

Climate Change Input into Pre-Application Meeting

Creating a Checklist to Mitigate Impact on Climate Change

- A. Promote sustainable development: It is essential for developers and local planning authorities (LPAs) to ensure that new homes are constructed in a sustainable and environmentally responsible manner. This entails reducing carbon emissions, enhancing energy efficiency, using renewable energy, quality living conditions and sensitive to the environment. By setting specific, measurable targets, developers, LPAs, and the broader community can work together to ensure that new housing developments meet the highest environmental standards and help fight climate change.
- B. Enhance transparency and accountability: A measurable checklist fosters transparency and ensures accountability. It empowers developers and LPAs to demonstrate their commitment to sustainability to the community.
- C. Set ambitious yet achievable targets: The checklist below includes ideal targets, many of which are easily achievable, while others will require more consideration. The LPA and developer to review each item on the checklist and set challenging, innovative, and achievable targets that demonstrate their commitment to sustainability and their green credentials.

Some Key Measures for New Builds Satisfying Climate Change Legislation and Needs

Ideally, each measure on this checklist should have a target measurement to determine the developers' success in minimising climate change.

Design Resilience

1. Design homes to be resilient to extreme weather events, such as flooding or heatwaves.
 - Design resilience objectives for new dwellings should be set to ensure that buildings are able to withstand the impacts of climate change, such as more extreme weather events of greater intensity of heat and rainfall. This will help to protect the safety and well-being of occupants, and reduce the costs of damage and repair.
Some key design resilience criteria for new dwellings should include:
 - Structural resilience: Buildings should be designed to withstand the increased wind speeds and rainfall intensities associated with climate change. This may involve using stronger building materials and construction methods, and designing buildings to be more aerodynamic.
 - Flood resilience: Buildings should be designed to be resilient to flooding. This may involve using flood-resistant building materials and construction methods. Must be able to withstand a flood event in accordance with the latest climate change projections.
 - Heatwave resilience: Buildings should be designed to be resilient to heatwaves, which are becoming more frequent and severe due to climate change. This may involve using shading and insulation to keep buildings cool, and providing adequate ventilation. Must be able to cope with heatwave of at least 35 degrees Celsius for three consecutive days.

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- Water resilience: Buildings should be designed to be water-efficient, and to be able to cope with water shortages due to climate change. This may involve using rainwater harvesting systems and water-saving fixtures.
- Energy resilience: Buildings should be designed to be energy-efficient, and to be able to generate their own renewable energy. This will help to reduce greenhouse gas emissions and make buildings more resilient to power outages.

Health and Wellbeing

2. Buildings should be designed to promote the health and well-being of occupants, by providing access to natural light and fresh air, and by creating comfortable and productive spaces.

- Measurement: All new homes must have at least two hours of direct sunlight per day in the main living areas, and they must have a minimum air ventilation rate of 15 cubic meters per hour per person.

3. Incorporate effective ventilation systems for good indoor air quality.

- Measurement: All new homes must have a mechanical ventilation system that is capable of providing a minimum air ventilation rate of 15 cubic meters per hour per person.

4. Develop community allotments and other shared spaces where residents can grow their own food. Target: Develop at least one community allotment or other shared space for growing food per 50 homes.

Energy Efficiency

5. Adopt Passivhaus holistic approach to sustainable building that promotes energy efficiency, renewable energy, sustainable building materials, healthy indoor air quality, and reduced carbon emissions.

- Measurement: All new homes must be designed and built to Passivhaus standards.

6. Adopt Passivhaus buildings designed to maximise natural light exposure.

- Measurement: This is achieved through careful site selection and building orientation. South-facing windows are ideal for passive solar heating, as they allow sunlight to enter and heat the building during the winter months. East- and west-facing windows are also beneficial, as they provide natural light in the morning and evening. Plant trees and other vegetation to provide shade and reduce heat island effects for each dwelling including community gardens and other shared spaces.

7. Reduce carbon emissions from new homes by at least 75% by 2025.

- Measurement: All new homes must have an energy performance rating (EPC) of A.

8. Require all new homes to be zero-carbon ready by 2025.

- Measurement: All new homes must be designed and built so that they can be easily converted to zero-carbon operation in the future, with minimal additional cost or disruption.

9. Mandate the use of renewable energy sources for new homes, such as solar panels and heat pumps to, maximise energy efficiency.

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- Measurement: All new homes must have a renewable energy system installed that is capable of generating at least 50% of the home's annual energy needs. Solar panels and EV charging points as standard. Electric heat pumps rather than gas boilers as standard. No gas on the development. To future proof homes, all to have 3-phase electricity supply.
10. Install energy-efficient windows and doors.
- Measurement: All new windows and doors must have a U-value of 0.8 W/m²K or lower.
11. Improve energy efficiency standards for new homes by 20%.
- Measurement: The average energy performance rating (EPC) of new homes must be increased by 20% compared to current standards.
12. Where possible, incorporate renewable energy generation into the design of the estates.
Target: Install renewable energy systems with a capacity to generate at least 20% of the estate's annual energy needs. Measurement: Measure the capacity of the renewable energy systems installed.

Sustainable Building Materials

The building and construction sector accounts for 38% of global carbon dioxide emissions, according to the United Nations Environment Programme (UNEP). This includes emissions from the production of building materials, the construction process, and the operation of buildings. UNEP also estimates that embodied carbon in buildings, or the carbon emissions associated with the materials and construction processes, accounts for about 11% of global emissions.

13. Use recycled materials in at least 50% of the construction of new homes.
- Measurement: At least 50% of the building materials used in the construction of new homes must be recycled or reclaimed. Use sustainable building materials and minimise the use of UPVC and mass concrete.
14. Select building materials and paints with low VOC (Volatile Organic Compounds) emissions.
- Measurement: All new building materials and paints must have a VOC content of 50 grams per litre or lower.
15. Use sustainable building materials and construction methods.
- Measurement: All new homes must be constructed using sustainable building materials and methods, such as those certified by the Cradle to Cradle Products Innovation Institute.

Water Efficiency

Kent is experiencing acute water shortages due to a number of factors, including over-extraction of groundwater, housing growth, lack of investment in water infrastructure, and increased water demand due to climate change. It is essential all new developments put in holistic set of water efficiency measures to reduce water demand.

16. Design homes to be water-efficient.

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- Measurement: All new homes must have a water efficiency consumption of a maximum of 105 litres per person per day (lpd)
17. Install water-saving fixtures such as low-flow toilets and faucets.
- Measurement: All new toilets and faucets must have a water flow rate of no more than 1.28 gallons or less per flush.
18. Consider rainwater harvesting for landscaping and non-potable water use.
- Measurement: All new homes must be designed to incorporate a rainwater harvesting system that is capable of collecting and storing at least 50% of the annual rainfall and comply with BS 8515:2009.
19. Allotments should have underground cisterns (reservoirs) installed to store harvested rainwater.
- Measurement: Allotments must be able to rely on harvested rainwater for three months of the year. The rainwater must be filtered to remove sediment and debris, and stored in underground cisterns that can be pumped out by residents for the use growing vegetables.

Biodiversity

20. Plan landscaping that supports local wildlife. Target: Plant at least 50% native plants in the landscaping.
- Measurement: Count the number of native plants planted.
21. Provide a wide range of habitats (new and existing) for biodiversity.
- Measurement including green spaces, wild areas, water, with wild flowers, tree planting and keeping of as much of the flora and fauna on the site as possible (especially hedges and trees).

Transportation

22. Active travel plan (easy/ safe/ pleasant cycling and walking routes) that connects with the exiting town routes.
- Measurement. Present and consult on the active travel plan with the community.
23. Provide residents with access to public transportation within 0.5 miles of their home.
- Measurement: All new homes must be located within 0.5 miles radius of a public transportation stop. Measurement: Measure the distance of each home to the nearest public transportation stop.
24. Provide residents with access to sustainable transportation options, such as electric vehicle charging stations.
- Measurement: Install at least one electric vehicle charging station per dwelling.

Waste Reduction

25. Minimise waste and pollution. Target: Reduce waste production by 10%. Measurement:
- Measure waste production before and after implementing measures to reduce waste.

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Surface Water Flooding

26. Design and implement SuDs (Sustainable Drainage Systems) to manage rainwater and surface water runoff.

- Measurement: Slow down the flow of rainwater using swales, detention basins, and rain gardens giving more time to soak into the ground or evaporate. Increasing the storage capacity for rainwater: Increase the amount of rainwater that can be stored on-site, which will reduce the amount of runoff that enters the sewer system. This is especially important during periods of heavy rainfall.

27. Minimise the amount of paving and hardscaping.

- Measurement: No more than 50% of the total surface area of the development should be paved or hardscaped. Measurement: Measure the total area of the development and the area of paved and hardscaped area.

Community Engagement

28. Engage with the local community to discuss climate change measures to gain their support.

- Measurement: Hold regular public consultation meetings to discuss the housing development mitigation actions with Tenterden Town Council Climate Action Advisory Group and the local community and to address any concerns. Measurement: Hold at least four public consultation meetings in 2024 to get feedback on our climate change action plan and to answer any questions they have. Document the dates and times of the meetings.