

## **Derby City Council's Renewed Approach to Energy Management & CO<sub>2</sub> Reduction**

### **Purpose**

- 1.1 This report sets out a reinvigorated approach to energy management which will play a fundamental role and contribution in establishing the direction of travel for the Council's assets, ensuring a fit for purpose, sustainable future property portfolio. It will also align with the Council's commitment under the Climate Emergency Agenda

### **Recommendation**

- 2.1 It is recommended that Corporate Scrutiny note the approach as detailed in this report and endorse the key principles to ensure energy is managed efficiently to ensure carbon and cost savings.

### **Reasons**

- 3.1 Derby City Council wants to achieve maximum efficiency within its property portfolio ensuring sites are both fit for purpose and sustainable. This requires effective energy management resulting in cost and carbon savings. This approach is aligned to the objectives identified in the Council's Climate Emergency declaration.

### **Supporting Information**

#### **4.1 Derby's Climate Emergency**

On 22nd May 2019, Derby City Council declared a Climate Emergency in the city. The decision was unanimous across all parties, at the Council's Annual General Meeting.

The council was asked to:-

- Establish a Derby Climate Change working group to respond to this challenge
- Consider recommendations from the proposed working group, and set a target for Derby to be carbon neutral
- Work with other local authorities and public, private and voluntary sector partners on carbon reduction projects to ensure the UK is able to deliver on its climate commitments
- Ensure the Government provides the necessary resources and powers so that Derby can make its contribution to the UK's Carbon Reduction targets

Derby is one of 245 UK local authorities (60%) that have declared a climate emergency. 149 of these have set a target of reaching zero emissions by 2030 or earlier.

As a local authority it is to be determined how we rise to this challenge – that means taking stock of where we are now, and where we need to be. Work on that has already begun, but in order for this target to be achievable, everyone across our city must come together to work towards this common goal.

#### **4.2 D2N2 – Local Enterprise Partnership (LEP)**

D2N2 is a LEP for Derby, Derbyshire, Nottingham and Nottinghamshire. It is set up to support and encourage economic growth for the D2N2 region. Derby City Council form part of this partnership and want to work towards the energy reduction targets set out in the D2N2 strategy.

#### **4.3 Derby City Council's Corporate Asset Management Plan**

The Council's property portfolio is a key resource which has a substantial financial value (capital valuation of circa £500 million, excluding residential properties). The portfolio is vital for the delivery of public services for our residents and to support Council priorities including the growth and development of Derby City.

Whilst the property portfolio is an asset, its retention, use and management requires revenue expenditure of around £10 million per annum of which £4.5m of this comes from energy costs. If the portfolio is not maintained efficiently and used effectively it can become expensive to operate and failure to maintain it adequately will create a risk of service disruption and breach of duties as a property owner and occupier.

The Corporate Asset Management Plan (AMP) sets the strategic direction for the use, management and development of the Council's property assets and a key principle of the AMP is to only retain and invest in properties that are suitable, sufficient, safe and efficient to support the delivery of public services, now and in the future.

The Council's property portfolio is a significant opportunity in terms of working towards meeting the key objectives as set out in the Council's Climate Emergency.

#### **4.4 Property & Energy Management**

The Council currently has 120 energy consuming corporate sites of which it is responsible. These assets include the following categories:-

- Offices e.g. the Council House
- Leisure venues e.g. Derby Arena

- Homes for Older People e.g. Arboretum House
- Children's Centres & Residential Homes e.g. Queensferry
- Training Centres e.g. Rycote Centre

In **2017/2018** Derby City Council's corporate property assets consumed 43.7 million kilowatt hours (kWh) of energy at a financial cost of £4.5m. During this period the Council was responsible for emitting 12.7 tonnes of Carbon Dioxide (CO<sub>2</sub>). At £17.20 per tonne of CO<sub>2</sub> this resulted in a mandatory Carbon Reduction Commitment (CRC) payment of £218,371, excluding schools. This is lower than previously anticipated due to improved scrutiny of data and due to the carbon conversion factor change as more energy is now sourced from renewables) Current Government commitments are to deliver a reduction of 37% in carbon dioxide emissions by April 2020 and a 51% reduction by 2025 rising to 80% by 2050 based on 1990 levels.

## 4.5 The Council's Approach to Energy Management

### Funding

In order to improve the approach to energy management and ensure a reduction in CO<sub>2</sub> across the Council's retained estate, a 5% top slice (equating to approximately £1.25m) has been put aside from the Council's 5 year Property Capital Programme to spend on energy improvements.

This approach together with the opportunities afforded through SALIX funding will ensure investment in the Council's core retained assets. SALIX, a not-for-profit organisation is funded by Business, Energy and Industrial Strategy (BEIS) and removes financial barriers by making this capital accessible to the public sector. SALIX enables public sector organisations across England to take a lead in tackling climate change by increasing their energy efficiency. This is aided by a Salix loan which is 100% interest-free to reduce energy costs by enabling the installation of modern, energy efficient technologies and replacing dated, inefficient technologies.

## 4.6 Energy Reducing Principles

**4 key** principles as detailed below, will be adopted to ensure the profile of energy management is raised.

### (i) Principle 1 - Energy Performance will be aligned to the Property Portfolio

The primary objective of the AMP is to determine the future direction of the Council's property assets. Energy performance data will form a fundamental contribution in determining this direction of travel.

Consideration will be given to the highest (combined) energy consuming sites when making decisions regarding the future of property assets.

Energy performance will be considered as a key component when dealing with

property transactions, including:-

- Acquisition of assets
- Disposal of assets
- Changes to properties
  - Including designing out property assets, over and above that of a compliance level

In order to ensure that this first **principle** is firmly embedded, the following are required:-

(a) **Data Capture and intelligence**

It is imperative that up to date accurate energy performance data is captured and analysed. This will be undertaken in the long term by the receipt of readings taken from Automatic Meter Reading Meters (AMR) which will be inputted into the energy data management tool for further analysis. DCC is currently undergoing a commitment by its energy supplier to provide AMR to all of its corporate sites.

Display Energy Certificates (DEC) report how efficient a building is based on its actual usage **DEC's are designed to increase transparency of energy efficiency in public buildings.**

Energy Performance Certificates (EPC) are a rating scheme to summarise the energy efficiency of buildings and take into account the technologies and infrastructure of the building.

(b) **Baseline Data**

Profiling energy data of buildings in order to understand usage and identify improvements which can be made. These will include technical and behavioural changes.

(c) **Monitor energy use throughout the Council's estate**

Improved transparency regarding energy consumption and costs will be achieved by further use of the current software analytical tool (Systemlink). This software can be used to measure the current annual performance of property assets within the Council's portfolio. This data can also be utilised to compare the council portfolio with other national property benchmarks.

Work has commenced to ensure Systemlink is updated and fit for purpose to monitor energy usage.

(ii) **Principle 2 - Reduce energy consumption, emissions and overall spend on the Council's property stock**

Consideration will be given to the following:-

- Profile top consuming sites
- Conduct energy surveys on top consuming sites
- Set out programme of work based on survey report findings

It is fundamental that realistic targets are set in order to reduce consumption/costs. This is the first step to establishing the financial and carbon savings that can be made.

## **Current Projects**

### **Invoice Validation**

Work is commencing regarding the procurement of consultants to undertake work on the validation of water bills (going back to approximately 8 years) to determine the level of savings that may be possible. It is estimated that this work will commence by Autumn 2020 and is estimated to take circa 12 months to complete.

Invoice validation will also be carried on the gas and electricity accounts.

### **Carparks**

Feasibility work is underway to examine the potential of installing intelligent LED lighting 2 of the City's carparks to reduce energy consumption and therefore generate revenue savings. This could also provide an opportunity for SALIX funding.

## **(iii) Principle 3 - Encourage and promote energy efficiency across the organisation**

Key sites will be identified which can easily reduce energy consumption through behavioural change and the correct use of equipment.

Examples include:-

- Checking boiler controls and timer settings
- Ensuring equipment is not left on when not in use
- Building Management Systems being set to the operational hours of the building

For more ambitious technical changes such as the provision of renewable energy generation or the whole scale replacement of systems could be funded by the SALIX funding stream. SALIX can be utilised to provide funding for energy efficiency projects across local authority estates, with over 100 energy efficiency technologies supported. The SALIX loan is dependent of a set of criteria set out by the funding body.

It is proposed that a communication plan will be compiled and distributed to colleagues setting out some tangible outputs of changing behaviours regarding energy efficiency. Monitoring and feedback of these behavioral changes will be used to encourage continued/sustained changes. This is a zero cost approach but can

have significant benefits as a result.

(iv) **Principle 4 - Increase opportunities for energy generation and investment in renewable energies**

The energy surveys conducted will consider renewable energy sources and will highlight any opportunities suitable for those sites. Renewable sources could include:-

- wind energy
- small scale hydropower
- solar thermal hot water
- ground source heat pumps
- air source heat pumps
- biomass
- solar photovoltaic and micro combined heat and power (Micro-CHP)

#### 4.7 **Action Planning**

An Action Plan is currently under development as part of the Climate Emergency Commitment and will focus on the highest energy consuming properties targeting the principles as set out on section 4.6 of this report.

These key assets are:-

- Derby Arena
- The Council House
- Markeaton Crematorium
- Environmental Services, Stores Road
- Riverside Chambers
- Marble Hall
- IHub Innovation Centre
- Arboretum House

#### 4.8 **Challenges**

The importance of the work associated with energy and CO2 reduction across the Council's property portfolio is imperative in order to achieve the objectives of the climate emergency declaration. Although some good progress has been made with regard to key initiatives such as bill validation and installation of intelligent lighting in

carparks a comprehensive approach cannot be fully embedded with the limited resource that the property department currently has in place.

### **Public/stakeholder engagement**

5.1 Engagement with key stakeholders is on-going.

### **Other options**

6.1 None

### **Finance and Value for Money**

7.1 None

### **Legal implications**

8.1 None

### **Other significant implications**

9.1 None

This report has been approved by the following people:

<b>Role</b>	<b>Name</b>	<b>Date of sign-off</b>
<b>Legal</b> <b>Finance</b> <b>Service Director(s)</b> <b>Report sponsor</b> <b>Other(s)</b>	Steve caplan	10/02/2020

**Background papers:**  
**List of appendices:**