

## **Appendix 1 Quick Wins and Potential Longer-Term Projects**

### **Quick Wins**

The following is a list of proposals, some of which are been worked upon at time of writing and some are new. Either way, they are list of projects that we intend to move on relatively quickly to help us deliver our ambitious targets.

#### Food Waste

One of the early gains raised in staff discussions was the realisation that many of the City Council's own food and drink outlets were not sending their food waste for anaerobic digestion. It is also clear that there are other outlets in the City Centre that we are now the landlord of, that are producing food waste which is not going to the local anaerobic digestion facility at Stoke Orchard. We hope therefore to increase the quantity of food sent for digestion to be made into 'Green Gas'.

#### PV on Council Buildings

Since the demise of the Feed-in Tariff (where generators were given a guaranteed income for low carbon electricity) the economics of Solar Photo-voltaic have been at best marginal. However, where there is a useful daytime load, then they can still be a cost-effective low carbon option. At the time of writing, a PV system is being installed at the Guildhall, this took advantage of the need to re-roof the building but it shows where there is a daytime demand it can still make economic sense (this will pay itself back in around 7 years). There are other Council-owned buildings which may be able to take PV, though of course historic buildings will present certain difficulties. Buildings managed by partners also present some complexities as there are issues around who gains from any saving made (some of our biggest emitters are managed by Aspire for instance). We will appraise our building stock and where there is a useful daytime load and a business case constructed, we will invest in this technology.

#### Electric Cars/Bikes

As the grid becomes less dependent on fossil fuels, then E-cars make climate change sense. They also have co-benefits of local air quality and are quieter. Electric bikes due to their weight are phenomenally efficient and use a tiny amount of carbon per kilometre travelled. We hope to amend our staff travel contract with Enterprise to include e-cars and bikes (we have recently acquired a new electric car). The latter has been tried before and will need some sort of training associated with it to convince staff that it is a viable, quick and low carbon means of getting around the City.

### EV charging points

Without charging points there will be no revolution towards E-car use. We will ensure that where opportunities arise such as in new car parks etc that charging points will be incorporated and that planning policy shall promote their uptake.

### Tree Planting Projects

The City Council has a good reputation for planting trees. We will continue to carry out planting schemes and managing them afterwards. We will plant a new Arboretum in Westgate Park.

### Natural Flood Management Projects/Rain Gardens

We are currently running a project to manage flood flows in the upper reaches of the river Twyver. The Environment Agency is very satisfied with this and if they offer to extend the project, we will do so. There are useful co-benefits with this scheme around silt load as it comes down the catchment, and wider biodiversity gains. We will also work with Gloucestershire Wildlife Trust in delivering some rain gardens as examples of what can be done to manage flows and increase biodiversity.

### Insects in the City

We are doing a good deal to increase biodiversity in the City, for example the ESIF work currently being rolled out and meadow management of some areas of open space. This is essential if wildlife is to be resilient enough to stand up to increased temperatures and more extreme weather events. 'Insects in the City' is a project we hope to run with the local Wildlife Trust to increase habitat for invertebrates (most of which will be insects). This has co-benefits around amenity and food production, as many insects are pollinators and essential for the production of a number of staple crops.

### Staff/Member Training/Contact Groups

This is fairly straightforward to deliver and can bring surprising benefits as new ideas can be discussed and if appropriate developed into new projects. As well as broad training it is the intention to set up a Member contact group on similar lines as the Planning Policy Sub-Group and also a staff group to generate ideas and act as a sounding board for new projects.

### Environment and Ecology Forum

This Forum has been going for over 25 years and while membership has waxed and waned it is currently active and keen to take on a more climate focused role. Rather

than set up a new separate external advisory group, it is suggested that the Environment & Ecology Forum is slightly re-focussed so that climate change is a standing agenda item and so it can have active input into our Climate Emergency response.

### Update Green Travel Plan

The existing Green Travel Plan that addresses how staff travel to work has not been updated for 10 years (though there is a recent version covering business travel using Enterprise). Thus a refresh is overdue. We will re-publish this so we can do more to nudge staff and Members to travel to work in a more sustainable low carbon manner.

### Planning Policy

Planning policy has to sit within the context of national guidance, so there are limitations as what can be achieved. Notwithstanding this, there is always room to manoeuvre and we will work with the Joint Core Strategy partners and other Gloucestershire authorities to ensure that new development is low carbon and that renewable energy proposals are encouraged.

### Adopt a ten-year payback guide for how Council low carbon schemes are judged

Interest rates are at historic lows and although no one can predict them into the future, for the short and medium term they are expected to stay low. Energy efficiency and renewable energy schemes will tend to have long payback periods which may not fit into normal business planning models. While each project will need to be assessed and decisions made on their individual merits, it is considered that if a low risk project with a 10 year simple payback can be realised, then the City Council will fund the proposal, including potentially by borrowing.

### 100% renewable electricity for the City Council estate

A significant proportion of our energy is currently sourced from renewable sources. This is where the money flow goes direct to a renewable supplier and not just a pool of producers. This provides incentive for developers to invest in further low carbon sources and ensures that our energy is 'clean'. We will commit to buy all our electricity from a renewable source and look into purchasing 'green gas'.

### Carbon-friendly procurement

There are two large Council procurements on the horizon. The first is the renewal of the Waste and Streetcare contract, the second the provision of Leisure Centre services. These are good opportunities to build in climate friendly requirements into

the tender process. The Social Value policy going forward to Cabinet requires this for large procurements, but there is no reason why this general approach cannot be done proportionately on more modest projects and purchases.

### More sustainable Festivals and Events

The City Council is responsible for delivering a number of festivals and cultural events that are run throughout the year. Increasingly these will be procured through third party providers, and as with other purchasing decisions they can be done so with Sustainability and Climate Change as a commissioning component. To ensure that City Council employees along with external partners can deliver a more sustainable events/festivals programme, we will undertake training sessions to bring them up to speed on Climate Change and Sustainability issues generally.

### Communications

Getting our message out will be an important component of bringing the Citizens of Gloucester with us enabling them to instigate change. We will work therefore with the new county co-ordinator and other stakeholders to ensure there that the message is delivered in a co-ordinated and planned manner so it can have the greatest benefit.

## Potential Longer-Term Projects

The above is a list of quick wins that can be implemented over the coming year. Moving forward, we will have to do far more if we are going to achieve the ambitious targets for emissions reductions. Set out below are a number of longer-term projects, some of which will need significant funding and officer time to come to fruition. Many will need detailed work and it may be that on closer inspection they will not provide sufficient value for money and we may get more carbon for our buck investing somewhere else. As markets and subsidies change then this too will mean new projects come forward and others may fall by the wayside. As with earlier climate change strategies we will report back to Cabinet on an annual basis and Overview and Scrutiny Committee when necessary.

The following therefore is a list of potential projects that may go forward in the forthcoming climate change strategy/action plan to be published in the Autumn of 2020. At this point we will also need to show broadly how we deliver what is required in line with the 2030 target and when. With regard the 2050 target for the City, it will be impossible to assign projects to a carbon reduction plan as we have little idea what technologies/subsidies and markets will be like, as such this will have to come later. The projects are grouped together for convenience into broad categories.

### Renewable Energy

- Hempsted energy park: Solar biomass and potentially wind on/around the old landfill site at Hempsted.
- Own estate Photo-voltaics: Further increase the number of buildings with PV fitted. If feasible include car parks with EV charging points. We will work with GCH on similar proposals.
- Solar Farm at Gloucestershire airport: A solar farm providing energy for the airport and associated buildings, this could include Electric car charging points.
- Biomass: Woodchip/wood pellets can provide low carbon heat. The tennis centre is the most appropriate given storage and access needs.
- Heat pumps: Utilizing the canal water or ground source, this can be domestic or commercial. There is limited potential for council buildings but there may be applications commercially.
- Llanthony weir: This project has a long history and unfortunately will be complex to deliver but currently does have some private backing. We could support the proposal by providing land and a potential market for the energy.
- Wind turbines: Gloucester is sub-optimal in terms of wind speed. As part of the JCS, an 'opportunity map' will be produced. This is the first step towards identifying sites and eventually gaining planning consent.
- Battery Storage: The use of batteries falls between renewable and energy efficiency. They can be domestic or commercial. We will revisit the potential for a battery farm on or near Castlemeads, utilising the grid connectivity of the site.

## Energy Efficiency

- Continuous improvement: It is an on-going process looking at the efficiency of our estate. Much of the low hanging fruit has been done but there are further carbon savings to be had around lighting and heating.
- City-wide efficiencies: We will need to work with partners and stakeholders to increase the energy efficiency of the city as a whole; in part this can be achieved by increasing standards in new build and working with large landowners such as Gloucester City Homes to help them deliver necessary improvements.

## Transport

- Electric vehicles: Although no panacea they will have a significant impact on reducing car borne emissions. We should do all we can to increase the electric component of our fleet and of our main contractors and the taxi fleet we licence. We need to keep an eye on emerging technologies such as Hydrogen.
- Promotion of alternatives: The most basic technology with regard to moving around is the lowest carbon i.e. walking and cycling, they need to be supported as does the use of public transport. There are also clear co-benefits of health safety and air quality associated with alternatives to the private car.
- Work with the Private Hire and Hackney taxi trade to meet their target of being carbon neutral by 2030.

## Adaptation

- Tree planting: We have included this in the quick wins and we will continue to plant trees within Gloucester so we can realise their amenity, biodiversity and urban cooling benefits.
- Green walls/Rain Gardens. These reduce urban temperatures and slow surface water run off, there are some City owned buildings where this can be implemented. They also come with co-benefits of increasing biodiversity and amenity.
- Flood management: This is constant theme and many more projects will need to come forward. Gloucester being at the confluence of the river Severn and the Estuary may well be hit hard as rising tides coupled with increased river flows put existing defences at risk.
- Emergency planning: We should not forget that as extreme temperatures become more intense then public health will be put at risk as heat stress takes its toll on vulnerable individuals, this issue increasingly needs to be incorporated into the emergency planning process.

## Biodiversity Resilience

- Green Infrastructure: Through the JCS we will promote Green Infrastructure and increase the resilience and background diversity within Gloucester and beyond.
- Regional Park: We will work with partners to realise the ambitious Severn Washlands Regional Park as this will facilitate the movement of species north through the landscape as temperatures increase. Co-benefits include increase in amenity, flood resilience and more resilient food production.
- Biodiverse Parks: We have done much to improve the biodiversity value of our own estate. There is more that can be done and through the re-tendering of the Waste and Streetcare contract we will ensure that habitat management is a fundamental part of the day to day work and not an add on.

## Sequestration/Offsetting of Carbon

- Tree Planting to fix carbon: Trees absorb carbon as they grow, to make a real difference many millions of trees will need to be planted. Clearly this cannot be done within the confines of Gloucester, so we will work with the County Council and other partners to deliver new forests in Gloucestershire
- Grasslands to fix Carbon: Grasslands and wetlands are good carbon sinks. We currently manage Alney Island and parts of Netheridge. We will work with partners to increase the amount of land under grassland management.
- Offsetting Carbon: Offsetting allows organisations and individuals to 'buy' carbon credits. There are issues around the effectiveness of some of these products, however, if we are to be net carbon neutral then this will have to be looked at. There is potential to develop a Gloucestershire-based offsetting programme, where for example individuals and organisations could buy into the Forest of Gloucestershire and claim carbon credits.

## Waste

- Food waste diversion: Sending putrescible material such as food to landfill gives off methane, likewise food waste is generally very wet and reduces the efficiency of incineration. We should increase our efforts to divert food waste so it can be made into clean energy through anaerobic digestion.
- Metal Matters: Many waste materials especially metals have a heavy carbon footprint in their manufacture. We can focus our activities to ensure that as much metal is recycled as possible, thus reducing the carbon footprint of manufacture from virgin ore.

## Procurement

- See quick wins but the two large procurements mentioned above will be worked on over the next 2 – 3 years.