

Environment Scrutiny Panel – 17 November 2010**Energy Efficiency and the Planning Process Informal Scrutiny Group Review****Report of the Chairman, Councillor Barry Lipscomb**

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Executive Summary

The Informal Group examined the Council's role encouraging the development of energy efficient buildings through the planning process and, as a consequence of their investigations, makes a number of recommendations which are drawn from the attached full report and set out below:

Recommendations**That the Environment Scrutiny Panel:**

- 1. Considers the report and whether the review has adequately scrutinised issues relating to Energy Efficiency and the Planning Process , as defined in the Group's terms of reference.**
- 2. Asks Cabinet to agree the following recommendations from the Group:**
 - a) That, as the Group had discovered that there was a critical lack of expertise within the Planning Management Team on energy efficiency issues (and to underpin the policies emerging through the Local Development Framework process) the Council should urgently investigate the possibility of joint working, etc. The Group agreed that "doing nothing" was not a viable option and that the alternative to joint working should be to create an in-house facility through training existing officers. *(The Group were agreed that this was the most important recommendation of their review and that, even within the current budget constraints, relatively small resources should be made available to action these recommendations.)*
 - b) That the Council investigate whether the C- Plan system would deliver significant benefits in relation to the determination of planning applications in the Winchester context.
 - c) That the Council investigate ways to support WinAcc's initiative to promote forward thinking from developers on energy efficiency issues and consider establishing links from the Council's Planning and Building Control web-pages to a page entitled "Is your application as green as it could be?" This page could then refer the reader onto other, external, links giving advice on energy efficiency matters.
 - d) That a representative of the National Farmers Union be invited to participate on the High Quality Environment Group (part of the Winchester District Strategic Partnership).

- e) That Cabinet or senior officers be encouraged to contact Thamesway (Woking Borough Council) to hear directly their experiences of encouraging and assisting the development of energy efficient projects.

3. That the Cabinet (Local Development Framework) Committee be requested to note the Group's recommendations that:

- i) That the Council should not seek to create a Supplementary Planning Document on energy efficiency issues at this stage, but reconsiders whether such guidance is necessary when the Core Strategy Policy is completed.
- ii) That the importance of providing sufficient garden space for home grown produce and the provision of allotments be highlighted to the Local Development Framework Committee.
- iii) That the Local Development Framework Committee be recommended to note that energy efficient homes should not be an impediment to good and sympathetic design.

4. That the Portfolio Holder for High Quality Environment be requested to report on Cabinet's consideration of these recommendations to the next meeting of the Panel (to be held 8 February 2011).

5. That the Panel review Cabinet's implementation of the above recommendations in twelve months time, at its meeting to be held November 2011.

Links to the Sustainable Community Strategy and Corporate Business Plan:

This relates to High Quality Environment and managing our assets as a part as our aim to be an efficient and effective Council.

Resource Implications:

Joint working, or providing officer training, would require additional resources which could not be met from within existing budgets. In the event that it was decided that the C-Plan system should be provided in Winchester additional resources would need to be identified as purchasing the system and maintaining it thereafter could not be met from within existing budgets.

Risk Management Issues:

A risk assessment has been completed in accordance with the Council's Risk Management Methodology and the existing controls in place mean that no significant risks (Red or Amber) have been identified.

Background Documents

As set out in the attached report.

Appendices

Appendix: Energy Efficiency and the Planning Process Informal Scrutiny Group Report

Energy Efficiency and the Planning Process Report

1 Introduction

- 1.1 The Energy Efficiency and the Planning Process Informal Scrutiny Group (ISG) was established by the Environment Scrutiny Panel meeting, held 2 February 2010. The creation of the ISG had been inspired by the Audit Commission's paper ["Lofty Ambitions; the Role of Councils in reducing domestic CO2 emissions"](#).
- 1.2 The membership of the Group was agreed as Councillors Lipscomb (Chairman), Bell, Busher, Clear and Jackson (Councillor Maynard deputy).
- 1.3 The Group met on four occasions:

8 March 2010,

when the Group agreed their terms of reference and gathered evidence from;

- the then Portfolio Holder for Environment, Councillor Pearson;
- the City Council's Head of Planning Management, Simon Finch;
- the City Council's Head of Strategic Planning, Steve Opacic;
- the City Council's Head of Building Control, Chris Griffith-Jones;
- and the City Council's Head of Estates, Kevin Warren.

19 April 2010,

when the Group gathered evidence from;

- Sean Randall, Head of Policy and Strategy – Energy Centre for Sustainable Communities Ltd;
- Rob Veck, Chairman of WinAcc's Built Environment Group;
- the City Council's Historic Environment Team Leader, Alison Davidson;
- the City Council's Sustainability Officer, Teresa Kennard.

14 July 2010,

when the Group visited the Thamesway Group of Companies at Woking Borough Council. The Group received a presentation from John Thorp (Group Managing Director of Thamesway); then saw a retrofit solar panel installation to a sheltered accommodation site; some show-homes which were being built to a very high standard of energy efficiency; and a Combined Heat and Power Plant which had been constructed within a multi-storey car park.

27 July 2010,

when the Group drew together its final conclusions for this Report.

- 1.4 This Report uses the minutes of the Group's meetings to answer the questions the Group set itself in its terms of reference and, for information, the complete minutes are set out in Appendix 1.

2 The Group's Terms of Reference:

- 2.1 "To consider how the Council can best use its strategic planning and development management processes to ensure energy efficiency through the construction and refurbishment of buildings."
- 2.2 More specifically the Scrutiny Group considered:
1. What is the current Government guidance to local planning authorities on their policies and decision making processes in relation to low carbon and sustainable buildings?
 2. To what extent is the Council constrained by national or regional policy or other legislation?
 3. Do the current strategies and emerging planning policies, which set out the Council's aims for sustainability in building design and construction, represent a reasonable balance between ambition and deliverability/viability?
 4. Does the Council have sufficient expertise and advice available to it to properly assess and make informed decisions in relation to these issues?
 5. What is the Council doing to provide leadership and to set a good example to the community and partners to act on domestic CO₂?
- 2.3 This Report sets out the Group's responses to the above questions in turn:

3 What is the current Government guidance to local planning authorities on their policies and decision making processes in relation to low carbon and sustainable buildings?

a) Planning Policies

i) *National Policies*

- 3.1 The City Council's Head of Planning Management (Mr Finch) and the Head of Strategic Planning (Mr Opacic) explained that energy efficiency issues were mainly dealt with in [Planning Policy Statement 1](#) and its annex, "Planning and Climate Change". These expected

Councils to produce local policies to bring forward development whose energy requirements can partly be met by decentralised and renewable energy or low carbon energy sources.

ii) Regional Policies

- 3.2 The [South East Plan's Policy NRM1](#) (Natural Resource Management) required developments of 10 dwellings or more (and commercial properties over 1,000 sq metres) to provide 10% of its energy requirements from decentralised and renewable or low carbon sources, unless this was not possible due to design or site specific reasons.
- 3.3 However, the South East Plan was revoked on 6 July 2010 and so is no longer part of the Development Plan of the District and is not therefore a material planning consideration.

iii) Local Policies

- 3.4 The Local Plan had policies on sustainable construction and renewable energy which had been, in effect, written by the Local Plan Inspector. However, as these added nothing in addition to the South East Plan's policies, they had not been 'saved' into the Local Development Framework.
- 3.5 As Government required any new, replacement policies to be evidence based, consultants had been commissioned and had undertaken [studies](#) to investigate the potential for renewable energy in the District.
- 3.6 This had informed two proposed policies in the Core Strategy:
- 3.7 [CP13](#) would immediately require new development to reach Level 5 of the Code for Sustainable Homes (COSH) for energy and water and Level 6 from 2016 (in line with national requirements).
- 3.8 [CP14](#) set out how this should be achieved and acknowledged that on-site energy generation was only likely to be possible on larger sites and offered smaller developments a buy-out option, to provide or contribute to off site energy generation.
- 3.9 The Core Strategy was expected to be adopted by December 2011. (NOTE: since the ISG meetings, the programme for the Core Strategy has been revised and is likely to be delayed by 6-12 months).
- 3.10 The Council had commissioned [further consultancy work](#) to test the viability of these policies on developments. In summary, this had demonstrated that the changes were likely to add considerably to the current build costs (excluding land value and distinct from the sale value).
- 3.11 The Group was advised that officers believed that the Planning Inspectorate would not approve these policies, as anything above

about a 10% increase in build costs would probably be considered to be unviable. To that end, the consultants had recommended that developments should provide at least 70% of energy requirements on-site (consistent with the Government's emerging 'Zero Carbon Policy'), but could pay into a 'buy-out' fund for the other 30%, as reaching 100% on-site generation led to very high costs.

iv) A local Supplementary Planning Document

- 3.12 As part of his evidence to the ISG, Cllr Pearson had suggested that the Council should adopt a Supplementary Planning Document (SPD) to require developers to create more energy efficient buildings. However, officers had advised against this at this stage, as there was no policy in the new Local Development Framework for the SDP to supplement. PPS1 advises that any local policy should be based on nationally understood standards (Codes for Sustainable Homes for BREEAM, *Building Research Establishment Environmental Assessment Method*, commercial properties).
- 3.13 Mr Opacic had reported that the Cabinet (Local Development Framework) Committee had requested that officers report on the options for producing a SPD in March 2009 but, due to lack of resources and the lack of a 'parent' policy, it had not been possible to proceed with this request. It was Mr Opacic's view that a SPD would not be as productive as a robust Core Strategy policy, because SPDs cannot introduce new policy requirements (according to PPS1).
- 3.14 In response to questions, Mr Opacic had explained that both Brighton and Eastleigh Councils had more specific requirements in their old Local Plans (due to the timing of their plans' submission to the Inspector and that different Inspectors would have considered the Plans). Neither had replacement Core Strategies in place.
- 3.15 Nationally, only 16 Councils had Core Strategies approved by the Inspectorate since the beginning of 2009. Of these, seven required developments to do no more than the national or regional policies or comply with the latest building regulations; three required 10-20% on-site energy generation, but were not related to COSH (Code for Sustainable Homes); and two, in effect, required less than national standards.
- 3.16 Three councils required developers to produce schemes above the national standard, Southampton, New Forest and Dover. Southampton and New Forest required all developers to meet COSH standards a year earlier than Government requirements and Dover required this for specific sites.
- 3.17 NOTE: Following the Cabinet (Local Development Framework) Committee's agreement to revise the Core Strategy programme, a number of 'Interim Policy Aspirations' have been developed and are in

the process of being adopted by the Council. One of these deals with sustainable development and seeks to bring the emerging Core Strategy's policies into effect on a non-statutory basis, prior to their statutory adoption. There may be a need for further advice/interpretation of the Policy Aspirations by way of a guidance document and consideration is being given to the format of this.

- 3.18 ***Recommendation: That the Council does not seek to create a Supplementary Planning Document on energy efficiency issues at this stage but reconsiders whether such guidance is necessary when the Core Strategy Policy is completed.***

b. Building Control Issues

- 3.19 From the City Council's Head of Building Control's (Mr Griffith-Jones) evidence, the Group had noted that in 2005 the Government had introduced COSH and increasingly stringent Building Control Regulations in intervals of three years, to enable the building market to adjust and develop expertise. By 2013, all homes were required to be built to Level 4 and by 2016, Level 6. Mr Griffith-Jones commented that he was unsure why there were moves to speed up this process through the planning system.
- 3.20 Building Control used SAP ratings (Standard Assessment Procedure), which took into account all energy use, construction, orientation, number of windows etc. Whilst there was no statutory on-site inspection between the completion of the damp-proof course and the roof, developers were required to guarantee, by a competent person, that the correct level of insulation etc had been used. In addition, the final building would undergo an air tightness test.
- 3.21 Mr Griffith-Jones had explained the level of expertise within his team, namely that he was trained in COSH, one of his officers in SAP and that consultants were brought in where necessary. He added that resources were frequently shared with other Building Control Departments in other authorities on an informal basis.
- 3.22 ***Recommendation: That the Council investigate opportunities for more joint working with other Local Authorities on sharing energy efficiency expertise in Building Control***
- 3.23 The Group also learnt that any private residents enquiring about retrofitting energy efficient measures would be re-directed to other agencies and/or the Environment Team. He suggested that further information (or links) could be made available from the Council's website and the Group acknowledged this and the need to reach those without internet access.

c. Conservation Issues

- 3.24 Alison Davidson (Historic Environment Team Leader) made a presentation to the Group. From this, the Group noted the importance and high regard the government has for the historic environment and the need to protect it, whilst recognising that there could be considerable benefits from adapting existing buildings to become more energy efficient. This was borne out by a recent government statement on the historic environment and the publication of new policy guidance.
- 3.25 Mrs Davidson referred the Group to the relevant guidance in Planning Policy Statements and a number of further documents (see references below) on a range of sustainable living and energy conservation issues, published by English Heritage and others.
- 3.26 Mrs Davidson also explained that the Historic Environment Team had a generally positive view towards energy efficiency measures, so long as they were not detrimental to the historic fabric of the building. The emphasis should be on ensuring that all “benign” measures are undertaken prior to alterations which have an impact on the historic interest of the buildings, and that it is imperative that the traditional build methods of historic buildings is fully understood before adaptations are considered.

d. The Local Experience

Rob Veck – Chairman of WinAcc’s Built Environment Group

- 3.27 To encourage the local community to better insulate their homes, WinACC (Winchester Action on Climate Change) aimed to create an independent and trusted team of volunteers to advise homeowners on their best options. Included in this was part of WinACC’s efforts to break down the barriers between the different home-improvement trades to ensure that as much insulation work as possible could be installed with minimum disruption to the house and minimum cost to the homeowner. For example, they would advise that, whilst a plumber was employed, they could use that opportunity to install pipes and connections for a more environmentally friendly system to be completed and installed at a later date when finances allowed. Therefore WinACC aimed to advise the homeowner of the possibilities and to encourage local trades to be more forward thinking.
- 3.28 ***Recommendation: that the Council investigate ways to support this initiative and consider linking from the Council’s Planning and Building Control webpages a link through to a page entitled “Is your application as green as it could be?” This page could then refer the reader onto other, external, links giving advice on energy efficiency matters.***

- 3.29 Mr Veck also explained his own experiences in insulating his property, where he was working to reduce his emissions by 80%. He recorded his progress in the blog: <http://www.greenhomedairy.co.uk/>
- 3.30 Part of that work included additional external insulation. Mr Veck proposed to use cedar wood cladding and to install a hot water solar panel on the roof. He explained that these proposals had been rejected by planners as they were considered to be alien to the surroundings. As a compromise, the solar panel was moved to a less prominent position on the roof and the external wall was clad in hanging tiles. From this experience, Mr Veck explained that environmental improvements to buildings were likely to make the properties look different and, in the current environment, this aesthetic change was likely to generate concerns from neighbours and local planning authorities.
- 3.31 He had also taken part in Oxford University's "e-measure" scheme, which aimed to demonstrate the effectiveness of good insulation.
- 3.32 It was Mr Veck's view that the emphasis should be on providing homes with excellent insulation, as very well insulated homes required very little heating; thereby reducing its carbon output to a minimum. Arising from this, the Group noted that ground source heating systems usually required an area twice the total floorspace of the property to work properly.
- 3.33 From learning about the Greening Colden Common scheme, the Group noted that there were no planning policies which required developers to provide sufficient garden space to cultivate their own food. The Council could only require developers to provide allotments for very large developments.
- 3.34 ***Recommendation – that the importance of providing sufficient garden space for home grown produce and the provision of allotments be highlighted to the Cabinet (Local Development Framework) Committee.***

4 To what extent is the Council constrained by national or regional policy or other legislation?

- 4.1 In addition to the policy limitations set out above, the Annex to PPS1 stated that if Local Authorities wished to introduce higher standards through local policies, the need had to be justified to the developer (for example, water conservation in areas prone to water shortages). Furthermore, these could only be area specific and could not be applied district-wide.

5 Do the current strategies and emerging planning policies, which set out the Council's aims for sustainability in building design and construction, represent a reasonable balance between ambition and deliverability/viability?

5.1 At its first meeting, the ISG heard evidence from the then Portfolio Holder for Environment, Councillor Pearson.

5.2 He had explained that:

- Policies to encourage carbon neutral homes had, in effect, two approaches. Firstly, that the homes should maximise energy conservation within the building itself through, for example, insulation. Secondly, the Government was moving towards expecting these, more efficient homes, to be self sustaining on-site in terms of their energy supply.
- On-site energy could be provided through a combined heat and power unit (CHP) on a community basis. These could be powered by waste energy burners (the heat produced would be used to heat houses and then generate energy for local homes). A system of transferring heat to homes was undertaken in Sweden with massive insulation on the piping, but in the UK this was not considered economic for distances beyond 2km.
- Another alternative source of on-site energy generation was anaerobic digesters, which used surplus domestic and out-of-date food from supermarkets, along with farm waste and wood chips, to produce methane. However, Councillor Pearson advised that such on-site energy generation schemes had come up against public (and local authority) opposition because of fears regarding smell, fumes and traffic. However, he added that many of these fears were unfounded against newer, cleaner technologies.
- That the appearance of energy efficient buildings was likely to differ from traditional homes, by virtue of using different materials, being squatter and using smaller windows with south facing roofs to maximise solar gain.
- Developers had informed Councillor Pearson that energy efficient homes had been refused by the Council and that there was a need for further officer and Member training on the relevant issues (see below).
- Councillor Pearson had also commented on difficulties of converting older, listed buildings or buildings within Conservation Areas and the resistance to change from English Heritage and Conservation Officers (regarding for example, the replacement of Victorian glass).

The Group noted these comments in the context of Mrs Davidson's evidence above.

- 5.3 ***That the Cabinet (Local Development Framework) Committee be recommended to note that energy efficient homes should not be an impediment to or incompatible with good and sympathetic design.***

6 Does the Council have sufficient expertise and advice available to it to properly assess and make informed decisions in relation to these issues?

- 6.1 The ISG learnt, with concern, from the Head of Planning Management that the Council had no in-house expertise in energy efficiency issues and had bought in consultants to assist with the Barton Farm application. However, the Group was advised that there was insufficient work to justify a full time post within the planning team dealing with energy efficiency issues.
- 6.2 ***Recommendation: That, to underpin the policies emerging through the Local Development Framework process, the Council should urgently investigate the possibility of joint working etc. The Group agreed that "doing nothing" was not a viable option and that the alternative to joint working should be to create an in-house facility through training existing officers. The Group were agreed that this was the most important recommendation of their review.***
- The Group agreed that even within the current budget constraints, relatively small resources should be made available to action these recommendations.***
- 6.3 Mr Finch had explained that he was unaware of any training courses that were adequately comprehensive for those officers who had already expressed an interest in the subject. Furthermore, there were insufficient funds in the department's training budget.
- 6.4 The ISG heard at its second meeting from Sean Randall (Head of Policy and Strategy – Energy Centre for Sustainable Communities Limited), who promoted the computer and software tool for planners, C-Plan.
- 6.5 C-Plan had arisen from an understanding of how planning authorities would need to implement the Merton Rules.
- 6.6 The C-Plan system placed the emphasis on the developer to demonstrate the carbon impact of their scheme in relation to local and national planning policies and presented this information in an easy to understand manner for planning officers. It did this via a website site

backed up by a comprehensive database relating to complex building regulations, government advice and other technical information.

- 6.7 He explained that the C-Plan process was an auditable process and had, indirectly, been successfully defended at a planning inquiry. The system was currently used by Three Rivers Council, Hertfordshire, and Woking Borough Council.
- 6.8 The programme cost approximately £7,500 per annum.
- 6.9 ***Recommendation: That the Council investigate whether the C-Plan system would deliver significant benefits in relation to the determination of planning applications in the Winchester context.***

7 What is the Council doing to provide leadership and to set a good example to the community and partners to act on domestic CO2?

a) The Council's own buildings

- 7.1 The Group had called to its second meeting the City Council's Head of Estates, Mr Warren, to explore whether the Council was setting a good example through the management of its own buildings.
- 7.2 The Group had chosen not to consider the impact of energy efficiency on its own housing stock because it was too large in its scope and not appropriate to the planning process.
- 7.3 Mr Warren explained:
- the improvements to the energy efficiency of the Guildhall. The renovations included improvements to insulation, air conditioning equipment and replacement of Victorian glazing where practical (however, this was mainly for safety reasons),
 - that there were similar plans to upgrade the City Offices and these included the construction of a mansard roof (with accommodation) and improvements to the elevations and windows.
- 7.4 Mr Warren also advised that local energy projects had extremely high installation costs and were prone to breakdowns.
- 7.5 A Combined Heat and Power system had been discussed with the County for the Winchester town area, in co-ordination with the resurfacing of the High Street, but was dismissed, as the pipe work alone would have cost £300,000. Winchester College had not been involved in these discussions. However, Ms Kennard later explained that the Council was currently jointly funding a CHP/District Energy

Study for the Winchester town centre area with Hampshire County Council.

- 7.6 Mr Warren had also explained that the Council was set to employ a part-time surveyor to deal with energy matters regarding the Council's own estate.
- 7.7 It was Mr Warren's view that vertical ground source heat pumps proved ineffective after several years' use (as the temperature of the ground changed over use) and that only larger horizontal systems worked well. However, these were not practical for the City Offices, given the area's high water table.
- 7.8 Furthermore, proposals to extract power from Abbey Mill had been delayed by structural problems with the building and Mr Warren had advised the Group that, whilst there were many energy efficient products available, few offered real savings.

b) Teresa Kennard – Sustainability Officer

- 7.9 At their meeting held on 19 April 2010, the Group heard from Ms Kennard, the City Council's Sustainability Officer with a view to understand what leadership the Council provides to reduce domestic CO₂.
- 7.10 She explained that the development of the Climate Change Programme, the partnership working taking place through the Local Strategic Partnership and the support provided to organisations such as WinACC.
- 7.11 The Climate Change Programme worked towards four outcomes and a number of projects were taking place for each of these outcomes:
- Greenhouse Gas Emissions Reductions
 - Renewable Energy Generation
 - Adaptation Planning
 - Community Development
- 7.12 Whilst the Programme took a holistic view of Climate Change, an emphasis had been placed on the CO₂ emission reduction element. This was due to the need to rapidly reduce these emissions from a high baseline, with local targets set at a 20% reduction by 2012 and a one-third reduction by 2015.
- 7.13 She explained how the data for NI186 was collected; the difference (in a growing population) of carbon use in total and carbon use per head of capita; and the role of smart meters.
- 7.14 Despite its importance, Ms Kennard explained that the initiatives relating to transport in the Carbon Change Programme were almost

entirely on hold, awaiting developments within the control of Hampshire County Council and the production of the Winchester Town Access Plan.

- 7.15 As part of Ms Kennard's presentation, the Group noted the role of the High Quality Environment Panel and recommended that a representative of the National Farmers Union be invited to participate on the Panel.

- 7.16 ***Recommendation: That a representative of the National Farmers Union be invited to participate on the High Quality Environment Group (part of the Winchester District Strategic Partnership).***

c) THAMESWEY – WOKING BOROUGH COUNCIL

- 7.17 Arising from a suggestion from Sean Randall, the Group visited Woking Borough Council on 14 July 2010 to ascertain what lessons could be learnt for Winchester. The Group was joined on its visit by officers of Winchester City Council, other City Councillors, together with representatives of WinACC and the City of Winchester Trust.

- 7.18 At Woking, the Group received a presentation from the Group Managing Director of Thameswey, which is attached to the Report. In summary, Woking Borough Council had established Thameswey as a separate group of companies to promote and pursue sustainability issues. This had resulted in a number of high profile sustainable developments in the district, including the installation of a combined heat and power unit in a town-centre car park, and the development of Thameswey as an advisor to other Councils and private developers.

- 7.19 At their last meeting, held on 27 July 2010, the Group reviewed what lessons could be learnt from their visit to Woking. In summary, the Group considered that there were a number of unique circumstances at Woking which had made the Thameswey initiative a success (including the level of expertise within the Council, the political commitment to long-term investment and layout and composition of the town-centre). Although, the Group therefore considered that it would be difficult to import the Thameswey model to Winchester, it did agree that the Woking experience was sufficiently inspiring that Cabinet (and/or the Senior Management Team) should be encouraged to contact Thameswey for them to determine whether there were any lessons from which Winchester could benefit.

- 7.20 ***Recommendation: That Cabinet or Senior Officers be encouraged to contact Thameswey (Woking Borough Council) to hear directly their experiences of encouraging and assisting the development of energy efficient projects.***

7.21 References:

The following references are the hyperlinks, in full, from the text in the above report:

www.audit-commission.gov.uk/housing/nationalstudies/loftyambitions

<http://www.communities.gov.uk/documents/planningandbuilding/pdf/planningpolicystatement1.pdf>

http://www.gos.gov.uk/497648/docs/171301/815607/815696/Pages_from_RS_S-3_Section_B.pdf

<http://www.winchester.gov.uk/General.asp?id=21091>

<http://www.winchester.gov.uk/Documents/LDF/Core%20Strategy/preferred%20option/CoreStrategyPreferredOption.pdf>

<http://www.winchester.gov.uk/Documents/LDF/Core%20Strategy/preferred%20option/CoreStrategyPreferredOption.pdf>

<http://www.winchester.gov.uk/General.asp?nc=X7QG&id=23852>

The following references were provided by the Head of Historic Environment:

- The Government's Statement on the Historic Environment for England 2010, HM Government 2010
- Planning Policy Statement 5 – Planning for the Historic Environment - Department of Communities and Local Government 2010
- PPS5 Planning for the Historic Environment – Historic Environment Planning Practice Guide - DCLG, English Heritage and DCMS 2010
- Building Regulations and Historic Buildings - English Heritage 2004
- Climate Change and the Historic Environment - English Heritage 2008
- Energy Conservation in Traditional Buildings - English Heritage 2008
- Microgeneration in the Historic Environment - English Heritage 2008
- Micro Wind Generation and Traditional Buildings - English Heritage 2008
- Small Scale Solar thermal energy and Traditional Buildings - English Heritage 2008

- Wind Energy and the Historic Environment - English Heritage 2005
- Research into the Thermal Performance of Traditional Windows: Timber Sash Windows (Executive Summary) - English Heritage 2009

Web sites:

www.climatechangeandyourhome.org.uk

www.lowcarbonbuildings.org.uk

www.energysavingtrust.org.uk

Appendices:

Minutes of the Informal Scrutiny Group:

- 8 March 2010
- 19 April 2010
- 27 July 2010

Thamesway Limited Presentation

ENERGY EFFICIENCY AND THE PLANNING PROCESS
INFORMAL SCRUTINY GROUP

8 March 2008

Attendance:

Councillors:

Lipscomb (Chairman) (P)

Bell (P)
Busher (P)
Clear
Jackson (P)

Others in attendance:

Councillor Pearson (Portfolio Holder for Environment)

Officers in attendance:

Simon Finch – Head of Planning Management
Steve Opacic – Head of Strategic Planning
Chris Griffith-Jones – Head of Building Control
Kevin Warren – Head of Estates

1. TERMS OF REFERENCE

The Chairman explained that the ISG had been inspired by the Audit Commission's paper ["Lofty Ambitions: the Role of Councils in reducing domestic CO2 emissions"](#).

The Group discussed broadening its remit to include issues such as the retro-fitting of insulation etc to existing properties, but agreed that, at this stage, this would be too large a piece of work to undertake. The Group should therefore concentrate on energy efficiency issues through the planning process. The Group agreed that other related issues, such as retro-fitting, could be looked at by another Group at another time.

Following discussion, the Group agreed to the terms of reference set out on the agenda (and as below), which had been drafted by the Chairman with officers at a meeting held on 15 February 2010. The only amendment the Group proposed to make to these terms of reference was to include a question suggested by the Audit Commission in their original letter to Councillors (set out in italics below).

RESOLVED:

That the Group's Terms of Reference be agreed as:

"To consider how the Council can best use its strategic planning and development management processes to ensure the construction and refurbishment of energy efficient buildings.

More specifically the Scrutiny Group will consider:

- What is the current Government guidance to local planning authorities on their policies and decision making processes in relation to low carbon and sustainable buildings?
- To what extent is the Council constrained by national or regional policy or other legislation?
- Do the current strategies and emerging planning policies which set out the Council's aims for sustainability in building design and construction represent a reasonable balance between ambition and deliverability/viability?
- Does the Council have sufficient expertise and advice available to it to properly assess and make informed decisions in relation to these issues?
- *What is the Council doing to provide leadership and to set a good example to the community and partners to act on domestic CO2?"*

2. EVIDENCE GATHERING FROM WITNESSES

Councillor Pearson – Environment Portfolio Holder

In summary, FP explained that:

- He was frustrated by the Council's absence of a Supplementary Planning Document (SPD) to require developers to create buildings with greater energy efficiency. Although he had suggested that the Council should adopt these policies with immediate effect, he had been informed by officers that this not possible at this stage, as the Council had yet to adopt the relevant policy in the Local Development Framework. An SPD required a policy to supplement, and at this stage, there was no policy.
- Policies to encourage carbon neutral homes had, in effect, two approaches. Firstly, that the homes should maximise energy conservation within the building itself through, for example, insulation. Secondly, the Government was moving towards

expecting these more efficient homes to be self sustaining on-site in terms of their energy supply.

- On-site energy could be provided through a combined heat and power unit (CHP) on a community basis. These could be powered by waste energy burners (the heat produced would be used to heat houses and the generate energy for local homes). A system of transferring heat to homes was undertaken in Sweden with massive insulation on the piping, but in the UK this was not considered economic for distances beyond 2km.
- Another alternative source of on-site energy generation was anaerobic digesters, which used surplus domestic and out-of-date food from supermarkets, along with farm waste and wood chips, to produce methane.
- However, FP advised that such on-site energy generation schemes had come up against public (and Council) opposition because of fears regarding smell, fumes and traffic. However, he added that many of these fears were unfounded against newer, cleaner technologies.
- That the appearance of energy efficient buildings was likely to differ from traditional homes, but virtue of using different materials, being squatter and using smaller windows with south facing roofs to maximise solar gain.
- Developers had informed FP that energy efficient homes had been refused by the Council and that there was a need for further officer and Member training on the relevant issues.
- FP also commented on difficulties of converting older, listed buildings or buildings within Conservation Areas and the resistance to change from English Heritage and Conservation Officers (regarding for example, the replacement of Victorian glass).

Simon Finch – Head of Planning Management

- SF agreed that the ISG should concentrate its focus on energy efficiency through the Council's planning process.
- That, through [Planning Policy Statement 1 \(and its annexe\)](#), energy efficiency issues were material considerations in planning.
- That the absence of a local policy made the assessment of energy efficiency issues for planning officers more difficult.
- That Brighton and Hove City Council's and Eastleigh's SPDs had set requirements for new developments. Woking had also developed an e-system ("c-plan") to help planning officers to assess the energy efficiency of proposals.
- The IDEA website also had useful advice and examples of conditions that could be applied to permissions

- That there was no in-house expertise in energy efficiency issues and that the Council had bought in consultants to assist with the Barton Farm application. During discussion, SF explained that there was insufficient work to justify a full-time post. Therefore the Group discussed the possibility of a cross-Council resource. It was noted that the Council's Sustainability Officer was unable to offer this expertise.
- In response to questioning, SF explained that he had considered offering additional training to those officers who had expressed an interest in this area, but that he had yet to identify training courses which were adequately comprehensive and there were insufficient funds in the department's training budget.
- Although the Council currently relied on regional policies, these tended to be most useful only in relation to the larger applications.
- Government advised that if the Council was to adopt its own local policies, these should be based on nationally understood standards (ie, the Codes for Sustainable Homes levels 1-6 for domestic properties, or the BREEAM standard for commercial properties). These standards used a matrix evaluation to assess the energy efficiency of buildings.
- During discussion, the Group noted that the good energy efficiency rating of exception housing sites and the Group suggested that Councillors be offered tours of these properties, as part of energy efficiency training, before the properties were occupied.

Steve Opacic – Head of Strategic Planning

- National Policies – [PPS1](#) and the Supplement, Planning and Climate Change, expected low carbon schemes and introduced the Merton Rule (from London Borough of Merton), whereby 10% of the development's energy needs should be provided on-site.
But, within the annexe, Paragraph 31 stated that if local authorities required higher standards than the current, national building regulations, then the local authority would need to justify this (for example, water policies relating to local water supply problem). Furthermore, these additional requirements should be only site or area specific, and could not be applied district-wide. The paragraph also required local requirements to be set within Development Plan Documents (and not SPDs) and to be evidence based. Public consultation on Government proposals to merge PPS1 and PPS22 (guidance on renewable energies) was due shortly.

- At the regional level – [South East Plan NRM11](#) (Natural Resource Management) required developments of 10 dwellings or more (or for commercial properties, developments over 1,000 sq m) to abide by the Merton Rule (ie, produce 10% of its energy needs on site) unless this was not possible because of design or site specific reasons.
The Plan also included targets for renewable energy at the county level and to help facilitate the introduction of wind farms etc.
- At the local level – The Local Plan had policies on sustainable construction and renewable energy which had been, in effect, written by the Local Plan Inspector. However, as these added nothing in addition to the South East Plan's policies, they were not 'saved' into the Local Development Framework.
As Government required any new, replacement policies, to be evidence based, consultants had been commissioned and had undertaken [studies](#) to investigate the potential for renewable energy in the District.

This had informed two proposed policies in the Core Strategy:

[CP13](#) would immediately require new development to reach Level 5 of the Code for Sustainable Homes (COSH) for energy and water and Level 6 from 2016 (in line with national requirements).

[CP14](#) set out how this should be achieved and acknowledged that on-site energy generation was only likely to be possible on larger sites and offered smaller developments a buy-out option, to provide or contribute to off site energy generation.

The Core Strategy is expected to be adopted by December 2011.

The Council had commissioned [further consultancy work](#) to test the viability of these policies on developments. In summary, this had demonstrated that the changes were likely to add considerably to the current build costs (excluding land value and distinct from the sale value).

Officers felt that Planning Inspectors would not approve these policies, as anything above about 10% would probably be considered to be unviable. To that end, the consultants were recommending that developments should provide at least 70% of energy requirements on-site (consistent with the Government's emerging 'Zero Carbon Policy'), but could pay into a 'buy-out' fund for the other 30%, as reaching 100% on-site generation led to the very high costs.

SO added that the LDF Committee had requested that officers report on the options for producing a SPD in March 2009, but due to lack of resources, it had not been possible to proceed with this request until now. It was SO's view that a SPDs would not be as productive as a robust Core Strategy policy, because they could not introduce new local requirements (according to PPS1).

In response to questions, SO explained that both Brighton and Eastleigh had more specific requirements in their old Local Plans (due to the timing of their plans' submission to the inspector and that different inspectors would have considered the Plans). Neither had replacement Core Strategies in place.

Nationally, only 16 Councils had Core Strategies approved by the Inspectorate since the beginning of 2009. Of these, seven required developments to do no more than the national or regional policies or comply with the latest building regulations; three required 10%-20% on-site energy generation, but were not related to COSH; and two, in effect, required less than national standards.

Three councils required developers to produce schemes above the national standard, Southampton, New Forest and Dover. Southampton and New Forest required all developers to meet COSH standards a year earlier than Government requirements and Dover required this for specific sites.

SO agreed that there was a lack of specialist knowledge in the area at the Council.

Chris Griffith-Jones – Head of Building Control

In 2005 the Government had introduced COSH and increasingly stringent Building Control Regulations in intervals of three years, to enable the building market to adjust and develop expertise. By 2013 all homes will need to be built to Level 4 and by 2016, Level 6. CGJ was therefore unsure why this process was being sped up.

Building Control used SAP ratings (Standard Assessment Procedure), which took into account all energy use, construction, orientation, number of windows etc. In response to a concern, CGJ explained that whilst there was no statutory on-site inspection between the completion of the damp-proof course and the roof, developers were required to guarantee, by a competent person, that the correct level of insulation etc had been used. In addition, the final building would undergo an air tightness test.

In response to a question, CGJ explained the level of expertise within his team in that he was trained in COSH, another surveyor privately

had trained as a SAP assessor, and consultants were brought in where necessary. He added that resources were frequently shared with other Building Control Departments in other authorities on an informal basis.

CGJ also confirmed that any private residents enquiring about retrofitting energy efficient measures would be re-directed to other agencies and/or the Environment Team. He suggested that further information (or links) could be made available from the Council's website and the Group acknowledged this and the need to reach those without internet access.

Kevin Warren – Head of Estates

KW advised the Group of the improvements to the energy efficiency of the Guildhall. The renovations included improvements to insulation and air conditioning equipment.

Plans to upgrade the City Offices would have to be considered and these might include the construction of a mansard roof (with accommodation) and improvements to the elevations and windows.

KW also advised that local energy projects had extremely high installation costs and were not currently very cost effective. In housing developments, residents had expressed concerns about the potential to be left without heating in the event that a communal system was to breakdown.

A CHP system had been discussed with the County for the Winchester town area, in co-ordination with the resurfacing of the High Street, but was not deemed affordable at the time as the pipe work alone would have cost £300,000. Further consideration is however being given to the potential for a CHP scheme in Winchester by HCC and others. In response to a question, KW confirmed that he had not spoken to Winchester College about these proposals, but that he had held discussions on energy matters with the University.

KW explained that the Council was set to employ a surveyor to deal with asset management and energy matters regarding the Council's own estate.

KW reported that there was a view that vertical ground source heat pumps proved ineffective after several years' use (as the temperature of ground changed over use) and that only larger horizontal systems worked well. However, these were not practical for the City Offices, given the area's high water table.

Proposals to extract power from Abbey Mill had been delayed by structural problems with the building.

KW also advised the Group that, whilst there were many energy efficient products available, few offered real savings.

During debate, the Group noted that the Council did not appear to offer any obvious leadership on these issues to the local community.

3. PROPOSED WORK PROGRAMME

Following discussion, the Group agreed:

Next meeting:

Either Monday 12th or 19th April, 10.00am – depending on which was more convenient to the external witnesses.

To receive information from:

- External witnesses – either Woking or New Forest (SO/SF to advise)
- Teresa Kennard
- Alison Davison
- Robert Hutchison

3rd Meeting:

Wednesday 28 April – 10am

To draw conclusions from the evidence gathered.

The meeting commenced at 1.00pm and concluded at 4.20pm.

ENERGY EFFICIENCY AND THE PLANNING PROCESS
INFORMAL SCRUTINY GROUP

19 April 2010

Attendance:

Councillors:

Lipscomb (Chairman) (P)

Bell (P)
Busher (P)
Clear (P)
Jackson (P)

Officers in attendance:

Alison Davidson – Historic Environment Manager
Teresa Kennard – Sustainability Officer

Chris Griffith-Jones – Building Control Team Manager
Simon Finch – Head of Planning Management

4. MINUTES

RESOLVED:

That the minutes of the previous meeting, held 8 March 2010, be approved and adopted.

5. EVIDENCE GATHERING FROM WITNESSES

a) Sean Randall
Head of Policy and Strategy – Energy Centre for Sustainable Communities Limited.

Mr Randall gave a presentation, which is appended to these minutes.

In addition to the presentation, the Group noted that:

The Energy Centre for Sustainable Communities was part of Thamesway, a group of commercial companies formed by Woking Borough Council in 1999 to move forward a range of environmental issues.

Woking Borough Council had an estate of sustainable homes that was coincidentally adjacent to the show-home demonstrating how a 1950s property could be made more efficient. The Group agreed to investigate the possibility of visiting these properties as part of their tour to Watford (see below).

Mr Randall explained the computer software and consultation tool, C-Plan. C-Plan had arisen from an understanding of how planning authorities would need to implement the Merton Rules.

The C-Plan system placed the emphasis on the developer to demonstrate the carbon impact of their scheme in relation to local and national planning policies and presented this information in an easy to understand manner for planning officers. It did this via a website site backed up by a comprehensive set of database relating to complex building regulations, government advice and other technical information.

He explained that the C-Plan process was auditable process and had, indirectly, been successfully defended at a planning inquiry. The system was currently used by Three Rivers Council, Hertfordshire, and Woking Borough Council.

The programme cost approximately £7,500 per annum.

b) ROB VECK
Chairman of WinACC's Built Environment Group

Mr Veck gave a presentation, which is appended to these minutes.

In addition to the presentation, the Group noted that:

To encourage the local community to better insulate their homes, WinACC aimed to create an independent and trusted team of volunteers to advise homeowners on their best options. Included in this was part of WinACC's efforts to break down the barriers between the different home-improvement trades to ensure that as much insulation work could be installed with the minimum disruption to the house and the minimum cost to the homeowner. For example, they would advise that, whilst a plumber was employed, they could use that opportunity to install pipes and connections for a more environmentally friendly system to be completed and installed at a later date when finances allowed. Therefore WinACC aimed to advise the homeowner of the possibilities and to train local trades to be more forward thinking.

In response to a question, Mr Veck explained his own experiences in insulating his property, where he was working to reduce his emissions by 80%.

He recorded his progress in the blog:
<http://www.greenhomedairy.co.uk/>

Part of that work included additional external insulation, which Mr Veck proposed to clad in cedar wood and to install a hot water solar panel on the roof. He explained that these proposals had been rejected by planners as they were considered to be alien to the surroundings. As a compromise, the solar panel was moved to a less prominent position on the roof and the external wall was clad in hanging tiles. From this experience, Mr Veck explained that environmental improvements to buildings were likely to make the properties look different and, in the current environment, this aesthetic change was likely generate concerns from neighbours and local planning authorities.

It was Mr Veck's view that the emphasis should be on providing homes with excellent insulation, as very well insulated homes required very little heating; thereby reducing its carbon output to a minimum. Arising from this, the Group noted that ground source heating systems usually required an area twice the total floorspace of the property to work properly.

During debate, Mr Griffith-Jones commented on the benefits of the Passive Homes Standard (which required homes to be fully insulated and therefore required little or no heating), in preference to adopting the Code for Sustainable Homes.

The Group noted that on older properties, or properties within the Conservation Areas, it may be more appropriate to put an additional insulating wall in the interior (rather than on the exterior) of the property, and that this also may require planning permission.

During debate, the Group considered that it was likely that, as technologies improved, environmentally friendly installations could become both cheaper and less visually intrusive.

The Group also discussed the importance for WinACC to make their presentations and campaigns (such as 24hours to Save) available to residents outside of the Winchester town area.

The Group noted the Greening Colden Common scheme. This had begun with local residents displaying green cards in their windows, followed by a community meeting which identified a need to grow vegetables locally, in partnership with local schools and businesses. The Scheme also set up a library to lend tools to participants, a delivery system of vegetable boxes, community gardening schemes and links with the local farming community.

Arising from this debate, the Group noted the impact of planning policies which sought the best use of the land for development

purposes, but often resulted in very small or no garden space for residents to cultivate their own food. There was no policy for the Council to require allotment spaces on anything other than very large developments.

The Group noted that the ColdENergy scheme run with Southampton University monitored the effects of insulation schemes. This had discovered that a previous scheme (WarmFront, which targeted insulation schemes to low income households) had little or no effect on carbon reduction, as householders had merely used the better insulation to warm their houses even more.

Mr Veck also explained that he was participating in the “e-measure” scheme run by Oxford University. This tracked household’s carbon data and Mr Veck had (with the permission of his neighbours) recorded the data from all nine of the neighbours in the close where he lived. Although there would be discrepancies in the data regarding whether residents spent most of their time at work or at home; across a wide range it was hoped that the data would be able to demonstrate the effectiveness of better insulation.

During debate, the Group noted the problems of damp and stale air created by total insulation and the need to re-think the design of modern small houses to accommodate all the environmental equipment.

At the conclusion of the debate, the Group welcomed Mr Veck’s suggestion that it should visit the BRE innovation village of energy efficient homes at Watford. The Group agreed that this tour should be made available to all Members.

<http://www.bre.co.uk/page.jsp?id=634>

c) Alison Davidson
Historic Environment Team Leader, Winchester City Council

Mrs Davidson gave a presentation which is appended to these minutes.

In summary she commented on the importance and high regard the government has for the historic environment and the need to protect it, whilst recognising that there could be considerable benefits of adapting existing buildings to become more energy efficient. This is borne out by a recent government statement on the historic environment and the publication of new policy guidance.

She referred the Group to the relevant guidance in Planning Policy Statements and a number of further documents on a range of sustainable living and energy conservation issues published by English Heritage and others.

She explained that the Historic Environment Team had a generally positive view towards energy efficiency measures, so long as they were not detrimental to the historic fabric of the building. The emphasis should be on ensuring that all “benign” measures are undertaken prior to alterations which have an impact on the historic interest of the buildings, and that it is imperative that the traditional build methods of historic buildings is fully understood before adaptations are considered.

d) **Teresa Kennard**
Sustainability Officer, Winchester City Council

Ms Kennard gave a presentation, which is appended to these minutes.

Following on from her presentation, Ms Kennard explained in detail how the data for NI186 was collected; the difference (in a growing population) of carbon use in total and carbon use per head of capita; and the role of smart meters.

Despite its importance, Ms Kennard explained that the initiatives relating to transport in the Carbon Reduction Programme were almost entirely on hold, awaiting developments within the control of Hampshire County Council.

The Group suggested that a representative of the National Farmers Union be invited to participate on the High Quality Environment Panel

6. **DATE OF NEXT MEETING**

As the Group agreed to postpone its next meeting (which was to be held on 28 April) until after the coach tour of Woking and Watford.

No date was set for the coach tour or the next meeting.

The meeting commenced at 10.00am and concluded at 1.45pm.

ENERGY EFFICIENCY AND THE PLANNING PROCESS
INFORMAL SCRUTINY GROUP

27 July 2010

Attendance:

Councillors:

Lipscomb (Chairman) (P)

Bell (P)

Clear (P)

Jackson (P)

Officers in attendance:

Julie Pinnock – Planning Management Team Manager

7. MINUTES

RESOLVED:

That the minutes of the previous meeting, held 19 April 2010, be agreed as a correct record.

8. REVIEW OF VIST TO WOKING – 14 JULY 2010

The Group visited the Thamesway Group of companies at Woking Borough Council on 14 July 2010. The Group was joined on its visit by officers of Winchester City Council, other City Councillors, together with representatives of WinACC and the City of Winchester Trust. During the trip, the Group received a presentation from John Thorp (Group Managing Director of Thamesway); then saw a retrofit solar panel installation to a sheltered accommodation site; some show-homes which were being built to a very high standard of energy efficiency; and a Combined Heat and Power Plant which had been constructed within a multi-storey car park.

The Group agreed that the presentation they had received from John Thorp at Thamesway was inspiring and recommended that Cabinet (or members of the Council's Senior Management) should contact Thamesway directly to explore what opportunities there were for Winchester to encourage greater energy efficiency in new developments.

During their discussion regarding the visit, the additional points were raised:

The compact, multi-story layout of the Woking town centre, unlike Winchester, was well suited to take advantage of Combined Heat and Power (CHP) units.

Furthermore, the creation of the Thameswey Group of companies by Woking Borough Council had required a very long-term investment, and had benefited from officer-led expertise (the lead officer for the project had gone on to be Chief Executive).

The Group noted with interest the energy efficiency measures that had been introduced into the showrooms they had been shown. However, doubts were raised regarding the benefit of “homes for life”. The Group considered that the compromises made in the design of the dwellings, to facilitate future adaptations, were too great. As a consequence, “homes for life” were cramped and therefore had limited appeal.

The Group also considered the retrofit solar panels they saw at the sheltered accommodation to be unsightly, but did approve of the integral tiles, used at the show homes they visited.

In addition, the Group raised concerns about the complexity, cost (especially for replacement equipment in future years) of the “control rooms” in the lofts of the show homes and because these rooms were sealed units, they were inaccessible to the home owners.

9. **CONSIDERATION OF THE DRAFT REPORT**

The Group made a number of minor changes to the draft final report and these have been incorporated, above.

The meeting commenced at 9.30am and concluded at 12.00pm.

Woking Borough Council
Thameswey Limited
Acting Locally, Thinking Globally



14th July 2010

Climate Change: Global issue – Local solutions

John Thorp MBA MSB C.Biol. FEI FRSA
Group Managing Director
Thameswey Limited

Thameswey Limited

Acting Locally, Thinking Globally



Outline

- Background to Woking
- Woking's Strategy and Policies
- Thameswey and esco business
- Questions

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Savings

Corporate

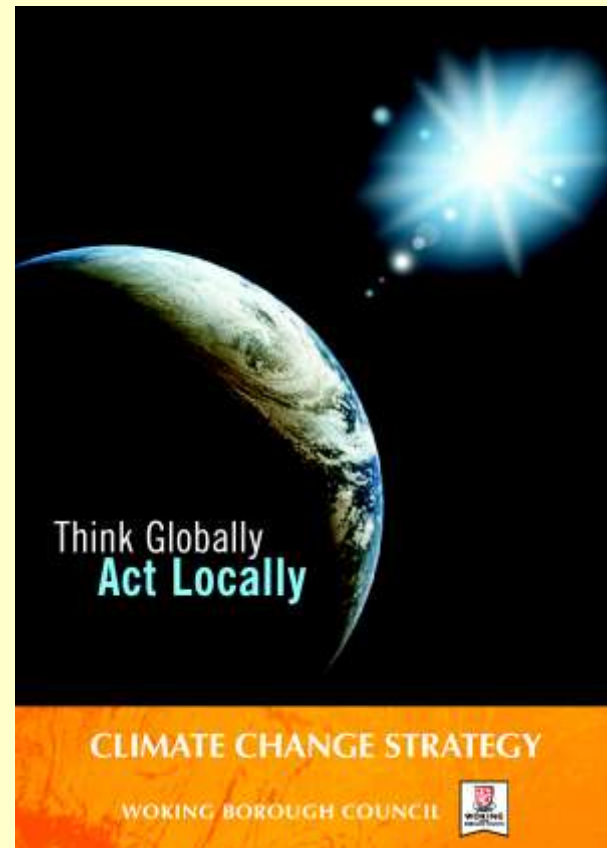
- | | |
|---|------|
| • Energy Consumption Savings (2008) | -31% |
| • CO2 emission reductions (2008) | -29% |
| • Sustainable Energy Self Generation (2008) | +41% |
| • Renewable Energy Self Generation (2008) | +2% |

Borough Wide

- | | |
|---|-------|
| • Energy efficiency of residential property (up to 2008) | +35% |
| • CO2 emission reductions (2008) | -21% |
| • Number of households assisted with energy conservation grants (1996 – 2008) | 5,072 |

Climate Change Strategy

- Three Overarching Aims
 1. Reduction of CO2 equivalent emissions
 2. Adaptation to climate change
 3. Promotion of sustainable development



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Climate Neutral Development Good Practice Guide

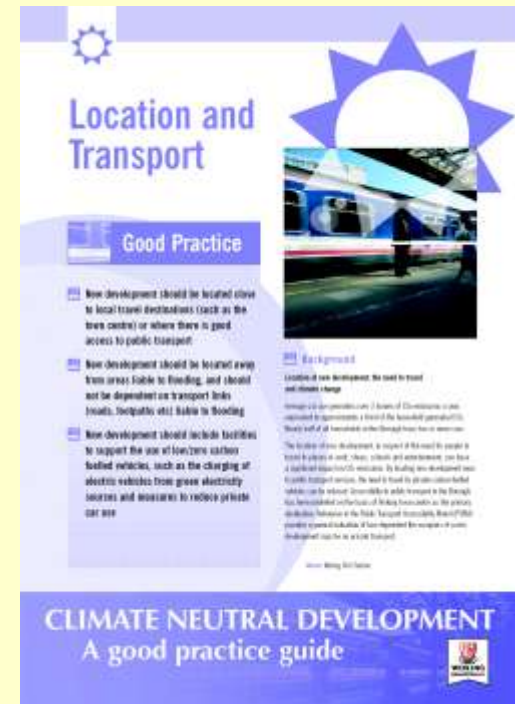
Neutral risk to the climate by not contributing to greenhouse gases and,

Neutral risk from the climate by ensuring development is resilient to changes in climate



Climate Neutral Development Guidance

- Guidance to applicants for Planning Permission
- Believed to be first of its kind in the UK
- Promotes Good Practice
- Aims to achieve 80% reduction in CO2 emissions



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Strategy on Sustainable Construction

Development will be refused unless it:

- Achieves a 40% reduction in CO₂ emissions (against current Building Regulations)
- Is carbon neutral (greenfield sites)
- Adapts to climate change impacts in design of buildings and open spaces
- Provides a sustainable water management system (runoff and potable water)

Household Extensions:

- **Extensions to** existing dwellings to meet best practice standards for energy efficiency

Town Centre CHP

Gas fired 1.3 MW electrical, 1.6 MW heating; 1.2 MW absorption cooling, island generation

- Thameswey Energy Limited Project
- Private Supply network
- Council Buildings & Car Parks
- Businesses
 - Holiday Inn
 - Big Apple



Equipment used in CHP Energy Stations



Above – Absorption Cooler

Left – Gas fired CHP Engine

Woking Park

- Gas fired CHP 1.1MW electrical,
- Hydrogen Fuel Cell 0.2MW electrical, combined 1.6MW heating, absorption cooling 0.5MW,
- Island generation
- Self sufficient in thermal loads
- Exporter of electrical generation to other TW Energy customers



Sustainable and Renewable Energy



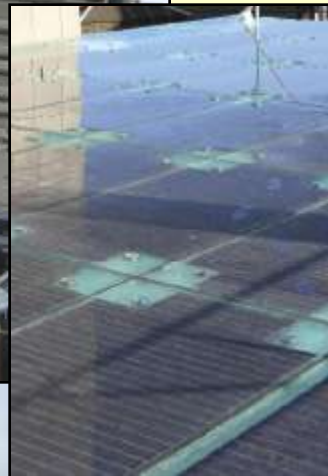
New build by Council Housing Company of six flats incorporating small scale CHP and Photovoltaic roof tiles in a private wire system

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Albion Square Solar Canopy



- Woking Borough Council wanted a stunning gateway to the town
- Solar photovoltaic cells use energy from the sun to light the canopy
- 35,000 PV cells laminated in 272 glass panels giving peak electrical output of 81kWp
- Saves 41 tonnes of carbon dioxide emissions per year

Woking Borough Council

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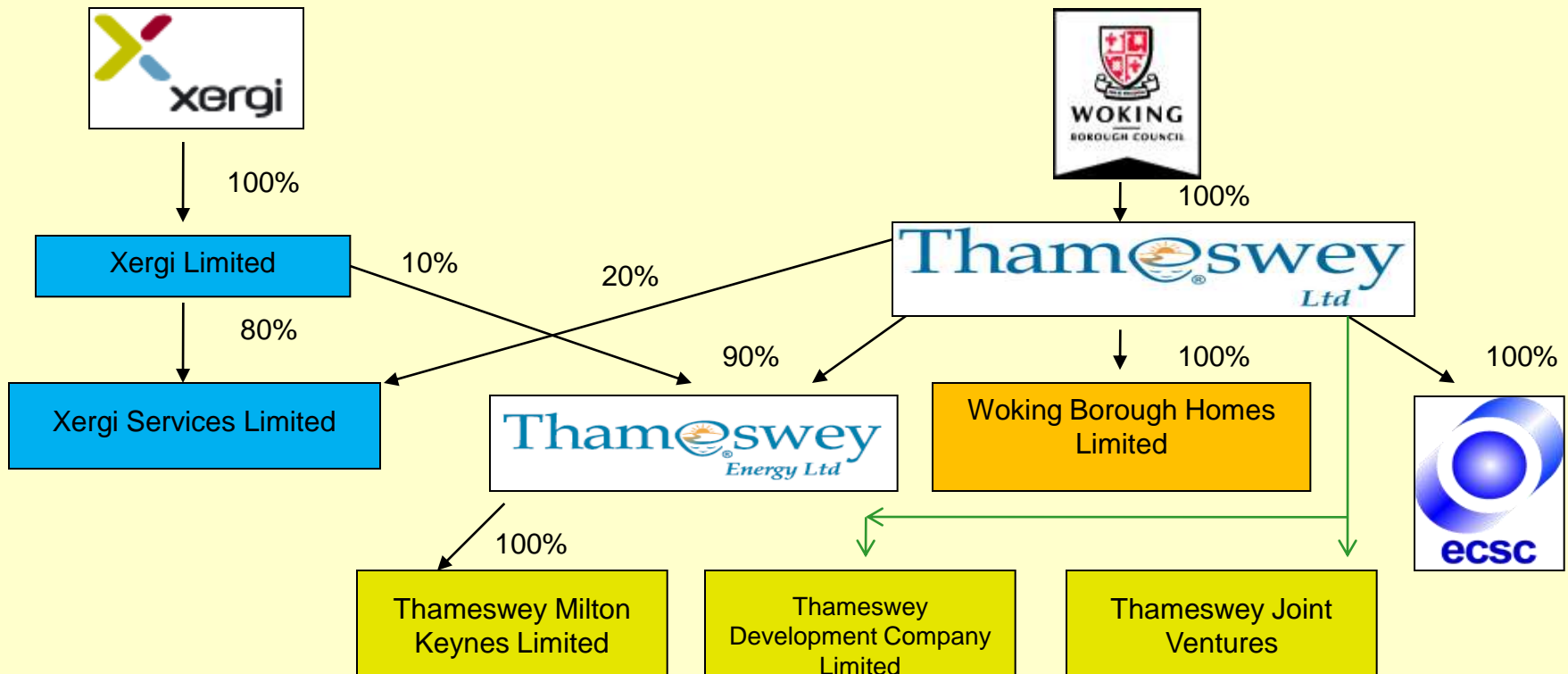


Partnership Working



Woking Borough Council

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Delivering Energy Generation

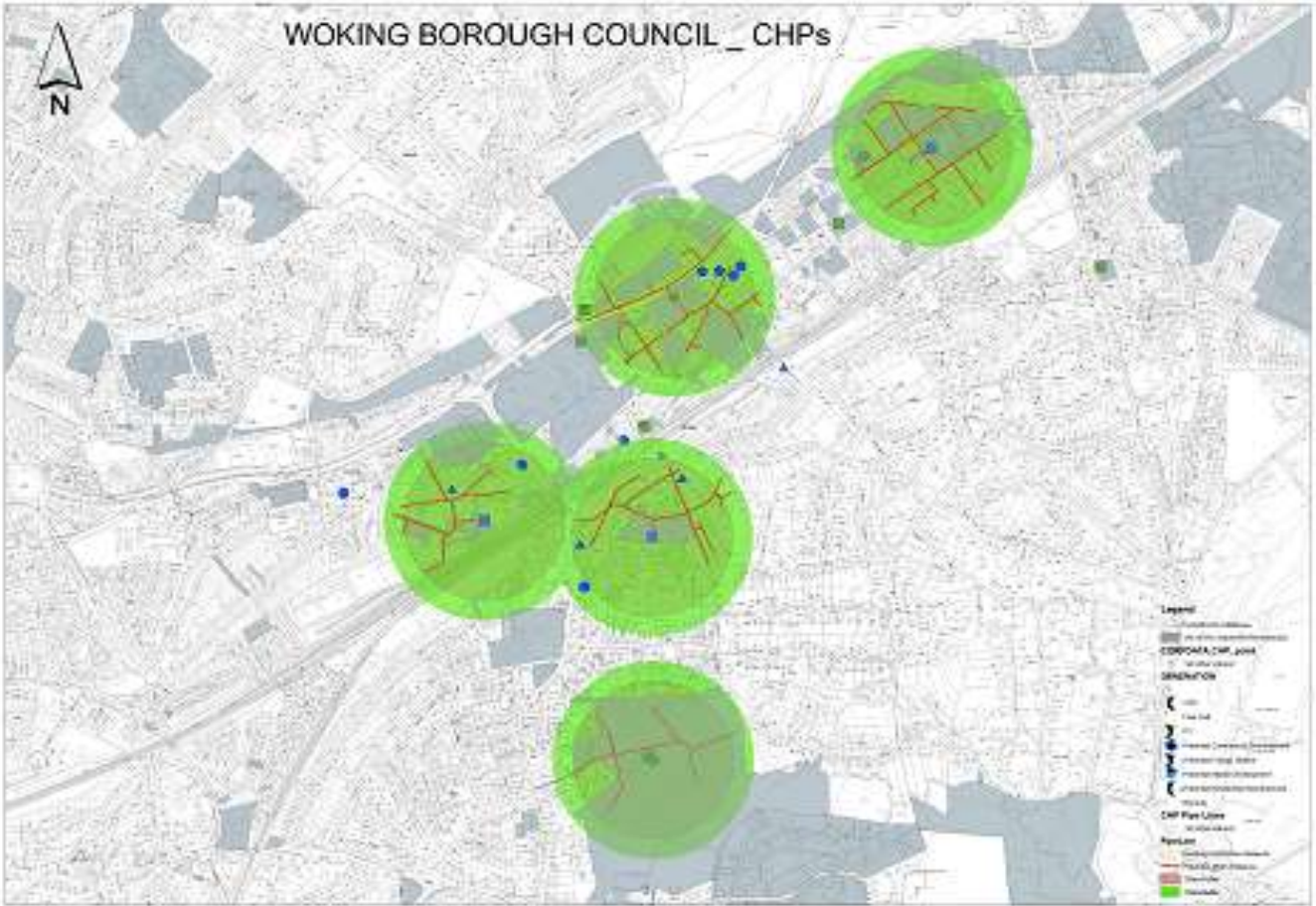


- Twenty to Thirty year project business plans.
- Projects progressed on an internal rate of return of circa 8%.
- Economics rely upon being a generator, distributor and supplier of energy.
- Retail sales income (plus renewable energy credits where applicable) critical to financing projects.
- Tracks energy prices to give affordable “market comparable” charges to businesses and 5% below a basket of major energy company dual fuel tariffs to residential customers.

Milton Keynes Energy Station

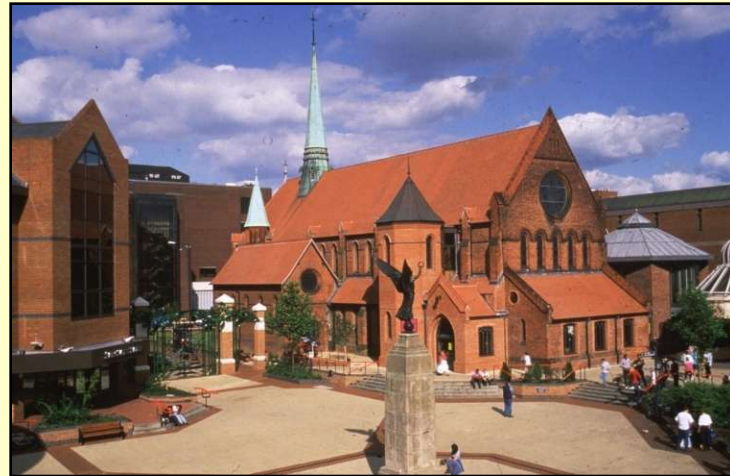


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John Thorp

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The Future



- Woking Borough Council aim to integrate renewables and CHP wherever possible
- Wind turbine feasibility study
- 1000 Zero carbon homes project
- Carbon reduction
- Social inclusion and cohesion

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10 Key Issues

- Planning and Regulation
 - Empower your planners
- Energy
 - Concentrate on your own estate
- Waste
 - Reduce and Educate
- Transport
 - Spatial mapping
- Procurement
 - Partnership thinking
- Education and Promotion
 - Be consistent
- Green Spaces, Water
 - Climate effects
- Working with Business, Community and Residents
 - Be business like