Climate Change

7 Climate Change

Climate Change Key Facts

- The district contains 43 river water bodies totally 907.23 km in length.
- The rivers Swale, Ure and Ouse flow southward through the Vale of York; the River Wharfe flows along the southern boundary of the district.
- Of those water bodies at risk from hazardous substances (163.74km), only 39.23% pass the chemical classification test.
- Areas in the district particularly at risk of flooding include parts of Ripon, Knaresborough, Boroughbridge and Pateley Bridge and Masham, however, only 6.6% of the district lies within Flood Zone 3.
- In 2015 the total per capita carbon dioxide (CO2) emissions for the district was 6.2 tonnes.[22] This is higher than the regional (5.1t) and English averages (4.8t), but lower than the North Yorkshire average (7.3t) (DBEIS, 2017).
- CO2 emissions in the district by sector were: industrial and commercial 38.2%, domestic 32.7%, transport 29% (DBEIS, 2017). These are similar to the national trend.
- For many years the average domestic gas and electricity consumption in the district have both been above the regional and national averages (DECC, 2015).
- The Climate Change Act (2008) sets a framework to deliver an 80% reduction in greenhouse gas emissions below 1990 levels by 2050, while the council's Climate Change Strategy (2009) sets targets to reduce CO2 emissions locally by 40% by 2020 and 80% by 2050.
- Over the last 10 years the district's CO2 emissions have decreased by 20.7%, however, Yorkshire and the Humber has seen a 26.8% reduction and England a 28% fall (DBEIS, 2017).

22 These are emissions within the scope of influence of Local Authorities. They exclude emissions that Local Authorities don't have direct influence over: Motorways; EU Emissions Trading System sites; Diesel railways; Land Use, Land Use Change, and Forestry

CC1: Flood Risk and Sustainable Development

Draft Policy CC 1

CC1: Flood Risk and Sustainable Drainage

Development proposals will not be permitted where they would have an adverse effect on watercourses or increase the risk of flooding elsewhere.

Development will only be permitted where it has an acceptably low risk of being affected by flooding when assessed through Sequential Testing against the most up-to-date Environment Agency flood risk maps and the Harrogate District Level 1 Strategic Flood Risk Assessment (SFRA) maps. Development layout within the site should be subject to the sequential approach, with the highest vulnerability development located in areas at lowest flood risk within the site.

Proposals within Flood Zone 3a(i) will be assessed in accordance with national policies relating to Flood Zone 3a but with all of the following additional restrictions:

A. no new highly vulnerable or more vulnerable uses will be permitted;

B. less vulnerable uses may only be permitted provided that the sequential test has been passed; and

C. where extensions are linked operationally to an existing business or, where redevelopment of a site provides buildings with the same or a smaller footprint;

D. all proposals will be expected to include flood mitigation measures to be identified through a site specific Flood Risk Assessment including consideration of the creation of additional sustainable flood storage areas;

E. development will not be permitted on any part of the site identified through a site specific Flood Risk Assessment as performing a functional floodplain role.

Where required by national guidance, proposals for development should be accompanied by a site-specific Flood Risk Assessment (FRA). The FRA should demonstrate that the development will be safe, including access, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

All development will be required to ensure that there is no increase in surface water flow rate run off. Priority should be given to incorporating Sustainable Drainage Systems (SuDS) to manage surface water drainage, unless it is proven that SuDS are not appropriate. Where SuDs are provided arrangements must be put in place for their whole life management and maintenance.

Proposals involving building over existing culverts or the culverting or canalisation of water courses will not be permitted unless it can be demonstrated to be in the interests of public safety or to provide essential infrastructure and that there will be no detrimental effect on flood risk and biodiversity. Where feasible, development proposals should incorporate re-opening of culverts, modification of canalised water courses and consideration of mitigation measures to achieve a more natural and maintainable state.

In partnership with the Environment Agency and the lead local flood authority, the council will seek opportunities from new development to reduce the causes and impacts of flooding. Development should ensure that land which is needed for flood risk management purposes (as identified in Defra's[23] Programme of flood and coastal risk management schemes and other Environment Agency or lead flood authority documents) is safeguarded.

23 Department for Environment, Food and Rural Affairs

Justification

7.1 Flooding is a natural process influenced by natural elements such as rainfall, geology, topography and man made interventions such as flood defences, roads, buildings, farming methods and other infrastructure. The National Planning Policy Framework (NPPF) seeks to avoid the risk of flooding where possible. Where it is not possible, development should be directed to areas with the lowest level of flood risk using the sequential test. Having exhausted all opportunities to direct development away from areas of flood risk, the vulnerability of the proposed use must be considered along with possible mitigation measures using the exception test. This approach is known as the risk based sequential approach.

7.2 With regard to flooding from rivers, the NPPF categorises zones of flood risk (1,2,3a and 3b) and states that the overall aim should be to steer new development to Flood Zone 1 (low risk). The Environment Agency defines flood zones on the basis of their annual probability of flooding without the presence of any defences. The advice within the NPPF explains in detail how these zones are classified.

7.3 The advice within the NPPF makes clear that planning applications for development proposals of 1 hectare or greater located in Flood Zone 1, and all proposals for new development in Flood Zones 2 and 3, should be accompanied by a flood risk assessment (FRA). The FRA should identify and assess the risks of all forms of flooding to and from the development and demonstrate how these flood risks will be managed, taking climate change into account. For major developments in Flood Zone 1, the FRA should identify opportunities to reduce the probability and consequences of flooding. The FRA should include an assessment of groundwater or fluvial flooding and seek a betterment in the runoff and thereby flood risk; thereby reducing the risk of flooding downstream. A FRA will also be required where the proposed development or change of use to a more vulnerable class may be subject to other sources of flooding (see guidance within the NPPF), or where the Environment Agency, Internal Drainage Board and/or other bodies have indicated that there may be drainage problems.

7.4 Proposals for development that require a FRA will need to submit the assessment before the application can be validated.

7.5 The risk of flooding from rivers, surface water, sewers, groundwater, canals and reservoirs within the district has been explored within the Harrogate District Level 1 Strategic Flood Risk Assessment (SFRA) and its addendum. The SFRA provides more detailed flood risk information including identifying which parts of Flood Zone 3 are within the functional floodplain (Flood Zone 3b) and information on the effects of climate change and data on depth and hazard of flooding.

7.6 The functional floodplain does not reflect the fact that some land within these areas will already contain buildings and therefore cannot perform a functional floodplain role. Such areas have therefore been excluded from the functional floodplain but have been identified in the Harrogate District SFRA as Flood Zone 3a(i) to highlight the higher risk than Flood Zone 3a. The following flood zones therefore apply in the Harrogate district:

- Flood Zone 1
- Flood Zone 2
- Flood Zone 3a
- Flood Zone 3a(i)
- Flood Zone 3b

7.7 Proposals within Flood Zone 3a(i) will be assessed using criteria in national policy for Flood Zone 3a but with additional restrictions to reflect the higher risk. The probability of flooding in Flood Zone 3a(i) remains the same as the functional floodplain (Flood Zone 3b) therefore highly vulnerable or more vulnerable developments would not be appropriate within this

zone. In certain circumstances less vulnerable development proposals could be justified, subject to a sequential test, such as proposals for an operationally linked extension to an established business or redevelopment with the same or smaller footprint.

7.8 Where possible, proposals for redevelopment in these areas should reduce the built form in these areas and if possible create additional water storage areas. Flood attenuation measures will be required for all schemes in Flood Zone 3a(i) and areas shown to be acting as functional floodplain by a site specific flood risk assessment should be retained as undeveloped areas.

7.9 The promotion of sustainable water management practises is vital. Sustainable Drainage Systems (SuDS) to manage water flow can be important in minimising flood risk, but they also help to create high quality environments that encourage biodiversity through enhancements to wildlife, and benefit water resources. The effective use of permeable surfaces, soakaways and water storage areas should be incorporated in all new development where possible. Developers will be encouraged to enter into early discussions with the council to identify which type of SuDS are most appropriate to local site conditions to deliver multiple benefits. This should include reference to the latest guidance/code of practice on SuDS. The Construction Industry Research and Information Association (CIRIA) have published guidance on their website.

7.10 Green Infrastructure, such as permeable surfaces, basins, swales, ponds, open spaces and trees etc., can be used to reduce flood risk and surface water run-off. By incorporating green infrastructure into SuDS it can help to reduce peak flows. The integration of green infrastructure proposals should be considered during the design stage of proposals for development.

7.11 National planning policy in respect of sustainable drainage is set out within the NPPF and a Written Ministerial Statement dated December 2014. National policy states that for major applications, SuDS for the management of surface water run-off should be put in place unless demonstrated to be inappropriate. SuDS are a material planning consideration and, as such, new drainage systems will require approval by the local authority with comments also sought on all major applications from the lead flood authority, North Yorkshire County Council. National Planning Practice Guidance (NPPG) advises on how planning can take account of the risks associated with flooding and coastal change in plan-making and the application process. The Department for Environment, Food and Rural Affairs (Defra) has produced a set of non-statutory technical standards for the design, maintenance and operation of sustainable drainage systems. There is an expectation that robust and sustainable arrangements for the maintenance of sustainable drainage systems will be put in place. Applicants will be required to submit sufficient information, both in respect of the design of systems and their future maintenance to enable the local planning authority to discharge its duties.

7.12 Applicants intending to lodge a **major** application with the council are strongly advised to review Harrogate Borough Council's supporting drainage information criteria chart and the lead local flood authority guidance notes. Applicants submitting **minor** development applications are also advised to review Harrogate Borough Council's supporting drainage information criteria chart.

Further Information

Related planning policies

- National Planning Policy Framework (NPPF)
- National Planning Practice Guidance (NPPG)
- Policy NE5: Green Infrastructure

Further information/guidance for applicants (see bibliography under Climate Change for more details)

- Harrogate Borough Council: Harrogate District Level 1 Strategic Flood Risk Assessment (SFRA), JBA (2016)
- Harrogate Borough Council: Flood Risk Sequential Test (2016)
- Construction Industry Research and Information Association (CIRIA): SuDS Guidance Manual (C753) (2015)
- North Yorkshire County Council: SuDS Design Guidance (not dated)
- Department for Environment, Food and Rural Affairs (Defra): Sustainable Drainage System Non-statutory Technical Standards (2015)
- Environment Agency: Flood Risk Maps (updated regularly)
- House of Commons: Written Statement (HCWS161) (December 2014)

Evidence that may be required from applicants to accompany a planning application

- Flood Risk Assessment.
- SuDs: information on the design proportionate to the application type.

CC2: Rivers

Draft Policy CC 2

CC2: Rivers

All new development should have regard to the actions and objectives of appropriate River Basin Management Plans and the Water Framework Directive in striving to protect and improve the quality of water bodies and ecological systems in and adjacent to the district. Proposals which fail to take opportunities to restore and improve rivers will be refused unless the absence of such works can be justified. If works can't be done on site then arrangements should be entered into to secure improvements off site, subject to viability.

Development proposals adjacent to watercourses should address the following;

A. Provide a minimum of 8m buffer zone measured from bank top to provide an effective and valuable river corridor and improve habitat connectivity. This should remain/be designed to be intrinsically dark with lux levels of 0-2 and should not contain any structures;

B. Provide a 5m buffer zone for ponds to protect their wildlife value and ensure that the value of the adjacent terrestrial habitat is protected.

Justification

7.13 The European Union Water Framework Directive became part of UK law in 2003 with the primary objectives of achieving good ecological status in water bodies, and providing protection for drinking water sources and protected sites (Habitats Directive Sites and Sites of Specific Scientific Interest). These requirements are reflected in the Environment Agency's River Basin Management Plans with the Humber River Basin Management Plan covering the Harrogate district.

7.14 Development proposals, particularly those next to watercourses, should help, wherever possible, to achieve and deliver the Water Framework Directive objectives. The types of improvement that developers may be expected to make include: the removal of obstructions, such as weirs; de-culverting; the regrading of banks to achieve a more natural profile; improving in-channel habitat; and reducing levels of shade to allow aquatic vegetation to establish, for example, through tree trimming.

7.15 Buffer zones should be provided adjacent to rivers, streams and ponds in order to protect and, where necessary, enhance biodiversity, in particular the value of the adjacent terrestrial habitat. These zones provide valuable habitats and help support improved habitat connectivity. Main rivers are defined by the Environment Agency, the 8m buffer to these watercourses should be maintained as undeveloped, naturalised areas and not include any structures, such as fencing or footpaths, that could increase flood risk. Any works or structures that applicants intend in, under, over or within 8m of the top of the bank of a main river, or toe of a flood defence, will require a permit from the Environment Agency under the Environmental Permitting (England and Wales) Regulations 2010. This permit is separate to and in addition to any planning permission granted.

Further Information

Related planning policies

- National Planning Policy Framework (NPPF)
- National Planning Practice Guidance (NPPG)
- Policy CC1: Flood Risk and Sustainable Drainage
- Policy NE2: Water Quality

Further information/guidance for applicants (see bibliography under Climate Change for more details)

- Environment Agency and Defra: Humber River Basin Management Plan (2015)
- European Commission: EU Water Framework Directive (2000)

Evidence that may be required from applicants to accompany a planning application

- Flood defence consent

CC3: Renewable and Low Carbon Energy

Draft Policy CC 3

CC3: Renewable and Low Carbon Energy

A. Permission will be granted for renewable and low carbon energy projects, including incorporating small-scale renewable and low carbon energy generation into the design of new developments where appropriate, feasible and viable, provided that:

i. The proposal does not have an unacceptable adverse impact on the landscape, the natural environment, biodiversity, the cultural environment, the historic environment, adjoining land uses and residential amenity;[(24)] and

ii. Appropriate mitigation measures would be taken to minimise and, where possible address, adverse impacts; and

iii. The proposal avoids unacceptable cumulative landscape and visual impacts.

B. Proposals for wind turbines must also, following consultation, demonstrate that the planning impacts identified by affected local communities have been fully addressed and, therefore, the proposal has their backing; and

i. Be located in an area identified as being suitable for such use within a Neighbourhood Plan; or

ii. For small-scale turbines: be directly related to, and generate power principally for, the operation of a farmstead, other rural business or a local settlement.

Justification

7.16 The approach of tackling climate change by reducing carbon emissions is well established. In 1992, through the Kyoto Protocol, many industrialised countries, including the UK, committed to cutting their greenhouse gas emissions in order to help prevent dangerous interference with the climate system. More recently, the Paris Climate Agreement saw an even greater number of countries sign-up to more ambitious emissions reduction targets to limit the extent of climate change.

7.17 In the UK the Climate Change Act (2008) sets a legal framework to deliver an 80% reduction in greenhouse gas emissions below 1990 levels by 2050. In response the Harrogate Borough Council Climate Change Strategy states that the district should make a proportional contribution to reducing carbon dioxide (CO2) emissions and sets a local target to reduce emissions by 40% by 2020 and by 80% by 2050.

7.18 Around two thirds of the districts carbon dioxide emissions are associated with energy use in domestic and industrial or commercial settings. As a result, reducing emissions related to energy use is imperative in order to meet wider local targets, national legislation and international agreements. The energy hierarchy, see policy CC4: Sustainable Design, identifies priorities for action in order to develop sustainable energy systems. Whilst the first priority is to reduce energy use, the next priority is to generate energy from renewable sources or, following this, low carbon sources rather than conventional means. As a result of the EU

24 The historic environment includes the archaeological environment

Renewable Energy Directive (2009), the government has a target to generate 15% of all energy from renewable sources by 2020, while the Energy White Paper set a target to generate 20% of electricity from zero carbon or carbon neutral sources by 2020.

7.19 Renewable energy technologies produce energy from natural resources that will not run out, they include energy from wind (wind turbines), energy from the sun (photovoltaic and/or thermal panels) and energy from water (hydro-electricity). Other low carbon technologies produce energy with substantially lower amounts of carbon dioxide emissions than fossil fuel generation, they include heat pumps, combined heat and power (CHP) combined cooling heat and power (CCHP) and energy from waste.

7.20 Paragraph 94 of the National Planning Policy Framework (NPPF) requires planning authorities to adopt proactive strategies to mitigate and adapt to climate change in line with the objectives and provisions of the Climate Change Act 2008. Paragraph 93 identifies that planning plays a key role in supporting the delivery of renewable and low carbon energy and associated infrastructure, and paragraph 97 requires planning authorities to recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources. It goes on to say that the authorities should have a positive strategy to promote renewable and low carbon energy and policies to maximise this kind of development whilst ensuring that adverse impacts are addressed satisfactorily.

7.21 In recognition of the important contribution that renewable and low carbon energy is required to play in meeting commitments to reduce carbon dioxide emissions and mitigate climate change, this policy seeks to support, in principal, schemes to generate energy from renewable and low carbon sources where any adverse impacts, including cumulative landscape and visual impacts, can be satisfactorily addressed.

7.22 NPPF paragraph 97 states that planning authorities should consider identifying suitable areas for renewable and low carbon energy generation where this would help secure such development. The Harrogate District Planning and Climate Change Study (2011), produced by consultants AECOM, investigates opportunities for different types of renewable and low carbon energy development across the district. Although the study concentrates on identifying areas of opportunity rather than areas of suitability, which would require more detailed assessments of local constraints, it nevertheless provides a useful tool to help determine whether a technology may be suitable for use in a particular area.

7.23 The main findings of the study were that there is significant potential for renewable and low carbon energy in the district, although it also recognises that there are significant constraints that would need to be taken into consideration. These constraints largely relate to the exceptionally high quality of the district's natural and built environment but also to internationally protected sites for wildlife.

7.24 Proposals for renewable and low carbon energy should be supported by an assessment of impact proportionate to the scale of the proposal and the potential for negative impacts so that consideration of the impacts, including cumulative impacts, can be undertaken. Proposals for large-scale development should be supported by a comprehensive assessment. In addition, developers should, where appropriate, provide details alongside a planning application of a satisfactory scheme to restore a site to at least its original condition when the scheme has reached the end of its operational life.

7.25 In particular, proposals will need to demonstrate that there is no unacceptable adverse impact on protected species or designated area based natural assets, including the features for which the assets were designated. An initial assessment of potential impacts can be made using Natural England's Impact Risk Zones. Zones have been identified around Sites of Special Scientific Interest (SSSIs) to reflect the sensitivities of the features for which the SSSI has been designated and to indicate types of development proposals that could have

adverse impacts. These zones also cover the interest features and sensitivities of the Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). The Impact Risk Zones can be viewed on the government's interactive MAGIC mapping website.

7.26 Proposals within the Nidderdale Area of Outstanding Natural Beauty (AONB) should respect the natural beauty and special qualities of the area and will be determined in line with policy GS8: Nidderdale Area of Outstanding Natural Beauty. Nevertheless it is recognised that climate change is itself a significant long-term threat to landscapes across the country. Many renewable energy technologies, particularly smaller-scale applications including in connection with new developments, are capable of being accommodated within the Nidderdale AONB without causing unacceptable adverse effects.

7.27 Proposals will need to demonstrate that there is no unacceptable adverse impact on the historic environment, in particular designated heritage assets but also non-designated assets, in line with policy HP2: Heritage Assets. In order to retain better control over the impact of development in particular parts of the district, the council has confirmed Article 4 Directions that remove some permitted development rights relating to certain renewable and low carbon technologies associated with properties fronting The Stray in Harrogate and properties in the Great Ouseburn conservation area. Development of the types described in the directions would need to assessed against this and other relevant policies through a planning application.

7.28 In line with NPPF paragraph 91, elements of many renewable and low carbon energy developments would be considered inappropriate development in the Green Belt. Proposals that include inappropriate development will only be permitted in very special circumstances. The onus is on the applicant to justify why such development should be allowed and demonstrate very special circumstances. The benefits of the production of renewable or low carbon energy may be considered sufficient justification but these should be quantifiable and evidenced.

7.29 There are many factors that should be considered when assessing the suitability of renewable and low carbon energy development. Some will have a greater effect than others but many can often be overcome, particularly for small-scale proposals, especially when being considered from the outset and incorporated into the design of new development. A considered choice of appropriate technologies and sensitive siting and design of installations is vital, especially in more constrained areas. Despite the very special qualities of much of Harrogate district, and the subsequent constraints on development, there is still significant potential for the installation of small-scale schemes.

7.30 In order to secure greater climate change benefits from renewable and low carbon energy investment when associated with new developments, policy CC4: Sustainable Design requires such proposals to consider measures that will maximise reductions in energy use, such as more efficient appliances and greater energy efficiency, before establishing proposals for energy generation. The same approach should be followed for energy generation proposals associated with existing properties where this is technically feasible, financially viable and accords with other planning policies. Through such an approach it may be possible to reduce any unacceptable adverse impacts to an acceptable level by reducing the need for energy and consequently the scale of installation required.

7.31 A large number of renewable and low carbon energy developments can be carried out without the need for planning permission through permitted development rights. Where permission is required further guidance and advice on balancing the need to protect the environmental qualities of the district with the need to increase renewable and low carbon energy generation can be found in the council's Renewable and Low Carbon Energy Supplementary Planning Document (SPD) (2015).

Wind Energy Development

7.32 In June 2015 the Secretary of State issued a Written Ministerial Statement that should be taken into account when determining applications for wind energy development. The statements includes the following:

> *When determining planning applications...involving one or more turbines, local planning authorities should only grant permission if:*
>
> - *The development site is in an area identified as suitable for wind energy development in a Local or Neighbourhood Plan; and*
> - *Following consultation, it can be demonstrated that the planning impacts identified by affected local communities have been fully addressed and therefore the proposal has their backing*

7.33 The suitability of an area for wind energy development will be dependant on the combination of the following: the wind energy resource in the area; the character and capacity of the environment to accommodate the development, and the scale of the proposal. An area may, for example, be suitable for a single small-scale turbine or even several small-scale turbines but be unsuitable for a commercial wind farm comprising several large-scale turbines. The council has considered the merits of seeking to identify areas suitable for large-scale and small-scale turbines using the methodology set out in national planning guidance, and whether this would be likely to help secure such development.

7.34 In considering suitability for large-scale turbines, the council has looked at the wind energy opportunity areas identified by the AECOM study and compared these with the landscape and visual sensitivity of the district's landscape character types.[25] This has shown that the district is very heavily constrained by landscape considerations and has only very limited areas that may be suitable for large-scale turbines.

7.35 While most of the district would be unsuitable for large-scale wind turbine development, the impact of small-scale turbines would be less and may be acceptable, depending on the nature of the proposal. Given the high and moderately high landscape sensitivity of much of the district and the potential for other constraints, work to assess the suitability of all potential individual areas for wind energy development across the various scales is considered to be a disproportionate level of work that may result in little benefit in terms of securing increased generating capacity. At the same time, however, precluding all wind turbines irrespective of the scale of their impacts or an accepted justification, such as to meet an essential operational need of a farmstead or other rural business would seem unreasonable. It would also prevent the development of community-led schemes where the benefit is to local communities unless the community produced a Neighbourhood Plan.

7.36 The government's desire to give local communities more influence in this aspect of the planning process, as expressed in the Ministerial Statement, is acknowledged and supported. Notwithstanding the content of the statement, the council will support the development of small-scale wind turbines where proposals are directly related to, and generate power principally for, the operation of a farmstead, other rural business or a local settlement, rather than to generate energy to be fed to the power grid for commercial gain.

25 North Yorkshire and York Landscape Characterisation Project (May 2011)

Further Information

Related planning policies

- National Planning Policy Framework (NPPF)
- National Planning Practice Guidance (NPPG)
- Policy GS4: Green Belt
- Policy GS8: Nidderdale Area of Outstanding Natural Beauty
- Policy CC4: Sustainable Design
- Policy HP2: Heritage Assets
- Policy HP3: Local Distinctiveness
- Policy HP4: Protecting Amenity
- Policy NE3: Protecting the Natural Environment
- Policy NE4: Landscape Character

Further information/guidance for applicants (see bibliography under Climate Change for more details)

- Climate Change Act 2008
- Harrogate Borough Council: Harrogate District Climate Change Strategy (2009)
- Harrogate Borough Council: Harrogate District Planning and Climate Change Study, AECOM (2011)
- Harrogate Borough Council: Renewable and Low Carbon Energy Supplementary Planning Document (SPD) (2015)
- MAGIC map

Evidence that may be required from applicants to accompany a planning application

- Heritage statement
- Biodiversity risk assessment
- Landscape and visual impact assessment
- Restoration scheme

CC4: Sustainable Design

Draft Policy CC 4

CC4: Sustainable Design

The council will require all developments to be designed to reduce both the extent and the impacts of climate change; it will promote zero carbon development and encourage all developments to meet the highest technically feasible and financially viable environmental standards during construction and occupation:

A. All developments should seek reductions in carbon dioxide emissions through the following sequence of priorities, as set out in the energy hierarchy:

   i. Energy reduction; then

   ii. Energy efficiency; then

   iii. Renewable energy; then

   iv. Low carbon energy; then

   v. Conventional energy.

B. The council will encourage

   1. Proposals that incorporate passive design measures that reduce the need for heating, cooling and ventilation systems.

   2. Proposals that include design measures to minimise the reliance on artificial lighting through siting, design, layout and building orientation that maximises sunlight and daylight and avoids overshadowing.

   3. Greater energy efficiency, including sensitive energy efficiency improvements to existing buildings.

Domestic development

C. The council encourages developers to meet independently accredited energy and sustainability standards, such as, the Passive House Institute's Passive House standard (including EnerPHit where appropriate), and the BRE[26] Home Quality Mark.

D. All developments of ten dwellings or more, or 1000 sq m or above of gross floorspace, will be required to submit an energy statement demonstrating how the energy hierarchy has been applied to make the fullest contribution to reducing greenhouse gas emissions in support of the council's Climate Change Strategy and the Climate Change Act (2008).

26 Building Research Establishment

Non-domestic development

E. New non-domestic developments, excluding conversions and extensions of less than 500 sq m, will be required to achieve a minimum standard of BREEAM[27] 'Excellent' (or any future national equivalent).

Justification

7.37 Paragraph 93 of the National Planning Policy Framework (NPPF) identifies that planning plays a key role in securing radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change, and supporting the delivery of renewable and low carbon energy. It goes on to highlight that this role is central to not only the environmental dimension of sustainable development but also to its social and economic dimensions. To deliver on this, paragraph 94 requires planning authorities to adopt proactive strategies to mitigate and adapt to climate change in line with the objectives and provisions of the Climate Change Act 2008. This policy, therefore, requires that new development is designed with climate change in mind.

7.38 All new development should be designed to be resilient to the impacts of climate change to an extent that is commensurate with the nature of the development and the risks associated with its location and intended use. Where opportunities exist, new development should also support and contribute to the wider resilience of communities and key infrastructure in so far as is technically feasible and financially viable.

7.39 The approach of mitigating the extent of climate change by reducing carbon dioxide emissions is well established. All new development should, therefore, be designed to reduce carbon dioxide emissions. The Climate Change Act sets a legal framework to deliver an 80% reduction in greenhouse gas emissions below 1990 levels by 2050. In response, the Harrogate Borough Council Climate Change Strategy states that the district should make a proportional contribution to reducing carbon dioxide (CO2) emissions and sets a local target to reduce emissions by 40% by 2020 and by 80% by 2050. At 6.2 tonnes per person, per capita carbon dioxide emissions in Harrogate district are currently higher than both regional and English averages, 5.1 tonnes and 4.8 tonnes respectively, but lower than the North Yorkshire average of 7.3 tonnes.[28]

7.40 Around two thirds of the district's carbon dioxide emissions are associated with energy use in domestic and industrial or commercial settings. As a result, reducing emissions related to energy use is imperative in order to meet wider local targets and national legislation. Over the last 10 years both domestic and industrial and commercial emissions have fallen, by almost 30% and 25% respectively. New development has contributed to these reductions with most new non-domestic development attaining a Building Research Establishment Environmental Assessment Method (BREEAM) rating of 'Very Good' and new housing being built to code level three, and more recently code level four, of the Code for Sustainable Homes up to 2015. Nevertheless the percentage reduction in CO2 emission in the district over the last 10 years lags behind regional and national figures.

7.41 The government's housing standards review set out to rationalise the large number of codes, standards and regulations whilst still delivering on quality, sustainability, safety and accessibility. As a result a Written Ministerial Statement in March 2015 withdrew the Code for Sustainable Homes and announced a new approach to the setting of housing standards where energy and carbon emission performance would be integrated into building regulations.

27 Building Research Establishment Environmental Assessment Method
28 These are emissions within the scope of influence of Local Authorities. They exclude emissions that Local Authorities don't have direct influence over: Motorways; EU Emissions Trading System sites; Diesel railways; Land Use, Land Use Change, and Forestry

7.42 The statement included provision allowing planning authorities to continue to set Local Plan policies requiring energy performance above that required in current building regulations, effectively up to a level equivalent to code level four of the Code for Sustainable Homes[29], until the commencement of amendments to the Planning and Energy Act 2008 in the Deregulation Bill 2015 (now Act). This was expected to happen in 2016 alongside the introduction of zero carbon homes for all but the smaller sites when building regulations would also be strengthened to require performance equal to code level four. However the subsequent Fixing the Foundations (July 2015) report announced that the government no longer intended to introduce the zero carbon homes requirement and would keep energy efficiency standards under review.

The energy hierarchy

7.43 Whilst the building regulations regime addresses the standard of energy efficiency in buildings, this policy seeks to ensure that new development takes a holistic approach to reducing greenhouse gas emissions. The policy requires developments to approach climate change mitigation by considering actions that would reduce emissions in a sequence that reflects the energy hierarchy. The energy hierarchy is a concept that was developed in the late 1990s and is used to identify the order in which energy issues should be prioritised to assist progress to a more sustainable energy system.

7.44 The first priority is to reduce energy consumption by seeking to reduce the amount of energy required, for example, through 'smart' heating and lighting, behavioural changes, and the incorporation of passive design measures. Passive design measures can reduce the need for heating, cooling and ventilation systems and minimise reliance on artificial lighting through design solutions, such as siting, layout, landscaping, and building orientation and massing, in order to maximise sunlight and daylight and avoid overshadowing. NPPF paragraph 96 states that planning authorities should expect new development to take account of these factors. Nevertheless, in some circumstances passive design may not always be possible, for example, because of site-specific constraints or when designing conversions or extensions.

7.45 After seeking to reduce the amount of energy required, consideration for reducing energy consumption should move to energy efficiency. Depending on the nature of development, energy efficiency can be improved through the use of more efficient systems and machinery, more efficient appliances and lighting, and better insulation.

7.46 In addition to contributing to climate change mitigation, reducing energy consumption in domestic properties will also contribute to reducing the incidence of fuel poverty. For many years the district's average domestic gas and electricity consumption have both been above the regional and national averages, and in 2015 it was estimated that 10.4% of households in the district were in fuel poverty (DBEIS, 2017). While this is broadly similar to the national average it still means that just over 7000 households in the district are affected. Fuel poverty affects the most vulnerable residents in our community and can have adverse impacts on their health and wellbeing. It also contributes to wider economic under performance by reducing the amount of money that affected households have available to spend in the local economy.

7.47 Households suffering fuel poverty are more likely to be living in less efficient properties[30]. The government's fuel poverty strategy[31] estimates that less than 5% of fuel poor homes have an energy efficiency rating of band C[32] or above, compared to around 18% of all homes. In 2014 the government set a statutory target to ensure that as many fuel poor homes as is reasonably practicable achieve a minimum rating of band C by 2030.

29 This equates to a 19% reduction in energy use below Part L Building Regulations 2013.
30 The efficiency of a property is measured by the Standard Assessment Procedure (SAP) rating on a scale of 1 to 100, the higher the number the more efficient the property
31 Cutting the Cost of Keeping Warm: a fuel poverty strategy for England (2015)
32 A band C rating is equivalent to a SAP rating of 69 to 80 points

7.48 Improving the energy efficiency of homes to reduce fuel poverty is a key ambition for the council, as set out in the Home Energy Conservation Act: Progress report and action plan 2017-2019, and sub-regional bodies.[33] The council's report identifies that earlier gains relating to the requirement for compliance with the Code for Sustainable Homes can no longer be relied upon. Nevertheless higher standards that reduce energy consumption, particularly through greater energy efficiency, can be realised through the design and construction of new homes and by sensitive improvements to existing buildings, particularly the least efficient properties.

7.49 The council will encourage proposals that seek to build to higher energy performance levels than the minimum required by building regulations, where this is technically feasible and financially viable, in order to reduce carbon dioxide emissions and, where relevant, design out fuel poverty.

7.50 After reducing energy consumption the energy hierarchy identifies the sustainable production of energy. Energy from renewable sources is the highest priority followed by other low carbon sources. The council encourages proposals that incorporate renewable and/or low carbon energy generation into the design of new domestic and non-domestic development and meet the requirements of policy CC3: Renewable and Low Carbon Energy.

7.51 The council will update the Renewable and Low Carbon Energy Supplementary Planning Document (SPD) (2015) to provide further guidance on sustainable design.

Domestic development

7.52 The council supports the use of independently accredited standards for new housing. These standards help house builders to demonstrate the high quality of their homes and differentiate them in the marketplace. At the same time they give householders the confidence that the new homes they are choosing to buy or rent are well designed and built, and cost effective to run.

7.53 The Passive House Institute's Passive House standard is a rigorous standard for energy efficiency in a building that results in ultra-low energy buildings that require little energy for space heating or cooling. In recognition that it is often unfeasible or unviable to achieve this standard when refurbishing certain older buildings, the institute has developed EnerPHit to certify refurbishments completed with appropriate components. The Building Research Establishment's (BRE) Home Quality Mark assesses a new home's quality using a five-star rating as well as providing information on its running costs, positive impacts on health and wellbeing, and environmental footprint.

7.54 Proposals for domestic developments of ten dwellings or more, or 1000 sq m or above of gross floorspace, will be required to submit an energy statement demonstrating how the energy hierarchy has been applied to make the fullest technically feasible and financially viable contribution to reducing greenhouse gas emissions in support of the Climate Change Act (2008) and the targets and commitments set out in the council's Climate Change Strategy. The statement should include the predicted energy consumption and associated carbon dioxide emissions of the development.

Non-domestic development

7.55 Non-domestic development was not affected by the housing standards review and planning authorities are still enabled to require energy performance that is better than building regulations standards for new non-domestic buildings. BREEAM is an independently accredited method for assessing and rating the environmental performance of non-domestic

33 The ambition feeds directly into priority three of the Leeds City Region Strategic Economic Plan (SEP) 2016-2036 and links to a specific objective of the North Yorkshire Strategic Winter Health Partnership

development. A scoring system is used to evaluate a building's sustainability, including aspects related to energy and water use, the internal environment (health and well-being), pollution, transport, materials, waste, ecology and management processes.

7.56 The council will require new non-domestic development to be assessed against the BREEAM standard and achieve, at a minimum, the level of 'Excellent'. The council will require this to be verified by an independent assessor at the design and post construction stages at the applicant or developer's cost and to provide the relevant certification to ensure compliance. Where an applicant can demonstrate that achieving a level of 'Excellent' is unviable, a lower level may be accepted. Conversions and extensions of less than 500m, as well as unheated buildings, will be excluded from the requirement to achieve BREEAM 'Excellent' but should still meet the other relevant requirements of the policy.

Further Information

Related planning policies

- National Planning Policy Framework (NPPF)
- Policy GS7: Health and Wellbeing
- Policy CC1: Flood Risk and Sustainable Development
- Policy CC3: Renewable and Low Carbon Energy
- Policy NE5: Green Infrastructure

Further information/guidance for applicants (see bibliography under Climate Change for more details)

- Harrogate Borough Council: Harrogate District Climate Change Strategy (2009)
- Harrogate Borough Council: Renewable and Low Carbon Energy Supplementary Planning Document (SPD) (2015)
- Passive House Institute website
- BRE Home Quality Mark website
- Building Research Establishment Environmental Assessment Method (BREEAM) website

Evidence that may be required from applicants to accompany a planning application

- Energy statement
- Certification for Passive House Standard (including EnerPHit, where appropriate) or BRE Home Quality Mark.
- BREEAM certification.