Strategy Area 1: Leadership, Communication and Engagement

Mainstreaming Climate Change

This Climate Change Action Plan sets out to engage the community and business sectors in positive action on climate change by promoting and explaining the council's aims in reducing carbon dioxide emissions – why we need to do this. Tackling climate change affects everyone in the borough and raising awareness will be achieved by various methods: engaging people face to face, electronically through the internet, the media and running campaigns. This will not be enough, however, as readily available updated information must be provided to enable people to reduce their carbon footprint.

By mainstreaming climate change, Hinckley and Bosworth Borough Council is taking the approach whereby adaptation and mitigation objectives are integrated into core policies and strategies. Political and senior-level support and action is critical to achieving our targets for managing the causes and impacts of climate change across our estate, services and the wider community. The council's services are also subject to climate-proofing to ensure that progress can be made in increasing our resilience to climate change over the long term by reducing climate related risks to acceptable levels. The Corporate Plan 2013-16 states the priority to reduce our impact on the environment.

Sustainability issues are at the heart of the Sustainable Design Supplementary Planning Document (SPD), part of the Hinckley and Bosworth Local Plan 2006-2026. By encouraging better design in the built landscape and working with applicants to implement sustainable measures, the local authority can contribute to national targets which reduce carbon emissions and achieve a climate conscious, visually diverse and innovative street scene. A Sustainability Appraisal was undertaken on the SPD to ensure the potential economic, social and environmental effects of applying the SPD have been taken into account.

The effects of this SPD will be monitored through the Annual Monitoring Report produced by the council each year. Indicators, which have specific reference to the success of this SPD, will be included for consideration by the Government Office of East Midlands. These are:

- the number of permitted applications compliant with the Code for Sustainable Homes and BREEAM with breakdown of levels achieved
- the percentage of planning applications granted which propose water conserving methods (e.g. rainwater/ grey water systems)
- planning permissions granted with Sustainable Urban Drainage Systems (SUDS)
- the number of applications for renewable energy sources, received and granted and
- the installed capacity of renewable energy sources in new development per annum

Individuals and communities may feel powerless to act on global issues such as climate change, as they seem too large to tackle. However, quality of life locally can be improved by small, simple measures taken collectively making a large difference to communities. Individuals need to be encouraged to feel that they have a role to play and how they may benefit from taking small steps to achieve large targets.

Commitment: Demonstrate the council's commitment to acting on climate change		
Specific actions(s)	**Measure**	**Timescale**
Climate change commitments are embedded in the council's key documents: the Corporate Plan 2013-2016, Community Plan 2010-2015 and our vision statement.	Update climate change section on the renewal of both the Corporate and Community Plans.	Community Plan to be refreshed in 2015 and Corporate Plan in 2016
A Councillor Scrutiny Environment Group was established in 2008 to monitor and oversee the environmental and climate change activities of the Council. It was agreed that the group need not be politically balanced and that the number of Members be flexible depending upon the number of committed Councillors.	Maintain Scrutiny Environment Group to contribute and monitor climate change issues	Convene at least two meetings per year
Lead Member with responsibility for climate change appointed.	Maintain Councillor as appointed Environmental Champion with responsibility for climate change and who is a member of the Council's Executive.	Review in 2015
Consultation and training information for Members on the benefits and opportunities of tackling climate change was provided by East Midlands Improvement and Efficiency Partnership.	Maintain up to date climate change information and training on Intranet for Members including information to be updated through Scrutiny Environment Group	Review in 2017

Improving the awareness, engagement and knowledge of all staff in the Hinckley Hub

Climate change is relevant to a wide range of local government functions. It adds to the many uncertainties that councils must consider in all their planning, risk assessment and decision-making. Every council function or service that relies on, or is affected by, climate parameters such as rainfall, or temperature, can be affected by climate change.

As HBBC is a large employer, education and engagement of staff can make a big impact on emissions. Underpinning any successful climate change strategy is the need to fully engage employees at every stage of the process. Raising awareness of all partners at the Hinckley Hub will be achieved by engaging people face to face or electronically through the internet. Readily available information must be regularly updated to provide advice on how a carbon footprint can be reduced.

Commitment: Engagement of all Hub staff in achieving our carbon reduction targets		
Specific actions(s)	**Measure**	**Timescale**
Climate change and sustainability information provided for staff induction programmes to encourage staff to be more energy efficient and reduce carbon dioxide emissions	Review environmental management and specifically climate change measures in staff communications	Review annually

<u>Reducing the carbon dioxide emissions from all our activities by 20% by 2016 (from a 2008/9 baseline)</u>

The council is required by the Climate Change Act 2008 and Energy Act 2012 to reduce energy use and carbon emissions. A target was set in line with the previous national Indicator 185 which reported carbon emissions only. A Greenhouse Gas (GHG) Report is submitted to the Department of Energy and Climate Change (DECC) and emissions reported in this document include the 6 greenhouse gases included in the Kyoto Protocol which are seen to be increasing in our atmosphere because of human activity: carbon dioxide (CO2); methane (CH4); nitrous oxide (N2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulphur hexafluoride (SF6). Units are represented as tonnes of CO_2 equivalents (TCO_2e). By publishing the Greenhouse Gas Report , the council ensures transparency and comparison so that progress can be monitored.

The current report shows that net GHG emissions increased up to March 2013 by 15.5% but decreased by 8.9% against the baseline year of 2009-10. This was mainly due to a cold winter and HBBC purchasing Green Tariff electricity.

A new leisure centre is being commissioned with an aspiration BREEAM rating of Excellent

Commitment: Aim to reduce carbon emissions and lead by example to mitigate climate change

Specific action(s)	Measure	Timescale
Continue to implement HBBC's Carbon Management Plan	Reduce emissions by 20% from Council buildings and vehicle fleet	March 2016
Promote the efficient use of energy and water by all Hub staff through awareness raising programmes	Link awareness promotions to national environmental campaigns each year	Review 2017
Reduce emissions from corporate buildings	Deliver a programme of relocation to low carbon and more energy efficient buildings	Review annually
Reduce emissions from Hinckley Leisure Centre	Work with our partners to find ways of reducing energy use	Review 2017

Strategy Area 2: Maximising Hinckley and Bosworth Borough Council's contribution to limiting climate change

Reducing energy use

There is a worldwide need to reduce the amount of energy consumed. Most of the UK's electrical power, and our gas supplies, come from fossil fuels, much of which has to be imported. Once they have been used these fossil fuels are gone forever. If more energy is used today, then there is less left for the future and when energy is used unnecessarily, for example leaving appliances on "Standby", the stock of fossil fuels dwindles more quickly.

The council is committed to reducing its environmental impact through carbon reduction measures and through the support of appropriately designed and sited renewable energy and low carbon developments. It is seeking new renewable energy generation capacity up to 2026 to deliver at least 14% of the borough's energy consumption (GWh) based on 2010 levels. Debates continue on the contribution that alternative sources of renewable (predominantly solar and wind generation) energy can make. A further potential source is hydraulic fracturing for gas or "fracking". An assessment has claimed that its production in the UK could deliver up to 25 per cent of the country's current gas demand in the 2020s while supporting local jobs.

Mitigation of greenhouse gases must involve carrying out the same activities and task but using energy more efficiently. Consuming less energy, by being more efficient in the way it is used, will naturally save stocks for the future and, at the same time, be financially beneficial and reduce pollution and CO_2 emissions. Government policies, strategies, campaigns and new technology on their own are no substitute for individual actions. Simple actions by each person to save energy can have just as much impact as the high profile initiatives. Campaigns are only effective if individuals take positive actions as a direct result of such campaigns.

The UK's buildings are responsible for almost half of the UK's energy consumption and carbon emissions. Managing the consumption of energy for lighting, space

heating and cooling, hot water supply, cooking, and how the these buildings are maintained offers the largest potential for energy efficiency.

The Code for Sustainable Homes was introduced in 2008 and is intended as a single national standard to guide industry in the design and construction of sustainable homes. It includes mandatory minimum levels of performance that have been introduced across 6 key issues:

- Energy efficiency /CO_2
- Water efficiency
- Surface water management
- Site Waste Management
- Household Waste Management
- Use of Materials

The Code has a scoring system of six levels indicated by stars, one star indicating entry level above Building Regulations, and six stars the highest level – reflecting exemplar development in sustainability terms. The different levels are made up by achieving both the appropriate mandatory minimum standards together with a proportion of the 'flexible' standards. Code Level 3 is approximately equal to the Ecohomes VERY GOOD score.

Reduce carbon emissions and improve affordable warmth in our housing stock

Hinckley and Bosworth Borough Council is committed to tackling home energy conservation. This includes approaching the ever growing issue of fuel poverty due to carbon reduction.

The total housing stock in the Borough is 46,055. The council has retained its housing stock of 3390 dwellings including 11 sheltered housing complexes. Improving the energy efficiency of these households is perhaps the most effective way that we can tackle fuel poverty. It also has a secondary benefit as the energy efficiency work will also reduce the carbon emissions from these properties.

At present there are 6,929 (15.9%) homes in fuel poverty in the Borough. Between 1985 and 2008 when the Council submitted HECA reports an overall improvement in home energy efficiency of 21.6% was reported. During the reporting period from 2008 to 2011, the Council reduced the number of households residing in properties with low levels of energy efficiency by 2.6% and increased the number of households living in properties with higher level of energy efficiency by 3.14%.

A major factor in these positive results was the Decent Homes Insulation Project undertaken by the Council during 2008-10. Using Decent Homes funding secured from Government Office East Midlands, the project targeted priority neighbourhoods and resulted in 1,961 loft and cavity wall insulation measures being installed. These measures produced annual CO_2 savings of 1,435,570 kg and annual savings on energy costs to the households of £269,605.

In 2013, HBBC housing officers, as part of a consortium of Leicestershire and Rutland councils, were successful in securing £3,205,100.00 funding from Department of the Energy and Climate Change (DECC). The project has significantly reduced the number of low income, high cost/vulnerable households in fuel poverty by providing energy efficiency measures which has resulted in reduced energy bills

and improved thermal comfort, alongside providing fuel debt advice and assistance, and promoting opportunities of the Green Deal (GD) to households and businesses. To date the funding has provided:

- installation of 39 systems of 12 photovoltaic panels to vulnerable residents received pension credit (primarily in off-gas areas)
- replacement boilers and heating distribution systems for 22 households
- vouchers for fuel card top ups, distributed with food parcels Food Parcel Emergency Fuel Bill Fund to 250 households
- help to 16 households with purchasing emergency fuel during winter 2013
- debt reduction payments for 27 residents to enable them to move from prepayment meters to lower cost standard meters
- 27 households with low cost insulation or energy monitors
- 78 “jam jar” accounts with a local credit union helping households to budget for fuel and other bills

Castle Court is one of the authority’s supported housing complexes for older people. It benefitted from installation of new boilers and pre heat solar hot water panels are now in operation. The energy use of the building during the succeeding year has fallen by 29%.

There have been 127 referred Green Deal assessments and in addition floor insulation, wall insulation, central heating, windows, doors, roof insulation and external wall insulation has been fitted to a long term empty property using the show homes funding from DECC.

A Green Deal Breakfast was held in April 2013 to facilitate small and medium size local businesses in identifying energy savings in the premises.

HBBC has recently built its first new dwellings for over 25 years. The properties were constructed to comply with Code 4 Sustainable Homes. The new houses have photovoltaic roof panels which produce electricity provided to the tenants free of charge, with any surplus returned to the local supply network.

The council continues to improve the energy efficiency of its retained housing stock. One hundred and three old gas central heating boilers were replaced with new ‘A’ rated condensing boilers during this financial year. One air to water heat pump and a new electric storage heating system have been installed in two properties where mains gas is not available.

Commitment: Reduce the number of households whose fuel costs are above the median level; and are left below the official poverty line after paying what is required for fuel.		
Specific Action(s)	**Measure**	**Timescale**
Improve the energy efficiency of our housing stock in line with our Home Energy Conservation Act (HECA)	Upgrade insulation, replace boilers, provide energy monitors	2014 - 2017

report plan		
Work with our residents, households and communities of the borough through events and schemes to promote energy conservation	Identify private sector properties that may be eligible for funding and advise occupiers/owners of the scheme details.	2014 - 2017

Promotion of householder and community action on reducing carbon emissions

Hinckley and Bosworth Borough Council has an important role in influencing its partners. We cannot achieve the overall reduction target on our own. We will encourage all sectors in the local community including businesses, to take the opportunity to reduce their contribution of greenhouse gas emissions. Progress can only be made towards overcoming the threats associated with global climate change if every individual is made aware and plays a part by reducing their own contribution. To do nothing is not an option either for the sake of the environment or our finances. We hope that all who live and work within the borough will fully support us in this action plan as we move towards lowering the impact of our services on the environment.

Commitment: Community action can significantly reduce overall emissions		
Specific action(s)	**Measure**	**Timescale**
Review the Empty Property Strategy and Housing Renewal Policy	Include measures to improve the condition of private housing stock in the Borough	2014/ 5
Promote the carbon reduction and financial benefits of energy efficiency	Carry out energy audits and install low cost energy efficiency measures such as loft and cavity wall insulation and renewable energy systems, and replace old or defective heating systems / boilers.	2014 - 2017
Develop demonstration projects to show what can be achieved.	Refit three unoccupied homes into “eco-show homes” to showcase energy good practice and renewable energy technology including fitting new windows and doors, cavity and external wall insulation, loft and floor insulation, new boilers and potentially renewables: fuel heating systems and	2014 - 2017

	solar PV	

Apply planning regulations to promote energy efficiency and low carbon building

The Building Research Establishment's Environmental Assessment Method (BREEAM) is used to assess the environmental performance of both new and existing buildings. It is regarded as the measure of best practice in environmental design and management BREEAM covers offices, industrial and retail units and schools

Created by Building Research Establishment (BRE), it sets the standards for best practice in sustainable development and demonstrates a level of achievement. It has become the vocabulary used to describe a building's environmental performance.

Clients, planners, development agencies, funders and developers are using BREEAM to specify the sustainability performance of their buildings in a way that is comprehensive and clear to everyone.

BREEAM aims to:

- Improve the environmental performance of buildings.
- Reduce the environmental impact of construction and building operation.
- Recognise best practice.

BREEAM assesses the performance of buildings in the following nine areas:

- **Management**: overall management policy, commissioning site management and procedural issues;
- **Energy use**: operational energy and carbon dioxide (CO2) issues;
- **Health and well-being**: indoor and external issues affecting health and wellbeing;
- **Pollution:** air and water pollution issues;
- **Transport:** transport-related CO2 and location-related factors;
- **Land use:** Greenfield and Brownfield sites;
- **Ecology:** ecological value conservation and enhancement of the site;
- **Materials:** environmental implication of building materials, including life-cycle impacts;
- **Water:** consumption and water efficiency.

Developers and designers are encouraged to consider the sustainability issues of a building at the earliest opportunity of planning to maximise their chances of achieving a high BREEAM rating. Credits are awarded in each area according to performance. A set of environmental weightings then enables the credits to be added together to produce a single overall score.

The building is then rated on a scale of ***PASS, GOOD, VERY GOOD or EXCELLENT*** and a certificate awarded that can be used for promotional purposes.

Hinckley and Bosworth Borough Council moved into new BREEAM Excellent offices in 2013. From the inception the approach was to make the building as energy efficient as possible. The Hub's location offers members of staff sustainable options in travelling to work.

Design features increase the efficiency through the level of insulation, air tightness, glazing specification and natural ventilation where possible. Heat recovery ventilation provides fresh air and improved climate control while also saving energy by reducing heating (and cooling) requirements. Water consumption is minimised as a result of installing water saving taps, foam soap which needs less rinsing and low flush toilets.

The building's footprint and orientation have been taken into consideration. The Hub faces East/West to maximize passive solar gain at the appropriate time of year. This is to reduce heating costs and improve the quality of the working conditions. The footprint is long and narrow to maximise the natural light from windows and provide cross flow ventilation. The office area is open plan to increase the efficiency of desk layout and lighting.

The Council is in the process of commissioning a new leisure centre with an aspirational BREEAM rating of Excellent. Passive and active energy efficient and sustainable designs are being considered including combined heat and power, photo voltaic panels, improved levels of insulation, reduced air loss, solar shading and reducing south facing glazing to create an environmentally friendly facility.

To reduce annual carbon emissions, further measures for consideration include heat recovery by fine tuning of the swimming pool air handling system to achieve the ideal relative humidity, energy saving lighting and the possibilities of grey water harvesting and having regimes in place that ensure backwashing is kept to a minimum within the Pool Water Treatment Advisory Group guidelines to make sure safety is maintained. Introduction of ultra violet light treatments to the swimming pool plant will reduce chemical use and improve the water quality for its bathers. An innovative green roof will limit both heat gains and losses and will also reduce the amount of surface water sent to the sewerage system.

The procedure for demonstrating compliance with the Building Regulations for buildings other than dwellings is by calculating the annual energy use for a proposed building and comparing it with the energy use of a comparable 'notional' building. Both calculations make use of standard sets of data for different activity areas and call on common databases of construction and service elements. A similar process is used to produce an 'asset rating' in accordance with the Energy Performance of Buildings Directive (EPBD). The tool that has been developed by BRE is called SBEM – Simplified Buildings Energy Model.

Commitment: Influence developers in building high energy performance housing		
Specific Action	**Measure**	**Timescale**
Encourage or require developers to build homes to the energy standards described in the HBBC Core Strategy or better	Policy 24: Sustainable Design and Technology	Core Strategy: Code level 6 by 2016

Promote sustainable procurement within the council

HBBC has implemented its Purchasing and Environmental policies to source goods and services with a reduced impact on climate change. The actions include activities that achieve a reduction in greenhouse gas emissions from operations and reduce waste and consumption of scarce resources.

By taking a "whole life" approach to the cost of goods i.e. from the need to buy, through the initial purchase price, any maintenance or revenue costs, to waste and disposal. Consideration is given to contracting suppliers who are concerned about their own environmental performance and who are able to demonstrate policies and procedures to address environmental issues. Awareness of recognised environmental standards labelling e.g. Forest Stewardship Council for timber products is of importance. The optimisation of environmental and social benefits is at the core of procurement decisions in accordance with the principle of value for money and our relevant policies.

The HBBC Green Purchasing Guide introduced in 2008 provides information on the issues and good practice for making the decision on potential purchases based on Reduce, Reuse and Recycle. As well as the selection criteria using life cycle analysis, issues and good practice are considered together with relevant "confidence" labelling. Council property which is classified as non-domestic has been receiving 100% green electricity from renewable sources.

Commitment: Encourage low energy and more sustainable options in purchasing		
Specific Actions	**Measure**	**Timescale**
Incorporate the social and environmental aspects as well as cost considerations into purchasing	Continue to purchase a significant proportion of green electricity	Ongoing
Review and update the Council's Corporate Procurement Strategy to encourage low energy items and more sustainable purchasing	Reduce resource use and carbon emissions	2016

Strategy Area 3: Transport

Work with local organisations and businesses to promote sustainable transport

Transporting goods and people from place to place is unavoidable. Technological improvements have delivered carbon reduction benefits but in some cases these have been either offset or out-stripped by rising demand and choices made by transport users – trends that are set to continue in future unless action is taken now.

What needs to be reviewed is how much transport is avoidable and how can alternative fuels become mainstream rather than alternative?

HBBC is looking at ways to reduce staff mileage without affecting services, one of which is flexible working practices. A Green Travel Plan has been implemented which aims to reduce staff mileage by introducing working from home. At present 60 staff are working flexibly i.e. are either home-working or are based at one or more locations. A further 16 staff work compressed hours, longer hours but fewer days per week.

Mileage for business purposes is recorded and includes officers who are only home based. Flexible home-working is not recorded. There is a need to reduce single occupancy car travel to work so sustainable travel is being promoted. Regular updates are circulated describing alternative methods of commuting particularly the car sharing scheme.

The Hinckley Hub has no all-day parking for staff on-site. Provision has been made for 44 short stay spaces for visitors to the Hub which can be used by staff for dropping off equipment. The car park provides 8 disabled bays. Parking provision for 6 motorcycles is provided on site. To encourage cycling by the staff of all partners using the Hub, 40 covered cycle racks have been provided in the Hub car park. All staff are encouraged to take advantage of the Cycle to Work scheme which allows a reduction of the equivalent cost of National Insurance on the price of hiring a new bicycle if arranged through the scheme. Showers and cycle lockers have been installed in the building. Car parking advantages are available to all staff who join the car share scheme.

The HBBC Core Strategy describes the balance of the transport system in favour of sustainable transport modes and how it will give people a real choice about how they travel. Information about all forms of travel in the Borough can be downloaded from the website.

Looking forward, the Hub building includes ducting for the provision of electric vehicle charging should the option of an electric pool car develop in the future. “Essential User” spaces are provided on a separate car park a short distance away from the building.

HBBC officers are working in partnership with Leicestershire County Council and other districts in implementing the Hinckley aspect of the Local Transport Plan 3. This influences transport providers to increase routes and the availability of public transport in the Borough, and will provide better facilities for walking and cycling when completed.

HBBC, in conjunction with Leicestershire County Council, is seeking funding for a full time Active Travel post from 2015/16, initially for 1 year but, dependent upon additional monies from other sources, the post will include a organising a comprehensive cycling programme aligned to the new proposed cycling routes. The focus will be on engagement with small, medium and large scale businesses, coordinating campaign programmes and tackling the culture change in travel choices for economic and health benefits.

Commitment: Support corporate objectives to sustain our local economy, reduce carbon emissions , improving air quality, reducing congestion, and

improving health and road safety		
Specific Actions	**Measure**	**Timescale**
We will continue to implement the Hinckley Priority Area LTP3 Engagement and Communication Plan	Investment in walking and cycling infrastructure	2014/15
Influence other large employers in the district by implementing the Council's Green Travel Plan to reduce single person car use and increase the use of public transport, walking and cycling	At corporate buildings introduce parking management, car-sharing, cycling facilities, tele and video conferencing and flexi-working during awareness raising sessions to staff of all the Hub partners	2014 and ongoing
Ensure new developments are accessible by sustainable modes of transport	To ensure that transport remains considered in planning policies to encourage developers to include sustainable means to travel are within easy reach of all developments	2014 and ongoing

Identify opportunities to reduce the carbon emissions from our transport fleet

Transporting goods and people from one location to another is unavoidable. Technological improvements have delivered carbon-reduction benefits in the method of transport but in some cases these have been either offset or out-stripped by the frequencies involved in the movement of people and freight. The rise in journeys is set to continue as the global population grows with a corresponding increase in air pollution and use of land.

HBBC has introduced a number of recommendations from the Green Fleet Review and by reassessing the waste collection routes fuel usage was reduced by over 50,000 litres during 2011/12. In 2013 lower emission vehicles were leased on all routes. Vehicle telematics will be introduced during 2014 and drivers will receive training in best practice techniques for reducing fuel consumption. These measures will contribute to increased fuel efficiency, an increase in engine working life, savings in service cost, improved safety, and a reduced carbon footprint.

Commitment: Reduce the fuel consumption of and carbon emissions from our fleet and save money resulting in a reduction in air pollution in the Borough		
Specific Action	**Measure**	**Timescale**
We will purchase and invest in greener vehicles across the Council's fleet where long term investment can be made.	Environmental specification is part of all tender analysis	Ongoing

Strategy Area 4: Waste

Reduce the amount of household waste which goes to landfill

Although households are not responsible for the majority of waste on a national basis it does pose a major problem because of the high organic (derived from a carbon basis) content.

Landfilling the 68% biodegradable element of this waste produces methane gas which is 21 times more harmful than carbon dioxide in trapping heat in the Earth's atmosphere. For each tonne of biodegradable material – paper, cardboard, food, garden and textile waste - sent to landfill it is estimated that between 200m^3 and 300m^3 of greenhouse gas is produced, contributing to global warming. Although some landfill sites utilise the trapped methane gas as a fuel source, usually only about 40% recovery is possible.

The other aspect of waste is that we are using up the planet's valuable, and finite, natural resources most of which cannot be replaced. Many such resources are now running out. Much of the waste we dispose of is manufactured as a result of mining, logging, quarrying and other industrial processes. This requires energy from fossil fuels and more to transport them across the globe which also results in releasing carbon dioxide and pollutants.

Being a responsible "sustainable" society requires that natural resources must be left for future generations to use. The challenge is therefore to reduce what we need, reuse what we buy and, as a last resort, recycle before an item becomes waste and is thrown away.

In addition to refuse which goes to landfill, HBBC introduced wheeled recycling bins with separate caddies inside for all households in the borough. The new service makes recycling easier with the caddy used for paper/cardboard and the main part of the bin for glass bottles/jars, food/drink cans, cartons and plastic bottles, pots, tubs and food trays. Textiles/shoes and batteries are also collected.

In addition the Recycle on the Go scheme offers 15 specialised "on street" locations in the Borough where recycling banks are installed. Most of the bins are equipped with a separate litter compartments and a separate cigarette bin. These are predominately in busy shopping areas and some popular visitor sites.

HBBC has a target to reduce the amount of household waste which goes to landfill to 310Kg per capita by 2015/16 and to meet the waste minimisation targets of recycling or composting 58% of municipal waste by 2020.

A total of 23,637 tonnes of residual waste was diverted from landfill in 2012/13. The trend is positive with the figures of 339.54Kg per capita for 2012/13, a reduction from the 2011/12 figure of 408.67Kg per head. The recycling rate increased for 2012/13 to 55.5% due to the new dry-recycling kerbside collection service. This figure is contrary to national indications in that recycling rates are reaching a plateau.

Commitment: Reduce carbon dioxide emissions from waste by meeting the waste minimisation targets

Specific Action	Measure	Timescale
Raising community awareness on waste minimisation through public awareness campaigns	Reduce per capita residual waste going to landfill to 310Kg per capita per year	2015/16
Quantify the greenhouse gas benefits of diversion from landfill due to waste minimisation and recycling and publicise the information	Reduction in carbon dioxide emissions per capita	Ongoing
Work with our community to develop new recycling schemes, undertake improvements to current collection schemes and promotional activities to achieve the national target of recycling 50% of their waste by 2020.	Percentage of waste recycled	2020

Improve levels of recycling and reduce waste in council buildings and services

The majority of HBBC's staff moved into a new building, the Hinckley Hub, in 2013. No waste bins are positioned at desks but located at a central point on each floor. To encourage segregated recycling at source, bins are provided for paper, cardboard, plastic bottles and jars, metal cans, non-recyclable and toner cartridges, and batteries. A similar system is in operation at the Jubliee Building which houses the waste and recycling depot.

Commitment: Reduce costs and the Council's operational waste management reflects what Borough residents are encouraged to do		
Specific Action	**Measure**	**Timescale**
Promote waste minimisation to staff and ensure all recyclable material is recovered	Reduce overall waste volumes	Ongoing

Strategy Area 5: Resilience

Improve the resilience of our communities to future climate impacts through the climate ready plan

Hinckley and Bosworth Borough Council has acknowledged the effects of climate change and the need to reduce the future impact on the community as a result of potential changing weather patterns.

Preparing for climate change in order to increase the borough's resilience puts the emphasis firmly on adapting now to prevent adverse impacts on communities, the economy and the environment. By adapting we ensure that the services we provide to our communities will be less disrupted by extreme weather, we will be prepared

and will suffer fewer interruptions and significant impacts, and avoidance or reduction in associated financial costs.

A Joint Strategic Flood Risk Assessment was carried out with adjacent authorities, Blaby and Oadby and Wigston Borough councils in 2007. This provided information of potential sites at risk of flooding due to rivers, streams or other sources and enabled appropriate managements plans to be put in place. The risk assessment should be taken into account when development areas are identified and to determine the capacity required for Emergency Plans.

HBBC is aware of the risk to the district that may arise due to the change in weather patterns. The Sustainable Design SPD includes examples of sustainable design methods which, when incorporated into a development, can assist in meeting the requirements of the Code for Sustainable Homes and BREEAM. It is designing responsibly to resolve complex problems in order to protect, care for, and improve our environment. It involves new land development and construction, redevelopment, renovation and restoration. Key issues include energy efficiency, renewable energy, environmentally sustainable building materials and techniques, healthy building design, life cycle and maintenance costs, economic factors and incentives to promote "green" building products and services. If an applicant has chosen to meet the minimum requirements for building control, it is still expected that sustainable design will have been taken into account and incorporated into schemes where possible.

Water issues are also linked to other themes in this strategy e.g. energy requirements and planning. Many streams and natural drainage ditches are now culverts and flow through large pipes underground. During high rainfall some of the culverts have insufficient capacity to take the flow and flooding results. Localised flooding can also be as a result of watercourses overflowing their banks or because heavy rainfall cannot drain away sufficiently quickly from blocked drains or a trough in the ground.

Conventional surface drainage for developments is generally linked into existing provision for off-site water removal, often taking insufficient account of dispersal rates into the river system. New buildings mean more roofs and paved area which in isolation would not seem to have a large effect on water run-off. Linked together, at some stage a level will be reached that exceeds the capacity of a river system to capture further water. The resultant risk is that the receiving water body will flood causing damage to the wider area, often many miles downstream, giving rise to severe and concentrated pollution of the water environment, threatening ecological systems and water abstraction for drinking purposes.

Increasing demands on essential water resources combined with changing rainfall patterns as a result of climate change mean that efficient use of available resources is essential. Water use itself also produces greenhouse gas emissions that contribute to climate change. These come from the water industry, primarily from treating and supplying water and disposing of wastewater, and from water use more widely. Planners should be seeking to ensure that development is sustainable, both in terms of water demand (water efficient devices and rainwater harvesting), water abstraction, treatment and supply, and water disposal (sewerage and sustainable urban drainage systems).

As a member of the Leicestershire Together partnership, in 2009 HBBC took part in a Local Climate Impacts Profile (LCLIP) study which sought to gather information about the impacts of severe weather events on council services and increase the awareness of the associated risks. It created a database of weather impacts collated

from media sources to initiate a consultation process with key officers from the council. Where relevant it also included taking action now to make sure the Borough is well placed to take advantage of any opportunities that occur due to climate change.

The study investigated the effects of severe weather conditions between 2000 to 2008 where damage to property and delays and damage to the road networks were caused by fluvial and pluvial flooding, snow and ice and debris spread by high winds and storms which impacted upon the operation of council services. The results of the study were used to identify priority risks due to adverse weather. However, no significant impacts were indicated within our service provision or estates during the investigated period. A number of potential risk priorities were identified from the scenario assessment through predicted weather anomalies due to climate change and future land development.

It is expected that the resulting Climate Ready Plan 2013 - 2020 will achieve the target reductions in carbon dioxide emissions, an increase in renewable energy generation and use of alternative fuel sources, communities and businesses take responsibility for reducing their carbon footprint, the transport system is resilient to the effects of climate change climate and the risk profile for the County is understood by all partners.

In addition the Leicestershire Together Carbon Reduction Strategy 2013 – 2020 is intended to build the market demand for the low carbon economy in Leicestershire. It has been developed based on understanding and analysis of the source of carbon emissions in all the districts. It projects likely carbon emissions in the county based on anticipated reductions from government intervention but with no significant local action and identifies the reduction required to match the national government target of 34% reduction by 2020 compared to 1990. A total of 1,000Ktonnes of emission reduction will need to be delivered to meet the target, 686 Ktonnes of which will be delivered through decarbonisation of the electricity grid delivered principally through national energy policy. Energy regulations on technologies will produce a 147 Ktonnes reduction. The remaining 165 Ktonnes can be saved from action in domestic (75 Ktonnes), commercial and industrial property (90 Ktonnes) provided emissions from transport do not increase.

Commitment: Preparing for climate change will increase the Borough's resilience to the increased frequency and severity of extreme weather events		
Specific Action	**Measure**	**Timescale**
Raise awareness in businesses and industry about the importance of risk analysis and contingency planning associated with climate change, build capacity in organisation and embed climate change into commissioning processes	Publicise workshops and support available.	2016
Implement the Leicestershire Climate Ready Plan	HBBC to complete a comprehensive climate	2014/15

	change risk assessment of operations and services and develop action plans where appropriate.	
Engage the community in climate change adaptation and mitigation planning	Publicise workshops and support available	2014/15
Maximise the use of sustainable urban drainage systems	Planning permissions granted with sustainable urban drainage systems	Ongoing
Meet and exceed our obligations to the Flood and Water Management Act in order to prepare our area for increasing levels of precipitation and flooding	Implement the Strategic Flood Risk Solutions actions from the Flood Risk Assessment of the Local Plan 2006-026	Ongoing

Strategy Area 6: Natural Environment

Work in partnership with other agencies and the community to maintain and enhance distinctive and outstanding natural environment

The natural environment is an asset in mitigating the effects of climate change and ensuring resilience to projected risks in the future. The impacts of climate change on the natural environment have implications for water resources, the health of our communities, our food supply and the landscape as a whole.

Hinckley and Bosworth has many valuable green spaces but is under pressure to provide additional homes and associated infrastructures. Over time open spaces will also become increasingly under threat from the implications of climate change.

Many habitats have become, or are at risk of becoming, fragmented and there is a need to expand and re-connect existing areas and restore habitats where they have been destroyed. The Site Allocations and Development Management policies require any proposed development to contribute towards environmental gain, the connection or reconnection of habitats or the provision of compensatory measures. Plans would also need to contribute towards the objectives for priority habitats and species identified in the UK and Leicester, Leicestershire and Rutland Biodiversity Action Plans (BAP) and delivery of the Green Infrastructure Strategy.

The borough is recognised as a sub regional centre of the 6Cs partnership as an area of significant growth under the (now closed) Sustainable Communities Plan. The Growth Point comprised the three cities of Leicester, Derby and Nottingham and their surrounding Counties plus five towns incorporating Hinckley. The key areas of Barwell and Earl Shilton are where sustainable urban extensions are proposed. Provision of green spaces and corridors will form an important part of these developments.

The growth proposed in Hinckley and Bosworth provides an opportunity to plan for a green infrastructure network, serving the needs of both rural and urban communities and strengthening the links between them. It must link in with the wider green infrastructure framework for the Leicestershire region and will provide important

green corridors to enable wildlife migration and protection and enhancement of biodiversity.

Four cross cutting priorities underlie delivery of the themes and priorities of the Green Space Delivery Plan: community involvement and partnership working, life-long learning and equalities. Green spaces provide communities with a sense of place and belonging, opportunities for recreation, health and fitness, events that reinforce social cohesion and inclusive society and offer an alternative to the urban and built environment. Statistics show that 87% of the population have used their local park or open space in the last year, and 79% have used it in the last six months. Parks and open spaces are the most frequently used service of all the public services. Engaging with and empowering local communities to become actively involved in the management of local green spaces is of prime importance. The Council will:

- consult with local communities when making key decisions about green spaces, following the guidance within the community engagement and involvement strategy
- work with local communities and other providers to manage, develop and promote green spaces
- support existing and encourage new “Friends of” and volunteer groups
- promote and increase awareness of all green spaces in the Borough
- support parish councils to enable them to develop their own green space delivery plans

HBBC manages seven main Local Nature Area sites across the borough, Burbage Common and Woods, Hillhole Quarry, Billa Barra Hill, Manor Farm and Community Orchard and Groby Pool Nature Area. Changes have been made to the management and maintenance of the sites to increase biodiversity and nature conservation.

Burbage Common and Woods Local Nature Reserves comprise 80 hectares of mature woodland and unimproved grassland. The Management Plan updates the previous version and includes a revised five year action plan covering the period 2011 to 2016. With regard to habitat management, the authority has been successful in securing grant support to help manage its grassland habitat through Natural England’s Higher Level Stewardship scheme and woodland resource through the Forestry Commission’s English Woodland Grant Scheme. This funding aids the long-term sustainable management of these important habitats. Burbage Common and Woods are identified as an important strategic open space to surrounding communities in Hinckley, Burbage, Barwell and Earl Shilton particularly in relation to green infrastructure. Appropriate changes have been made in management to improve conservation at other LNRs including Bila Barra Hill, a Regionally Important Geological site. The hill top is of ecological interest, with areas of acid grassland and an old conifer plantation. The Council has been planting native broadleaved trees on improved grassland on the slopes of the hill below the gorse scrub line which will be used as local provenance seed stock. Specific biodiversity management improvements are proposed for each of the following sites: Hillhole Quarry, Manor Farm and Community Orchard, and Groby Pool Local Nature Areas.

The National Forest covers a small proportion of the north eastern corner of the borough including Markfield, Bagworth, Thornton and parts of Groby and Ratby. The Council endorses the implementation of the National Forest Strategy by supporting landscape proposals which reflect the forest environment of woodland planting and creation of associated habitats.

There are two Green Wedges in the Borough. Rothley Brook Meadow Green Wedge falls within the north eastern green infrastructure zone and highlights a unique landscape character defined by the National Forest. The second is Hinckley/Barwell/Earl Shilton/Burbage Green Wedge. Green Wedges are areas of undeveloped, natural or agricultural areas between developed, urban areas. In addition to this they also aim to provide a green lung and act as a recreational resource.

The Leicester and Leicestershire Green Wedge Review Joint Methodology (July 2011) was compiled by six authorities to assess whether an area should be identified as a further green wedge. The joint methodology was created to develop a consistent approach to the assessment of existing and new green wedges. A number of sites were appraised and rejected.

Commitment: An effective approach to protecting and enhancing the natural environment working across boundaries and between organisations		
Specific actions	**Measure**	**Timescale**
Establish policies to protect and enhance biodiversity sites, habitats and species with reference to the Leicester, Leicestershire and Rutland Biodiversity Action Plan (BAP)	Consider scope for actions in new Green Spaces Delivery Plan	2014 and ongoing
Implement the Green Spaces Development Plan	Identify opportunities for the creation of new accessible Natural and Semi Natural (NSN) open spaces in the Borough, focusing particularly on areas which are shown as deficient.	2014 and ongoing
Enhance and develop the quality of NSN open space in the Borough	Identify opportunities to amend management practices	Commencing 2014 and ongoing
Improve biodiversity of species in formal parks and cemeteries	Integrate sustainable management into grounds maintenance	2014 and ongoing
Enhance sites of importance for conservation and biodiversity	Introduce species specific management plans and modify maintenance regimes of suitable sites to increase biodiversity	2014 and ongoing

Protect and enhance the resilience of the borough's biodiversity to the projected effects of climate change

A Green Infrastructure Strategy was produced for the borough in October 2008 and forms part of the council's Core Strategy. It is intrinsic to sustainable development. Green infrastructure is an all embracing term which can cover all features from parks and gardens, to footpaths and bridleways, to rivers and woodlands. Each of these environments makes a contribution to the quality of life for individuals and communities and to sustaining wildlife and the natural environment. It is essential to mitigating and adapting to climate change.

The strategy is based on a comprehensive analysis of local green and blue (water) networks in the borough. These networks will be implemented into local plans and strategies such as Local Plan (formerly LDF) documents and Area Action Plans and other council initiatives. The green infrastructure network provides a framework for multi-functional open space, functioning biodiversity networks and a sustainable movement network, improving connectivity within urban areas, and between urban areas and rural settlements, and expanding the functioning and connection of habitat resources. It also directs the action for climate change mitigation and adaptation resulting in resilience.

The action plan supporting the Green Space Delivery Plan is influenced by the Green Infrastructure Strategy as there are few natural corridors connecting the towns to the surrounding rural areas, although there are several streams flowing from urban to rural areas. Open space and landscaping on developments are part of the green infrastructure. A building's energy bill can be reduced by appropriate landscaping which can modify the climate. A windbreak of trees and/or shrubs can reduce heat gain in summer by shading walls from the sun and heat loss in winter by mitigating the effects of cold winds. Trees in urban landscapes suffer stress and reduced growth rates because of rising levels of atmospheric pollutants, increasing temperatures as a consequence of heat island effects, restricted rooting space and lack of water availability because of soil compaction and solid surfaces. With predicted climate change scenarios such as hotter, drier summers and more extreme weather events, tree health will deteriorate. Large trees particularly are important carbon stores, improving air quality by removing carbon dioxide fumes (carbon sequestration). Providing more green spaces in built up areas will significantly improve air quality in conditions of raised temperatures and heatwaves. They also aid drainage.

A number of key priorities have been identified to contribute towards improving the green infrastructure. HBBC will be increasing the number of trees, natural and semi natural areas on green spaces particularly to mitigate the effects of heat islands in the built up areas. Management and maintenance specifications will be amended appropriately. One example is the Harrow Brook corridor, part of a circular route connecting Burbage Common, the Ashby canal and Hinckley town centre. Improvements are planned for the area by increasing the number of habitats. Retention and enhancement of flood storage ponds along the Battling Brook will also regulate the rate of water entering the main river system at times of flash flooding.

The implementation of a Green Infrastructure Network is a key priority and development that compromises its delivery will not be permitted. It is intended that plans to extend green areas and corridors will be carried out across the three zones of the borough to provide.

Commitment: To create and promote the use of green infrastructure and raise awareness of its importance for environmental, social, recreational,

psychological, health and economic benefits		
Specific actions	**Measure**	**Timescale**
Ensure parks are resilient to future seasonal ground conditions	Management plans incorporate potential effects of damage from flooding and urban heat	Ongoing
Introduce species planting which can withstand projected seasonal conditions	Reduction in seasonal bedding schemes	Ongoing
Promote the use of trees and vegetation that prevent rapid run off and therefore protect areas from flooding	Develop a tree and woodland policy and strategy for the borough	2014/15
Deliver the Leicester, Leicestershire and Rutland Biodiversity Action Plan	Assess actions identified in the BAP and incorporate into HBBC policies and plans	Ongoing
Refresh the Council's Green Spaces Delivery Plan	Implement management site specific management plans	2013/14
Ensure that the habitat and associated diversity is maintained or compensated for within development plans	Incorporated into Local Plan 2006-2026	Ongoing
Seek to negotiate and improve access to sites which are currently inaccessible	Create and improve Green Corridors throughout the Borough	2017 and ongoing