ITEM 6

ENVIRONMENT AND TRANSPORT SELECT COMMITTEE

26 NOVEMBER 2013

LOW CARBON LIVING

1. Background

1.1 The Council's Core Strategy sets out ways in which the Council could tackle climate change and build sustainable communities. New development and major redevelopments must be designed to support sustainable lifestyles for all. (Policy CS12). The need to tackle climate change provides an opportunity for designers to be more creative, incorporating energy-saving features, such as green roofs and walls, solar panels and paying attention to the 'thermal performance' of a development as a whole.

1.2 Planning policy can help to deliver the Sustainable Community Strategy objectives of reducing our carbon footprint and achieving carbon neutral growth. Local Plan Policy D4 has already driven up construction standards above the national level by requiring improved energy efficiency and the use of renewable energy in new buildings and through the successful implementation of a Carbon Offset Fund. Local Plan Policy D4 will be supported until a new revised policy can be tested through the preparation of Plan:MK.

1.3 There will be opportunities in any new development area for an area-wide approach to low or zero carbon development and renewable energy provision based on the potential to plan energy efficient layouts in new neighbourhoods. This has already been achieved in Central Milton Keynes where a combined heat and power system supplies many housing and office developments.

1.4 The Council's Low Carbon Living Strategy is attached as an Annex to the report.

2. Milton Keynes Low Carbon Living Project

2.1 Where relevant, planning policy will support initiatives which form part of the Low Carbon Living Project. The project brings together a number of initiatives aimed at reducing energy consumption and carbon emissions to help tackle climate change. The Council's Core Strategy (Policy CS14) promotes the use of renewable energy schemes where it can be demonstrated that there will not be any negative social, economic or environmental results from the scheme.

Where an existing local energy network is established, developments will be expected to connect to the network, if feasible.

2.2 The Low carbon Living Project covers many aspects including the following:

2.3 Energy

- Residual Waste Facility and Anaerobic digestor schemes – consideration being given about what to do with the energy created and whether or not to sell it commercially.

- Consideration of local CHP plants installed at key locations such as the hospital or sheltered accommodation and extending this to service local communities.

- Renewable energy schemes such as PV installations, ground source heat pumps, air source heat pumps etc

- The Council is working in partnership with other organisations on the following:

    - Thinking Energy Project (in partnership with EON) – 75 households across MK have taken part in a trial for Smart Homes. This included installation of smart plugs, PV installation, electric car, storage batteries, LED bulbs, efficient white goods and heating controls.

    - Western Power Distribution (WDP) are trialling new ways of building resilience into the existing grid across Milton Keynes, including monitoring of usage, times of peak use and the use of back-up generators from businesses to provide power to the grid rather than just using them for emergencies

    - Working closely with NEF on projects to improve the energy efficiency of buildings. The Council operates the Carbon Offset Fund to provide grants to residents and the Pioneer Places projects provide Green Deal assessments for residents in readiness for the Green Deal loans and educational work producing leaflets and guidance.

2.4 MKC Buildings

- Installing building management systems and automatic meter reading devices, optimising energy use through power perfectors, better lighting systems, valve covers.

- Installing biomass boilers at key locations such as Leon School, sheltered housing accommodation and Wolverton Swimming pool.

- Using the Salix finance scheme to provide interest free loans to all MKC budget managers to install energy efficient schemes into their portfolios.

- Energy procurement for the Council's portfolio.

2.5 European Projects (Shared Learning)

- Crescendo – contributed to the funding of the CMK CHP and the PV installation on the former bus station

- Imagine – shared learning from 7 other EU countries developing a roadmap to 2050 for a sustainable low carbon city.

2.6 Transport

- Plugged in Places (electric vehicles)

- Changing streetlights to more efficient systems

- Autonomous vehicles – Pilot

- Demand Response Transport (DRT) – 'Simply Connect' project, use of IT. Pilot to take place early 2014.

- Electric buses and charging points – Replacement of seven diesel buses with eight all-electric counterparts on one of the main bus routes in the city (route 7). New buses will be able to recharge batteries through the day and capable of the equivalent load of a diesel bus.

2.7 Other Areas of Work

- Regeneration schemes such as the schemes introduced on the Lakes Estate

- Creation of the Green Deal Together CIC (Community Interest Company) – working with 12 other local authorities to deliver savings.

- Participating in the Re Start local initiative through the Institute for Sustainability to develop local supply chains for Small to Medium Enterprises in the green sector.

3. Electric Bus Project

3.1 The electric bus project is an innovative approach to charging electric buses to enable a quieter, cleaner future of public transport in Milton Keynes. In September 2012, six organisation led by a subsidiary of Mitsui & Co Europe signed a five year collaboration agreement to the replacement of seven diesel buses with their all-electric counterparts on one of the main bus routes in the city.

3.2 Uniquely, the new buses will be able to recharge their batteries wirelessly through the day which means that for the first time, electric buses will be capable of the equivalent load of a diesel bus.

3.3 The eight electric buses will replace seven diesel buses on the number 7 route in Milton Keynes and will run 7 days a week, removing approximately 500 tonnes of tailpipe CO2 emissions per year as well as 45 tonnes of other tailpipe emissions. The initiative could reduce bus running costs by between £12-£15k per annum. The route currently transports over 775,000 passengers per year and travels over a total of 450,000 miles.

3.4 The buses will charge when power transmitted from a primary coil buried in the road is picked up by a secondary coil on the bus. Ten minutes parked over a coil will replenish two thirds of the energy consumed by the bus's route. The primary coils will be placed at three locations (Wolverton, Bletchley and CMK) on the route and the buses will charge in the layover time at the end of the route.

3.5 It is expected that the buses will be in service early 2014.

3.6 The trial will be managed by Mitsui-Arup joint venture MBK Arup Sustainable Projects (MASP).

3.7 Mitsui and MASP's ultimate aim is to use the data collected by the Milton Keynes trial to demonstrate the economic viability of low-carbon public transport and could be used to kick-start electric bus projects in other towns and cities worldwide.