

Energy and Climate Change: comments on Joint Local Plan Issues consultation

Overall there is little coherent structure to the document – nor a consistent story as to how the issues around Energy and Climate Change (ECC) are to be tackled.

There are a number of threads to ECC, not all of which are addressed in the document:

- a) Protecting natural carbon sinks such as woodland, peat deposits, heathland, which have both a nett negative effect on emissions and retain water so helping to mitigate flooding.
- b) Encouraging energy efficiency in terms of buildings – both existing and new.
- c) Energy efficiency in transport both in terms of reducing the need for transport and promoting low emission methods of transport
- d) Reducing the emissions caused by electricity generation – by promoting microgeneration, enabling the development of industrial scale renewable generation in the plan area, finding ways to import low carbon electricity into the plan area. For example by requiring developers to make contributions to renewable energy projects.
- e) Mitigating the effects of climate change, most notably flooding but also changes in agricultural land use necessitated by climate change e.g. flood plains and creation of land areas which retain water.

Taking these issues in turn.

Protecting natural carbon sinks

1. Protection of natural assets which sink carbon is largely a planning issue. It requires that planners recognise that the destruction of natural carbon sinks constitutes a high degree of harm to the extent that developers cannot be allowed to build on carbon sink areas.

Document comment:

There is no reference to protecting natural carbon sinks in the rural area such as peat deposits and woodland the destruction of which can cause significant CO₂ emissions and permanently damage areas which naturally capture and store carbon. This is a particularly relevant issue for NuL where the rural area encompasses the Woodland Quarter of Staffordshire and the W. Mids. meres and mosses.

Encouraging energy efficiency in buildings existing and new

It is difficult to achieve the levels of energy efficiency inherent in new buildings by modifying existing ones. However, given that there is a considerable stock of old buildings in the plan area simple measures which improve energy efficiency must be encouraged where practical. To a large extent this is already taken care of by mitigation schemes run by energy companies.

Buildings can be either commercial or residential and the issues of energy efficiency apply to each.

1. Smaller developments can be more innovative and flexible in terms of incorporating microgeneration and energy efficiency measures.
2. District heating schemes are unlikely to make a significant impact on the overall energy budget because they require buildings to be sited close to sources of waste heat. This is more likely to be the case on industrial estates. The infrastructure required to carry hot water or steam is expensive to install and potentially difficult to maintain – such schemes may be viable on industrial estates or residential developments or new developments which are sited close to sources of waste heat. This highlights the importance of siting housing close to areas of employment. The potential to use waste heat for residential heating is just one of several ECC benefits of the close siting of residential and employment areas.
3. It may be difficult to obtain planning permission for the replacement of existing buildings in the rural area with modern energy efficient buildings because of policies which, for example, only allow replacement buildings within existing curtilages. Planning policies should be more flexible make it easier for people to get planning permission for developments of this type. For example, re-siting a replacement building may improve the prospects for solar or ground source.
4. Buildings can be designed and positioned to make the most of solar energy both in terms of electricity microgeneration and heating (solar gain).

Document comments:

9.13 District heating is not a form of renewable energy, neither is district heating a justification for larger developments. Smaller developments can benefit from design best practice, such as planning for sufficient south facing roofs to maximise potential for solar energy collection.

“If the government’s ‘zero-carbon homes’ policy is ended, this may further limit both councils’ ability to deliver energy efficiency in new development.” Is untrue - very few zero carbon homes were ever built and best practice building can deliver greater overall energy savings.

9.18 District heating will only ever be viable in localised high density areas. And can only be considered viable in locations where there are large sources of waste heat. It could be viable in some parts of SoT, where I believe it is mentioned as a possibility; but it has limited application.

S106 agreements could include contributions to renewable energy schemes elsewhere.

Energy efficiency in transport

Transport typically accounts for around 30% of the total energy budget. Due to the heavy reliance on fossil fuels it contributes disproportionately to carbon emissions but also to other emissions such as NO_x, particulates and ozone which diminish air quality and to noise.

1. Provision of electric car charging points – not mentioned.

2. Public transport is only energy efficient if it achieves a high utilisation. Empty buses are significant polluters and causes of congestion.
3. Electric cars and plug-in hybrids are becoming increasingly popular, and will become more so during the lifetime of this plan. There is no mention of electric car charging points which are an essential enabler.
4. Reducing the need to commute to work particularly in rural areas will have a significant impact on the number of road miles generated. Encouraging the development of rural businesses can help here.

Document comments:

2.1 SA3 – Supporting the development of rural businesses which reduce the need to travel from the Rural South into Stoke and Newcastle.

9.5 – What about emissions standards (both noise and greenhouse gases) from buses and HGVs? This is a significantly neglected area and there should be a policy of adopting low emission zone standards within the plan area.

Issue 3 – buses are only energy efficient if they are fully utilised. Empty buses contribute significantly to emissions, noise and traffic congestion. Operators should be encourage to make more use of smaller and more energy efficient vehicles as part of a more flexible transport network better able to support the needs of the polycentric area.

4.3 Bus services – need to recognise that there needs to be a review of where bus routes are, following a long period of decline and no attempt to identify travel need patterns and introduce more flexible routing and on-demand services.

Reducing emissions due to electricity generation

Electricity generation accounts for about a third of carbon emissions. The scope for large scale renewable generation in the plan area is limited and it is likely that wind has the most potential. A number of sites in the plan area have been identified as having high average wind speeds. However, solar and biomass also have potential. Solar microgeneration can utilise building roof space assuming that buildings are constructed with adequate south facing aspects. Larger scale PV installations may be proposed where they are commercially viable. Flat-roofed industrial buildings also offer potential for PV installations. Biomass requires both the appropriate generation installations and the growing of suitable energy crops nearby as biomass is generally bulky and it is not viable or sustainable to transport it large distances. Biomass production may however conflict with food production.

1. Need to identify potential for micro generation in the rural area and suitable schemes.
2. Identify sites suitable for wind generation based on national wind maps.

3. Adopt a policy on agricultural farm wind turbines, to enable at least some wind generation in the face of public opposition to wind farms.
4. Consider the possibility of requiring developers to invest in renewable electricity schemes outside of the plan area that can be counted towards the plan area's renewable energy contribution.

Document comments:

I cannot understand why *"Smaller residential developments in both areas can struggle to deliver renewable energy schemes and energy efficiency measures, particularly due to the associated costs."*

– this is manifestly untrue. All they need is solar roofs.

9.6 I suspect that the potential for deep geothermal heat in this area is low but not zero (possibly from old mine workings). What studies are available?

Mitigating the effects of climate change

Flooding is the most obvious effect of climate change. Current guidelines used by planners (100 year storm plus climate change) are starting to look increasingly inadequate and will undoubtedly need to be upgraded during the life of the plan. Some recent studies are suggesting that climate change induced flooding could increase by a factor of five by 2050.

Flood mitigation requires more than simply not building on areas likely to flood, it involves ensuring that land which will retain water is preserved, flood plains are created and maintained and that land usage – particularly in rural areas – does not generate undue amounts of run off. Water flows do not respect administrative boundaries and it is inevitable that flood mitigation measures will be required within the plan area to reduce flooding problems elsewhere. For example: flood plains installed in the Rural South of the plan area in order to mitigate flooding problems in Stafford.

Document comments:

1. The document does not address the potential need to make changes to land used for agriculture in the longer term to accommodate climate change effects. e.g. run-off from agricultural land.
2. Flooding: current standards for 100 year storm plus climate change are looking increasingly inadequate and are likely to be upgraded during the lifetime of this plan.
3. Flood plain projects and other flood mitigation measures in the rural area have not been addressed.
4. The document does not address the issue that flooding in this area can cause problems for other areas downstream. e.g. Stafford is affected by drainage from parts of the Rural South and there needs to be co-operation to ensure joined up schemes are implemented e.g. upstream floodplains and restriction of development in areas where it might cause flooding elsewhere.

5. Land which naturally retains water [e.g. meres and mosses areas and woodland] needs to be protected – this is not mentioned in the document.
6. The document does not address the role of agriculture in flood mitigation. For example: restricting the growth of high run-off crops such as maize in places where this could contribute to flooding either on site or elsewhere.

Other issues – Air quality

Air quality is not directly an ECC issue although emissions which cause climate change can also impact on air quality in other ways such as nitrous oxide (NO_x), particulates and ozone. These matters need to be addressed in the document in their own right.

Document comments:

1. Much of the document addresses transport and air quality issues rather than genuine energy and climate change issues.

Other issues – Contaminated land

It is not clear why contaminated land is considered to be an ECC issue rather than an environmental issue.

Document comments:

9.4 – Why is contaminated land relevant to ECC?

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