Zero Carbon West Berkshire

A discussion document to inform West Berkshire Council about the issues around implementing policies to make West Berkshire zero-carbon

produced by the

West Berkshire Green Exchange

May 2019

Foreword by Professor Sir Brian Hoskins, CBE, FRS

There is now a general agreement in the world that climate has changed because of human activity, that more change is inevitable and must be adapted to, and that the extent of additional climate change must be limited to as low a level as possible. In the UK, with cross-party agreement, a world-leading Climate Change Act was passed in 2008. This committed the UK to an 80% reduction in greenhouse gases from 1990 levels by 2050. However, since the international agreement in Paris in 2015, it has become clear that this is not enough, and the Government asked its advisors, the Climate Change Committee, to Report on whether and how the targets should be changed. Their report at the beginning of this month recommends that the UK target should be strengthened to zero net greenhouse gases by 2050. Even with the remarkable development of new technologies, this target is very challenging, and will require the involvement of everyone. In particular, it will require Government at all levels to put greenhouse gas reduction at the centre of all policy discussions.

In this context I warmly welcome the intensive discussions that have been taking place in the West Berkshire Green Exchange, and the thoughtful document that has emerged from them. I hope that West Berkshire Council will consider and discuss the very practical recommendations in it and put climate change mitigation at the centre of its policy making.

Brian Hoskins

Contents

Document Purpose

The purpose of this document is to provide West Berkshire Council with a discussion document with which to initiate the formulation of local policies to address climate change. It follows a conference on Zero Carbon held by the West Berkshire Green Exchange (WBGE) in November 2018. The WBGE is a formally-constituted voluntary organisation open to all who have an interest in addressing climate change. There is no membership fee nor any affiliation to any organisation. The WBGE is entirely apolitical.

What is Zero Carbon?

Zero carbon is a term used to denote a state of carbon neutrality in the sense that the amount of carbon delivered to the atmosphere as a greenhouse gas is balanced by the amount sequestered from the atmosphere and captured by the earth. There is a good definition on Wikipedia of carbon neutrality[1]. Zero carbon can be achieved by a combination of reducing the amount of greenhouse gases, especially CO_2, emitted, and offsetting what is emitted through carbon capture techniques which may be natural or man-made.

Why is Zero Carbon important?

The debate about man-made global warming, its causes and the mitigation actions required to keep it in control has been going on for over fifty years but it has intensified recently and "global warming" is now a term generally understood by the public. There can be little doubt about the science, the extent to which humans cause global warming, its effects on the planet and the natural world including humans, and the actions needed to mitigate it. Indeed there is very little doubt among scientists. 97% of actively-publishing scientists recognise that climate-warming trends over the past century are extremely likely to be due to human activities[2].

For the past 30 years or so a general recommendation from scientists has been that in the western world we need to reduce our greenhouse gas emissions (principally CO_2) to much reduced levels by 2050 from 1990 levels in order to keep the extent of global warming below 2°C above pre-industrial levels, an amount of warming that was considered manageable though not desirable. In the UK the amount of the reduction was expressed as 80% which approximated to each person reducing their emissions from 10 tonnes per year to 2 tonnes per year on average, a huge undertaking in itself.

The actions required to control global warming have to be taken by all communities across the globe if success is to be achieved. A series of international conferences in the past thirty years has sought to bring consensus for action between as many governments as possible. The most recent, in Paris in December 2015, was signed by almost 200 governments including the UK government, of which 195 had ratified the agreement by March 2019. They

1 https://en.wikipedia.org/wiki/Carbon_neutrality
2 https://climate.nasa.gov/scientific-consensus/

agreed to take actions necessary to limit global warming to well below 2°C, and to strive further to keep to a limit of 1.5°C [3].

In October 2018 the International Panel on Climate Change (IPCC) detailed the advantages of the 1.5°C limit and discussed the ways this could be achieved. The 1.5°C figure is an average across the planet, and 20% - 40% of the world's population lives in regions where, even if the average global rise is limited to 1.5ºC, the rise in the location where they live would be 2ºC or more[4]. The report "finds that limiting global warming to 1.5°C would require "rapid and far-reaching" transitions in land, energy, industry, buildings, transport, and cities. Global net human-caused emissions of carbon dioxide (CO_2) would need to fall by about 45 percent from 2010 levels by 2030, reaching 'net zero' around 2050. This means that any remaining emissions would need to be balanced by removing CO_2 from the air".

The UK's position

The UK government is a signatory to the Paris agreement and is thereby bound to put into effect the measures necessary to abide by that agreement. In 2008 it passed its own Climate Change Act which set a series of targets to be met en route to achieving what was then the overall target of an 80% reduction in greenhouse gas emissions by 2050. To date the targets have been met, but those set for the 2020s are not, on current forecasts[5], going to be met, and they were set before the IPCC revised its advice to say that global CO_2 emissions would need to fall by 45% by 2030. In other words, without further significant initiatives, the UK government will fall behind in its attempt to abide by its own law and the Paris agreement. Very recently, on 2 May 2019, the Government's advisors, the Climate Change Committee recommended that, in the light of the Paris agreement and the IPCC Report, the UK's target for 2050 should be strengthened to net zero for all greenhouse gases by 2050. This would be possible only if net zero carbon emissions was achieved well before this date.

The role of local government and local communities

Central government has a major role to play in achieving the climate change targets, in particular with its energy, transport and planning policies, but it cannot do it alone. Local government and local people must play their parts. Many of the initiatives required will be good for our health and our wealth but some will require behavioural change, and one of local government's roles will be to promote this change in behaviour which will go hand-in-hand with greater education on the reasons for the change. They will be supported

3 https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

4 https://www.ipcc.ch/sr15/

5 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/794590/updated-energy-and-emissions-projections-2018.pdf

by the general public who are increasingly joining interest groups or social media groups to demand change. The recent strike action by schoolchildren is one example.

Should West Berks Council declare a climate emergency?

In November 2018 the councils of two major cities, Bristol and Manchester, passed motions declaring a 'climate emergency' and setting targets aiming to be carbon neutral by 2030 and 2038 respectively. Since then, there has been a wave of Climate Emergency declarations by councils across the UK. For a full list see https://climateemergency.uk/ . Whether or not WBC does the same, there will be valuable knowledge to be learned from these other councils.

More recently, in May 2019, the UK parliament voted to declare a climate emergency in order for the country to reach zero carbon by 2050. We believe that target is complacent and that zero carbon by 2030 is both required and achievable. Logic says that if the declaration of a climate emergency is required in order to reach carbon zero by 2050, then it is definitely required in order to reach it by 2030.

There are two principal arguments for declaring a climate emergency in West Berkshire. The first is that it focuses policy makers and implementers and the general public on the need for urgent action of a kind that has not been known since the second world war and its immediate aftermath, which is what is required. The second is that for action on climate change to be successful it requires the local community, the nation and the international community all to drive in the same direction with the same degree of haste. West Berkshire should support the other communities that are showing that they understand the urgency of the situation by showing the same urgency. All communities are interlinked on this issue.

Recommended Policies

In summary, WBGE recommends that West Berkshire Council should recognise the urgent need for action at a local level in acknowledgement of the serious warning on climate change given by the IPCC in OCtober 2018, should declare its intention of achieving carbon zero by 2030 and should declare a climate emergency to do so.

WBGE offers, in the pages that follow in this document, some ideas for policies in the areas of the local economy, planning, energy, transport, food and waste, in order to achieve carbon zero. We welcome any further ideas.

Economic Policy Suggestions

1 Set up a Community Interest Company (CIC)[6], or similar form of ownership, to develop the former mill sites along the River Kennet in the District for micro hydro electricity generation. This form of ownership should allow joint ownership between the District Council, Parish Councils and local private investors.

2 Use a proportion of the profits from the above scheme to help alleviate energy poverty in the District by providing Zero Carbon levels of retrofit insulation to households in energy poverty. (In the absence of a preferred government scheme for this function)

3 Once those homes in energy poverty have been addressed the scheme could be extended to all homes in West Berkshire. (In the absence of a preferred government scheme for this function)

4 The above two items could be subject to a Green Deal type mechanism for repayment of the funds loaned but the energy poverty households would have a much lower rate of repayment than the other households. Any interest charged should be at or about bank base rate to ensure affordability.

5 Once established the CIC, or similar, should investigate other possible renewable energy sources within the District for exploitation.

6 WBC should investigate the various Green Bond very low interest finance schemes available in the City of London for funding Sustainable development as an alternative form of funding for the various Zero Carbon initiatives.

[6] https://en.wikipedia.org/wiki/Community_interest_company

ZERO CARBON WEST BERKSHIRE

May 2019

Planning Policy Suggestions

1 Using the National Planning Policy Framework (NPPF), increase the Building Regulations Part L requirements to Association for Environment Conscious Building (AECB) Silver Standards or similar from 2020.

2 Using the NPPF, increase the Building Regulations Part L requirements to Zero Carbon Standards from 2025 incorporating mandatory AECB Gold Standard or PassivHaus standards of fabric insulation.

3 In order to facilitate paragraph 2 above, all new houses should be electrically powered and have solar panels, solar water heating and ground source/air source heat pumps by 2030.

4 Require developers to maximise the number of houses with good solar orientation from 2020. Good solar orientation would be for the main windows of the house to face within 20 degrees of south and the number so orientated should be say 75%.

5 Require developers to provide serviced plots of varying sizes for sale to self-builders at a fair market rate suitable a range of house sizes from "Tiny Homes" upwards from 2020. An initial requirement of say 10% from 2020 and 20% from 2025.

6 Provide, by 2020, a Park and Ride scheme from Greenham to Vodafone and restrict new business parking in the town centre. Use fossil fuel powered buses initially to be replaced by electric vehicles (Trolley buses or battery powered vehicles) at a later date. (Possibly as part of the New Greenham Park LDF)

7 Provide a Park and Ride scheme from Thatcham to Speen as above by 2025.

8 Provide a multi-mode transport hub at Newbury Railway station to replace existing provision by 2025.

9 Require walk, bike and bus friendly design of new housing as a priority over car friendly design with the provision of fast charging facilities for cars in every house from 2020. Reduce the number of car park spaces required per house where walk, bike and bus friendly design is used.

10 Require BREEAM Excellent and energy positive (more energy than the development requires for its own use) design for new commercial development from 2020.

11 Require all houses to be energy positive by 2030.

12 Educate local shops and offices about the energy efficiency of turning lights off overnight and keeping doors closed as much as possible.

13 Source land that could have trees planted on for carbon capture. This could reduce the amount of lawn areas in Newbury and Thatcham which would use less carbon intensive energy to maintain. This could also include hedges along roadsides, particularly the B4009.

14 Develop a Plant for the Planet academy scheme to both plant more trees and educate the local school children about climate change.

ZERO CARBON WEST BERKSHIRE

May 2019

Energy and Transport Policy Suggestions

Note some of the policies herein have already been suggested in the Planning and economics papers.

ENERGY

1 The Energy Hierachy is minimise, generate from green sources and only then to generate from high carbon sources as a last resort.

2 Much of the energy policy has been included in the Planning (housing insulation and energy generation) and Economic (Local community owned generation, Green Deal type policies, generation on industrial buildings) policy suggestions.

3 Develop local micro hydro schemes between the River Kennet and the Kennet and Avon Canal in as many places as possible.

4 Develop wind energy schemes in places where suitable sites can be found.

5 Set up a home insulation analysis scheme so homeowners can retrofit Zero Carbon standards of insulation.

6 In the absence of a government run scheme, set up a home insulation scheme to insulate all houses in West Berkshire to a minimum level of 80% energy saving using the cheapest finance available. Make a start with Housing Association houses first issuing contracts on a street by street basis to ensure the best prices. Private houses within the area of a HA contract should be encouraged to join the contract with the threat of a much higher price at a later date. Payment for the work to be collected on the same basis as the now defunct Green Deal with repayments being at a level where the savings more than pay for repayments and are levied through the electricity bill and a continuing charge on the property through succeeding owners.

7 In the absence of government subsidies for solar panels, set up a community solar panel scheme where residents can group together to buy discounted solar panels.

8 Install solar panels on all council buildings.

9 Start courses in building insulation at Newbury College to ensure the above work is carried out to the high standard required.

10 Develop an energy from waste plant with carbon capture and storage and district heating.

11 Set up energy producing gyms in the gyms in the sports and leisure centres in West Berkshire.

12 Set up vertical wind turbines at suitable points in roads.

TRANSPORT

1 Adopt a travel hierarchy for West Berkshire as below

For personal transport

A Avoid Travel by ensuring good internet access

B Walk or Cycle

C Use Buses or Trains

D Electric Vehicles

E Car Share

F Use of Fossil-fuelled Cars or Taxis.

A Avoid Travel by ensuring good internet access

(i) Ensure the availability of high speed broadband throughout West Berkshire.

(ii) Encourage employers to offer home working as a full or part time option.

(iii) Encourage employers to offer staggered hours of work to employees.

(iv) Use planning options to enforce some degree of home working and staggered hours options.

B Walk or Cycle

(i) Develop a town master plan for waking routes and cycleways and require developers to allow for these routes in their estate layouts so that walking and cycling become an integral part of the transport structure of the town.

(ii) Look at connectivity of routes, and the segregation of cycles and motor vehicles to reduce barriers to cycle use. For instance, a route for leisure cyclists between Thatcham and Newbury that avoids principal roads should be a priority.

(iii) Look at developing cycle routes using some of the old railway network such as the Lambourn valley route, the old Didcot Newbury line and the Southampton Newbury line which might be possible and using CIL coffers and national grants to pay for instatement of routes.

(iv) Conversion of existing footpaths to bridleways would also bring benefits for those more adventurous who did not wish to cycle along busy roads.

(v) Require installation of electric cycle charging points in new development, both commercial and housing, and at town centre car and cycle parks.

(vi) Provide more secure cycle parking with charging points and require employers to do so.

(vii) Require employers to provide shower and changing facilities for employees.

(viii) Encourage walking or cycling buses for schools where children are picked up from their houses by a fellow parent and a group walk or cycle to school together.

(ix) Provide a 'cycle to school' vouchers scheme for secondary school children.

C Use Buses or Trains

(i) Establish a multi-mode transport hub at the railway station to facilitate ease of travel both locally and nationally with cycle charging and changing provision as above.

(ii) Encourage the early adoption of electric buses perhaps powered by the local CIC's micro hydro plants.

(iii) Look at ways of improving bus provision locally such as using buses to deliver goods and parcels to hubs along the rural routes.

(iv) Provide bus lanes where possible to speed up public transport at the expense of private transport.

(v) Provide electric buses for rural school children.

(vi) Provide free bus travel for teenagers.

D Electric Vehicles (EVs)

(i) Look at ways to encourage EV use such as offering free parking to electric vehicle owners using a green permit scheme like Milton Keynes Council for an initial period.

(ii) Develop charging hubs like Dundee council and encourage taxi-firms to invest in electric vehicles

(iii) Encourage electric vehicle interest by setting up an Electric Vehicle Experience Centre like Milton Keynes or more frequent and easily accessible experience sessions such as Octopus operate.

Note:- the above two items could be powered by the local CIC owned micro-hydro scheme proposed in our Economics paper.

(iv) All new properties with parking to have three phase electric charge-points for the number of parking spaces as standard. The promotion of dedicated on-street parking and charging facilities.

(v) Encourage Co-wheels to place electric vehicles in the villages.

(vi) Encourage charge points at supermarkets, railway stations etc.

(vii) Offer salary sacrifice schemes to all public employees provided they adopt electric cars.

(viii) Petition Government through Richard Benyon to remove car tax on electric vehicles, VAT on EVs etc.

E Car Share

(i) Encourage car share through the allowance of multi-occupancy vehicles in bus lanes.

F Use of Fossil-fuelled Cars or Taxis.

(i) Introduce a Zero Carbon zone to the town centres[7] to push fossil-fuel vehicle owners onto Park and Ride and electric taxis.

(ii) Ban fossil fuel taxis after say 2025.

(iii) At junctions where road users typically wait for a long time, install signs reminding people to turn off their engines.

[7] The towns in the area are Hungerford, Newbury, Thatcham and Theale.

ZERO CARBON WEST BERKSHIRE

May 2019

Food and Waste Policy Suggestions

A. Food

According to SUSTAIN (https://www.sustainweb.org/sustainablefood/), there are various steps that should be taken ensure a sustainable food supply chain. Cutting down the amount of food that is wasted, reducing overall consumption of meat and buying local, seasonal and environmentally-friendly food are key to achieving this. Sustainable food supply supports local economies, helping them to thrive and giving local employment. In addition, sustainable farming promotes diversity of plants and improves the welfare of domestic animals. It reduces waste of food produce and natural resources, which helps towards mitigating climate change. There are significant social benefits in developing the local food chain such as improving food quality and safety and providing education for communities. There is some evidence that less intensive farming increase trace element content of food, which may provide important health benefits.

The proposals below provide a starting point for improving our local food supply and for working towards Zero Carbon West Berkshire.

1. Promote local food supply chains by encouraging the use of local markets in Newbury, Hungerford and Thatcham. The main market in Newbury has fared less well in recent years but could play a key role in promoting local food. West Berkshire Council should work with Newbury Town Council to re-invigorate these markets.

2. Encourage the production and sale of local food produce through support for local growers and farmers. The monthly farmers markets do this but much more could be done in this area. It would require working closely with town and parish councils. Implement a programme that develops consumer understanding of the seasonality of foods and the advantages of buying local produce.

3. Develop co-operative shops where producers can sell their goods directly to the public. We have several local stores run by communities for the benefit of the local community. This could be extended. There are a number of initiatives across the UK. In particular, Sustain Web has resources to support the setting up and running of food co-ops.

4. Set local business rates at a level that is advantageous for local businesses compared with national chains. This should be applied to food and non-food local businesses. The Council provides Discretionary Relief to local business subject to certain criteria. Eligible businesses have to apply for this relief so should be actively encouraged to do so. However, the relief is based on the rate paid prior to the recent revaluation and is tapered over 4 years. The Council should lobby Government individually and collectively through the Local Government Association to have more freedom to support local businesses.

5. Promote the use of allotments and growing food in home gardens. Liaison with town and parish councils will be part of this, as this is their responsibility. But WBC could identify council and private land which could be made available for more allotment sites, and help fund NTC to make

these available at reasonable rents for a wide selection of the community, including groups. They could jointly fund ongoing workshops to help people get started and address common issues.

6. In schools, promote use of local food products, growing projects and allotments. Many children and even their parents have limited knowledge as to where food comes from and even less experience in growing their own. There is an important opportunity to help schools with local growing projects. As far as possible, schools should provide food that has been produced locally. Where possible, children should be taken to visit the school's food suppliers to learn about how that food is produced and the supply chain. It is essential that children learn the where their food comes from and learn to value it. In villages, in particular, allotments may be under-used. This gives an opportunity for school children to have direct experience of growing food.

7. Promote the 'Love Food, Hate Waste' campaign. This campaign promotes the careful use of food and how to reduce food waste. Figures from the Waste and Resources Action Programme (WRAP) show that the UK wastes about 10 M tonnes of food per year. The campaign shows how food waste can be reduced through careful purchase behaviour, preparation and using leftovers. In the recent past, representatives of the Campaign have presented seminars to local communities – these should be continued.

8. Encourage a reduction in meat consumption. Meat provides many important nutrients, however its mass production has a significant impact on the environment. Additionally, over-consumption of meat can lead to health problems. The best advice indicates that meat should be eat about three times per week.

9. Have planning controls on advertising of 'junk' food, particularly to prevent large, illuminated signs near schools. Large billboards and illuminated signs that can be used to advertise so-called junk food should not be sited in sensitive areas such as near schools, playgrounds and other areas where children may see them. The Council should implement a planning policy to control the siting of these signs.

B. Waste

Producing waste is to squander limited resources. Disposing of unwanted materials of all kinds leads to contamination of the environment and causes harm to life. Decomposition in landfill releases methane into the environment. This gas is 20 times more potent a greenhouse gas than carbon dioxide. The raw materials used to produce all manner of goods, such as cars, domestic goods, buildings are limited and will run out eventually. We need to conserve these resources and switch to reusing and recycling much more than at present. There are a number of things that can be done to improve this situation. For example, we should ban putting reusable, recyclable and compostable materials into landfill. Incineration, which is used to dispose of much of the waste in West Berkshire, uses gas, a fossil fuel, to burn waste that is mostly derived from fossil fuel products. This increase the carbon dioxide burden on the atmosphere.

Below are some starting points towards Zero Carbon West Berkshire.

1. Renegotiate the contract with Veolia to improve the level and range of recycling (NB, this may require coordinated action with other local authorities in light of Veolia's refusal to renegotiate

elsewhere). Find ways of reducing the amount of materials going into both landfill and incineration and increase recycling rates. A target of, say 75% within 5 years should be achievable.

2. Give clearer guidance and incentives to help residents recycle more. Whilst the Council does provide information it is not as accessible as it could be. In addition there are many households in West Berkshire where recycling is problematic, for example in flats. Consider possible penalties for those who deliberately avoid recycling. Implement a programme of education on the benefits of recycling and how to recycle.

3. Promote the hierarchy of waste: 'refuse', 'repair', 'reuse', 'recycle'. Too many goods come wrapped in materials that cannot be recycled easily. This ranges from various films and packs for food items to DIY goods, such as paint pots, electrical goods etc. It would be helpful to carry out a survey of retail outlets to determine the scale of the problem and develop solutions with retailers.

4. Install water fountains in towns, villages and schools. One of the major sources of plastic waste is discarded water and drinks bottles. If water fountains were generally available across West Berkshire, together with a campaign to promote their use, this could go a long way to reducing such waste.

5. Change consumer behaviour through the use of nudge psychology. Central government has used and is using this to help change people's behaviour in a beneficial way. The Nudge Unit has been set up within the Cabinet Office to tweak communications that encourage people to pay taxes on time or take medications, for example. The local council should similarly use nudge psychology to reduce pollution from discarded waste. A number of studies have shown that this approach can be very effective.

6. Provide more education on recycling. This links with the previous point. Whilst many people may know what they should or should not do, many do not put it into practice. Education is needed to show people that recycling and related actions are of not only of great benefit but essential in order to maintain lifestyles.

7. Provide more points where a wider range of items and materials can be recycled. At present the range of things that can be recycled is limited with significant amounts of re-usable materials going for incineration or landfill. WBC and businesses can draw on support from a number of organisations, including the Waste and Resources Action Programme (WRAP). Large companies should be encouraged to sign up to the Courtauld Commitment, details of which can be obtained through WRAP. This organisation has information about waste reduction for all businesses and consumers.