

# APPENDIX THREE – CLIMATE CHANGE AND ENVIRONMENTAL SUSTAINABILITY ACTION ALREADY TAKEN OR UNDERWAY

## Introduction

The Council has been actively working on improving its sustainability for some time albeit as yet we do not have an overall climate change strategy. Set out below are **examples** of the progress made already. Some services clearly have a greater scope than others because of their nature, with others making their contributions through corporate changes we have made. On the latter these include the move to the Forum one of the most energy and sustainably efficient buildings in the County and the associated flexible working arrangements reducing energy requirements and through working from home the number of car trips made to and from work. Digitisation has allowed us to become far less dependent on paper usage and we have recently adopted a reduction in single use plastic.

## 1 Planning, Development and Regeneration

- Embedded sustainability at the heart of the 2013 Dacorum Core Strategy – but we need to go further
- Delivered high performing buildings the Council has developed including The Forum, Maylands Business Centre (plus extension) and Kylna Court
- Developed biodiversity through the regeneration of the Water Gardens
- Worked proactively with innovative developers on bespoke eco-house developments (such as Two Oaks and the Walled Garden, Aldbury)
- Carried out sustainable travel initiatives at Maylands with new work with businesses on achieving modal shift away from the car about to start incorporating climate change and sustainability action at the heart of the new Local Plan currently underway

## 2 Housing

### Housing Development

Our principal control documents are our Design Guide and Employers Requirements. I have outlined some of the ingredients of these documents that focus on areas of sustainability and energy performance along with reference documents that we refer to within these documents that are adhered to under our contracts.

National Housing Federation Housing Standards Handbook- This document outlines design detailing that should be considered. It covers areas like:

- Building orientation doesn't exacerbate excess heat gain or loss
- Balancing the size and thermal performance of windows for improving daylight and sunlight without excess heat gain or loss
- Ensuring that the amount of ventilation is adequate
- Heating systems are correctly sized for the amount of insulation and levels of air tightness
- Understanding how improved thermal insulation can assist with reduced noise transmission.

UK Green Building Council – Health and Wellbeing in Homes - This report discusses the mental, social and physical health and wellbeing of the people who occupy the homes we build. This aims to gather and distil the most compelling evidence and advice about building and neighbourhood design features which can enhance the health and wellbeing of residents.

Site Waste Management Regulations - Our Designers must be aware of and contribute to the preparation of the Site Waste Management Plan. In particular, schemes are designed in a manner that reduces waste.

Sustainability and Energy Strategy - In order to formulate a standardised approach to sustainability and energy efficiency in the construction of new homes we operate a staged approach as follows:

- Stage 1 - Passive Design Measures and Features. 'Be Lean'  
New dwellings design adopt a 'Fabric First' approach and as such benefit from - low U-values, high standards of air tightness, beneficial use of daylighting and high levels of insulation to initially reduce the energy demands and associated CO2 emissions of the building.
- Stage 2 - Passive and Active Energy Efficient Building Services. 'Be Clean'  
In addition to passive 'Lean' measures, the dwellings include high standards of energy efficient building engineering services. These measures to include the following: high efficiency lighting design and associated controls, high efficiency fan motors, variable temperature and volume control of the heating systems.
- Stage 3 LZC/Renewable Energy Provision 'Be Green'  
Over and above passive and active measures to achieve further overall reduction in CO2 emissions. Air source heat pumps, photovoltaic panelling or other renewable technology are considered to reduce emission figures.

Design to maximise daylight and solar gain - Schemes are designed to maximise solar gain to assist overall energy performance while at the same time taking precaution against potential summer overheating.

Design to minimise noise nuisance - A high standard of sound insulation must be provided. Values will be in excess of current Building Regulation

Design to minimise whole life costs - Designers should consider life cycle costing techniques to justify selection of elements and services.

Design to maximise value - Schemes should be designed to maximise value by considering the most efficient use of space (while not detracting from our minimum space standards) and by maximising the likely saleability of any sales element

Design to Reduce Construction Waste - Designers must consider opportunities for reducing construction waste at design stage when the potential for such is at its greatest. This can be achieved by using construction techniques that make efficient use materials, minimise production waste and have recyclable waste streams.

Modern Methods of Construction - Appropriate solutions will be considered provided it can be demonstrated that the proposals are of genuine value. This is an area we are just starting to move into and have some sites in mind, which could benefit from this approach.

Examples of our Contractors approach

- Site cabins are all low energy with inbuilt PV panels and sensors for lighting etc.
- Waste segregation is rarely available on site due to space, so they often use a waste management company that sort each skip into the separate waste streams when offsite and provide a report showing where the waste was used or disposed of.
- Using the feedback from these reports benchmark can be set to for use on the next schemes
- Working with a number of the suppliers to reduce the amount of packaging that is used prior to site delivery
- Where packaging is essential suppliers are encouraged to collect it for re-use
- Sustainable procurement practices – buying only materials that can be proven to have been sustainably manufactured or sourced – the perfect example of this is timber with Programme for the Endorsement of Forest Certification (PEFC) or Forest Stewardship Council (FSC) certification
- Part of our supply chain selection process includes the vetting of each companies environmental management processes/manual

### **Existing Council Housing**

The Council have optimised the use of historic grant funding from, the Green Deal, Energy Company Obligation (ECO), Carbon Emissions Reduction Targets (CERT) and Community Energy Saving Scheme (CESP), along with its own capital funding, to undertake a raft of energy improvements to existing stock.

One of the first projects was in response to the opportunity to obtain attractive feed in tariff's (FiT) from the installation of solar photovoltaic (PV) panels, which aside from the ongoing revenue income, used renewable energy sources to generate electricity, for use in the schemes communal areas. **Seven** of the sheltered housing schemes had large solar PV arrays installed, which combined with the installation of Light Emitting Diode (LED) light fittings have dramatically reduced the energy consumption at the schemes. LED light fittings have been installed to a number of other sheltered schemes and combined with the use of motion sensors, to reduce the energy consumption substantially.

In addition the street lighting columns, which are owned by the housing service have been subject to a programme of fitment replacements and just over 35% have been replaced with LED fitments.

Other investments have been targeted at those properties with a low Energy Performance Certificate (EPC) banding, whereby the measures would have significant benefit to the occupiers. To date we have installed External Wall Insulation (EWI) at **265 individual houses**, all of which were solid wall construction.

The estate based project at Summer Court, provided a number of sustainable improvements to **32 flats**, including solar photovoltaics, EWI and a biomass boiler, which has sufficient capacity to add additional blocks, in the future. The biomass boiler qualifies for Central Governments, renewable heat incentive (RHI), which was set up to encourage uptake of renewable heat technologies amongst households, communities and businesses. The Council receive payments for seven years following the installation.

Seaton Road had a similar whole house approach undertaken and works included, EWI, new roofs including upgraded loft insulation and the installation of solar photovoltaic panels, and new condensing boilers. The scheme also provided the opportunity for private owners to have EWI installed to their properties, enabling a number to have works undertaken, which were part grant funded, whilst also having the benefit of retaining the streetscape. The project was shortlisted for a National Housing Maintenance Forum award in 2015, for sustainability and innovation.



The upgrade of the block of **20 flats** in Longlands, included EWI, solar PV and new double glazed windows to all properties and the communal areas, as well as providing six additional flats on the roof for social rent.



Properties located in off gas rural locations, have benefitted from a raft of improvements including, EWI and installation of air source heat pumps (ASHP) to **62 homes**, which also attract Renewable Heat Initiative (RHI).

Properties with cavity construction, have had cavity fill installed, to improve the thermal performance, and loft insulation has been installed to the majority of Council properties, to provide 300mm of cross laid insulation.

The capital investment programmes in the past five years have delivered 988 window replacements, with thermally efficient double glazed units, 6632 composite doors, which have an insulated core and 3941 condensing boilers with a Seasonal Efficiency of a Domestic Boiler in the UK (SEDBUK) rating of A, which save around 90% of the energy rated by the boiler. To put that in perspective, old boilers lose 35-40% of the energy they create.

The RHI from the biomass boiler and ASHP's bring in approximately £20K per annum and the FiT around £30K, which can be reinvested in other energy efficiency measures.

### **Private Sector Housing**

We provide Energy Company funded energy efficiency measures such as heating and insulation for qualifying private residents through the Hertfordshire Warmer Homes scheme. Hertfordshire Warmer Homes is a partnership

between Hertfordshire County Council and the 10 district councils. There have been 24 installations in Dacorum since January 2018.

We have written to Private Rented Sector landlords regarding 207 domestic properties with an energy rating below “E” and advised them on how they can comply with the Minimum Energy Efficiency Standards.

### **3 Clean Safe and Green**

#### **Trees and Woodlands**

- Currently using battery powered equipment whenever appropriate, and replacing petrol-powered equipment with battery powered when possible.
- Using bio-oils and recyclable products.
- Using watering bags around newly planted trees to increase establishment rates and reduce the number of watering rounds required (van with trailer).
- Altering mowing regimes at Bunkers Park to increase species diversity and reduce maintenance.
- Using voluntary groups to help maintain two of our sites. Volunteers use hand tools, not powered tools, and are locally based so reduce vehicle miles.
- Woodland management - reusing timber products, increasing biodiversity through management practices, e.g. leaving standing dead wood, leaving eco-piles, creating more woodland edge habitats
- Tree planting borough-wide

#### **Parks and Open Spaces**

- Created new butterfly invertebrate meadows, by changing cutting regimes. They have been surveyed twice now and this will be an ongoing thing. This will be expanded next year to include more areas. This is all to help create more biodiversity. This has been in partnership with Butterfly world 2.0 and Buglife.
- Watergardens team have battery operated tools and mower to help reduce carbon emissions.
- Use of chemicals in parks has been reduced.
- Beds that were once for bedding have been planted with more sustainable planting, that encourages more bio-diversity and cuts down on watering and costs.
- Bee houses installed in the walled garden, water gardens and Gadebridge. These use cardboard tubes which Masonry Bees and leaf cutter bees use. These tubes are removed and sent to a Masonry bee charity, who take the cocoons out. In the spring they send us some back and the whole process starts again. These have been so successful that we will be installing them in more parks across the borough.
- Watergardens wildflower was installed last year, again to help with biodiversity. More areas to be added in the years to come.
- Re modelling of section of river Gade. Again to increase bio diversity.

## **Waste and Recycling**

- Planning to roll out food waste recycling to 12,000 properties by March 2020 so that all homes in Dacorum can recycle food waste. This will divert extra food waste from landfill / incineration (landfill produces methane – a greenhouse gas 25x more potent than carbon dioxide) and in doing so creates biogas which is fed back into the National Grid.
- Launched 'Refill Hertfordshire' – signed up over 300 refill stations in Herts so that residents can refill their own reusable bottles with tap water without having to buy a bottle
- Ran the 'Remember your reusables' campaign to encourage residents to ditch single use plastic
- Running clothes swap events to encourage people to reuse clothes rather than throw them away – fashion industry is responsible for 10% of global carbon emissions and is the world's second largest industrial polluter after oil
- Since Q1 so far this year we have given out 127 reusable nappy bundles to residents. Disposable nappies are the third largest source of waste in landfill and produce methane as they biodegrade. It takes around 500 years for them to break down in landfill and each child goes through around 4000 from birth to potty. Reusable nappies are much better for the environment.
- Running a Love Food Hate Waste campaign in November to encourage residents to waste less food – if food waste were a country it would be the third largest emitter of carbon emissions.
- Switching calendars from physical to digital which will reduce the amount of waste the service produces.
- Rolling out blue-lidded bin stickers to all residents to encourage them to recycle correctly and reduce the amount of waste that they produce
- Reducing amount of single use plastic used internally by staff by providing more reusable items
- Rolled out great recycling capacity to schools for both mixed recycling and food waste – more work in this area to follow.

## **4 Old Town Hall**

### **The Old Town Hall successfully implements the following -**

- Waste is separated into general, mixed recyclable and confidential. Recycling bins are located in all staff areas.
- 100% recycled paper is used for printing and staff use recycled paper notepads. We also re-use ring binders, plastic wallets and other stationary and office equipment.
- All printing defaults to double sided, and uses a low intensity ink setting.
- We have reduced paper usage and minimised waste in our offices by maintaining electronic copies and records. We also process invoice payments using a paperless system.

- Where possible, old posters are re-used by printing on the reverse and flyers are often used for scrap paper.
- Our energy certificate is on display at the Box Office for members of the public to view.
- All bar fridges and freezers are switched off during down seasons (when we have no events).
- All glasses used at the bar are reusable plastic.
- The Robert Adams Gallery exhibits work by local artists. Whilst supporting artists within Dacorum, this also reduces distance that exhibitions are transported.
- We make the most of daylight, and only switch lights on when needed.
- All computers, monitors and printers are fully switched off when not in use, not left on standby.
- All stage lights and technical equipment is switched off when not in use.
- All external and internal lights are switched off when the building isn't in use.
- We replace bulbs with LED lights as they expire.
- We ensure that the overnight switch-off procedures are carried out, and that all members of staff are familiar with this.
- All cleaning chemicals are disposed of safely and responsibly, as per COSHH regulations.
- Hand dryers are used in all toilets in place of paper towels.

**We are pleased to have achieved the following:**

- Our bar service is now Single Use Plastic free! We've replaced plastic water bottles with aluminium water cans and plastic straws with paper alternatives. We have also introduced food compostable coffee cups and serve all our drinks in reusable plastic glasses.
- Our bar now stocks some locally produced goods! You will find delicious ice creams from Lewis of London (Barnet), crisps and nuts from Salty Dog (Chesham) and locally brewed ales from Haresfoot Brewery (Berkhamsted)
- During our Gallery redecoration, the old café tables were refurbished and upcycled and new LED lights were installed. We also saved the old chairs from landfill by donating them to local charities.
- We have successfully reduced the quantity of brochures printed by producing fewer issues per year and condensing our mailing list.
- The introduction of e-tickets has led to a significant reduction in ticket printing.
- Marketing activities have become increasingly digitalised, advertising on digital screens and communicating through our social media platforms and monthly e-newsletter.

**5 ICT**

- Paper consumption reduction – print and paper represent around 1% of carbon dioxide emissions so the Technology team's contribution to reducing the use of paper will have significantly shrunk our footprint



- Staff Commuting reduction – the very significant increase in working from home which has only been made possible by the deployment of technology and the support of the technology team
- Website & portal – similarly the number of transactions that can be undertaken remotely by residents will have had a significant effect on emissions as residents no longer need to travel to the Forum/Civic and officers no longer have to drive to meet with them.
- More efficient data centre equipment. The new generation of data centre equipment recently installed is more power efficient – we estimate by somewhere between 5 and 10%.

## **6 Finance/Revenues and Benefits.**

**Finance** – On going process of digitalisation to produce as paper light systems and processes as possible.

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Rate relief available to new businesses opening within the Enterprise Zone based on their environmental credentials.

## **7 Commercial Assets and Property Development**

A. All operational assets have electronic meter readings for gas/electricity and water (where applicable). These form monthly reports circulated to assess usage and allow these to be assessed to see if there are leaks or unusual consumption patterns. Usage is accessible via an online tool.

A reduction in utility use over the last 3 years of greater than 30% for the 13 main operational sites. (Civic sites, Forum, Playgrounds, Cupid Green Depot, Cemeteries).

B. All new lighting installed is now LED. Any maintenance or upgrades to facilities ensures all lighting is changed to LED for operational buildings. Motion sensor lighting installed in the civic centres where applicable.

C. Improved recycling facilities at all operational buildings including the Forum to increase the volume of recycling and reduce the waste produced. In theory this reduces the need for natural resources and makes future production more efficient.

## **8 Environmental Health**

Draft Air Quality Action Plan in place and work continuing to establish this in full.

## **9 Licensing**

- Full section in Air quality action plan

- Advice to taxis switch off engines whilst waiting for jobs
- Internally the team aims to ensure that when jobs need to be carried out by way of a visit that multiple visits are carried out in the same part of the Borough to reduce unnecessary travel
- All taxi plates are returned to the supplier for recycling

## **10 Commissioning and Procurement**

- Use of Social Value Act in service contracts to have regard to environmental well-being
- Evidence of environmental aspects included in specifications and evaluation criteria.
- Introduction of MFD's rather than individual printers

## **11 Parking services**

- Introduction of EV Charge Points
- Introduction of virtual permits

## **12 Leisure Services**

- Plant & Equipment are switched off when areas are not in use, not just at the end of the day
- Consumption reporting is understood and reviewed by colleagues, the impact individuals can have on consumption made clear
- Pool covers used when the pool is not in use
- Everyone Active are currently investing £320k on energy efficient measures
- DBC investing £350k upgrading to energy efficient mechanical & engineering equipment

## **13 Facilities Management**

- The Forum has been built to BREEAM excellent standards
- Rainwater harvesting system to reduce water consumption
- Building management system operates the heating & ventilation
- Power generated by photovoltaic panels
- No single use plastic in café
- Recycling of waste streams