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Climate Change Planning Guidance

Climate Change Mitigation and Adaptation Checklist

The issues for consideration have been grouped by topic and are listed below in the form of a checklist. The main text of the guidance provides a short description and rationale of each measure, explaining its relevance and how this can contribute to mitigation, adaptation or resilience. The issues and measures are reflected in the assessment tool. There has been some contraction of the list, grouping similar issues and outcomes to ensure that the tool is informative while remaining useable in the development management and policy fields. The checklist produced below does not therefore exactly mirror the measures identified in the assessment tool or guidance. Nor is the issues list exhaustive, and as technologies develop there may be scope for further additions to, or contraction of, the assessment tool measures. Details of how to use the assessment tool are included in the tool itself. The checklist may potentially be used as a guide by developers bringing forward proposals.

Built environment: Energy efficiency, building design and layout

- ☐ Retain and reuse existing building where form is worthy of retention
- ☐ Use of recycled and recyclable building materials – locally sourced where possible
- ☐ Consideration of the Energy Hierarchy (Demand reduction, efficiency, renewables, low carbon, fossil fuels)
- ☐ Wall insulation above building regs requirement
- ☐ Roof insulation above building regs requirement
- ☐ Under floor insulation above building regs requirement
- ☐ High R value glazing
- ☐ Plot and block orientation, roof pitch orientation
- ☐ Passive solar design (window positioning and shading to maximise solar gain during winter and minimise summer gain)
- ☐ Natural and controlled ventilation

- ☐ Green roof and street trees
- ☐ Adequate space for composting and for recycling bins (within curtilage to enable kerbside recycling)
- ☐ Building for life standards to enable future proofed occupation with minimum adaptation
- ☐ Mix dwelling types and sizes
- ☐ Water efficiency to exceed building regulations, BREEAM ‘very good’ standard
- ☐ Low energy space heating
- ☐ On site renewable energy generation (80 % of estimated energy demand)
- ☐ External lighting minimised and designed to reduce light trespass
- ☐ Mixed uses, provision of local services/employment
- ☐ District heating systems
- ☐ Outdoor clothes drying space
- ☐ Home working compatibility
- ☐ High speed broadband connectivity
- ☐ Intelligent heating controls

Commercial

- ☐ Retain and reuse existing building where form is worthy of retention
- ☐ Use of recycled and recyclable materials – locally sourced if possible
- ☐ Consideration of the energy hierarchy
- ☐ Wall insulation above building regs requirement
- ☐ Roof insulation greater than building regs requirement
- ☐ Under floor insulation greater than building regs requirement
- ☐ Commercial developments at minimum BREEAM 'Very good'
- ☐ High R value glazing
- ☐ Plot and block orientation, roof pitch orientation
- ☐ Passive solar design
- ☐ Natural and controlled ventilation
- ☐ Green Roof

- ☐ Recycling bins storage space
- ☐ Water efficiency measures
- ☐ Low energy space heating systems
- ☐ On site renewable energy generation (as % of estimated energy demand)
- ☐ External lighting minimised and designed to reduce light trespass
- ☐ High speed broadband connectivity
- ☐ Intelligent heating controls
- ☐ Low energy LED lighting

Securing enhanced green infrastructure and biodiversity net gain

- ☐ Retain existing trees and hedgerows
- ☐ Suitable tree planting along boundaries
- ☐ Tree planting to provide shade to buildings in the summer, street trees and trees within private spaces
- ☐ Public open space and outdoor seating areas should be provided with trees for shade
- ☐ Provide food growing space within private gardens and communal growing spaces, such as community-managed allotments or community orchards
- ☐ Community/communal composting facilities
- ☐ Pocket Parks and green spaces within blocks, green verges and SuDS
- ☐ Green infrastructure in private outdoor space – e.g. trees, hedges, green/brown roofs, vertical climbers and landscaping
- ☐ Restore old hedgerows and plant new formal hedgerows instead of fencing or walls
- ☐ Sustainable management and maintenance of the green infrastructure.
- ☐ Provide a net gain in biodiversity, where possible

- ☐ As appropriate include bird/bat boxes and hibernacula, amphibian kerbs/ hibernacula, hedgehog holes/hedgehog homes, garden ponds or wild areas
- ☐ External lighting control, down lighting, energy efficiency, avoidance of 'wasted light', light trespass and impact on nocturnal and migratory species

Renewable energy generation

- ☐ Potential for landscape and habitat enhancements/biodiversity gains
- ☐ Impacts on agricultural land quality and land use change mitigated
- ☐ Impacts on designated sites, assets and species mitigated
- ☐ Glint and Glare or shadow flicker designed out or mitigated
- ☐ Hydrological impacts mitigated
- ☐ Mitigation of noise and other nuisance implemented
- ☐ Site restoration conditions

Reducing the need to travel and promoting sustainable travel

- ☐ Street layout to favour active travel and pedestrians
- ☐ Street design to favour active travel
- ☐ Active travel permeability
- ☐ Public transport priority and provision
- ☐ Mixed use developments
- ☐ Provision of secure cycle storage
- ☐ Active travel interconnectivity with existing developments
- ☐ Residential and commercial ULEV charging provision
- ☐ Community facilities with ULEV charging provision

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Further travel related considerations - detail

- ☐ Traffic calming and priority ambiguity to encourage walking and cycling while discouraging car use and reducing speeds:
  - ☐ Constrain street widths
  - ☐ Reduce street length to increase number of junctions
  - ☐ Reduce forward visibility through building line and visual narrowing
  - ☐ Provision of secure cycle storage
  - ☐ Carriageway narrowing
  - ☐ Variety of carriageway edge treatments
  - ☐ Reduce building line setback – traditional village building styles
  - ☐ Introduce motor vehicle blockages but cycle/pedestrian permeability
  - ☐ Prioritise cyclists at junctions and crossings
  - ☐ Raised bus priority at junctions and signals/bus lanes
- ☐ Maximise pedestrian and cycle interconnectivity – traffic free through cycle/walking routes within the site and out, linking to other parts of the locality
- ☐ Link key cycle network and existing cycle routes to new development
- ☐ Higher residential densities
- ☐ Travel plans
- ☐ Broadband connectivity
- ☐ Sign posting cycle/walking routes
- ☐ Constrain car parking facilities and control retrofitting of additional spaces
- ☐ EV and E-bike charging at community facilities and destinations
- ☐ Secure bike storage at residential and commercial developments
- ☐ Cycle/bus modal shift provision – on bus cycle racks, intermodal cycle storage
- ☐ All dwellings fitted with cabling for EV charging as a minimum
- ☐ Community facilities, local shops etc to have 20% of parking spaces with universal 22Kw charging
- ☐ Additional 10% of public parking places to be fitted with cables for addition of LEVI later

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Managing the water environment

- ☐ Direct development to areas with the lowest flood risk
- ☐ Avoid increasing flood risk elsewhere
- ☐ Flood resilience and protection measures in all new buildings where relevant
- ☐ Encourage land management to reduce run off and increase infiltration, woodland, moor, leaky dams up stream
- ☐ Permeable hard surfaces for drives, car parks and paved areas
- ☐ Water efficiency to exceed building regulations, BREEAM 'very good' standard as a minimum (110 L/person/day – BREEAM 'Good')
- ☐ SuDS - Swales, rain gardens, water features and wetlands included in design
- ☐ Maintain and retain natural water features and streams
- ☐ Reinstate old flood plains, river courses and wet meadows/flood storage areas
- ☐ Naturalistic SuDS including less engineered appearance of balancing ponds and head walls

Sustainable approach to minerals development

- ☐ Operational emissions (GHG) management and reduction
- ☐ Management plans in place to improve recycling rates and reduce landfill
- ☐ Energy efficient plant and buildings
- ☐ Reuse of existing buildings, retrofitting and refurbishment
- ☐ Sustainable design and construction of new buildings
- ☐ Use of locally sourced materials
- ☐ Plant maintenance and refurbishment where appropriate
- ☐ Sustainable transport models and low emissions transport modes, sustainable transport of minerals
- ☐ Minimisation of water use and wastewater recycling
- ☐ Avoiding and mitigating flood risk associated with the development
- ☐ Avoidance of causing flood risk elsewhere, consideration of climate change and flood risk impacts
- ☐ Restoration schemes that contribute to carbon reduction and capture

- ☐ Restoration schemes that contribute to biodiversity net gain
- ☐ Use of renewable energy sources
- ☐ Provision of on-site renewable energy generation
- ☐ Does the operator have a published climate change strategy and targets?
- ☐ Management system certifications

Sustainable approach to waste development

- ☐ Operational emissions (GHG) management and reduction
- ☐ Management plan in place to improve recycling rates and reduce landfill
- ☐ Energy efficient plant and buildings
- ☐ Reuse of existing buildings, retrofitting and refurbishment
- ☐ Sustainable design and construction of buildings
- ☐ Use of recycled and locally sourced materials
- ☐ Plant maintenance and refurbishment
- ☐ Sustainable transport models and low emissions transport modes
- ☐ Minimisation of water use and wastewater recycling
- ☐ Avoiding and mitigating flood risk associated with the development
- ☐ Avoidance of causing flood risk elsewhere, consideration of climate change flood risk impacts
- ☐ Restoration schemes that contribute to carbon reduction and capture (Landfill)
- ☐ Restoration schemes that contribute to biodiversity gain (landfill)
- ☐ Transport planning to reduce GHG emissions
- ☐ Use of renewable energy sources
- ☐ Provision of on-site renewable energy generation
- ☐ Does the operator have a published climate change strategy and targets?