

A Sustainable Town

Watford Local Plan
2018-2036



WATFORD
BOROUGH
COUNCIL



Chapter 8

A Climate Emergency

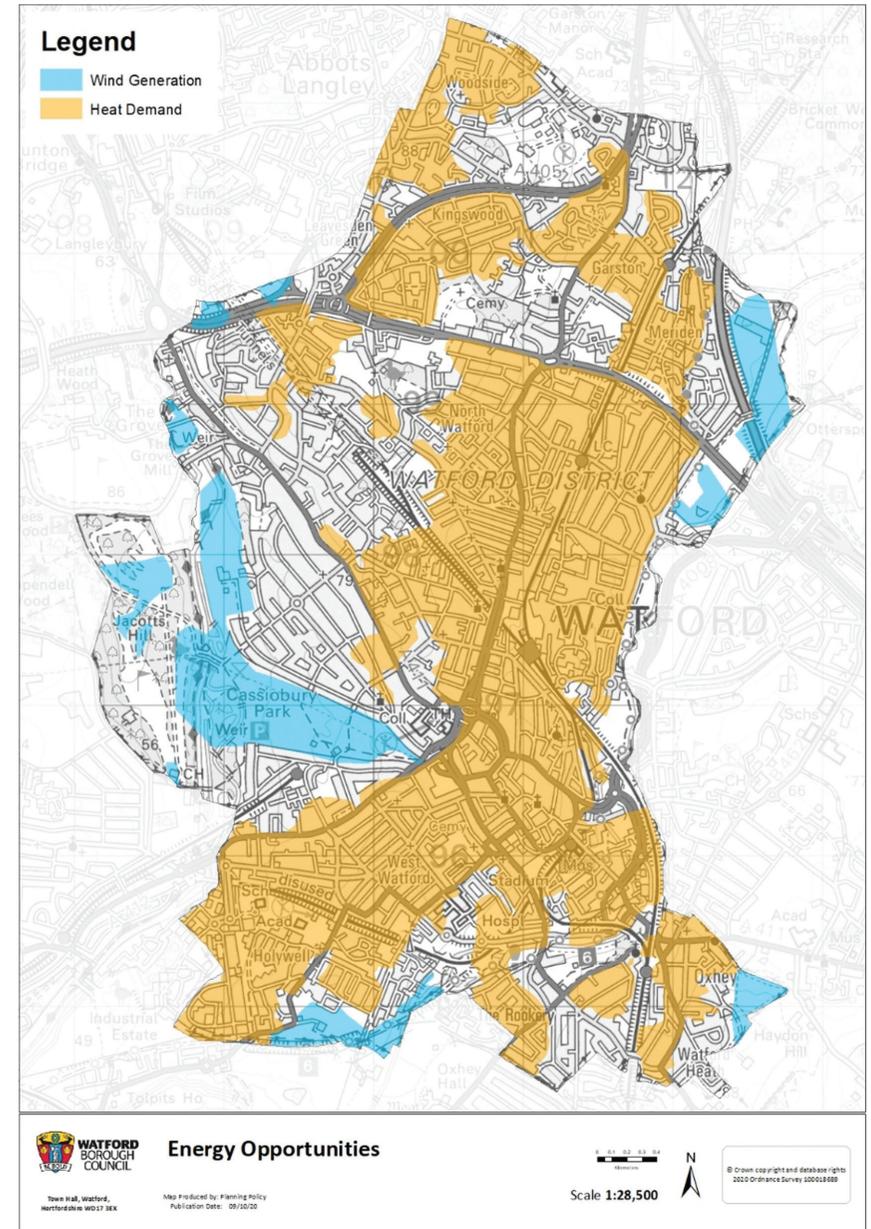
Sustainable Construction and Resource Management

The climate emergency declaration by the Council in July 2019 led to the ambitious objective to become carbon neutral by 2030. Planning has an important role to play in creating carbon neutral developments and meeting this objective and works in conjunction with the wider council initiatives to combat climate change out in the Watford Sustainability Strategy (2020)¹.

New development will be expected to use design and a mix of passive and active low carbon and renewable energy technologies to reduce carbon emissions and support greener industries. Sustainable building construction and operations will be encouraged.

Major developments in the Core Development Area should consider how they can reduce carbon emissions through the use of large-scale renewable energy schemes, such as community energy networks. Areas with potential for community energy schemes are identified on the Watford Energy Opportunities Map (Figure 8.1)

To be most effective, minimise costs and avoid time delays, applicants should consider sustainable development principles from the start of the design process. A Sustainability Statement should set out how proposals will mitigate the impact of climate change and contribute towards sustainable development.



¹ https://www.watford.gov.uk/downloads/file/3229/sustainability_strategy_part_1_-_2020_to_2023

Figure 8.1 Energy Opportunities Map



Policy CC8.1 Mitigating Climate Change and Reducing Carbon Emissions

The Council will support proposals that help combat climate change and ensure the borough becomes more resilient, sustainable and adaptable to climate change. New development will need to demonstrate how it is contributing positively towards:



A carbon neutral Watford

Developments are expected to contribute towards the borough becoming net zero carbon and reducing the overall environmental impact.



Sustainable construction

Proposals need to consider how they will affect the environment from start to finish including the construction process and how occupants will use the building and surrounding area.



New buildings

New buildings will need to be high quality, resource efficient, reduce pollution, healthy to live in and encourage healthy lifestyles.



Cumulative development

New development should consider opportunities associated with cumulative development. This includes materials used in construction, the layout of the scheme and measures that will create a comfortable micro-climate such as light, shading and landscaping.



Low carbon and renewable energy

On-site low carbon and renewable energy technologies will be encouraged, particularly where the scale of growth can support community energy networks.

Sustainable Construction Standards

The scale of development in Watford presents significant opportunities to improve the quality and sustainability of new residential and non-residential buildings and how they can contribute towards a wider goal of achieving sustainable development. All forms of new development should strive for sustainable consumption of resources including energy, water and materials with the latter reflecting guidance set out in the Hertfordshire Waste Local Plan.

Major Non-residential developments are to meet to meet BREEAM 'very good' standards or equivalent where possible. Reflecting the nature of smaller developments, minor non-residential developments are to achieve the sustainability standard of BREEAM 'very good'.

To be effective and reduce costs of retrofitting buildings, applicants are to provide a pre-assessment certificate to the Local Planning Authority which will set out how sustainability measures can be achieved as part of the development early in the process. Submission of a certificate by an accredited assessor will be required upon completion.



Policy CC8.2 Sustainable Construction Standards for Non-Residential Development

Proposals should be designed to reduce their impact on the environment and create high quality internal and external space for people to use. Proposals will be supported where it is demonstrated that resources will be used efficiently as part of the construction and operation of a building. This is including appropriate use of technologies, building design and layout while taking into consideration effects of climate change. To achieve this non-residential major developments should achieve BREEAM 'very good' standard.

Applicants should provide a BREEAM pre-assessment completed by a suitably qualified assessor as part of an application. The submission of a compliance certificate to the Local Planning Authority upon completion will be secured through planning conditions.



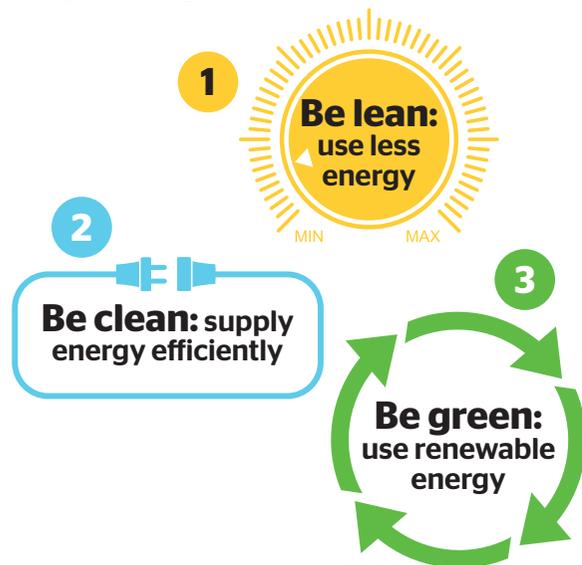
Resource Management

Energy efficiency

Energy use should be prioritised in line with the energy hierarchy (Figure 8.2). The first priority is to be lean. This is to ensure less overall energy use with good building design and high energy efficiency using passive design measures such as building orientation, internal and external building layout, tree planting (prioritising endemic and deciduous species) and the size and location of windows.

The second priority is to be clean, to use energy that is supplied efficiently. Developments should consider connecting to decentralised energy networks (energy generated off the energy grid). This can include technologies such as; solar energy and water, heat pumps, biomass fuelled energy generation and larger scale schemes such as combined heat and power systems.

Finally, is to be green and use renewable low or zero carbon energy sources. To reduce the impact on the environment and contribute towards the borough becoming carbon neutral, energy generation using sustainable sources is strongly encouraged.



The UK Government is legally bound to reduce greenhouse gas emissions by 100% from 1990 levels, by 2050. The design of new buildings will make an important contribution towards this. To plan, design and save unnecessary retrofitting of buildings new homes should be designed to be adaptable to zero carbon in the future.

The Council will be more ambitious with energy performance standards as technologies improve, become more accessible and cheaper and therefore the impact on development viability is reduced. Developments are to either achieve the applicable percentage of improvement over the target emission rate (TER) set out in Building Regulations or updated government standards that exceed this requirement, whichever is greater.

Carbon off-setting

If developments demonstrate exceptional circumstances resulting in an inability to meet the required standard of efficiency they are to contribute to Watford's carbon offset fund. Contributions will be used within Watford for carbon reduction projects such as retrofitting. The amount to be paid will be agreed in advance using the equation: $Cost = (T - O) * X * Y$. Where T = Total carbon emissions; O = Amount already offset on site; X = Cost per tonne of carbon emitted and Y = Amount of years found applicable.



Overheating

Building energy efficient homes is important to reduce carbon emissions, however, it is also important to build new homes that are healthy to live in and support a person's wellbeing. Overheating can be uncomfortable and dangerous, making it an important health issue. Smart design such as dual aspect windows, passive ventilation and incorporation of cooling measures like trees and shrubs to increase light or provide shading reflecting the seasons are important to prevent overheating and avoid health risks. Further detail is set out in the design chapter. Developers will be expected to integrate good design to support health and wellbeing and reduce overheating as part of their schemes. Use of traditional, energy dependent, cooling systems is not appropriate.

Where homes in flatted developments are single aspect, which reduces airflow, and need to be supported by mechanical ventilation in addition to passive cooling measures developers should demonstrate how this is addressed using low carbon technologies.

Water efficiency

The borough is within an area classified as under serious water stress by the Environment Agency. Water security can be put at risk, especially during droughts and with an increasing population, if not carefully managed.

To secure a sustainable water supply, new standards and technologies should be incorporated as part of new development schemes to reduce water use. Residential developments are to meet the technical standard for water efficiency set out in the Building Regulations which set a maximum consumption level of 110 litres per person per day. All developments should utilise opportunities to install internal water efficient fixings and incorporate rainwater use and harvest greywater where possible.

Materials and Waste Management

Generating large amounts of waste can be detrimental to the health of the public, the environment and wildlife. To be more resource efficient new developments should actively plan to reduce waste by minimising residual waste and by using recycled and recyclable materials as much as possible.

Proposals are to be in accordance with the Hertfordshire Waste Local Plan including aligning construction practices and building operations with the Hertfordshire Waste Hierarchy (Figure 8.3). Practices to manage materials and waste through mechanisms such as site waste management plans and circular economy statements as appropriate are supported:

- Site waste management plans outline the types and amounts of waste expected from a construction site including how each will be reused, recycled or disposed of.
- Circular economy statements consider how materials are used and keep their main use for as long as possible before planning on reusing or recycling the material.



Figure 8.3 Hertfordshire Waste Hierarchy



Policy CC8.3 Sustainable Construction and Resource Management



Energy efficiency

To minimise the impact of new homes on the environment and achieve net zero carbon, a phased approach to improve the energy efficiency of new homes is set out. To achieve this:

- All residential developments of 10 dwellings or more should be designed so they can be adapted to be net carbon zero.
- Proposals are to be designed to avoid overheating and use passive ventilation when possible.
- All residential developments are to achieve the minimum applicable percentage, as set out below, of improvement for carbon emissions over the target emission rate (TER) as outlined in national Building Regulations Part L (2013)², or any updated government standards whichever results in a higher target.

2018 - 2025	19%
2025 - onwards	35%

Proposals which do not meet these energy efficiency targets will only be supported if it is unfeasible due to exceptional circumstances and a financial contribution is made towards the carbon offset fund to provide equivalent carbon savings off site.



Water efficiency

All residential developments should meet the technical standard for water efficiency of 110 litres per person, per day as set out in Building Regulations Part H (2013)³.

In new non-residential developments, water conservation measures should be incorporated to reduce water consumption to a standard equivalent to BREEAM 'very good' for the appropriate building typology.



Materials and waste management

Development proposals should reduce construction waste through the re-use and recycling of materials. Practices should be undertaken should reflect the Hertfordshire Waste Hierarchy. As part of an application, applicants should set out how waste management of the site is in accordance the Hertfordshire Waste Local Plan.



² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/226965/Part_L_2013_IA.pdf

³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/442889/BR_PDF_AD_H_2015.pdf

Managing Air Quality

A polluted environment can result in a severe cost on public health, the natural environment and economy. Mitigating the impact of development on air quality and minimising exposure to poor air quality across Watford is important. This can help to safeguard residents from the impacts of a polluted environment. There are currently two Air Quality Management Areas (AQMAs) in Watford, where national objectives for ambient air quality have been exceeded. The predominant pollutants in Watford are those commonly associated with road traffic.

The exposure of poor air quality to vulnerable residents, such as children, the elderly, and those with respiratory issues is a particular concern. Sensitive development may include, but is not limited to, schools, residential care homes and health facilities. Air pollution also has potential to have increased impacts on the wider global environment and society with a changing climate.

Air quality is often managed through soft measures, such as active modes of travel, urban greening and the use of sustainable construction methods. The ways new developments are designed can also assist in mitigating against the negative impacts of poor air quality. For instance, strategically planting trees and hedges between major roads and residential development can create a barrier to shield residents from poor air quality caused by traffic. Measures such as these will be supported as part of the Plan. However, to ensure that national and international objectives for ambient air quality are met, additional steps must be taken to guide new development.

Development should seek to achieve overall improvements to air quality and minimise the potential adverse impacts. The policy intends to ensure that the potential impacts of new development upon air quality is an issue considered early in the design process and when planning applications are determined. Regard should be given to the location of development where users may be more sensitive to poor air quality.

Development will be expected to support the aspirations of the Air Quality Action Plan and any subsequent updates and replacements. Regard should also be had to the Ambient Air Quality Directive (2008) and the European Union Limit Values to determine compliance with national and international air quality standards.



Policy CC8.4 Managing Air Quality



Development will be supported where it does not contribute towards a worsening of existing air quality and where possible, seeks to improve existing air quality. Appropriate mitigation measures will be required to address any potential impact on air quality.

An Air Quality Assessment will be required for all major developments and other forms of development which are considered to be at risk of impacts from significant emissions or pollutants. This includes, but is not limited to, development where the occupiers/users may be sensitive to poor air quality and development in close proximity to an air quality management area.

Where the Air Quality Assessment indicates that a development would cause harm to air quality, planning permission will not be granted unless appropriate mitigation measures are proposed which demonstrate that:

- a) Public exposure to the pollution source has been minimised.
- b) Sensitive development has been located an appropriate distance away from the source of exposure, and
- c) The development would not lead to the creation of a new street canyon or a building configuration that inhibits effective pollution dispersion.



Managing the Environmental Impacts of Development

There are other types of pollution in addition to air quality that can have a negative impact on the environment and residential amenity, including light, noise, contamination, odour and vibration. Pollution can be brought about by new development and can have a severe impact on the amenity and function of existing properties and businesses, and the quality of life in an area.

The Council places responsibility on the applicant, or the party responsible for the development to provide mitigation for any significant adverse impacts that may be generated by the proposed development. This is set out in national policy as the 'agent of change principle' and ensures that new development does not cause existing uses in the vicinity to curtail their activities. Applicants will need to demonstrate how mitigation has been provided for any potential issues related to noise and light pollution, odour, contamination and other negative impacts. The Council will seek to ensure that quality of life, health, wellbeing and the environment are not adversely affected by harmful pollutants and other negative impacts that could be associated with new development.

The relevant national policy and guidance, including [Building Regulations](#), should be referred to for information regarding ambient levels for each individual pollutant. There are also various key stakeholders who are able to advise on minimising the risk of pollution and effective mitigation. These bodies should be engaged early in the process for good practice. For instance, where overhead powerlines traverse the site, early engagement with the operator should be undertaken and where development may impact on groundwater, the Environment Agency should be consulted with.



Policy CC8.5 Managing the Impacts of Development

Development should be designed to protect the amenity of adjacent land uses and their occupants and local amenity, and to enhance the public realm. In accordance with the 'agent of change principle' new development will be required to assess its potential impacts on neighbouring land uses and set out mitigation measures where appropriate. To achieve this, development must have regard to the risk related to:



Light pollution

Developments must be designed to minimise any significant detrimental impact of external lighting on local amenity and safety, biodiversity, heritage assets, roads and watercourses.



Noise pollution and vibration

Where development is noise-generating or sensitive to noise and vibration, applicants must undertake a noise assessment to identify potential issues and the required attenuation measures to achieve acceptable noise levels as defined in national guidance. Noise assessments should also consider the risk of noise reflection, particularly on new developments near to railway lines and major roads.



Contamination including contamination of groundwater

Applicants are required to carry out a comprehensive ground investigation report and take appropriate remediation measures for development on or near a site which is potentially contaminated.

Development that could adversely affect the groundwater quality, flow or volume will not be granted permission.



Odour

Development must address the adverse impact of odour through the incorporation of appropriate mitigation measures where the development is considered to generate or is sensitive to odours.



Unstable land

Applicants will be required to remediate unstable land and further issues related to subsidence before development can commence. Appropriate measures must ensure that the proposed development will not lead to land instability during works or following completion. A land stability risk assessment report may be required in line with [national guidance](#) if unstable land is considered to be a potential risk.



Power lines

The statutory safety clearances between overhead lines, the ground, and built structures must not be infringed.