



Buckinghamshire & Milton Keynes
Natural Environment Partnership

©AdamJamieson

Our Environment

Buckinghamshire and Milton Keynes: **State of the Environment Report** July 2016

Buckinghamshire and Milton Keynes Natural Environment Partnership
in collaboration with Natural England and
The Chilterns Conservation Board

Local Nature Partnerships: what and why?

©AdamJamieson

What are “Local Nature Partnerships”?

- In June 2011 the UK Government published the Environment white paper *‘The Natural Choice: securing the value of nature’*.
- The *White Paper* highlighted:
 - **Continued loss of biodiversity; and fragmentation of our natural environment** (development can fragment ecological systems geographically, making them less resilient to threats such as climate change); and
 - **The need for healthy, well-functioning and connected networks of ecosystems** to provide us with economic and social benefits.
- A clear message of the White Paper was the need for **coordinated action and to work across sectors in a joined up, strategic way to help manage the natural environment** and put the value of nature and its benefits to our economy and society at the heart of decision-making.
- So the White Paper established **Local Nature Partnerships (LNPs) to**
 - strengthen local action
 - develop a vision for the local environment
 - champion its interests; and
 - better integrate environmental objectives with social and economic goals.

Why do we need the Buckinghamshire and Milton Keynes Natural Environment Partnership? (the NEP)?

- The NEP is one of 48 LNPs in England and **works to bring people and projects together** across Buckinghamshire for the benefit of the environment, our communities, our economy, health and wellbeing.
- The NEP was formally recognised as a Local Nature Partnership by The [Department of Environment, Food and Rural Affairs](#) (Defra) in June 2012, and is chaired by Sir Henry Aubrey-Fletcher.
- [Board members](#) come from the health, education and business sectors alongside local government, governmental and non-governmental environmental bodies.
- The NEP’s work is structured around **four themes**:
 1. **Advocacy and policy:** We work in partnership to provide a collective, co-ordinated voice to champion the Buckinghamshire environment in decision-making, raise awareness of the value of the environment, promote coordinated working and provide a platform to share best practice.
 2. **Promoting the environment as an economic asset and driver of growth:** We work with others to look for opportunities to deliver social and economic outcomes and aim for a prosperous economy supported by, managing and protecting its “natural” capital.
 3. **Working at the landscape-scale: more, bigger, better and joined.** We aim to restore and connect habitats across the county to make wildlife more resilient to climate change and other pressures.
 4. **Connecting people and nature:** we look to promote and highlight the health, wellbeing and quality of life benefits of accessing and enjoying the natural environment.

Foreword

©AdamJamieson

The Buckinghamshire environment is changing.

- **We are experiencing a period of unprecedented growth in Bucks** and associated pressures - housing demand; new infrastructure.
- **A healthy natural environment underpins our economy**, our health and well-being, our communities and landscapes, as well as having its own intrinsic value.
- **Yet our ecosystems are already under pressure** from multiple sources – including damage caused by development (e.g. river straightening, disconnection of rivers and floodplains); habitat fragmentation; the decline in pollinators; pollution in water bodies; invasive non-native plant and animal species; climate change; changing farming practices (e.g. under-grazing of grassland; agricultural and other diffuse sources of water pollution)
- **Growth and development poses potential threats to the Buckinghamshire environment** and to the benefits it provides to us
- **With development comes the need – and potentially the opportunity - to influence** the location and type of development, to minimise or offset the impacts, to connect and improve Buckinghamshire’s natural assets and the benefits they provide us with, and to better connect people to their environment.

There has never been a more exciting, important and relevant time for the work of the NEP than now.

- **The NEP brings together people, best practice and projects** from right across Buckinghamshire and Milton Keynes, across sectors and areas of expertise, to review the threats and take best advantage of the opportunities to protect and enhance the environment, and thereby create multiple benefits for our economy, health and wellbeing - and ensure our environment is properly accounted for in strategic decision-making.

This report for the first time brings together a wide-range of County-scale environmental and related information. Gathering in one place the most up-to-date information provides:

- A timely baseline health-check on the quality of our natural “assets”;
- An overview of how we currently make use of those assets; and
- Implications for the future.

Our report highlights in particular the need for action to

1. **Improve the quality of Buckinghamshire’s natural assets** - including the extent, condition and linkage between our *wildlife habitats, including priority habitats and Local Wildlife sites*; the status of our *rivers and chalk streams; and air quality*.
2. **Reduce average energy demand & encourage cleaner energy sources to combat climate change.**
3. **Improve consumption of resources, waste generated and recycling rates**
4. **Ensure development seeks and provides opportunities to improve health and wellbeing of our communities** – e.g. access to high quality green space through development.
5. **Strengthen links between healthy living and the environment; and the economy and the environment** e.g. to encourage physical activity by connecting people to conservation; encourage visiting the environment.
6. **Improve data and data availability.** To avoid the scenario that “what gets measured gets done”, better data is needed in key areas where action may be needed, for example **species trend data, flood risk and consequence monitoring, condition of Local Wildlife Sites and priority habitats, and progress towards meeting Biodiversity Action Plan targets.**

We are grateful to all those who have provided advice, assistance, support and data for this report (see final slide). We look forward to using the information as a baseline for future monitoring, and to direct future work.



Sir Henry Aubrey-Fletcher, *Chair, Buckinghamshire and Milton Keynes Natural Environment Partnership*

July 2016

Objectives

- Baseline – provides information for future tracking and monitoring
- Visioning – strategic overview to guide where to focus efforts; and to aid decision-making
- Raise awareness
 - Status and value of the environment (our “Natural Capital”)
 - Multiple benefits - the importance of the environment for society, communities, individuals and their mental and physical health and wellbeing; to support our economy; and for landscape, wildlife and conservation
 - The Buckinghamshire and Milton Keynes Natural Environment Partnership and its work



Buckinghamshire & Milton Keynes
Natural Environment Partnership



©AdamJamieson

Summary of main findings

1 How healthy is our environment?

Summary

Quality and status of our natural assets

Indicator	Importance	Current status	Trend (where available)
Priority habitat extent	Nationally identified as habitats that are valuable for conservation of biological diversity. Extent and condition targets set nationally (Biodiversity 2020 strategy) and within Bucks.	Bucks and MK has less priority habitat than the average English county . Priority habitat as % of land area: Bucks and MK: 9.7% of land area England: 14% of land area	n/a
Species in wider countryside (Birds and butterflies)	Tracking populations of key species gives early warning of impacts of environmental changes, and of the effectiveness of conservation action. Taking action sooner can prevent higher costs if left (e.g. pollinators provide a free service – without them it would be expensive and time-consuming to pollinate crops).	National data shows long-term declines in breeding woodland and farmland birds and butterflies of the wider countryside (see England Natural Environment Indicators) <i>Species population trend data for Bucks in development</i>	n/a <i>Data, including trend data, needs improving</i>
Air quality for human health	Costs to NHS: adverse impacts on public health caused by poor air quality costs the UK economy more than £20bn per year (around 16% of current annual NHS budget). Royal College of Physicians Report, Feb 2016	Health-based air quality objectives are being achieved except in the 7 Air Quality Management Areas across Buckinghamshire and MK. These are designated by authorities and all due to elevated nitrogen dioxide emissions from traffic .	n/a
Water quality	EU Water Framework Directive (WFD) sets high quality water standards . Better water quality means lower water clean-up costs	Only 8% surface water bodies in Bucks and MK are assessed as achieving “good” status , compared to 21% nationally and a target of 100% by 2015/ 2027. Chalk streams: 0% “good” in Bucks compared with 23% nationally.	n/a

Good wildlife habitat in Buckinghamshire is precious, fragile and in short supply : ***we must focus on conserving, connecting and expanding it*** – in line with the [NEP’s Biodiversity Action Plan](#), emerging *Green Infrastructure Principles* and good practice.

Not all of Buckinghamshire’s countryside is deemed a “priority” in biodiversity terms. But all wildlife habitat has a part to play in creating ecological resilience to withstand and respond to pressures like climate change and development.

Compared with other English counties, **only a small proportion of Buckinghamshire is nationally or internationally designated for its wildlife interest** (areas designated as a Site of Special Scientific Interest or Special Conservation Areas). **22.5% of Buckinghamshire lies within the Chilterns Area of Outstanding Natural Beauty (AONB)**– which are designated for their natural beauty and are recognised as amongst the finest landscapes in the UK.

Buckinghamshire has a good network of Local Wildlife Sites but they are vulnerable to neglect, inappropriate management and impacts of development; ***there is a need for better support for owners / managers of these sites.***

Health-based air quality objectives are being achieved in Buckinghamshire except for where Air Quality Management Areas have been identified – which are mostly in or around the major transport routes **due to nitrogen dioxide from vehicle emissions**. Air quality could be affected by construction work and lorry routes associated with HS2. **Meanwhile aerial-source pollutants from agriculture, industry and flight adversely affect wildlife and biodiversity.**

Fewer than 1 in 10 of our surface water bodies in Buckinghamshire achieve the “good” status required by EU targets. None of Buckinghamshire’s chalk streams meet these objectives (yet 23% do nationally) . ***There is a need to focus on improving water quality by reducing pollution and abstraction*** pressures through demand reduction and development of new water resources.

2 How do we use our environment? (1 of 2)

Energy Indicator	Importance	Current status	Trend (where available)
Domestic energy consumption – electricity and gas	UK relies on fossil fuels for energy supply: this has recognised energy security and climate change impacts.	Electricity and gas consumption in Buckinghamshire households has reduced. Despite the trends, Chiltern and South Bucks use more gas per household than any other districts in England. MK is the most efficient area in Bucks (newer houses).	Improving ● (In line with national trends)
Non-domestic energy consumption Reflects wider economic output as well as industrial and commercial activities: so area-by-area comparison inappropriate.	NB - targets for energy relate to carbon emissions rather than the amount of power used.	Electricity use remains below regional and national averages in the Districts; MK much higher demand reflecting industry use. Bucks is using less gas than national average. There is a broad spread between authorities; upward trend in South Bucks.	Mixed ~
Renewable energy – % electricity consumed in Bucks that is met by renewables	Cleaner form of energy than fossil fuels. UK climate change target 15% energy needs from renewables by 2020. Electricity target: 30% by 2020 (14% by 2014)	Only 11% electricity consumed in Bucks is met by renewables (2014) Far short of national targets. Reliance on landfill gas to meet current levels (83%)	n/a
Micro-generation	Provides only a small proportion of energy needs, but indicate attitudes towards energy use.	Huge growth – from a low base. Over 99% Bucks micro-generation capacity is solar PV. Reduced Govt incentives likely o slow growth. Need to encourage other forms of micro-generation.	Improving ● (In line with national trends)

Summary

In line with national trends, **domestic energy consumption** (electricity and gas) is **reducing**. Milton Keynes is the most efficient authority in the county – reflecting newer housing. However, **Chiltern and South Bucks use more gas per household than any other districts in England.**







Non-domestic energy use tends to reflect industrial and commercial activities in an area. Less electricity is used in Bucks for non-domestic purposes compared with regionally and nationally; and overall Bucks is using less gas than nationally, but this varies by authority and economic output.

Overall, **only 11% of electricity consumed in Buckinghamshire on average is met by renewables.** This is far short of the national 2020 target (30%) and the 2014 interim target (14%). There is also a **reliance on landfill gas** to reach the 11%. With more waste being diverted from landfill, **Buckinghamshire is at risk of not doing enough to meet national renewables targets. Buckinghamshire needs a watchful eye on landfill gas contribution to Bucks energy needs and should encourage other forms of renewables to meet the targets.**

Renewables must be supported by energy efficiency measures (homes and appliances) *to address future energy challenges and reduce energy demand. Energy efficiency should be a priority both for future housing growth alongside retrofitting to improve the efficiency of existing housing (which is likely to account for 80% of the 2050 energy efficiency market despite new-build activity).* Energy demand management and energy storage will become increasingly important – at the same time as making sure keeping warm is affordable.

Whilst the picture for micro-generation has been positive, it only supplies a small proportion of energy needs. With incentives for solar PV cut, then **to keep improving, other forms of micro-generation should be encouraged.**

2 How do we use our environment? (2 of 2)

Indicator	Importance	Current status	Trend (where available)
Total waste generated	Reducing waste lowers demand for resources and amounts to landfill.	Slight increase in Bucks (household and municipal) In line with national trends	Deteriorating 
Recycling	Reduces demand for scarce resources and waste to landfill	Household waste: 56% recycled. Exceeds national rates (45%) and UK and EU targets (50% by 2020). Municipal waste to landfill: down since 09-10	Improving  Improving 
Fly tipping (Detection rate = ratio of clearances to casefiles)	Partly indicative of changing attitudes towards environment and effectiveness of fly-tipping campaigns.	Number of fly-tips and tonnage of waste disposed of have been declining Fly tip detection rates have moved away from ambitious target in recent years.	Improving  Deteriorating 
Average water consumption per customer	Removing water affects water quality & treatment costs. The less we use, the less we remove.	UK average: 150-160 litres per person per day MK average: 133 litres/day	n/a
Carbon emissions	Carbon Dioxide (CO2) is a potent greenhouse gas and makes up 82% of the UK's greenhouse gas emissions. UK has targets to reduce emissions and help prevent damaging climate change.	CO2 emissions per capita in Buckinghamshire (excl MK) are 9th worst of all English counties - (6.8t/CO2 p.c.) - higher than the regional and English average. Milton Keynes had per capita emissions in line with the combined Bucks Districts.	Improving 

Summary

There has been a slight **overall increase in waste generated** in the county (household and municipal) recently. While in line with national trends, the anticipated unprecedented **growth in Buckinghamshire risks accelerating this trend.**

The household waste recycling rate in Buckinghamshire is 56%. This exceeds national rates, the UK and EU 2020 targets, and is above Hertfordshire and Northamptonshire – but Oxfordshire achieved 61% (2014-15 figures).

Buckinghamshire has far more municipal waste going to landfill in the Districts, than is the case nationally. **More needs to be done to divert municipal waste from landfill.**

A successful anti-fly-tipping campaign and a focus on detection by *The Waste Partnership for Buckinghamshire* has seen both the **number of fly-tips and tonnage of waste decline in the Districts.** BCC estimates the net savings from reduced fly-tipping is likely to be £3m in the last 12 years.

As the county grows, avoiding and reducing waste and encouraging more recycling and diverting municipal waste from landfill becomes even more important. Improved resource management is needed - and better public awareness of waste avoidance and re-use.

With water consumption, metered water customers use less water. **Supporting water-saving methods**, including the take-up of water meters, will reduce consumption, improve water quality and reduce water treatment costs.

Buckinghamshire has particularly high domestic CO2 emissions and high transport emissions which are both obvious targets for reduction. Combined with **very low industrial CO2 emissions**, overall, the county (excluding MK) ranks **9th worst of all 27 English counties.**

3 How do we benefit from the environment? (1 of 2)

Multiple benefits / “services”: what the environment does for our health and wellbeing, society and the economy.

Benefit	Indicator	Importance	Current status	Trend (where available)
Natural health service	Proximity of households to large-scale green space (2 ha, 20 ha, 100 ha and 500 ha)	Access to green space directly affects health and wellbeing – and productivity.	Some areas are relatively-well provided for. Aylesbury Vale is the most deficient in accessible large-scale green space (nearly 70% households met none of the accessibility requirements).	n/a
	Area of urban green space of 0.25 ha and over in Aylesbury, Chesham, and High Wycombe	Access to green space directly affects health and wellbeing - and therefore productivity. Provision of green space to encourage activity is an important way to improve adult health – with corresponding savings to the health service, employers and productivity gains.	Over 1,000 ha urban green space in over 350 sites across Aylesbury, Chesham and High Wycombe. Most is accessible green space. There are pockets of low provision in each of Aylesbury, Chesham and High Wycombe. High Wycombe has the highest proportion of local-scale green space of these 3 urban areas.	n/a
	How active is the NEP adult population? <i>The estimated direct cost of physical inactivity to the NHS across the UK is over £0.9 billion per year.</i>	A healthy lifestyle means lower risk rates for e.g. heart disease and stroke. Physical activity taken outdoors can improve people’s connections with the environment.	62% of the Buckinghamshire adult population takes “regular” exercise – improving, and above regional (59%) and national (57%) levels. 21% Bucks adults are inactive - better than south east and nationally; improving since 2012 (27.6% MK).	Improving ●
	Health walk uptake	Help encourages mobility. Potential to improve appreciation of local countryside.	30% increase in footfall 2012-14 (excl MK) Wycombe has the most uptake; South Bucks the least.	Improving ●

Summary

Access to large-scale green space data shows that Aylesbury Vale is the most deficient.

This directly affects health and wellbeing and productivity, costs to business and the health services, etc.

At the smaller-scale, **most of the area of green space** in Aylesbury, Chesham and High Wycombe (0.25 ha and over) is “**accessible**”, although there are pockets of low provision in each urban area.

Local Planning Authorities must be mindful of the deficiencies in access and provision of local-scale and large-scale green space when planning for future and providing for current populations – especially in urban areas. New green space is likely to be needed and should be provided in line with the [NEP’s Green Infrastructure Vision and Principles for Buckinghamshire and Milton Keynes](#).

The Buckinghamshire Districts’ adult population is generally fitter compared with regional and national levels, and this is improving. Milton Keynes scores slightly less favourably. **Physical activity could be a useful way to connect people in the NEP area to their environment.** The increasing popularity of health walks (30% increase 2012-14) demonstrates this; and this is what the “[Active Bucks](#)” campaign builds on.

3 How do we benefit from the environment? (2 of 2)

Multiple benefits / “services”: what the environment does for our health and wellbeing, society and the economy.

Benefit	Indicator	Importance	Current status	Trend (where available)
Public engagement with the natural environment	Hours of conservation volunteering	Indicates public engagement with the environment. Practical activity also benefits health and wellbeing.	Organisations have seen increased volunteer hours over the past 3 years – by 38% (available data).	Improving
	Visits to the natural environment	Indicates public engagement with the environment. Practical activity also benefits health and wellbeing.	52% of the adult population of Bucks visit the countryside at least once a week (2014 – 2015) Higher than national (42%) and up from 48% in 2010- 11	Improving
Heritage	Number of planning-related heritage - evaluations in Bucks (including MK).	Heritage can provide habitats. Valued by public and faces similar threats as the environment. Affects planning for growth.	104 (2015 data) 81 (2010 data)	Increasing
Supporting the economy	Flood risk Management: number of properties at significant risk of river flooding. Annual flood damage costs in England are in the region of £1.1 billion.	Assists with planning for growth.	BCC operates a flood risk management strategy, as does MK Authority. 9,286 properties at risk of a 1 in 100 year flood across Districts and MK (2014 data).	n/a Data needs improving
	Visitor spend (data for Districts excluding MK)	A measure of benefit to the economy of visitors (not all to Bucks environment).	10.1m day visits to Bucks each year - £261m is spent. 1.1m overnight trips, over 2.6m nights, with £142m being spent. (2011-13 data)	Data, including trend data needs improving
	Skills in the green economy	Data in development		
	Businesses with an Environmental Management System	Data in development		

Summary

More hours are spent on conservation volunteering than 3 years ago in Buckinghamshire.

As might be expected, given the nature of the county, more adults in Buckinghamshire visit the countryside at least once a week than do nationally.

Both have obvious benefits to health and wellbeing and indicates a certain level of public engagement with the environment. **However, there remains considerable scope to increase the proportion of local population visiting the countryside and taking an active part in its conservation.**

There are **over 9,000 properties at significant risk of flooding across Bucks**, including MK. **Flood risk must be monitored and minimised for current properties at risk and for new properties, as Buckinghamshire grows.**

Day visitors to Buckinghamshire spend £261m; and 13% of those trips (as a straight proportion of spend, around £1.3m) relates to outdoor leisure activities such as walking, cycling, golf, or to “exploring” the area. **A further £142m** is being spent on 1.1m overnight trips. (Data excludes MK).

Conclusions

©AdamJamieson

The report highlights the need for action and proper preparation for development and population growth, as well as to improve current performance and provision, in the following areas:

1. **Improve the quality of Buckinghamshire's natural assets** where Buckinghamshire is far behind national levels and targets, and where each is at risk from new and continued growth and development:
 - **The extent and condition of our wildlife habitats - including priority habitats** – in line with the targets outlined in the [NEP's Biodiversity Action Plan](#); focusing activity in the Biodiversity Opportunity Areas (BOAs); as well as increasing connectivity between broader habitats for wildlife right across the county, from parks to road verges, local green spaces and farmland – which helps build ecological resilience to pressures including development and climate change.
 - **The condition of Local Wildlife Sites** - there is a need for better advice and support for those who own or manage Local Wildlife Sites in the county to ensure they are in good condition.
 - **The status of our rivers and chalk streams** – by reducing pollution and reducing abstraction, including demand reduction measures and water-saving methods such as the take-up of water meters;
 - **Air quality - by reducing NO2 air pollution** inside the Air Quality Management Areas (AQMAS); and working towards improving air quality outside the AQMAS.
2. **Reduce average energy demand and encourage cleaner energy sources to combat climate change:**
 - **Improve average energy efficiency** in homes and businesses
 - **Increase** to at least national target levels (30% by 2020) the proportion of **electricity consumed in Buckinghamshire that comes from renewable sources.**
 - **Encourage micro-generation technologies beyond solar PV**
 - **Focus on reducing CO₂ emissions per person in Buckinghamshire.** *The average per capita total CO₂ emissions in Bucks, at 6.8t, is nearly 3.5 times higher than the 2t p.c. stabilisation level that some proponents say is needed globally to prevent catastrophic climate change ([Committee on Climate Change](#)). It is also far higher than the 2011 global average CO₂ p.c. (4.9 tonnes – [World Bank data](#)).*

3. **Improve Buckinghamshire's consumption of resources, production of waste and recycling rates**
 - To **reduce overall waste** generated: needs improved resource management and better public awareness of waste avoidance / re-use.
 - To encourage recycling, so the amount of **waste recycled** is kept within national targets, despite population increases;
 - **To divert more municipal waste from landfill**
4. Ensure **development** seeks and provides **opportunities to improve the health and wellbeing of our communities.**
 - **Access to high quality green space through development:** Local Planning Authorities must be mindful of the deficiencies in access and provision of large-scale and local-scale green space when planning for future populations – especially in Aylesbury Vale. New green space is likely to be needed.
 - **Green space provision, protection, enhancement, connection and creation** should be carried out in line with the NEP's "[Vision and Principles for the Improvement of Green Infrastructure in Buckinghamshire and Milton Keynes](#)". Strategic-level green space should meet minimum "ANGSt" access requirements (a standard developed by Natural England and the Forestry Commission advocating accessible green infrastructure close to where people live) - and **supported by the planning system. Access to large-scale green space data shows that Aylesbury Vale is the most deficient.** This directly affects health and wellbeing and productivity, costs to business and the health services, etc.
5. **Strengthen links between healthy living and the environment; and the economy and the environment**
 - Encourage health walks and regular exercise in Bucks – **connecting people through physical activity to their environment;**
 - Linked to **encouraging visits to local Buckinghamshire green spaces,** and provide more opportunities to take an active part in conservation.

Next steps

1. Advocacy

- **The NEP will:**
 - **Seek endorsement** of the findings of the SOE report from within and beyond the NEP partnership, including the Buckinghamshire authorities and the Local Plan process;
 - Coordinate and encourage **actions** from delivery partners to take the lead in addressing the issues and areas of concern;
 - **Repeat the SOE report** exercise in c. 2 years, and then c. every 5 years thereafter – to identify trends and review work priorities

2. Work plan – to deliver change

- The NEP, its Board, Delivery Group and Task Groups, will consider each new publication of the SOE report, the extent of positive change or otherwise, and how that may **affect delivery priorities**.
- Each organisation that participates in the NEP will seek to ensure that the **work and priorities of its organisation align with taking appropriate action on the findings and issues raised in the SOE report**.

3. Data improvements (see next slide for full list): To avoid the scenario of “what gets measured gets done”, we acknowledge the need to improve data and its availability, particularly where action is needed.

- Suggestions for data improvements include:
 - **Priority habitat condition** (as well as extent)
 - **Species data**
 - **Progress towards meeting BAP targets**
 - **Flood risk** - data to better identify flood risks and consequences across Bucks; and to identify progress to mitigate flood risks
 - **Air quality impacts on wildlife and biodiversity** (not just on human health)
 - **Supporting the economy indicators** – e.g. skills in the green economy.

The NEP’s role in making use of this “state of the environment” report is to bring the findings together to the right audiences, and to bring people, initiatives and projects together at the right time to tackle the issues arising.

The time to act is now

Future development pressure provides challenges but also opportunities to improve Buckinghamshire’s environment. Done well, coordinated environmental improvement in Buckinghamshire and Milton Keynes can maximise the multiple benefits that the environment brings to our economy, health and wellbeing.

DATA IMPROVEMENTS

- We have made use of the latest available data robust enough to give a picture of the environment across Buckinghamshire. We will continue to monitor how this information changes over time.
- There are a number of areas where we would like to see data more readily available and/or indicators developed to help monitor change in critical areas:
 - Land use change over time: maps showing change in Buckinghamshire
 - Land quality (e.g. contaminated land)
 - Air quality – measurements of smaller particulates than currently is required – so-called “PM-2.5”s – something that Public Health England is promoting.
 - Air quality – impacts on wildlife and biodiversity
 - Green space in urban areas – *judgement criteria (how measure better?)*
 - Flood risk management – how to best measure risk and consequences of flooding (in development at Buckinghamshire CC) – and to better identify progress towards flood risk reduction.
 - Supporting the economy data – such as skills in the green economy and number (%) of Bucks businesses operating an Environmental Management System.
 - Population trends in key species in the wider countryside
 - Extent and condition of priority habitat (including accurate, up-to-date mapping). It is intended that progress within Biodiversity Opportunity Areas will be reported via the NEP Biodiversity Task Group
 - Condition of Local Wildlife Sites
 - Visitor spend in Buckinghamshire’s green spaces.
 - “Green pound” data – investment in energy efficiency, low carbon energy in stationary and transport infrastructure and increasing spend on electric transport.

DATA SOURCES AND FURTHER INFORMATION

Data sources are provided throughout the report. For further information, see [NEP website].

With thanks to individuals at the following organisations for providing / analysing data, information and analysis for use in this report:

- Anglian Water
- Affinity Water (website)
- Buckinghamshire County Council
- Buckinghamshire District Councils – Aylesbury Vale, Chiltern, South Bucks, Wycombe)
- Buckinghamshire and Thames Valley LEP
- Buckinghamshire Business First
- Buckinghamshire and Milton Keynes Environmental Records Centre (“BMERC”)
- Chilterns Conservation Board
- Chiltern Society
- DECC
- DEFRA
- Environment Agency
- Forestry Commission
- Geostore website
- Milton Keynes Unitary Authority
- Natural England
- Office for National Statistics (ONS)
- South East Midlands LEP
- Wildlife Trust - BBOWT