

**REPORT OF THE DIRECTOR OF TECHNICAL SERVICES**

**GREEN SPECIFICATION AND RENEWABLE ENERGY GENERATION BY COUNCIL**

**1.0 EXECUTIVE SUMMARY**

1.1 At its meeting on 18 October 2010, Council agreed to a Notice of Motion on renewable energy generation and resolved (minute 45 refers):

- a) to expand its renewable energy generation;
- b) to instruct officers to ensure that renewable energy projects are an integral part of the Council's office accommodation strategy, and
- c) to instruct officers to report back to the appropriate Cabinet Member and to the Sustainable Communities Overview and Scrutiny Committee at the earliest opportunity.

1.2 This report now advises Members of the development of a Green Specification in the form of a best practice guide for designers, which will require sustainable materials and products with recognised environmental benefits, and, where practicable, renewable energy technologies, to be incorporated into all Council building projects.

**2.0 BACKGROUND**

2.1 Members will be aware that over recent years a number of specific projects have been implemented by the Technical Services Department under the Carbon Reduction Programme to contribute towards the Council's Improvement Priority to reduce its carbon footprint, under the Strategic Objective to "create a clean, pleasant, safe and sustainable environment". These projects have also supported former National Indicators: NI 185 (CO<sub>2</sub> reduction from Local Authority Operations); NI 186 (Per Capita Reduction in CO<sub>2</sub>) and NI 188 (Adapting to Climate Change). These NIs have recently been withdrawn by Government and revised environmental performance measures are expected to be announced shortly.

2.2 This Committee last noted and endorsed progress of the Carbon Reduction Programme, including a strategy for reducing the Council's carbon footprint by 60% by 2025, on 21 June 2010 (minute 59 refers).

2.3 Measures included in the Council's Carbon Reduction Programme have included:

- Energy Efficiency schemes (improved lighting installations, boiler replacements)
- Energy Awareness and carbon reduction promotions and campaigns
- Automatic meter reading
- Combined heat and power (CHP)
- Launch of Wirral CRed initiative
- Waste reduction and improved recycling service

2.4 Over the same period, the Council has also been working closely with local partners through the Wirral Climate Change Group to reduce the Carbon Footprint across Wirral and to "create a clean, pleasant, safe and sustainable environment".

2.5 This Committee noted and endorsed progress of the various Wirral-wide Carbon Reduction projects and referred a report on the subject to Cabinet on 8 March 2010 (minute 46 refers).

2.6 Building designers within Technical Services began work on a draft Green Specification in 2007. A number of projects designed through the Department's Design Consultancy Division in recent years have incorporated green materials and technologies, which help contribute to the Council's strategic objectives and priorities for improvement in sustainability and carbon emission reduction. Some examples to date include;

#### Laird Foundation 2006

- high thermal properties and U-values
- intelligent lighting system
- solar thermal for hot water
- wind turbine
- radiant heating to maximise efficiency
- eco-warrior monitoring system (BMS)

#### Town Lane School 2006

- high thermal properties and U-values
- recycled aggregates used
- intelligent lighting system
- solar thermal for hot water
- consequential improvements made (10% of building contract sum)

#### Dale Farm 2007

- high thermal properties and U-values
- wood burning stove (carbon neutral) for heating installed
- intelligent lighting system
- solar thermal for hot water

#### Stanton Road School 2009

- high thermal properties and U-values
- intelligent lighting system
- solar thermal for hot water
- recycled aggregates used
- passive ventilation system to reduce mechanical installations
- sun glass used to reduce solar gain and diminish cooling requirement
- heat recovery system installed
- consequential improvements made (10% of building contract sum)

#### New Park Primary School 2010

- high thermal properties and U-values
- biomass boiler
- sun glass used to reduce solar gain and diminish cooling requirement
- rainwater harvesting
- intelligent lighting system
- passive ventilation system to reduce mechanical installations
- recycled aggregates used
- BMS system

2.7 The Green Specification has now been completed. It provides a best practice guide for designers to incorporate green technologies and sustainable products and materials into Council building projects, which will contribute to the Council's Carbon Reduction Programme and Carbon Budget and to the Government's Carbon Commitment. The Guide also includes links to access current best practice material specifications and an appendix containing examples of typical approved products which will ensure consistency of materials and equipment across the Council's buildings, assisting with efficiency of facilities management and maintenance operations. A key principle of the Guide is that energy demand, and thus energy

consumption and emissions from buildings, should be reduced before renewable technologies are considered.

- 2.8 In February 2010, Government announced details of a scheme of Feed in Tariffs (FiTs) designed to stimulate and drive an increased uptake of renewable energy systems and to increase energy generation from renewable sources from some 5.5% nationally to 30% in 10 years.
- 2.9 FiT schemes guarantee a set fee payable for electricity generated for self-use and an additional rate for all surplus electricity exported back to the national grid. Currently domestic rates are higher than for commercial applications. However, recent legislation now allows local authorities to participate in such schemes with a potential to accrue revenue benefits, in addition to contributing to local carbon reduction and climate change targets. Examples of small-scale, low carbon, renewable technologies include:
- Wind
  - Solar Photovoltaic (PV)
  - Hydro
  - Anaerobic digestion
  - Biomass CHP
- 2.10 Similarly, from April 2011 the Government intend to introduce Renewable Heat Incentive (RHI) which is expected to complement FiT's. This will help the Council to fund the installation of the following types of technology:
- Air and ground-source heat Pumps
  - Solar Thermal
  - Biomass Boilers
  - Renewable Combined Heat and Power
  - Use of Biogas and Bio-liquids
- 2.11 The notice of motion agreed by Council on 18 October 2010 will ensure that renewable energy installations are considered, where appropriate, as part of the building design process and that generation of renewable energy is explored with the Council's partner organisations.

### **3.0 PROPOSALS**

- 3.1 All new buildings and major refurbishments designed by the Council's Technical Services Department, or consultants procured to provide such services to the Council, should be designed in accordance with the general principles contained in the Council's Green Specification Guide, 'Wirral Green Spec' (see Appendix A). Where relevant and appropriate, the guide will also be applied to all building adaptation, reconfiguration or renovation designs, including works included in the Council's Strategic Asset Review and Accommodation Strategy. The guide will be a live document, which will be continually reviewed, revised and updated to reflect changing legislation and good practice guidance when necessary.
- 3.2 The Technical Services Department's Quality Management Systems, which are accredited to BSi ISO 9001, will be updated to ensure the Guide is being applied consistently across all Council building projects. An internal peer review process will also be established, so that designs for significant projects can be queried, debated and, where necessary, revised, prior to construction, by an appropriate team of fellow professional officers who were not involved in the initial design process.
- 3.3 The Technical Services Department will continue to retain membership of the Green Register, which is a national register of construction professionals, including a large number of architects' practices, undertaking to provide sustainable designs in accordance with good practice.
- 3.4 In addition, where practicable for the project concerned, all designs will consider the introduction of renewable energy generation technologies. All future Scheme and

Estimate reports presented to Cabinet for approval will include details of any proposed renewable energy facilities, which could be incorporated, where practicable, as part of the scheme, together with the associated costs and benefits.

- 3.5 The potential for the introduction of renewable energy installations through partnership working with energy technology providers and other partner organisations will also be explored through the Wirral Climate Change Group and any other appropriate channels. The Council is aware of social housing providers (RSLs) negotiating the installation of “free” solar PV panels on their properties and encourages the installation of renewable energy technologies on RSL, new-build and refurbished properties. Solar PV has been installed on new-build flats in Southwick Road, Tranmere and will be installed on Quarry Bank flats, Birkenhead, with each tenant benefiting from the resulting feed in tariff.
- 3.6 The Green Specification Guide will also be made available to private developers who are procuring building works in Wirral via the Developers Guide, which is being promoted by the Technical Services Department’s Development Control and Building Control Divisions. Thus, private developers will be encouraged to follow similar principles to the Council’s own designers and, therefore, contribute to corporate objectives and priorities.

#### **4.0 FINANCIAL IMPLICATIONS**

- 4.1 The inclusion of renewable technologies in any capital project will result in increased initial costs for that particular project. These costs will be assessed by Technical Services Department staff when the project is designed and the costs of the enhanced scheme separately identified in the Scheme and Estimate reports to Cabinet. The reports will also detail the resulting benefits, such as the potential revenue income via Feed in Tariffs for any proposed renewable energy facilities and likely pay-back period. This will enable Cabinet to assess the benefits resulting from the enhanced scheme and ensure that this is an integral consideration of any scheme proposals.
- 4.2 Continued membership of the National Green Register requires a revenue commitment of approximately £150 p.a. This can be met from existing resources.

#### **5.0 STAFFING IMPLICATIONS**

- 5.1 There are no staffing implications arising directly from this report.

#### **6.0 EQUAL OPPORTUNITIES/EQUALITY IMPACT ASSESSMENT**

- 6.1 There are no implications under this heading.

#### **7.0 HEALTH IMPLICATIONS/IMPACT ASSESSMENT**

- 7.1 There are no implications under this heading.

#### **8.0 COMMUNITY SAFETY IMPLICATIONS**

- 8.1 There are no implications under this heading.

#### **9.0 SUSTAINABILITY IMPLICATIONS**

- 9.1 Adoption of the Green Specification Guide will enable the Council to continue to reduce its carbon footprint by improving energy efficiency, reducing energy needs, introducing renewable technologies and improving environmental performance.

## **10.0 PLANNING IMPLICATIONS**

10.1 Some renewable energy installations, which are retrofitted to buildings during adaptation or refurbishment works, may require planning consent. Individual project-specific planning implications will be reported to Cabinet at Scheme and Estimate report stage.

## **11.0 ANTI-POVERTY IMPLICATIONS**

11.1 There are no implications under this heading.

## **12.0 HUMAN RIGHTS and SOCIAL INCLUSION IMPLICATIONS**

12.1 There are no implications under these headings.

## **13.0 LOCAL MEMBER SUPPORT IMPLICATIONS**

13.1 The Green Specification Guide and potential introduction of renewable technologies will be applied to Council's buildings across all Wards.

## **14.0 BACKGROUND PAPERS**

14.1 No relevant information has been used in the preparation of this report.

## **RECOMMENDATIONS**

That Members of the Sustainable Communities O&S Committee note and endorse the content of this report and refer the following recommendations to Cabinet for approval:

- (1) That the Green Specification Guide (Appendix A) be adopted by the Council for use on all Council building projects;
- (2) That all future Scheme and Estimate reports for building projects include details of proposed renewable energy generating facilities, where it is practicable to incorporate these, together with the associated costs and environmental and financial benefits of such enhanced schemes;
- (3) That membership of the National Green Register be continued;
- (4) That the Green Specification Guide be linked to the Developers Guide and promoted by the Technical Services Department

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TECHNICAL SERVICES