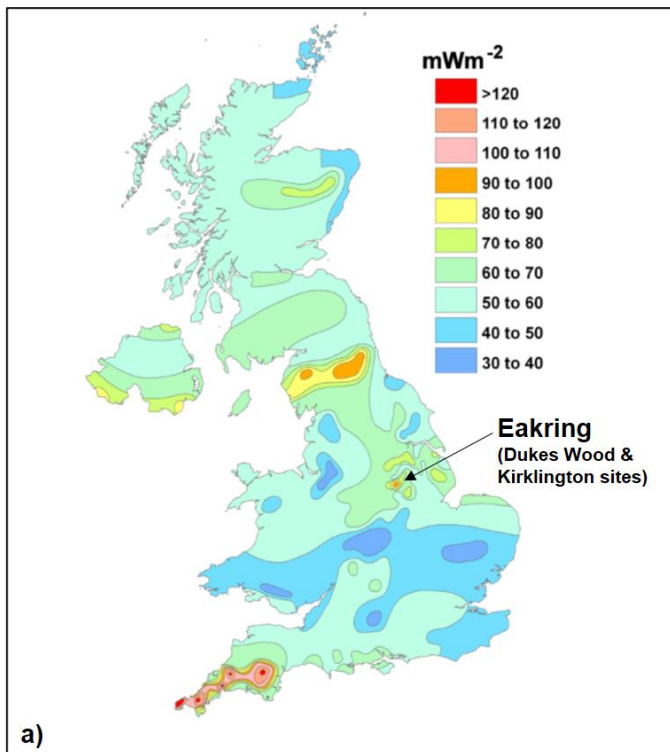
Paragraph 161 goes on to say that plans should provide a positive strategy for energy from these sources that maximises the potential for suitable development, whilst ensuring adverse impacts are addressed. They should also identify suitable areas for renewable and low carbon energy sources and supporting infrastructure and identify opportunities for co-locating potential heat customer and suppliers.

The glossary (Annex 2) in the NPPF makes clear that renewable energy includes deep geothermal heat.

Opportunities for Geothermal Heat Recovery in Newark and Sherwood

Establishing a deep geothermal industry in the country has the potential to create thousands of new green jobs, as well as aiding the transition of skills and technology developed in the oil and gas industry to an emerging UK renewables sector.

Egdon has undertaken desktop screening studies to assess its existing well stock and well sites. Several sites were identified as potential candidates for geothermal repurposing, in particular, the Dukes Wood-1 well in Kirklington. The site is located in an area that has long been known as having a localised geothermal anomaly (higher than average heat flow at shallower depth than expected). Analysis of temperature data from the Dukes Wood-1 well (and legacy data from other nearby wells) suggests that there is enough of a heat resource to warrant further investigation.



a) Heat flow map of the UK, warm colours indicate areas of high heat flow (after Busby, 2010); b) Heat flow map of the Eakring Anomaly or ‘High’ (after Wilson and Luheshi, 1987)

In early 2024 Egdon performed a workover operation on the Dukes Wood-1 well that has isolated the hydrocarbon producing reservoir intervals and allowed for decommissioning of the Dukes Wood oil field. A new well completion was installed that will allow for a Thermal Response Test (TRT) to be undertaken to assess the geothermal potential. This operation is to be completed in Q4 2024.

If the results of the TRT are positive then the Dukes Wood-1 well could potentially be repurposed and operated as a low enthalpy single-well closed loop geothermal installation (also known as a Deep Borehole Heat Exchanger). No abstraction or injection of fluid from or into the aquifer (surrounding formations) will occur. In a success case, Egdon will look for nearby commercial uses for the heat resource, with potential for space heating or enhanced agriculture use.

Does the Plan contribute to Sustainable Development?

In response to the question posed by the Inspector at para 9.29 of the MIQs, the Plan as currently worded will not contribute to the achievement of sustainable development in respect of harnessing the potentially valuable opportunities in the district to recover and reuse deep geothermal heat. Policy DM8 fails the test of soundness because it is not consistent with national policy. The policy as currently worded does not maximise the potential for renewable and low-carbon energy; it fails to identify suitable areas for renewable and low-carbon sources with respect to deep geothermal; and it fails to identify opportunities for co-locating potential heat customers and suppliers.

Are any main modifications required for soundness?

Part 8 of the policy should be amended to specifically allow for employment uses in locations which are capable of harnessing deep geothermal heat, in accordance with paragraph 161 of

the NPPF. The policy and supporting text should acknowledge the potential opportunities for deep thermal heat recovery within the District. It should also recognise that, for geothermal heat recovery to be commercially viable, it is important for those businesses that require regular, large quantities of heat, should be able to co-locate. Notwithstanding the fact that Kirklington parish is generally rural in nature, the policy should support such employment opportunities, subject to satisfying other relevant policies within the Plan.