Notice of meeting of

Scrutiny Management Committee

To: Councillors Kirk (Chair), Merrett (Vice-Chair), Blanchard, Cuthbertson, Hill, Hyman and Livesley

Date: Monday, 23 October 2006

Time: 5.00 pm

Venue: Guildhall

A G E N D A

1. Declarations of Interest
At this point in the meeting, Members will be invited to declare any personal or prejudicial interests they may have in the business on the agenda.

2. Minutes (Pages 1 - 4)
To approve and sign the Minutes of the meeting held on 25 September 2006.

3. Public Participation
At this point in the meeting members of the public who have registered their wish to speak regarding an item on the agenda or an issue within the Committee's remit can do so. Anyone who wishes to register or requires further information is requested to contact the Democracy Officer on the contact details listed at the foot of this agenda. The deadline for registering is Friday 20 September 2006 at 10.00am.

4. **Reducing Carbon Emissions from York's Public Sector Housing - Report Back on Implications and Revised Recommendations [5.00pm-5.20pm]** (Pages 5 - 50)

To consider the draft final Scrutiny Sub-Committee report, revised comments received from Directorates in the light of further consultation and revised recommendations.

5. **Guidance on Sustainable Development - Final Ad-Hoc Scrutiny Sub-Committee Report [5.20pm-5.40pm]** (Pages 51 - 178)

To consider the final revised draft report of the above Scrutiny Ad-Hoc Scrutiny Sub-Committee following comments made at a previous meeting of the Scrutiny Management Committee and in the light of further officer consultation.

6. **Schedule of Registered Scrutiny Topics - Local Transport Plan 2 (LTP2) and Traffic Congestion Topics [5.40pm-6.15pm]** (Pages 179 - 198)

To consider a report and associated topic registration forms and feasibility studies related to the above reviews deferred from the last meeting. The Executive Member for City Strategy has also been invited to attend the meeting to explain the considerations involved in determining the Local Transport Plan 2.

7. **Work Planning & Process Management for Scrutiny Reviews [6.15pm-6.45pm]** (Pages 199 - 206)

To consider a report setting out proposed eligibility criteria and work management process for future scrutiny reviews.

8. **Remit for Scrutiny Review of use of Council- owned land in Tang Hall Area [6:45pm -6:55pm]** (Pages 207 - 212)

To consider a report which proposes a remit for a new Scrutiny review of Council owned land in the Tang Hall area of York, as allocated at the last meeting of this Committee, and clarifies the position relating to the membership of the new Ad-Hoc Sub-Committee which will take on this review.

9. Update on Work of Health Scrutiny Committee [6.55pm-7.10pm] (Pages 213 - 214)

To receive an update report from the Chair of Health Scrutiny Committee on the position regarding those aspects of the North Yorkshire and York Primary Care Trust's financial recovery plan which the Committee will scrutinise for their impact on the citizens of York.

10. Any other business which the Chair decides is urgent under the Local Government Act 1972

Democracy Officer:

Name: Dawn Steel
Contact details:

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For more information about any of the following please contact the Democracy Officer responsible for servicing this meeting

- Registering to speak
- Business of the meeting
- Any special arrangements
- Copies of reports

Contact details are set out above.

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Agenda Item 2

City of York Council — Committee Minutes

MEETING	SCRUTINY MANAGEMENT COMMITTEE
DATE	25 SEPTEMBER 2006
PRESENT	COUNCILLORS KIRK (CHAIR), MERRETT (VICE-CHAIR), CUTHBERTSON, HILL, HYMAN, LIVESLEY AND B WATSON (AS SUBSTITUTE FOR COUNCILLOR BLANCHARD)
APOLOGIES	COUNCILLOR BLANCHARD
IN ATTENDANCE	COUNCILLOR D'AGORNE

1. DECLARATIONS OF INTEREST

At this point in the meeting, the Chair invited declarations of interest in any business on the agenda and none were declared.

2. MINUTES

The minutes of the meetings of the Scrutiny Management Committee were approved as a correct record and signed by the Chair.

3. PUBLIC PARTICIPATION

The Chair reported that no registrations had been made to speak at the meeting under the Council's Public Participation Scheme.

4. SCHEDULE OF REGISTERED SCRUTINY TOPICS AVAILABLE FOR REVIEW

(a) Topic 135 – Highways Maintenance Procurement Process

Members reconsidered the original topic registration form submitted by Councillor Simpson-Laing in relation to the above proposed review, together with the accompanying feasibility study. The Chair reminded Members that at this stage they were merely being asked to consider whether the topic was worthy of inclusion on the schedule of topics under (c) below available for potential review.

Councillor Simpson-Laing attended the meeting to support her case for review and explain why a review would, in her opinion, be invaluable to assist the procurement process. The Head of Highway Infrastructure attended the meeting to update Members on progress with the current and ongoing related PFI bid.

Members supported adding the topic to the schedule on the basis that Councillor Simpson-Laing be asked to review her topic registration and update it to reflect the current PFI status and ensure that any review would be relevant in the current situation.

RESOLVED:

That topic 135 – Highways Maintenance Procurement Process – be added to the schedule of topics available for review under (c) below, subject to Councillor Simpson-Laing making the above revisions to the registration form.

(b) Topic 129 Local Transport Plan 2:

Members reconsidered the original topic registration by Councillor Simpson-Laing and its accompanying feasibility study with a view to deciding whether to include the topic in the schedule under (c) below for potential review. Councillor Simpson-Laing attended the meeting to support her topic registration.

Members discussed in some detail whether to include the topic on the schedule and decided to defer consideration to the next meeting, with a view to inviting the Executive Member to attend to explain the processes and the involvement of Members in determining the strategy and delivery programme for LTP2.

RESOLVED:

That topic 129 – Local Transport Plan 2 – be deferred to the next meeting to invite the Executive Member to attend and clarify the position, prior to any decision being made on whether to add the topic to the schedule for potential review.

(c) Schedule of Registered Scrutiny Topics:

Members considered a schedule of registered scrutiny topics for potential allocation to review, including the highways maintenance procurement process. They considered the schedule, topic by topic, having regard to the available registration forms and feasibility studies and decided to allocate Ad-hoc Scrutiny Sub-Committees to deal with the following 2 topics:

- Review of Council-owned land in the area of Tang Hall school;
- Highway Maintenance Procurement Process

In addition, Members agreed the following:

To refer the topic on the evaluation of domiciliary and recuperative care for older people in the York area to the Health Scrutiny Committee for consideration;

To defer consideration of the following to the next meeting, alongside LTP2:

- Traffic Congestion in York (No.120);

To retain the following on the schedule of registered topics with a view to reconsidering them as other reviews progress:

- Suburban Shopping Centres (No. 109); and
- Key strategic partnership working (No. 138)

To invite the relevant EMAP (Leisure & Culture) to consider the basis for the topic on public art (No. 137) with a view to pursuing implementation of the underlying policy; and

To reject the following registered topics still on the schedule:

- Parking charges in York (No. 121);
- Transitional services from education environment to independent living for adults with learning disabilities (No. 126);

RESOLVED:

That (1) Ad-hoc Scrutiny Sub-Committees be established and remits be prepared for approval, in consultation with the Chair, Vice-Chair and Green spokesperson, in relation to:

- Tang Hall School area – Council owned land; and
- Highways maintenance procurement process;

That (2) reconsideration be given at the next meeting to the topics relating to LTP2 and traffic congestion in York, with the Executive Member for City Strategy being invited to attend as above;

That (3) the topic on public arts be referred to the Executive Member Advisory Panel for Leisure & Culture;

That (4) all other topics discussed be either retained for future consideration, rejected or referred to Health Scrutiny Committee as set out above.

5. REDUCING CARBON EMISSIONS SCRUTINY SUB-COMMITTEE - FINAL REPORT

Members considered the final report of the Reducing Carbon Emissions Scrutiny Ad-hoc Sub-Committee incorporating the changes referred to at the last meeting and specifically incorporating the comments of relevant officers, received late and circulated after the agenda had been published. It was felt that those comments – and particularly those regarding financial implications – did not fully address the financial concepts for generating energy savings within the report. As such, Members wished the Director of Resources and/or Assistant Director (Housing) to report back with revised comments or attend the next meeting of SMC to account for the comments made.

RESOLVED:

That the report be not considered by the Executive until further revised comments or an account of those submitted had been received from the Director of Resources and/or Assistant Director (Housing) at the next meeting, as indicated above.

6. RECYCLING & RE-USE SCRUTINY - FINAL REPORT

Members considered the final report of the Recycling & Re-Use Ad-hoc Scrutiny Sub-Committee relating to the removal of bulky items from the waste stream. The Chair of the Ad-hoc Sub-Committee informed Members of a number of amendments made to the final report by the Sub-Committee which had not been included in the version published with the agenda for this meeting, due to the Sub-Committee meeting being held after publication of the agenda. It was suggested that the revisions be incorporated into the final report and recirculated to Members.

Members also wished to add a further recommendation from Scrutiny Management Committee regarding the provision for residents to re-use recycling materials taken to waste collection sites. It was suggested that it would be helpful if space was made available at sites to allow for the inspection of clean materials for a short period of time for suitability for re-use, prior to disposal.

RESOLVED:

That (1) the revisions referred to above be made to the final report for circulation to Members of Scrutiny Management Committee and prior to its consideration by the Executive; and

That (2) an additional recommendation arising from the consideration of Scrutiny Management Committee be referred to the Executive as set out above and relating to provision for residents to re-use clean waste materials.

Councillor Kirk, Chair
[The meeting started at 5.00 pm and finished at 8.10 pm].

Scrutiny Management Committee **Date of meeting**

Report of the 'The Reducing Carbon Emissions Scrutiny Sub Committee'

Reducing Carbon Emissions from York's Public and Private Sector Housing.

Summary

1. The purpose of this report is to inform Scrutiny Management Committee of the final round of consultation on the implementation of recommendations and revisions to the report discussed at their previous meeting.

2. The main findings arising from the work carried out by the Scrutiny Sub Committee are as follows:

- The council has a number of obligations as set out in various Acts and international, national and regional guidance to promote sustainable forms of energy in the home and reduce harmful emissions.
- CO_2 emissions and fuel poverty are seen as linked issues. The recommendations therefore refer to both reducing CO_2 emissions and fuel poverty.
- Renewable microgeneration – i.e. domestic scale wind, solar or biomass generation is seen as integral to tackling fuel poverty and therefore reducing CO_2 emissions.
- Yorkshire and Humberside region is the second poorest nationally in terms of fuel poverty
- York has two wards in the bottom 10% nationally and five wards in the bottom 10% regionally concerning fuel poverty. Almost 1 in 4 households live in fuel poverty rising to almost 1 in three households in the poorest wards.
- City of York Council Housing stock has above national average SAP(energy efficiency) rating but is still the lowest in the region.
- York residents have the lowest rate of access to funding to increase home insulation and energy efficiency and therefore, potentially, spends more money on fuel and creates more CO_2 emissions.

3. Members are requested to endorse the recommendations and agree that the report be progressed through to the Executive.

Background

4. Drafts of the final report were previously presented to SMC in July where further work was initially agreed to conclude the review by September 2006. Amendments to the attached report requested by SMC were incorporated for the September 2006.

5. At the September meeting Members were disappointed at what they felt to be a disproportionately negative response from Officers regarding the financial implications of recommendations. Members felt that officers in Finance should be consulted further regarding their understanding of the underlying rationale for the recommendations as the comments in respect of implications did not appear to reflect this.

6. Further consultation has now been conducted and the recommendations have been adjusted to reflect discussions and the intended purpose of the review. As a result, the officer comments made in response to this review have now been revised and these are incorporated within the report at Annex A.

7. References to all Annexes in previous versions of the report remain the same. The final report is structured to provide a top down view of the issues around CO_2 emissions and therefore details research and findings in relation to the following:

   - Global/International issues
   - National responses and issues
   - Regional responses and obligations, and
   - Local obligations and implications.

8. The 12 recommendations contained in the report still focus on the following areas where the Council can take immediate action:

   - Strategies and action plans (recommendations 1, 10,)
   - Planning guidance and building regulations (recommendations 2, 3, 4, 6)
   - Standards, Monitoring and assessment (recommendations 5, 7, 8, 9)
   - Raising awareness (recommendations 11, 12).

Main Changes

9. The main changes to the September draft were detailed in the cover report for the last SMC meeting. The only further changes are in respect of the financial implications as outlined above.

Consultation

10. During the detailed work undertaken by the Scrutiny Sub Committee full consultation has been carried out and recognition of those consulted has been made at the end of the report. As explained in paragraphs 4-6 above, further detailed consultation has taken place with both Housing and Financial Services on their initial comments reported to the last meeting and on the underlying intent of the review. It is understood that the Head of Financial Services will attend the meeting to respond to any remaining queries on the financial comments, if necessary.

Options

11. During the course of review the Sub Committee have taken views on information provided as best practice and much of this is provided in the Annexes to the report, and available on line on the Council's website with the reports for the September meeting of this Committee. The recommendations reflect those considerations and alternative options are not therefore presented.

Analysis

12. All analysis is presented in the body of the report.

Corporate Priorities

13. The wider topic of sustainability has been a Council Corporate Aim for many years. The recently approved Corporate Priorities includes improvements to the 'quality and availability of decent and affordable homes in the city'.

Implications

14. The implications arising from each of the recommendations are detailed in the report (see summary of recommendations pages 7 & 8).

Risk Management

15. The report highlights the issues and implications for York of a number of national and regional guidance. The risks to the Council are that its responsibilities to promote more energy efficiency and assess and monitor progress across the city are not fully embedded. It is suggested that this should be addressed as part of the operational and strategic risk analysis carried out by each directorate.

Recommendations

16. The Scrutiny Management Committee are asked to :

- Note the comments made by the relevant officers.
- Endorse the revised recommendations contained within the final report;
- Agree for the report to be considered by the Executive at the earliest opportunity.

Contact Details

Author:
Author's name R. Sherratt
Title Scrutiny Officer
Dept Name
Tel No. 552066

Chief Officer Responsible for the report:
Chief Officer's name S. Hemingway
Title Head of Civic, Democratic and Legal Services

Report Approved ✓ **Date** 16.10.06

Chief Officer's name
Title

Report Approved ✓ 16.10.06

Specialist Implications Officer(s)
Peter Steed, Head of Financial Services
Tel: 01904 551745

Wards Affected: List wards or tick box to indicate all **All** ✓

For further information please contact the author of the report

Background Papers: See Annex A

Annexes

Annex A: Final Report Reducing Carbon Emissions from York's Public and Private Sector Housing.
Annex Aa: Scrutiny Topic Registration Form

Annex Ab: HACKW report re fuel Poverty and Health Impacts

Annex Ac: Affordable warmth Action Plan for Yorkshire and the Humber
Annex Ad: Section of Regional Local Authority Cabinet Energy Champions Questionnaire
Annex Ae: Mapping Domestic Thermal Efficiency in York

Annex Af: Affordable Warmth Strategy Development

Annex Ag: Sketching the Energy Efficient Home

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ANNEX A

Reducing Carbon Emissions Scrutiny Sub-Committee

Reducing Carbon Emissions from York's Public and Private Sector Housing.

Agreed at The Reducing Carbon Emissions Scrutiny Sub-Committee
13th September 2006

Considered by Scrutiny Management Committee
26th October 2006

Executive Reading Date XXXXX

Compiled by R. Sherratt

Contents

Chairs Foreword

The work of the Reducing Carbon Emissions Scrutiny Sub-committee has been lengthy and involved but has led to developing understanding for us all. A number of fellow councillors have shown an interest in our work and have given support, attending visits to neighbouring authorities (especially Kirklees, to whose kind hospitality we are indebted) and offering encouragement.

In many ways our work can be seen to have focussed not on the landmark initiatives, like the creation of the Eco-depot, but on the relatively pedestrian task of finding ways to make York's overall SAP rating higher and our eco-footprint less. We looked at methods of insulating homes and ways in which we could encourage householders, both in the public and private sector (rented and owner-occupied) to live in better insulated and more sustainable accommodation and derive full benefit from the available grant support which could enable the less well off to keep up with this general change in national behaviour. One of the advantages of pursuing this 'down to earth' line - in which we were supported and encouraged by our non-voting co-opted member, Alderman Jack Archer, was to try to achieve a community in which there was far less fuel poverty, especially among those elderly citizens currently on the verge of fuel poverty and struggling to 'make ends meet' on fixed incomes.

The promotion of Warm Front type support for older citizens in need of capital support to invest adequately in the heating and insulation of their homes was something that the committee unanimously supported. York has lagged behind other authorities in this area for some time. It is our firm and united opinion that we must catch up with and outstrip other authorities on this measure of success.

The common sense work of encouraging York's citizens to keep warm and encouraging homeowners to conserve heat is not dramatic or impressive in political terms. It may, however, prove to be just this sort of steady public service that does more to 'save the planet' than many of the more grandiose ideas of how to go about this. There is much simple, straightforward advice on how to address this problem in the report and its annexes. I commend this report to the Executive, the Council and the City.

Cllr. Bill Fairclough
Chair of the Reducing Carbon Emissions Scrutiny Sub-Committee

Executive Summary and Main Findings

This report and review outlines an approach to reducing carbon dioxide (CO_2) emissions from York's public and private sector housing.

Regionally we are one of the last authorities to prepare a Climate Change Strategy and Action Plan. This places us in a weak position to meet our obligations under The UK Climate Change Programme 2006[1]. In 2004 the council signed the Nottingham Declaration on Climate Change but it has not set targets or monitored progress against its aims. See Recommendation 1.

The Home Energy Conservation Act 1995 (HECA) obliges local housing authorities to act and report annually as "energy conservation authorities". Reports must identify measures for improving energy efficiency in all residential accommodation – public and private [2], obliging authorities to ensure citizens access information and grants. Doing so should make homes thermally efficient, reduce CO_2 emissions and improve public health.

With 14.9% of households 'fuel poor', i.e. households that spend more than 10% of its income on fuel, the Yorkshire and Humber Region is the second worst nationally according to the 2001 English House Condition Survey (EHCS). The gap between thermal efficiency in Local authority stock and private sector stock has widened. York's take up of national grants for efficiencies work is the poorest in the region whilst some of our Wards are also some of the regions most fuel poor.

The Region has developed a Regional Fuel Poverty Action Plan to try resolve this. York has yet to develop and adopt a Fuel Poverty Strategy. Recommendation 10 proposes the adoption of an Energy Efficiency and Thermal Comfort Strategy which will incorporate Regions' Action Plan.

National Energy Action (NEA) and the National Right to Fuel Campaign (NRFC) see the impact of fuel prices resulting in more than 1 million households still being fuel poor in 2009. They and the Energy Efficiency Partnership 'Homes Fuel Poverty Strategy Group'[3] highlight the need to use embedded renewable microgeneration – i.e. domestic scale wind, solar or biomass generation etc - as integral to tackling fuel poverty. York has yet to take a positive 'invest to save' stance on integrating such technologies into its homes. This report suggests approaches to consider doing so which should not divert funds away from other aspects of achieving decent homes standards. See Recommendations 6 and 12.

National Planning Policy frameworks were recently amended to address climate change, CO_2 reduction, insecurity of fuel supply and indirectly fuel poverty. Local Development Documents are now required to incorporate targets ensuring that <u>at least</u> 10% of all energy required is provided from renewable sources in new developments – including domestic – up to 2010 with a rising target for onsite

[1] 'The Uk Climate Change Programme 2006 'Tommorow's Climate Today's Challenge

[2] Local Authoritys were asked to submit their Ninth Progress Reports to the Secretary of State by 30 September 2005.

[3] Fuel Poverty Strategy Group response to the responses to a Department of Trade and Industry consultation exercise re the Microgeneration Strategy and Low Carbon Buildings Programme September 2005.

embedded renewables (15% by 2015, 20% by 2021 etc) thereafter. See Recommendation 2.

Recent amendments to Parts L and F of the Building Regulations emphasise better regulatory practice to maximise energy efficiency opportunities. Local authorities are expected to take a stronger approach to the enforcement of the integration of higher thermal efficiency standards during development and refurbishment. See Recommendations 4 and 5.

York must set targets for renewable energy integration in its developments and work with others to ensure officers are supported to deliver increasingly sustainable homes through its planning and enforcement processes. See Recommendations 2 and 3.

The review supports and encourages the council to monitor, manage and achieve the carbon savings required by international, national, monitoring frameworks and the law as it devolves at regional and local levels. Its findings are also supported by the Audit Commission's aims for increased sustainability in Comprehensive Performance Assessment (CPA) and Gershon efficiencies reporting[4]. See Recommendations 7, 8, 9 and 11.

This report is structured to provide a top down view of the issues around CO_2 emissions and therefore details research and findings at the following levels:

- Global/International issues
- National responses and issues
- Regional responses and obligations, and
- Local obligations and implications.

Details of these are précised below in Table 1.

Table 1

LEVEL / ISSUE	REQUIREMENT or REMEDY at this LEVEL	EXPECTATION on LOCAL AUTHORITY
GLOBAL/INTERNATIONAL Climate Change Global Warming	Montreal Protocol Kyoto Protocol	Adopt Climate Change Strategy (not done CYC) Sign Nottingham Declaration (Done November 2004)
GLOBAL/INTERNATIONAL End of Fossil Fuel Reserves	International Investment in Renewable Energy Technology	Promote Renewable Energy Technology (not done CYC)
NATIONAL Responding to Obligations re Climate Change including Kyoto Protocol	National Climate Change Programme – Tomorrow's Climate Today's Challenge (March 2006) & National Sustainability Strategy Securing the Future Integration of Sustainability into CPA and Gershon	Adopt Climate Change Strategy Sign Nottingham Declaration (Done November 2004) Incorporate Climate Change and Sustainability into Local Area Agreements. (not done CYC) Adopt EMAS (Done)

[4] for more information regarding CPA and Gershon efficiencies see glossary

LEVEL / ISSUE	REQUIREMENT or REMEDY at this LEVEL	EXPECTATION on LOCAL AUTHORITY
NATIONAL End of Fossil Fuel Reserves	National Investment in Renewable Energy Technology , training and grants structure	Pick up Grants funding in domestic property portfolio; joint working with EEAC to ensure renewables are part of the HRA and Housing Capital Business plan. Consultation should cover improvements scheduled to buildings fabric and/or heating, water systems replacements etc
NATIONAL Fuel Poverty and Achieving thermal comfort	Home Energy Conservation Act	Obliged to complete annual HECA return which should define areas for improvement. (presently done in partnership with EEAC but some actions not being fully recorded Return could be improved by adoption of Fuel Poverty Strategy and Action Plan for delivery with internal and External Partners
NATIONAL Historically thermally poor approaches to planning, buildings design and construction	Changes to the Planning Policy Framework including targets for renewables to be incorporated into all new build. Changes to Buildings Regs Parts L & F	Change the present planning framework to incorporate Merton Rule or Higher (See para's 24 & 25) Ensure that Merton Rule or Higher Are embedded in the LDF documents Ensure that Planning Enforcement / Buildings Control Officers are trained to enforce new standards
NATIONAL	Pressure to Adopt at LA level Higher Sustainable standards of build for own Stock – i.e. EcoHomes Excellent - as Exemplars	Adopt a policy to ensure new Housing stock within CYC control or ALMO is EcoHomes Very Good to Excellent
REGIONAL Net Energy Exporter – Hence Net CO_2 Contributor Greater than National need to invest in Renewables and Emmisions reduction technology across all Sectors	Strategic targets for devolution under the Regional Energy Strategy and Regional Spatial Strategy	Ensure that Merton Rule or Higher Are embedded in the LDF documents Adopt a policy to ensure new Housing stock within CYC control or ALMO is EcoHomes Very Good to Excellent
	Raise awareness in Local Authorities of Reduce and Renewably Source Principals; i.e. Cabinet Energy Champions Project	Appoint Cabinet Energy Champion (Done Annual Full Council 2006). Ensure Champion works corporately to improve approaches to energy across the authority Appoint a Corporate Energy and Water Management Task group (done) Ensure Cabinet Energy Champion is involved in the work of the Corporate Energy and Water Management Task group (not done)

LEVEL / ISSUE	REQUIREMENT or REMEDY at this LEVEL	EXPECTATION on LOCAL AUTHORITY
REGIONAL Chronic Fuel Poverty 2nd Worst Region Nationally	Regional Fuel Poverty and Action Plan Improved access to advisory bodies for all LA's e.g. NEA	Local Authority Fuel Poverty Strategy and Action Plan with target setting linked to HECA York's and Humber Assembly signed Membership and paid for all LA's in the region 2006
LOCAL Several Wards falling behind the National Standards for thermal comfort. Obliged to complete annual HECA return which should define areas for improvement. (presently done in partnership with EEAC but some actions not being fully recorded	Adoption of Fuel Poverty Strategy and Action Plan in Partnership with PCT, GP's, EEAC and Internal Partners Adopt policy equivalent to Kirklees to ensure new Housing stock with authorities control or ALMO is EcoHomes Excellent	Adoption of Fuel Poverty Strategy and Action Plan in Partnership with PCT, GP's, EEAC and Internal Partners Adopt a policy to ensure new Housing stock within CYC control or ALMO is EcoHomes Very Good to Excellent
LOCAL Authority falling behind its peers on renewable energy generation no clear commitment to achieving targets of local government or the region	Ensure that Merton Rule or Higher are embedded in the LDF documents Adopt policy equivalent to Kirklees to ensure new Housing stock with authorities control or ALMO is EcoHomes Excellent Pick up Grants funding in domestic property portfolio; joint working between EEAC & Local Authority to ensure renewables are incorporated as part of the HRA and Housing Capital Business plan. Consultation should cover improvements scheduled to buildings fabric and/or heating, water systems replacements etc	Ensure that Merton Rule or Higher are embedded in the LDF documents Adopt a policy to ensure new Housing stock within CYC control or ALMO is EcoHomes Very Good to Excellent Pick up Grants funding in domestic property portfolio; joint working between EEAC & Local Authority to ensure renewables are incorporated as part of the HRA and Housing Capital Business plan. Consultation should cover improvements scheduled to buildings fabric and/or heating, water systems replacements etc
LOCAL Duty to communicate CO_2 reductions to citizens and plan for sustainable future through Local Area Agreements, CPA Framework, Gershon, Climate Change framework as per National strategy (Tomorrow's Climate Today's Challenge) and LSP framework (National strategy Securing the Future) etc	Ensure Climate Change and Sustainability feature within Local Area Agreements Ensure EMAS and Gershon savings and targets are where ever possible linked Research and Adopt a Climate Change Strategy and Action Plan for York	Ensure Climate Change and Sustainability considered within LAA development. Ensure EMAS and Gershon savings and targets are where ever possible linked to one another and HECA etc Research and Adopt a Climate Change Strategy and Action Plan for York

Summary of Recommendations

1. **That Climate Change Strategies and Action Plans are developed by the Council's Sustainability Officer as a matter of urgency. This to be done with a view to best practice approaches used by other Local Authorities. Progress on the introduction of such a strategy and action plan be reported to the Scrutiny Management Committee within the next year.**

2. **That the Local Development Framework and our present planning policy framework include a Calderdale/Merton Style Target. This target will require developers to ensure that:**
   - **<u>at least</u> 10% of all energy required is provided from renewable sources in all new and significantly refurbished developments from this point and up to 2010, including domestic development.**
   - **After 2010 the target rises for onsite embedded renewables to be greater than or equal to 15% between 2010 and 2015**
   - **Then rises again to be greater than or equal to 20% between 2015 and 2021 etc.**

3. **That the City of York Council researches planning policies adopted by other local authorities with a view to applying them in York, if appropriate, in order to specifically ensure energy efficiency by design. That all plans submitted to the Local authority be tested on these criteria.**

4. **That the authority enforce Parts L and F of the Building Regulations as a matter of urgency, resolving any training and resourcing issues that may need addressing.**

5. **That the Council, through its Elected Member Energy Champion request that the Yorkshire and Humber Assembly and/or Yorkshire Forward facilitate region wide BREEAM assessor training for the region's Development Control (and other appropriate) Officers with the aim of reducing costs to individual Local Authorities, with the aim of reducing future expenditure.**

6. **That the City of York Council commit to recommend to appropriate funding bodies - i.e. Housing Corporation - that all new homes standards greater than or equal to Ecohomes 'Excellent Standards'.**

7. **That as a matter of urgency the Elected Member Energy Champion present a first version of the Regional Assemblies questionnaire to the Executive and thereafter the Regional Assembly, as a record of the authority's position across all sectors to date.**

8. **That the Elected Member Energy Champion present six monthly updates of the Regional Assemblies questionnaire to the Executive and thereafter**

the Regional Assembly, as a record of the authority's progress on energy across all sectors.

9. **That the authority adopt clearer lines of communication to ensure that information already collated by Housing Officers regarding thermal efficiencies improvements and other Carbon reduction measures, is shared with the Sustainability Officer. This should be done to ensure housing data relevant to the developing Environmental Management System (EMAS) is integrated. Officers in Housing should work with the Authority's Sustainability Officer to agree the best format for such data sharing and, ensure advice regarding targeted improvements in housing and the reporting of these outcomes are delivered under EMAS.**

10. **That the Housing Strategy & Enabling Group – Housing Standards & Adaptations Officer and other officers in housing where relevant work with York EEAC officers consult upon, devise and adopt a 'Energy Efficiency and Thermal Comfort Strategy and Action Plan' for the authority commencing this year. The Officers are recommended to use the Regional Action Plan (Annex C) NEA guidance (Annex F) and activities outlined at paragraph 50 of this report as a primary steer in shaping the process.**

11. **That the Local Authority ensures that CYC Officer and Member Positions on the Energy Partnership Board are always filled.**

12. **That Annual and inter-year joint working be conducted between EEAC's Local Authority Support Programme Co-ordinator and CYC Housing Officers to ensure that opportunities for the use of renewables are considered as part of the HRA and Housing Capital Business plan. Where such opportunities are cost neutral or affordable within the life of the business plan, micro-renewables should be installed as part of the development of the business plan. Consultation between housing officers and EEAC should cover improvements scheduled to buildings fabric, such as photovoltaic roof tiles when roofs need replacement and/or heating, water systems replacements (i.e. can carbon minimising heat pumps be applied) etc; Consultation should also explore opportunities to bring in external grants revenue.**

Summary of Implications of Recommendations for City of York Council

Implications Recommendation 1.	
Finance	The Sustainability Officer advises there are no financial implications from her perspective. While the development of a Climate Change Strategy will not in itself result in additional costs (unless significant staff resources, professional support or external consultation are required) the adoption of any resultant action plan may have financial implications which will need to be developed and considered as part of the adoption process. Funding for such actions will need to be identified either from within existing revenue and capital resources, or form part of future budget processes.
Human Resources	The workload of the sustainability officer is very high but should ease once the Assistant SO is in post (hopefully soon in the new year). Once the post has been filled there will be capacity for the SO and ASO to take this work area forward. It will be dependent on the filling of this post.
Equalities	
Legal	
Crime and Disorder	
Information Technology	The ability to collect data on CO2 emissions. REAP the Ecological Foot printing tool will be able to provide this. It has been purchased and training needs identified, integration into the CYC network needs to be investigated. The lead officer for this tool will be the ASO. [comments provided by Sustainability Officer]
Property	
Sustainability	I am expecting that I would take a lead role in this work area. Some work started on the production of a Climate Change Strategy in 2004 in partnership with other north Yorkshire LA's and the EEAC. This has not been taken any further due to the work load of the SO and the need to prioritise work. However we will not be starting from the very beginning with this piece of work.
Implications Recommendation 2.	
Finance	Any decision to introduce additional constraints into the planning process is likely to increase developer's costs this could result a reduction in both the desirability of building within York and in the value of relevant development land. The latter of these could result in the council receiving reduced receipts for its disposals which would have a direct impact on the overall capital programme for York.
Human Resources	The Sustainability Officer advises that there are no additional implications because the recommendation would be taken forward through the use of existing resources
Equalities	
Legal	Advice will be sought to ensure that all the minimum standards in the SPG are not viewed as unreasonable [comments of Sustainability Officer]
Crime and Disorder	
Information Technology	There will be a need to monitor the implementation of the standard and the amount of renewable energy being installed. It is hoped this can be done via the planning Uniform system. [comments of Sustainability Officer]

Property	
Sustainability	This recommendation has a direct link to the current draft Supplementary Planning Guidance Sustainable Design and Construction. Following a clear steer from the councils Local Development Framework Steering Group it is being redrafted to include minimum standard for develop. One of these minimum standards will be the achievement of a BREEAM standard at 'very good' or 'excellent' and 10% on site renewables. The draft will be returning to the LDF steering group in October with a view to consult on it from November to February, and agreement for use in March. The last two bullet points in the recommendation will be considered for inclusion in the LDF.
Implications Recommendation 3.	
Finance	Would need to be undertaken within existing resources.
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 4.	
Finance	The report does not provide sufficient detail to enable the impact of these changes to be accurately assessed. However if these regulations require significant additional work then this will result in pressures on affected areas which will have to met by reductions in the provision of alternate services or additional resources being deployed. Any decision to deploy additional resources must be considered as part of the council's budget process alongside the wide range of funding pressures.
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 5.	
Finance	Utilising a regional approach would help mitigate future expenditure on what can be expensive training package. By adopting such an approach it may be possible to deliver an affordable solution to future training needs.
Human Resources	
Equalities	
Legal	
Crime and Disorder	

Information Technology	
Property	
Other	
Implications Recommendation 6.	
Finance	No financial implications
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 7.	
Finance	No financial implications
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 8.	
Finance	No financial implications
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 9.	
Finance	No financial implications
Human Resources	
Equalities	
Legal	
Crime and Disorder	

Information Technology	
Property	
Sustainability	I am expecting that I will provide specialist advice for the implementation of this recommendation which will be led by housing. It is difficult to assess the time required to undertake this. However once the ASO is in post more of my time will be available. [comments of Sustainability Officer]
Implications Recommendation 10.	
Finance	While the development of a Thermal Comfort Strategy will not in itself result in additional costs (unless significant staff resources, professional support or external consultation are required) the adoption of any resultant action plan may have financial implications which will need to be developed and considered as part of the adoption process. Funding for such actions will need to be identified either from within existing revenue and capital resources, or form part of future budget processes and would need to be met from Housing's General Fund budgets.
Human Resources	
Equalities	Although fuel poverty is of particular relevance for people from disadvantaged communities (especially disabled people, older people, people with young children and people from black and minority ethnic groups) it is not clear at this stage what the impact of this recommendation will be on these groups. [Comments from, Principal Equalities Officer]
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 11.	
Finance	No financial implications
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 12.	
Finance	There are no immediate financial implications associated with this recommendation. However, officers are examining the potential for accessing other funding that may be available to increase investment in this area.
Human Resources	
Equalities	

Legal	
Crime and Disorder	
Information Technology	
Property	
Sustainability	Members may be aware that there is now a funding issue relating to the support of the LASP work of the EEAC. The Energy Saving trust has withdrawn funding as f October for this programme. The Board in charge of the EEAC have agreed to fund the programme until April 2007. In the mean time one of the officers has moved onto another post so the Programme has one officer in post. This will clearly effect the programmes ability to take forward work. [comments from Sustainability Officer]

Final Report: Reducing Carbon Emissions from York's Public and Private Sector Housing.

Introduction

1. Members of the Executive are presented with the final report of the Reducing Carbon Emissions Scrutiny Sub-Committee (formerly Housing Scrutiny Board) delivering their research and findings regarding approaches Local Authorities might take to reducing carbon dioxide (CO_2) emissions from York's public and private sector housing.

Background

2. Between 2005 and 2006 Scrutiny[5] at the City of York Council advanced the development more robust and holistic strategic approaches to delivering carbon reduction and energy sourcing. These approaches have covered all sectors of the Council's work bar transportation fuel, including;

   a. Sustainable Planning Guidance
   b. Reducing managing and monitoring energy consumption in council property
   c. Ensuring increasingly sustainable supply and embedded micro-generation in council property
   d. Street Lighting - strategic management & procurement to reduce co2 emissions and waste

3. The housing topic[6], 'Reducing Carbon Emissions from York's Public and Private Sector Property', was chosen by the Housing Scrutiny Board as complementary to the aims of the other Scrutiny reviews and

[5] Through work of the Boards: Environment and Sustainability and, Planning and Transport
[6] See Annex A for the topic registration form

recommendations supporting the authority to monitor, manage and achieve carbon savings in line with;

1. The Energy Hierarchy (see box below)
2. Future development of a Climate Change Strategy
3. Recent changes to the National Planning Policy framework promoting greater sustainability
4. The Audit Commission's aims for increased sustainable assessment in the Comprehensive Performance Assessment (CPA); for more information regarding Comprehensive Performance Assessment see glossary
5. Gershon efficiencies reporting; for more information regarding Gershon efficiencies see glossary
6. Local Housing Authority obligations under the Home Energy Conservation Act 1995

Energy Hierarchy

Sustainable

- **Energy conservation (reducing total energy demand)**
- **Energy efficiency**
- **Exploitation of renewable, sustainable resources**
- **Exploitation of non-sustainable resources using low/no-carbon technologies (eg CHP)**
- **Exploitation of conventional resources as we do now**

Unsustainable

Global/International Perspective

4. Planet Earth, seems a vast, safe and robust mass but returned cosmonauts and astronauts see it differently. They described Earth as a tiny blue gem or 'marble' beneath a thin, fragile atmosphere suspended in a silent and endless void.

5. Over the past century, Earth's surface temperature rose by about 1-2 degrees Fahrenheit with accelerated 'global warming' in the past two decades. Evidence indicates that warming over the last 50 years is attributable to human activities altering the chemical composition of the atmosphere and creating a build up of greenhouse gases[7]; including Carbon dioxide (CO_2). In the atmosphere this acts like a thickening blanket, trapping the sun's heat and causing the planet to warm up.

[7] See Glossary for a definition of Green House Gasses

6. Nearly half a century of evidence increasingly reminds us how fragile the planet is.

Global Warning Signs The Last Decade

- Severe floods, including those across our region.
- Heat waves in 2003 cause over 20,000 European and 1,500 Indian deaths.
- Tropical forests are dying back. Without them less atmospheric CO_2 is locked up.
- Warmer winters are raising sea levels by melting glaciers and causing early snowmelt.
- Shifts in UK weather patterns are increasing with greater propensity to flooding.

The overall effects of Global Warming and Ozone Depletion are described as Climate Change.

7. The first global agreement to restrict CFCs was the signing of the Montreal Protocol[8]. The European Community is stricter, agreeing to halt production of the main CFCs from 1995. Tighter deadlines for use of the other ozone-depleting compounds are also being adopted.

8. The UK is one of the signatories to the Kyoto Protocol which commits us to reduce emissions of carbon dioxide and five other green houses gasses.

9. In working on the progression of this topic the Sub-Committee acknowledged the commitment made by the City of York Council to actions mitigating climate change in signing the Nottingham Declaration[9]; See glossary for more about the declaration. The Sub-Committee believe that the research, findings and recommendations in this report should support the City of York Council to fulfil its declaration commitments.

10. As a nation we are still failing to meet what are considered to be weak international targets to mitigate 'Climate Change', our reaction to this very real threat has not been very effective:
    - It has long been the Government's policy to reduce greenhouse emissions by 20 per cent from 1990 levels by 2010. Yet we are now emitting only 7.5%.less than in 1990.
    - Carbon dioxide emissions rose by 1.5% in 2004, and figures released this year showed that carbon dioxide emissions are still continuing to rise."

11. The Scrutiny work on energy and CO_2 reduction the Sub-Committee believe this authority should now adopt a Climate Change Strategy and Action Plan to progress the signing of the Nottingham Declaration. This should done as a matter of urgency and based on best practice adopted by other Local Authorities. This would provide the authority with a framework for target setting and recording progress against the objective aims of the Nottingham Declaration.

Recommendation 1

[8] see also glossary
[9] For more about the Nottingham declaration please see glossary

That Climate Change Strategies and Action Plans are developed by the Council's Sustainability Officer as a matter of urgency. This to be done with a view to best practice approaches used by other Local Authorities. Progress on the introduction of such a strategy and action plan be reported to the Scrutiny Management Committee within the next year.

OUR NATION

12. The largest controllable source of CO_2 emissions is energy generation, 28% of total UK energy consumption and carbon dioxide emissions today are domestic[10]. Of energy consumed in households 80% is for space heating and hot water; see Department for Environment, Food and Rural Affairs' (DEFRA) report[11].

13. Between 1990 and 2002, UK household energy consumption rose by 18% contrary to a domestic carbon savings target of 4.2 million tonnes by 2010 per annum. DEFRA's report concludes necessary domestic decrease requires approaches to energy efficiency combining insulation and buildings structure improvement with more innovation in, and take up of, energy-saving products for homes[12].

14. The Energy Efficiency Commitment (EEC) requires energy suppliers to achieve domestic energy efficiency promotion targets which can be met by carrying out a combination of approved measures, from installing insulation to providing low energy light bulbs.

15. The Home Energy Conservation Act 1995 (HECA) obliges local housing authorities to act and report annually as "energy conservation authorities". Reports must identify measures improving energy efficiency in all residential accommodation – public and private [13]. After extension of HECA's scope in 1996[14], the aim was to deliver improved energy efficiency of 30%. DEFRA are clear that HECA contributes to meeting the UK's Climate Change commitments.

16. In short, National Guidance links the EEC to HECA by emphasising the need for local authorities to actively ensure CO_2 emissions are reduced across the spectrum of their influence including public and private domestic property. Local authorities are expected to find innovative ways to ensure the domestic sector reduce fuel consumption in line with the energy hierarchy, accessing EEC funds where possible and that these improvements be recorded under HECA.

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10 See Department of Trade and Industry Sustainable Consumption and Production Indicators - Revised Basket of Decoupling Indicators June 2005

11 'New Sustainable Consumption and Production Indicators' DEFRA 11th April 2005 report outlining progress the UK must make towards economic growth with reduced damage to the environment

12 See also House of Commons - Environment, Food and Rural Affairs Committee Ninth Report of Session 2004–2005 Volume I 'Climate Change: looking forward' Pg. 32-36 regarding household emissions.

13 Local Authoritys were asked to submit their Ninth Progress Reports to the Secretary of State by 30 September 2005.

14 to include the identification of measures to improve the energy efficiency of houses in multiple occupation and certain house-boats.

17. The Audit Commissions revised CPA and voluntary indicator frameworks[15] now also incorporate higher expectations of local authorities in respect of this issue and broader issues of sustainability. Revisions to both frameworks promote delivery of the National Government Sustainable Development Strategy 'Securing the Future'[16]. Each monitoring framework emphasises the role of Local Authoritys as a catalyst and exemplar for better citizen's awareness regarding reduced energy use and sustainable energy sourcing. An outline to the key messages of the CPA and Voluntary Indicator frameworks can be found in the glossary.

Fuel Poverty,Thermal Comfort and CO_2 Reduction.

18. Households needing to spend above 10% of their income on fuel for all uses, to achieve 'thermal comfort'[17] are 'Fuel Poor', those exceeding 20% of their income are classed as **severely** fuel poor. The Governments Fuel Poverty Strategy of November 2001 aimed to end fuel poverty in vulnerable homes by 2010 and all homes by 2016; policy aims reaffirmed in the Energy White Paper of Feb. 2003, which set targets to improve energy efficiency by 20% by 2010.

19. Some experts anticipate that climate change will dramatically lower UK winter temperatures. Rising fuel prices and altered climatic factors are leaving increasing numbers of citizens in health threatening fuel poverty. The health impacts of fuel poverty, including excess winter deaths, rising NHS costs (through treating conditions worsened by living in cold and damp), mental health effects (due to not being able to pay fuel bills, debt, isolation and living with poor health conditions) will increase. For more detail regarding the Health impacts of fuel poverty see the recent HACKW report at Annex B).

20. The Energy Efficiency Partnership 'Homes Fuel Poverty Strategy Group'[18] have highlighted the strategic need to support embedded renewable microgeneration – i.e. domestic scale wind, solar or biomass generation etc - as integral to tackling fuel poverty. National Energy Action (NEA) and the National Right to Fuel Campaign (NRFC) believe the impact of fuel prices on fuel poverty will result in more than 1 million households still being fuel poor in 2009, with almost 90% of these being classed as vulnerable. These bodies regard renewable microgeneration, which was once seen only as a CO_2 reduction measure as a key remedy to fuel poverty in such higher fuel price scenarios.

21. Tackling fuel poverty and CO_2 reduction have become wedded issues. The responses of fuel poverty reduction bodies to the relationship between Fuel Poverty and micro generation (previously seen as primarily a CO2 reduction measure) are summarised in the table below.

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15 Local quality of Life Indicators supporting Local Communities to Become Sustainable Audit commision August 2005 covering the delivery of public/private partnership objectives originally agreed at a local level through LA21

16 HM Government 2005

17 Thermal comfort: a satisfactory level of warmth i.e. no less than 21°C in the living room and 18°C in other rooms the level may be higher for the vulnerable or elderly. People with income brackets allowing ≤ 10% spend on fuel for all uses are described as living in 'thermal comfort'.

18 Fuel Poverty Strategy Group response to the responses to a Department of Trade and Industry consultation exercise re the Microgeneration Strategy and Low Carbon Buildings Programme September 2005.

A. Typical energy efficiency schemes – insulation, mains gas central heating installation etc – do not benefit many UK properties as construction methods (e.g. solid walls, flat roofs) create 'Hard to Treat Properties' (HTT's). Efficiency measures alone will not alleviate fuel poverty in such homes and alternatives must be sought.

B. Proximity to gas networks impacts on fuel poverty; homes that cannot be connected usually rely on more expensive heating methods, such as electricity.

C. Microgeneration can alleviate fuel poverty in this context. 'Whole-house' approaches to effective long-term improvements in energy performance and fuel poverty reduction should include strategies promoting microgeneration technologies.

D. National government should develop 'approved' training courses for each of the microgeneration technologies for; installers, technicians and producers etc. Building partnerships, training and advice will drive mass-market transformation and fuel poverty elimination development facilitated by relevant sector skills councils and trade bodies. The Energy Efficiency Best Practice for Homes programme has developed a qualification regarding energy efficient central heating boilers and control systems (now offered as standard training for gas installers). Such approaches must be used to develop skills and regulate training for the microgeneration sector. With a view to inclusion of renewables in the future Warm Front and similar schemes.

E. Devolved (Regional/Local Government) Administrations should target refurbishment of hard to treat homes with renewables and other innovative low carbon technologies, reducing fuel bills as an objective.

22. In brief the Energy Efficiency Partnership 'Homes Fuel Poverty Strategy Group' the NEA and NRFC recommend that national, regional and local microgeneration strategies must address fuel poverty issues, targeting the refurbishment of hard to treat (HTT) homes with renewables and other innovative low carbon technologies. That refurbishment of hard to treat (HTT) homes programmes should demonstrate reduced fuel bills promoting the wider application of renewables in future Warm Front activities in recognition of the contribution that microgeneration can now make to delivering 'thermal comfort' or affordable heating for all.

23. National Planning Policy frameworks and buildings regulations were recently amended, again reflecting increased awareness of the need to address climate change, CO_2 reduction, insecurity of fuel supply and indirectly fuel poverty. Regional Spatial Strategies (RSS) and Local Development frameworks will be required to incorporate 'Planning Policy Statement 22: Renewable Energy' (PPS22) emphasising the importance of Regional and Local Planning Authorities developing positively expressed policies on integrated renewables.

24. National Government recently announced its expectation that all planning authorities" put in place policies on a par with Merton, Croydon and regional exemplar Calderdale. National clarification of PPS22 wording regarding the wider take-up of Merton-type pro-renewables planning policies emphasised that

"It is essential that all planning authority's follow this example and all Chief Planning Officers will be written to urging them to do so" [19].

25. Adoption of a Calderdale/Merton[20] Style Target will require developers to ensure that at least 10% of all energy required is provided from renewable sources in developments – including domestic – up to 2010 with a rising target for onsite embedded renewables (15% by 2015, 20% by 2021 etc) thereafter. This requirement and the associated targets should be explicit in the developing City of York Council Local Development Framework. A number of authorities are now adopting higher Merton style targets - Chichester has a 50% target, Norwich a 30% target and Milton Keynes a Zero Carbon target.

Recommendation

2. That the Local Development Framework and our present development framework include a Calderdale/Merton Style Target. This target will require developers to ensure that:

- **at least 10% of all energy required is provided from renewable sources in all new and significantly refurbished developments from this point and up to 2010, including domestic development.**
- **After 2010 the target rises for onsite embedded renewables to be greater than or equal to 15% between 2010 and 2015**
- **Then rises again to be greater than or equal to 20% between 2015 and 2021 etc.**

26. In addition to changes to the planning framework amendments have recently been made to Parts L and F of the Building Regulations. These highlight the importance of establishing better regulatory practice to maximise energy efficiency opportunities prior to integrating or embedding renewable energy within proposals for significant refurbishment and new development. They reflect the findings of the 'Sustainable Buildings Task Group' and EU directive developments. As a result of such changes local authorities will be expected to take a stronger approach to the enforcement of the integration of higher thermal efficiency standards during building.

27. The Office of the Deputy Prime Minister (ODPM) published their proposals for Code for Sustainable Homes in December 2005 (formerly Code for Sustainable Buildings). From April 2006 the Code applies to all new homes receiving Government funding. It establishes a five star rating system, based on six essential elements, including energy efficiency and use of materials. Minimum standards will need to be achieved for each element, with additional, optional, elements for those developments wishing to achieve higher ratings. The Code builds on the existing EcoHomes standard[21].

[19] The Minister for Housing and Planning (Yvette Cooper) Written Ministerial Statements *Thursday 8 June 2006* Communities And Local Government PPS22

[20] For more detail about the Merton Rule/Target see Glossary

[21] For more about the EcoHomes Standard see Glossary

28. Housing funded by the Housing Corporation and English Partnerships will be required to achieve a three-star rating - equating to EcoHomes Very Good. The Housing Corporation have already committed to the requirement of Ecohomes Very Good on all its funded housing from April 2006 until 2008. This however, can be seen as a minimalist approach in comparison to many other local authorities who have for some time committed where ever possible to their new homes achieving 'EcoHomes Excellent Standard'.

Recommendations

3. **That the City of York Council commits to research and copy planning policies adopted by other local authorities to specifically ensure energy efficiency by design. That all plans submitted to the Local authority be tested on these criteria.**

4. **That the authority respond to and enforce Parts L and F of the Building Regulations as a matter of urgency, resolving any training and resourcing issues that may need addressing.**

5. **That the Council, through its Elected Member Energy Champion request that the Yorkshire and Humber Assembly and/or Yorkshire Forward facilitate region wide BREEAM assessor training for the region's Development Control (and other appropriate) Officers with the aim of reducing costs to individual Local Authorities , with the aim of reducing future expenditure.**

6. **That the City of York Council commit to recommend to appropriate funding bodies - i.e. Housing Corporation - that all new homes standards greater than or equal to Ecohomes 'Excellent Standards'.**

OUR REGION

29. With 14.9% of households 'fuel poor', the Yorkshire and Humber Region is the second worst nationally according to the 2001 English House Condition Survey (EHCS). The relationship between regional fuel poverty and HTT homes is highlighted in the Regional Housing Strategy (RHS) of 2005-2021 as housing structures which are difficult to insulate due to solid (single shell) walls and/or location off the gas mains are cited as contributory factors.

30. The 2001 EHCS found the average SAP (standard assessment procedure) rating across all stock in the region to be 49.9. The regional aim is to increase the rating across all homes to a SAP 65 by 2016. The Regional Housing Strategy proposes the development of policies, practices, and coordinated investment activity targeted initially at properties with a SAP of less than 30, which are otherwise sustainable. With the aim of reducing the percentage of housing with a SAP of 30 or under in 10 years to less than 1% or 2% in social and private housing respectively.

31. Responding to drivers from Government Office, the Region has developed a Regional Fuel Poverty Action Plan (see Annex C) as a way to try and solve fuel poverty. Its development marries well with the fact that most authorities in the region have already developed and adopted a Fuel Poverty Strategy.

32. Figures available showing the take-up of grants for home insulation over the five years from 2000-05 show that York has performed worse than any other significant urban area in the whole of Yorkshire.

County	Authority	Households awarded grants	% of households taking up grant	total households
East Riding of Yorkshire	East Riding of Yorkshire	8,412	6.4%	131,084
	Kingston upon Hull	10,193	9.8%	104,288
North Yorkshire	NYCC	7,338	3.1%	237,583
	York	**1,833**	**2.4%**	**76,920**
South Yorkshire	Barnsley	8,713	9.5%	92,165
	Doncaster	11,810	9.9%	118,699
	Rotherham	7,736	7.6%	102,279
	Sheffield	15,575	7.2%	217,622
West Yorkshire	Bradford	26,699	14.8%	180,246
	Calderdale	6,639	8.2%	80,937
	Kirklees	13,071	8.2%	159,031
	Leeds	17,299	5.7%	301,614
	Wakefield	7,961	6.0%	132,212
Total		143,279		1,934,680

figures from EAGA Partnership

33. The Warm Front grant is provided to homeowners to pay for measures to improve insulation, such as draught proofing, and increase energy efficiency. Figures from the EAGA partnership show that fewer than 2.4% of homes in York had benefited from a Warm Front grant for energy insulation, lower than in any other urban district or principal local authority in Yorkshire. The 2.4% here compares to 8% in Kirklees and 15% in Bradford. Proportionally, more residents in Scarborough and Selby are benefiting than in York. If the City of York Council did more to ensure our citizens accessed this funding twice as many households would benefit. If we were doing as well as the best local authorities some six times as many households would benefit.

34. There are serious problems with homes being poorly insulated. The Government is addressing this by making funding available but York residents are clearly not taking up these funds. It is the Council's role to promote grants like Warm Front in order to reduce emissions and energy consumption through. Later in this report the issue of better strategic approaches to

ensuring our citizens are aware of and supported to receive Government grant funding including Warm Front are discussed.

35. The Draft Regional Spatial Strategy (RSS) or 'Yorkshire and Humber Plan' devolves - for incorporation within LA Local Development Frameworks - responsibilities for energy[22]. This states that;

> The Region – Yorkshire and Humber - will improve energy efficiency and increase installed renewable energy capacity to at least 708 MW by 2010 and to 1862 MW by 2021. All development strategies, plans and decisions will:
>
> **A** Improve energy efficiency and maximise the efficient use of power sources by:
> - Requiring orientation and layout of development to maximise passive solar heating
> - Maximising use of combined heat and power systems, especially by development with considerable energy demands
> - Locating development to utilise community heating scheme opportunities near major sources of power generation, especially those at Immingham and near Selby
> - Providing for new efficient energy generation and transmission infrastructure in keeping with local amenity and areas of demand
> - Supporting the use of clean coal technologies and abatement measures
>
> **B** Maximise renewable energy capacity by:
> - Delivering at least the sub-regional targets for installed renewable energy capacity to 2010 (Humber 124 MW; North Yorkshire 209 MW; South Yorkshire 47 MW; West Yorkshire 88 MW; other 240 MW) and to 2021 (Humber 350 MW; North Yorkshire 350 MW; South Yorkshire 160MW; West Yorkshire 270 MW; other 690 MW)
> - Helping to develop and deliver local authority targets for installed renewable energy capacity to 2010 in line with those provided in table 15.12
> - Requiring at least 10% of the energy to be used in sizeable new development to come from on-site RE sources.

36. Scrutiny at the City of York Council was instrumental in supporting the Yorkshire and Humber Assembly's production an Elected Member Energy Champions Questionnaire. The Regional Energy Champions initiative aims to engender a better understanding and application of best energy practice and sources of practical and financial help for continuous improvement in this area region wide.

37. The City of York Council appointed Cllr. Christian Vassie as its Elected Member Energy Champion at Full Council on 25th May 2006. As a result of this the Scrutiny Sub Committee hope that the initial responses to the Housing Section of the questionnaire (see Annex D) will be completed shortly and presented to the City of York Council Executive and Regional Assembly Energy. In addition to which updated versions of the full questionnaire will be presented to the City of York Council Executive and Regional Assembly Energy on a six monthly basis to support monitoring of improvements.

[22] See The Yorkshire and Humber Plan, Draft for Consultation December 2005: Section15 Environment Pages 214-217

Recommendations

7. **That as a matter of urgency the Elected Member Energy Champion present a first version of the Regional Assembly's questionnaire to the Executive and thereafter the Regional Assembly, as a record of the authority's position across all sectors to date.**

8. **That the Elected Member Energy Champion present six monthly updates of the Regional Assembly's questionnaire to the Executive and thereafter the Regional Assembly, as a record of the authority's progress on energy across all sectors.**

OUR CITY

38. In responding to feasibility request for this topic as lodged (see Annex A) the Performance Improvement Team of the City of York Council highlighted the timeliness and particular importance of the authority addressing issues raised in this topic. Their response highlighted to Scrutiny Members the corporate CPA assessment, expected in 2007/2008, which will form a view on the following service and policy areas:

- Condition of LA housing stock – (cross tenure fuel poverty, energy and resource efficiency are relevant)
- Evidence that the council with partners are delivering on a 'clean and green liveability' agenda.

- The topic was also noted as fitting with Corporate Aim 1: ***'Take Pride in the City', by improving quality and sustainability, creating a clean and safe environment.***

39. In respect of the Local Authority's own housing stock York's performance can be seen as good – with a SAP rating of 66pts; above the national average but not as good as all other councils in the region. In considering the information returned through feasibility analysis the Board recognised the value of work undertaken by the authority to ensure its own housing stock meets required standards of thermal comfort.

40. Our private sector performance is however falling below this with a SAP of 44pts and mars our record on HECA reports. Improvement to Thermal Comfort within the Local Authority's own housing stock have been subsequent to achieving decent homes standard rather than strategic interventions with the joint aims of achieving thermal comfort and CO_2 reduction.

41. Our Authority has neither a Fuel Poverty and CO_2 Reduction Strategy nor Action Plan, this in association with rising energy prices may mean in real terms that the authority's position is now no better than it was some three to four years ago; a snap shot of mapped thermal efficiency giving detail regarding this can be found at Annex E.

42. The average level of fuel poverty (reported in the LASP[23] report) in York is identical to that of our region and the National average at 23%, (i.e. nearly one in four households live in fuel poverty). 12 wards in the LASP region feature within the 'worst' 10% of wards in England, two of which, Westfield and Clifton, are in York.

43. At a regional level York also presents the second highest number of Wards – 5 in total – falling within the worst 10% in the region; Westfield Clifton and Micklegate showing almost one in three households living in fuel poverty.

Table 2

	Ward name	**% in fuel poverty**	**No in fuel poverty**	**LASP rank** lower score indicating higher fuel poverty
Within national worst 10%	Westfield	31	1626	10
	Clifton	31	1499	12
Within regional Worst 10%	Micklegate	30	1553	13
	Holgate	29	1245	19
	Heworth	28	1294	23
Worse than National Average	Fishergate	27	853	28
	Guildhall	27	1004	29
	Tang Hall	24	713	44
	Acomb	23	801	49
NATIONAL SAP AIM				66
	Bishopthorpe	22	249	64
	Fulford	21	223	75
	Dringhouses & Woodth.	20	854	89
	Heslington	20	79	95
	Huntington & New Earswick.	18	776	127
	Osbaldwick	17	217	155
	Heworth Without	16	298	164
	Derwent	16	202	182
	Skelton, Rawcliffe & Clif	16	547	183
	Haxby & Wigginton	14	711	204
	Strensall	14	317	208
	Rural West	14	482	212

[23] The Baker & Starling report to York, North and East Yorkshire Local Authority Support Programmes (LASP) entitled '**A profile of fuel poverty in York, North and East Yorkshire LASP Region and Member Districts**'

	Wheldrake	14	155	218

44. It would be beneficial to the authority to adopt a more integrated approach, to recording improvements which utilized the developing Environmental Management System (EMAS) or similar. The Sustainability Officer for the Authority should be engaged to advise about targeted improvements and reporting under EMAS.

Recommendation

9. That the authority to adopt a more integrated approach, to recording improvements to LA housing stock utilizing the developing Environmental Management System (EMAS) or similar. That Officers in Housing work with the Authority's Sustainability Officer who should be engaged to advise about targeted improvements in this area and the reporting of targeted outcomes under EMAS.

45. A holistic approach to improving thermal comfort and sustainability in relation to domestic energy procurement, in all (including non-LA) housing stock needs to be adopted by the authority in partnership. Relevant partners – i.e. the Energy Efficiency Advice Centre, Primary Care Trust, Health Authority, Private Landlords including Universities and National Energy Action – need to be consulted (see Annex F NEA process outline). Consultation should be made with a view to creating a holistic response to fuel poverty reduction and improved public health and the associated need for CO_2 reduction in response to climate change.

46. Since this scrutiny commenced every local authority in the Yorkshire and Humberside region has been signed up as a member of National Energy Action (NEA) since April 2006. All the subs' for the 22 authorities are signed up on a bulk purchase deal negotiated by the Assembly. The Assembly will be reviewing this towards the end of the year to see what value/use authorities made of NEA membership and to see whether it would be something we might want to continue to support in next and subsequent years should budgets allow.

47. Whilst the NEA's prime function is tackling fuel poverty including obvious linkages with regard to insulation programmes/energy efficiency, the NEA is presently conducting research into use of microgeneration as a method for tackling fuel poverty in off gas network areas. It is vital that our authority make full use of its membership – the present contact Officer at CYC being Asset Manager (Housing Services) – by ensuring that the most appropriate Officers and Members including the Elected Member Energy Champion receive the information that they provide eg Energy Action magazine and the reduced rates for training courses etc.

48. During the Scrutiny process the authority's Equalities Officer also advised the Board that the absence of a Fuel Poverty and CO_2 Reduction Strategy may

prohibit the authority's capacity to meet the equality concerns raised by the community and hence to achieve the Equality Standard.

49. Inequalities in housing both mirror very closely, and exacerbate, other inequalities in society. Disabled people, elderly people, black and minority ethnic people, young people, single parents etc are more likely to live in poor standard accommodation – with poorer energy efficiency. The Officers considerations being based upon consultation undertaken by the authority with community groups (as part of its work to implement the Equality Standard) which has highlighted many equality issues around housing and poverty related to the topic. The Equalities Officer hoped that recommendations would incorporate strategies making advice and support regarding improved thermal comfort accessible and inclusive to all sections of the community.

50. The former Housing Scrutiny Board felt one of the biggest issues facing the citizens in respect of carbon reduction was understanding what a low emmissive home was comprised of. A notional model was created (in collaboration with Officers from York's EEAC) emphasising measures which could be taken to move existing homes towards the ideal; i.e. without major reconstruction of the buildings fabric. See 'SKETCHING the ENERGY EFFICIENT HOME – How to make a Normal Home a Greener Cleaner Home'. Annex G of this report.

51. In order to help assess the effects of more concerted education/marketing regarding advice to citizens the Board felt the following actions might be helpful;

a. Do a scaled down version of the paper (4 x A4) for delivery as leaflets direct to householders in one or two of York's most thermally poor Wards as a pilot with a view to explicitly monitoring any improvements in grant take up returns through EEAC. (to be done)
b. ensure that the fuller version of the report is annually refreshed with the support of EEAC and kept as a data source on the council's website. (to be done)
c. Contact Elected Members to request a short notice in their Ward Newsletters encouraging people to take up the advice and grants available through EEAC. Newsletters including this at the Boards request were sent to the following wards; Fishergate Jan 2006, Heslington and Fulford Jan 2006, Holgate February 2006, Strensall, Towthorpe, Earswick & Stockton on the Forest February 2006, Dringhouses & Woodthorpe February 2006.
d. Request that the Deputy Chief Executive send an all staff Email out advising of the same information, this was done first week of December 2005.
e. Ensure that Streets Ahead (the Council Housing Magazine) incorporates an article on Energy Efficiency Advice

50. As a result of completing limited actions c, d and e Colin Eastwood, Project Manager, Energy Efficiency Advice Centre (EEAC), [24] reported a vast increase in the level of customer contact, and resulting grant take up, with and through the local (EEAC). Further consultation by the Board with the Project

[24] Co-Opted Member of the Housing Scrutiny Board, Project Manager York, North Yorkshire and East Riding Energy Efficiency Advice Centre (EEAC)

Manager EEAC, National Energy Action and the Regional Assembly's Energy Policy Manager quickly led to a series of quick step actions that the authority might use as the basis of an Energy Efficiency and Thermal Comfort Strategy and Action Plan. These are tabulated below;

ACTION	**WHO**	**WHEN**
Annual refreshing of 'Sketching the Energy Efficient Home' for posting on the council's website with links to Sustainability content and Housing content of the site and reciprocal links to EEAC.	Housing Officers + EEAC personnel	April or as near to date of established annual grants funding changes
Possible short leaflet version of 'Sketching the Energy Efficient Home' for delivery direct to householders in Wards and/or for placement in Doctors Surgeries and other appropriate community locations etc.	Housing Officers +Marketing and Communications EEAC personnel, Health Authority, PCT	Devise Summer; roll out Autumn
Short 'Winter Warmer' notice in Ward Newsletters and or Your City, encouraging people to take up the advice and grants available through EEAC.	All Elected Members, Neighbourhood Pride Team, Marketing and Comms, EEAC personnel,	August/September for phased roll out in letters October through February
Pre-Ward Meeting Information sessions or Energy Bingo Games including give aways – low energy light bulbs, hot water tank jackets sponsored by Power providers	All Elected Members, Neighbourhood Pride Team, Energy Providers, EEAC personnel,	At Ward Members choice in consultation
Single Paragraph Advice link to EEAC in the advertising/information boxes on Council Payslips	Payments Manager, Resources, EEAC personnel,	October and March

ACTION	WHO	WHEN
October 2005 Website page on City of York Council linked through to the EEAC - Advice Centre's webpage as recommended through Scrutiny	EEAC/Housing/Marketing and Comms	October check web links and update information as appropriate
All staff Winter Warmer reminder Email encouraging staff to get the messages to friends and neighbours	Director Of City Strategy. EEAC personnel,	Late November
Benefits Section to facilitate York Energy Efficiency Advice Centre information being enclosed in benefits mail outs. To include a tick box on benefits forms giving claimants the option of been contacted by the Advice Centre if and when applicable grant funding or relevant information became available.	Payments Manager, Resources, EEAC personnel,	To be determined in consultation

51. The government introduces a new standard called the Health and Safety Rating System (The HHSRS) on the 6th April 2006. It is a means of identifying faults in dwellings and of evaluating the potential effect of any faults on the health and safety of occupants, visitors, neighbours and passers-by.

52. The system grades the severity of any dangers present in the dwelling. It also provides a means of differentiating between dwellings that pose a low risk to health and safety and those which pose a higher risk such as an imminent threat of serious injury or death. The system concentrates on threats to health and safety and is not concerned with matters of quality, comfort and convenience; The most significant hazard classified will be excessive cold.

53. HMO licensing - duty to ensure that all Licensable HMOS are free of Category 1 Hazards within a five year period. The City of York Council have included in its grant policy a decent homes grant for tenant measures - we have since 2001 also included in the code of practice energy efficiency measures. New grants were also introduced via the authority for over 75's who fall outside of warm front but live in council tax banded properties A, B or C. Work has been conducted with EEAC to ensure this grant can be delivered by them.

54. The EEAC has also arranged to meet with the York Registered Land Lord's Association to discuss the EEC directive about SAP ratings for tenant properties in September 2006.

55. In March 2005 the authority's Team Manager, Housing & Adult Social Services, Housing Strategy & Enabling Group - Housing Standards & Adaptations worked in partnership with the Energy Efficiency Advice Centre (EEAC) targeting the private rented sector to raise awareness of energy efficiency issues both with landlord and tenants - In March we successfully contacted more than 335 landlords and 1000 tenants offering energy efficiency packs (leaflets and low energy light bulbs) More than 200 packs were distributed.

56. In October 2005 the authority's Team Manager, Housing & Adult Social Services, Housing Strategy & Enabling Group - Housing Standards & Adaptations worked in partnership with EEAC and HIA - to produce a mailshot to more than 4000 residents (owner occupiers) in receipt of Council tax benefits. Intention to raise the profile of both warm front grants and other energy efficiency measures offered through EEAC and HIA. More than 450 responded, 184 surveys and 87 referrals through to Warm front.

57. The authority's Team Manager, Housing & Adult Social Services, Housing Strategy & Enabling Group - Housing Standards & Adaptations attended the Housing Scrutiny Board meeting of February 2006 with representatives from the Energy efficiency Advice Centre and the EAGA partnership.

58. Since this time, the officer has been trying to arranged a mail shot with EAGA and the energy advice centre which promotes warmfront grants - this has proven difficult but it is hoped that work will be completed soon. The officer is awaiting Council tax to ok the mailshot as per Scrutiny recommendations in line with the approach taken at other Local Authorities. This should take place during September and be paid for by EAGA.

59. In line with other partnership working conclusions of the Board the officer has also worked with EEAC to create new leaflets which have been sent to DR surgeries/ pension service/age concern/CAB and Council receptions. In particular the customer advice centre/ library square/ 9 St Leonard's Place. Press releases with the Energy Efficiency Advice Centre have also been sent out and discussions held regarding training with the EAC for technical officers in the Housing Strategy & Enabling Group - Housing Standards & Adaptations team to be able to calculate SAP ratings.

60. The March and October 2005 activities and post scrutiny work of the authority's Team Manager, Housing & Adult Social Services, Housing Strategy & Enabling Group - Housing Standards & Adaptations should be formally recognised and included in a Fuel Poverty and CO_2 Reduction Strategy and Action Plan to facilitate monitoring and target setting.

61. In respect of their findings and the testing of methods for improvement, the former Housing Scrutiny Board believe that it is now imperative that the authority consult upon, devise and adopt a Fuel Poverty and CO_2 Reduction Strategy and Action Plan. In addition to which they believe measures must be taken to ensure that the authority's relations with EEAC are built upon and further consolidated in partnership with others.

Recommendations

10. **That the Housing Strategy & Enabling Group – Housing Standards & Adaptations Officer and other officers in housing as appurtenant work with York EEAC officers consult upon, devise and adopt a Fuel Poverty and CO_2 Reduction Strategy and Action Plan for the authority this year. The Officers are recommended to use the Regional Action Plan (Annex C) NEA guidance (Annex F) and activities outlined at paragraph 50 of this report as a primary steer in shaping the process.**

11. **That the Local Authority ensures that CYC Officer and Member Positions on the Energy Partnership Board are always filled.**

62. To date The authority has not done any work in respect of improving sustainable sourcing in relation to domestic energy procurement; i.e. microgeneration from embedded renewable sources in its own housing stock. Nor has it taken a strategic stance on the education and support to achieve annually increasing levels of embedded renewable microgeneration in private sector stock. In respect of this the authority area has fallen behind its regional peers[25].

63. Authorities such as Kirklees, Harrogate, Bradford and Leeds have achieved significant microgeneration retrofit and new builds within their housing stock. In no small part by capitalising on established positive relations with their Energy Efficiency Advice Centres (EEAC) developed through delivery of Fuel Poverty Strategies. These have then been extended to ensure EEAC's are consulted annually in respect of proposals for upgrading of heating systems, thermal efficiency measures and other buildings fabric improvements prior to recording within Housing Revenue Account Business Plans.

64. This form of consultation has allowed EEAC's and Local Authorities to target grant funding streams and retrofit renewable microgeneration sources into domestic stock. This in turn has facilitated authorities such as Kirklees which is seen Nationally as exemplary in this field to aim for targeted levels of installation recorded under the Environmental management system EMAS.

65. To date the City of York Council has not adopted such a strategy. As a result of the Board's scrutiny however, some preliminary exploratory meetings have taken place between the Head of Housing Services and the EEAC Project Manager.

66. The Head of Housing Services agreed to look into possibilities for replacing (at end of life) standard boilers with heat pumps where this may be cost effective to the Authority and tenant. Although this situation used to be rare where

25 See 'Mapping Renewable Exemplars – York's And Humber', (provided at by the Environment and Sustainability Scrutiny Board, in respect of the known domestic microgeneration showing increasing levels of LA domestic stock retrofit and new build installation at other authoritys within the region.

properties have mains gas connections, it will need to be increasingly considered in reflection of rising fuel prices and will almost certainly prove the best cost benefit fit where off gas network properties are under consideration.

67. EEAC have committed to keeping The Head of Housing Services fully up to date as to Energy Efficient Commitment funding and other funding streams including regional available for heat pumps and other possible microgenerative alternatives as schemes change in 2006. In this way the authority should be better able to capitalise on funding streams available to it.

Recommendation

12. That Annual and inter-year joint working be conducted between EEAC's Local Authority Support Programme Co-ordinator and CYC Housing Officers to ensure that opportunities for the use of renewables are considered as part of the HRA and Housing Capital Business plan. Where such opportunities are cost neutral or affordable within the life of the business plan, micro-renewables should be installed as part of the development of the business plan. Consultation between housing officers and EEAC should cover improvements scheduled to buildings fabric, such as photovoltaic roof tiles when roofs need replacement and/or heating, water systems replacements (i.e. can carbon minimising heat pumps be applied) etc; Consultation should also explore opportunities to bring in external grants revenue.

Final Comments from the Board

The Housing Scrutiny Board/Reducing Carbon Emissions Sub-Committee would like to acknowledge the invaluable assistance of a number of people for their technical support and advice to the Board throughout various points of the Scrutiny. The Board extends its thanks to each of those listed below.

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Colin Eastwood	Project Manager York EEAC
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Lance Saxby	Local Authority Support Programme Co-ordinator, City Strategy, Energy Efficiency Centre
Julian Horsler	Equalities Officer, CYC

Lorraine Donaldson	National Energy Action
Andrew Cooper	Yorkshire and Humber Assembly Policy Manager Energy
Graeme Stephenson	EAGA Partnership

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Members of the Housing Scrutiny Board/ Reducing Carbon Emissions Sub-Committee Scrutiny Sub-Committee July 2005- 2006

Chair	Cllr. Ceredig Jamieson Ball
Vice Chair	Cllr. Bill Fairclough
	Cllr. P. Blanchard
	Cllr. Janet Greenwood
	Cllr. David Horton
	Cllr. Mark.Hill
	Cllr. Madeleine Kirk
	Cllr. David Livesley
Co-Opted Member	Colin Eastwood
Co-Opted Member	Alderman Jack Archer
Co-Opted Member	Mildred Grundy
Co-Opted Member	Pat Holmes

Background Papers & Publications

Title and Author(s)	**Publisher and Date**
CPA 2005 Key Lines of Enquiry for Corporate Assessment (KLOE).	Audit Commission Sept 2005
DIRECTIVE 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on waste electrical and electronic equipment (WEEE)	Official Journal of the European Union 13th Febraury 2003
Draft Environmental Policy And Update On Preliminary Review For The Environmental Management System (EMS).	CYC Environment & Sustainability EMAP 20th April 2004
Environment and Sustainability Scrutiny Board -	CYC Executive 2nd Feb 2005

Title and Author(s)	Publisher and Date
Energy Use In Council Buildings	
Environment and Sustainability Scrutiny Board - Generating the Future	January 2006
Feedback on the Consultation Exercise for the Best Value Performance Indicators for 2005/2006	ODPM May 2005
Home Energy Conservation Act 1995	Crown Copyright
Local Quality of Life Indicators – Supporting Local Communities to Become Sustainable	ODPM, LGA, DEFRA, AC August 2005
Planning for Renewable Energy A Companion Guide to PPS22	ODPM 2004
Planning Policy Statement 22: Renewable Energy	ODPM 2004
Regional Housing Strategy	Yorkshire and Humber Assembly
Releasing resources to the front line Independent Review of Public Sector Efficiency Sir Peter Gershon, CBE	Crown Copyright July 2004
Review of Sustainable Energy - Beacons sustainable energy theme	June 2005 I&DeA Learning Pages
The UK Climate Change Programme 2006 'Tomorrow's Climate Today's Challenge	March 2006

Glossary

Broad Leaved Native Trees

Broad Leaved native Trees would generally be agreed to be species of Deciduous (trees which loose their leaves in winter) trees which have grown in England since the last Ice Age. The below list is not comprehensive but provides a guide;

Alder (Alnus glutinosa), Ash (Fraxinus excelsior), Aspen (Populus tremula), Bay Willow (Salix pentandra) Beech ** (Fagus sylvatica), Bird Cherry (Prunus padus), Black Poplar (Populus nigra var betulifolia), Broad-leaved Lime ** (Tilia platyphyllos), Crab Apple ≅(Malus sylvesteris), Crack Willow (Salix fragilis), Downy Birch (Betula pupescans),

English Oak (Quercus robur), Field Maple (Acer campestre), Goat Willow (Salix caprea),

Hawthorn ≅**(Crataegus monogyna) and Midland Hawthorn≅ (Crataegus oxyacantha),

Hazel≅ ** (Corylus avellana), Hornbeam (Carpinus betulus), Rowan ≅(Sorbus aucuparia), Sessile Oak (Quercus petraea), Silver Birch≅ (Betula pendula),

Small-leaved Lime (Tilia cordata), Service Trees (Sorbus domestica and Sorbus torminalis), White Willow (Salix alba), Whitebeam (Sorbus aria),

Wild Cherry (Prunus avium), Wych Elm (Ulmus glabra)

Suitable for smaller gardens

** **Suitable for Hedging or pleatching**

CARBON

Carbon monoxide (CO) is a poisonous gas, which may be given off

MONOXIDE: Poisoning and Prevention

by heating - both fixed and portable appliances - or cooking appliances that use gas, coal, wood or oil, if they're not working properly, if the flue is blocked in any way, or if the room is not properly ventilated.

More than 50 Deaths from accidental domestic carbon Monoxide poisoning occur in the UK each year. Carbon Monoxide gas has no smell, no colour or taste and this makes it particularly dangerous.

To avoid accidental death through Carbon Monoxide poisoning people should do the following things as a minimal precaution;

Households with a gas boiler or heating system should be serviced every year

Chimneys should be swept, even if the fire is not in regular use, every year

Fit Carbon Monoxide detectors, these should comply with British Standard BS 7860 – a Carbon Monoxide detector is a warning device not a substitute for regular servicing.

In rented accommodation

The Gas Safety (Installation and Use) Regulations 1998 place a duty on landlords to make sure that appliances and flues are kept in good order and checked for safety at least once every 12 months. Landlords must also keep a record of previous safety checks and issue the current record to the tenant.

Tenants moving into new accommodation should:

Demand to see a copy of the current record of safety checks carried out.

Ensure that safety checks were carried by a CORGI-registered engineer.

Not use any gas appliances which they think may be unsafe.

Not attempt do-it-yourself work on appliances.

For more information about Carbon Monoxide in Homes please see the Department of Trade and Industry web site

www.dti.gov.uk/homesafetynetwork/cm_intro.htm

ChloroFluroCarbons (CFC's)

A common industrial product, used in refrigeration systems, air conditioners, aerosols, solvents and in the production of some types of packaging. Although chemically inert in the lower atmosphere (troposphere), they are taken to very high altitudes where they are broken down into their components by the stronger sunlight (UV) at these altitudes. It is the chlorine formed in this process that causes the damage to ozone. The manufacture and use of CFCs in industry has been severely curtailed following the Montreal Protocol and subsequent amendments.

CPA

Local Authoritys must show performance or delivery of priorities agreed by the ODPM's Central and Local Government Partnership. The priorities are expressed as 5 sub-themed themes in the Key Lines of Enquiry. Themes have criteria for judgement at Level's 2 and 3 (where 3 shows the greater commitment). Sub-theme 5.1.2 has particular reference to housing and the criteria for judgement at Level's 2 and 3 of 5.1.3 widen encompass an Authoritys own policy and monitoring framework, the Planning Authority role and the role of authority as exemplar. Sub Themes 5.1.2 and 5.1.3 with the associated criteria for judgement are copied below.

5.1.2 Asks what the council, with its partners, has achieved in its ambitions and priorities for the local housing market:

Level 2:

The council's various policies on fuel poverty, energy efficiency, health inequalities and community safety are achieving improvements but would benefit from being more consistently applied across tenures. There is work going on for outcomes in these areas to be more sustainable, with more efficiency savings and improved procurement practices.

Level 3:

The council is able to demonstrate that there are sustainable policies and practice where relevant across all tenures to address issues such as fuel poverty, energy and resource efficiency, health inequalities, and community safety. Outcomes in these areas will not only be reflected in sustained improvements to people's quality of life but can also be quantified in terms of efficiency savings and improved procurement practices.

New housing is more sustainable in terms of construction, location, maintenance, and running costs. It is appropriate in size, scale, density, design and layout. It is also accessible, affordable and sufficient green space is provided.

5.1.3 Asks what the council, with its partners, achieved in its ambitions for the local environment, can the council evidence that working in partnership with others, it has established and is delivering on its clean and green liveability agenda the council, working in partnership with others, has contributed to ensuring environmentally sustainable communities and lifestyles.

Criteria for Judgement:

Level 2:

The council is addressing the quality of design in buildings and public spaces and is addressing these matters in its local development plans. There has been some increase in the proportion of new developments (for example, public buildings, housing, fixed infrastructure) which mitigate the effects of, or adapt to the impact of, climate change during planning, design and construction.

The council is setting a positive example to others through its environmental management practices

Level 3:

The council has reduced its own resource consumption significantly and is able to quantify the cost of these and the environmental impact these policies have had.

The council is effectively addressing significant local and global environmental issues and actively communicating environmental issues to the wider community

Buildings and open spaces are designed to a high quality and this is addressed in the local development plans. There has been a sizeable increase in the proportion of new developments (for example, public buildings, housing, fixed infrastructure) which mitigate the effects of, or adapt to the impact of, climate change during planning, design and construction.

EcoHomes Standard

The Ecohomes environmental assessment and rating system was developed by the Building Research Establishment (BRE) for all new and renovated homes. It is the 'homes' version of the BRE Environmental Assessment Method (BREEAM) developed with support from the National House Building Council (NHBC).

Ecohomes rates environmental performance on a simple single scale: Pass, Good, Very Good and Excellent. It does so by assessment of the following aspects of a building: Operational Energy i.e. that required for fuel and power during its expected use; Transport; Health and Well-being; Water; Materials, Land Use; the Ecological Value and Pollution.

It is now the most widely recognised sustainability appraisal system for residential development by Local Authorities. Using Ecohomes is an effective means to test compliance with Local Plan policies, requiring developers to demonstrate their green and sustainable credentials and high environmental design standards. The scheme is also aligned to the 2004 Sustainable Buildings Task Group recommendation that a single national Code for Sustainable Building (CSB) based on this method be established. English Partnerships and the Housing Corporation already require contractors to build to such standards.

Emissions trading

Emissions trading is an attempt to reduce the environmental cost of pollution control by providing economic incentives for measurable reductions in emissions.
A central authority, such as an air pollution control district or a government agency, sets limits or "caps" for each type of pollutant, recognizing that clean air is a joint resource. Groups that intend to exceed the limits may buy *emissions credits* from those who will stay below their designated limits; this transfer is normally referred to as a trade.

Green House Gases

The six key gases, identified as accelerating global warming due to human production, use and emission into the environment;
carbon dioxide(CO_2),
methane,
dinitrogen (nitrous) oxide (N_2O),
hydrofluorocarbons (HFCs),
perfluorocarbons (PFCs)
and sulphur hexafluoride (SF_6)

Carbon dioxide (CO_2) accounts for the greatest proportion of greenhouse gas emissions in the UK.

Halocarbons

A class of halide (i.e. containing Chlorine, Bromine or Iodine) compounds, including CFC's. These can break down to form various ozone-depleting radicals.

Kyoto Protocol

An international agreement setting targets for industrialised countries such as the UK to cut their greenhouse gas emissions. The protocol was agreed in 1997, based on principles set out in a framework convention signed in 1992.
The Kyoto Protocol became a legally binding treaty on 16 February 2005 having been ratified by 55 nations.

Merton Rule

The 'Merton Rule' is the groundbreaking planning policy, pioneered by the London Borough of Merton, which requires the use of renewable energy onsite to reduce annual carbon dioxide (CO_2) emissions in the built environment. Hundreds of local authorities look set to follow Merton's lead, which will impact all new major development projects throughout the UK.
Following the publication of Planning Policy Statement 22 (PPS22), Planning Guidance on Renewable Energy, issued by the Office of Deputy Prime Minister in 2004, the London Borough of Merton was the first to formalise the governments renewable energy targets in its adopted UDP, setting the target for the use of onsite renewable energy to reduce annual CO_2 emissions for all new major developments* in the borough by 10%.
The first project to comply with this target – ten light industrial units - was completed in June 2005 at Willow Lane, Mitcham, using micro turbines and solar PV to meet the requirement.
Croydon were quick to follow Merton's lead, and their first project designed to reach a '10% target' was completed in July 2005.
North Devon has chosen to demand 15% CO_2 reduction from renewables and Kirklees Council have proposed that by 2011, 30% of energy consumption in every one of its new buildings is from renewable sources. This is a trend that has drawn increasing interest from local authorities across the UK, with over 75 councils already drawing up policies.

Montreal Protocol

A convention signed in 1987 by many countries to greatly reduce the production and use of CFCs responsible for damage to the ozone layer with the aim to reduce them by half by the year 2000. Since 1987, further amendments to the protocol have imposed greater restrictions on the production and use of potentially damaging compounds. The main CFCs will not be produced by any of the signatories after the end of 1995, except for a limited amount for essential uses, such as for medical sprays.. Two revisions of this agreement have been made in the light of advances in scientific understanding, the latest being in 1992. Agreement has been reached on the control of industrial production of many halocarbons until the year 2030.

Nottingham Declaration

In 2000 Nottingham City Council hosted a conference on climate change to launch a declaration which has been signed by over 80 local authoritys in the United Kingdom (number as at November 2004). The full wording of the declaration is copied below at Annex H.

Ozone (O_3 : 3 oxygen atoms)

Ozone occurs naturally in the atmosphere and forms a layer in the stratosphere, thinnest in the tropics (around the equator) and denser towards the poles. It is created when ultraviolet radiation (sunlight) strikes the stratosphere, dissociating (or "splitting") oxygen molecules (O_2) to atomic oxygen (O). The atomic oxygen quickly combines with further oxygen molecules to form ozone. **Ozone depletion** is mainly due to the release of manmade chemicals containing chlorine such as CFC's (ChloroFluoroCarbons), bromine containing compounds, related halogens and Nitrogen oxides;.

Ozone depletion has a major effects upon us and our planet, even a small amount of loss to the ozone layer , means more ultraviolet light (UV-B) from the sun reaches the Earth. For each1% of the ozone layer depleted, 2% more UV-B reaches the surface of the planet.
UV-B increase is one of the most harmful consequences of ozone depletion because it can cause skin cancer. The US Environmental Protection Agency estimates that 60 million people born by the year 2075 in America alone will get skin cancer due to ozone depletion and that one million of these people will die, in addition it estimates 17 million more cases of cataracts can also be expected in the US alone

Voluntary Indicator Framework

The March 2005 UK Government Sustainable Development Strategy 'Securing the Future' incorporates the August 2005 [26] guidance to monitoring, and complimentary indicators for Local Authoritys and Local Strategic Partnerships, entitled 'Local Quality of Life Indicators – Supporting Local Communities to Become Sustainable'.

Drafted with reference to National Local Authority monitoring indicators drawn up under the LA21 process the indicators are recommended for adoption to extend or widen the ethos of the CPA framework to cover an authoritys partners and partnership working.

Whilst the indicators are at present voluntary – i.e. non-statutory – in fleshing out the statutory indicators they "..help (LA's/LSP's) monitor the effectiveness of their Sustainable Community Strategies.."[27]. There is a strong suggestion that they may become obligatory in the near future. Indicators 24, 25 and 26 relating to energy and emissions are copied below.

24

Levels of key air pollutants.

25

Carbon dioxide emissions by sector and per capita emissions.

26

Average annual domestic consumption of gas and electricity (kwh)

Warm Front

Warm Front is the Government's main grant-funded programme for tackling fuel poverty. The scheme was launched in June 2000 and before its name changed to Warm Front, it was called the Home Energy Efficiency Scheme.

From June 2005 the roles of Warm Front Scheme Manager and Supplier of Heating Materials in England, Defra has announced the preferred bidders subject to contract award. These are:

[26] Audit Commission, DEFRA, ODPM and Local Government Association
[27] See Page 16 'Local Quality of Life Indicators – Supporting Local Communities to Become Sustainable'.

- Eaga Partnership for the role of Scheme Manager in all four geographical lots
- Wolseley UK Limited for the supply of oil and gas heating materials
- Graham Group for the supply of electrical materials.

A Warm Front grant of £2,700 or £4,000 (if oil central heating has been recommended) can provide a package of insulation and heating tailored to each property, drawn from the measures listed below.

Insulation measures

- Loft insulation.
- Draught proofing.
- Cavity-wall insulation.
- Hot-water-tank insulation.

Heating systems

- Central heating
- Gas room heaters with thermostat controls
- Electric storage heaters
- Converting a solid-fuel open fire to a modern glass-fronted fire
- Time controls for electric space waters and water heaters
- Heating repairs and replacements

Other measures

- Energy advice.
- Two low-energy lightbulbs.
- Hot water tank jacket.

Scrutiny Management Committee **23 October 2006**

Report of the 'Guidance For Sustainable Development Scrutiny Sub Committee'

Guidance For Sustainable Development

Summary

1. The purpose of this report is to inform Scrutiny Management Committee of the final revisions to the draft report discussed at their July meeting. It incorporates changes to the previous report recommended by Scrutiny Management Committee to assist access to the report and provide further detail of the rationale underpinning recommendations.

2. The main findings arising from the work carried out by the Scrutiny Sub Committee are as follows:

- The council has a number of obligations as set out in various legislative Acts with international, national and regional guidance. The obligations to promote sustainable building and sustainable planning practices require the local authority in partnership with others to actively promote and adopt measures to reduce harmful emissions, mitigate against and adjust to climate change.

- Addressing Climate Change is not simply a matter of reducing CO_2 emissions from heat and power sources. The recommendations therefore refer to water usage, natural carbon grounding, lifelong building, bio-diversity and waste management.

- York's development documents are now out of step with Planning Policy statement 22 regarding embedded renewable generation – i.e. domestic scale wind, solar or biomass generation and the report addresses this.

- York's lack of a strategic approach to trees has left the city performing joint fourth poorest in respect of national urban and rural tree density requirements. This is particularly poor given the role of trees in improving air quality and carbon grounding.

- York's historic environment should not be an obstacle to increased sustainable build within the city, indeed this environment offers many opportunities.

3. Members are requested to endorse the recommendations and agree that the report be progressed through to the Executive.

Background

4. A draft final report has been previously presented to SMC on the 24th July 2006 and it was agreed that further work be undertaken to conclude the review. The Committees recommended amendments to the previous report have now been incorporated into the attached report. References to all Annexes in the previous report remain and are also accessible electronically as they have been previously circulated and considered.

5. The final report is structured to provide a view of the key issues around sustainability in planning complimentary to the development of a robust (and Climate Change aware) Local Development Framework. As such, it details research and findings within the following headings:

- Climate Change and Sustainable Planning and Development
- Recognising Environmental Whole Life Costs and the Eco-Footprint
- Addressing Climate Change, Insecurity of Fuel Supply and Fuel Poverty
- Solar Gain
- Community Light
- Extreme Water Scenarios
- Air Quality, Carbon Grounding, and Trees
- Future Proofing the Past
- Future Proofing the Future: Life Long Building
- Supporting Understanding and Application of Sustainable Development

Main Changes

6. The main changes to the earlier draft report are as follows:

- A chairs forward which also provides a summary of main findings and recommendations has been provided at the front to of the report.
- Summary outlines explicitly providing a brief over-view of the rationale for the recommendations.
- All the recommendations have been subject to further detailed consultation with officers in City Strategy (Planning, Sustainability, Arboricultural, Conservation Architects) to ensure;
  a. Phrasing did not conflict with the ongoing consultation process for the LDF.

b. Responsibility for the development of strategies and plans was within the most appropriate officer portfolios.

Consultation

7. During the detailed work undertaken by the former Planning and Transport Scrutiny Sub-Committee / Guidance for Sustainable Development Scrutiny Sub Committee full consultation has been carried out and recognition of those consulted has been included and at the end of the report. As indicated above, further officer consultation has been undertaken on the report and recommendations since the last meeting and comments have been addressed as part of the revisions made to the report.

Options

8. During the course of review the Sub Committee have taken views on information provided as best practice and much of this is evidenced through the Annexes to the report. The recommendations reflect those considerations and alternative options are not therefore presented.

Analysis

9. All analysis is presented in the body of the report.

Corporate Priorities

10. The wider topic of sustainability has been a Council Corporate Aim for many years. The recently approved Corporate Priorities now incorporates stronger priorities in respect of sustainability. A detailed breakdown of how recommendations fit with achieving corporate priorities is given below and within the report.

IMPROVING QUALITY AND SUSTAINABILITY
Decrease the tonnage of biodegradable waste and recyclable products going to landfill;

- Recommendation 1: In implying greater consideration for the re-use of materials and the use of materials with longevity exceeding the whole-life, including environmental, costs of sourcing.
- Recommendation 16: In ensuring developers build in appropriate storage facilitating waste separation and recycling

Increase the use of public and other environmentally friendly modes of transport;

Recommendation 17: in ensuring planning proposals consider the local services, especially health, available to people within walking or easy public transportation distance.

Improve the actual and perceived condition and appearance of city's streets, housing estates and publicly accessible spaces;
Recommendations 8,9,10 11 and 15: In promoting greener spaces large and small and the inclusion of trees and other natural softening features throughout the built environment.

OPPORTUNITIES FOR EDUCATION, SKILLS AND LEARNING
Increase people's skills and knowledge to improve future employment prospects;
Recommendations 18,19,20,21 and 22: In supporting people to understand and access the skills, education, techniques and expertise required to conduct effective business in an economic environment increasingly driven by sustainability as a material consideration.

STRENGTHENING AND DIVERSIFYING YORK'S ECONOMY
Improve contribution that Science City York makes economic prosperity
See above

IMPROVING HEALTH AND WELL-BEING
Improve the health and lifestyles of the people who live in York, in particular among groups whose levels of health are the poorest
Recommendations 8,9,10 11 and 15: In promoting greener spaces large and small and the inclusion of trees and other natural softening features throughout the built environment. This will improve air quality for all and encourage greater use of open amenity space and walking

Improve the quality and availability of decent affordable homes in the city
Recommendations 1, 2, 3, 6, 7 and 16: in supporting the development of homes which cost lest in terms of energy and water consumption throughout their life and which are readily adaptable to peoples changing life circumstances.

ORGANISATIONAL EFFECTIVENESS
Improve our focus on the needs of customers and residents in designing and providing services.
All recommendations in supporting the authority its partners and citizens to adapt to and mitigate against climate change.

Improve leadership at all levels to provide clear, consistent direction to the organisation
Recommendations 18,19,20,21 and 22: In supporting people to understand and access the skills, education, techniques and expertise required to conduct effective business in an economic environment increasingly driven by sustainability as a material consideration. Recommendations 23,24 and 25 supporting the authority to act as an exemplar of best practice both internally and in its relationship with partners both locally, nationally and region wide.

Improve the way the Council and its partners work together to deliver better services for the people who live in York

Recommendations 1, 18,19,20,21, 22, 23, 24 and 25: In supporting achievement through partnership to address climate change

Improve efficiency and reduce waste to free-up more resources
Recommendation 24: In mitigating against rising costs from unsustainable practice.

Implications

11. The implications arising from each of the recommendations have been addressed as part of the further officer consultation previously referred to and every effort has been made to take account of those comments in the revised recommendations and report. Detailed comments from the Head of Financial Services are, additionally, included in the summary of implications grid included in the final report.

Risk Management

12. The report highlights the issues and implications for York of a number of national and regional guidance. The risks to the Council are that its responsibilities to promote an understanding of Climate change, energy efficiency, good water management and better holistic sustainable practice in planning and building might not be strategically and uniformly addressed.

Recommendations

13. The Scrutiny Management Committee are asked to :

- Note the changes to the report.
- endorse the recommendations and final draft report of the Scrutiny Sub-Committee;
- Agree for the report to be considered by the Executive as soon as possible.

Contact Details

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Author's name R. Sherratt
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Chief Officer's name S. Hemingway
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Report Approved ✓ **Date** 16.10.06

Chief Officer's name
Title

Report Approved ✓ **Date** 16.10.06

Specialist Implications Officer(s)
Tom Wilkinson, Financial Services

Wards Affected: List wards or tick box to indicate all **All** √

For further information please contact the author of the report

Background Papers: See Annex A

Annexes

Annex A: Final Report Guidance on Sustainable Development
Sub-Annexes
Aa. Scrutiny Topic Registration Form

Ab. Sustainable Developer Guidance Energy Chapter Draft
Ac. Sustainable Developer Guidance Water Chapter Draft
Ad. Sustainable Developer Guidance Buildings Chapter Draft
Ae. Sustainable Developer Guidance Renewable Energy Chapter Draft
Af. Sustainable Developer Guidance Land Use Chapter Draft
Ag. Sustainable Developer Guidance Waste Chapter Draft
Ah. Promotion of Sustainable Construction Methods and the Implications for Building Control Staffing levels.

CITY OF YORK COUNCIL

ANNEX A

Sustainable Development Scrutiny Sub-Committee

Guidance for Sustainable Development.

Work on York's Eco-depot October 2006 © Christian Vassie

Sustainable Development Scrutiny Sub-Committee October 2006

Scrutiny Management Committee 26th October 2006

Executive Reading Date XXXXX

Chair's Foreword

This scrutiny report represents some two years' work by the Planning & Transport Scrutiny Committee.

It has served a variety of functions:

- providing an opportunity for members to learn about the issues;
- informing the structure of the sustainability section GP4a and the renewable energy section of the draft Local Plan [4th set of changes], approved in 2005
- informing the draft Special Planning Guidance report produced in Autumn 2005
- providing an opportunity for dialogue between the local and national heritage groups and the council on the subject of environmental sustainability
- providing an opportunity for dialogue with architects and developers , particularly those involved in the restoration of old buildings.
- providing an opportunity to see how the city's Building Control team might be involved in encouraging more environmentally sustainable construction.

The wide array of recommendations reflects the length of time the scrutiny board has worked on this subject and the breadth of its overview.

It is clearly critical that progress on environmental sustainability requires a pro-active and rigorous set of planning documents. Through the on-going debate about the challenges posed to us all by Climate Change it is evident that the energy consumption of buildings, both domestic and commercial, makes a very significant contribution to CO2 emissions.

This scrutiny report tackles this from two ends: firstly, proposing tough requirements for all new buildings, and, secondly, proposing that historic buildings are also required to improve their energy efficiency.

The recommendations propose that the city's emerging planning documents, including the LDF, no longer simply encourage action but require action on energy efficiency, water efficiency, and use of renewable energy. In doing this City of York Council will not be out on a limb but simply adopting best practice from around the country. The Scrutiny Board believes this is vital if we are to make real progress on tackling CO2 emissions and combating our contribution to Climate Change. We also believe that this would have the very real benefit of encouraging the development of renewable energy companies in the region. We do not believe that there is any evidence that developers would decide that York was no longer an attractive place to develop.

These recommendations include historic buildings, requiring applicants to demonstrate why they shouldn't incorporate energy and water efficiency measures into projects. Our discussions with architects, heritage groups, and developers showed a welcome degree of pragmatism and an acknowledgement that, with energy bills rising rapidly, there will come a point where old or historic buildings will become increasingly difficult to sell or rent if their energy bills are significantly higher than bills for other properties. For example, refusing even bespoke double glazing on

historic buildings makes little sense when bespoke double glazing is successfully employed on historic buildings across Europe.

It was clear talking with heritage groups that the incorporation of environmentally sustainable measures wasn't a prime concern, the prime concern was to see high quality work.

Sustainability does not only impact on buildings, of course. The report also refers to the natural environment and the preservation and creation of open spaces across the city. With so many large sites now available to development (Hungate, York Central, the British Sugar site, a part of the Nestlé site, etc). York should be seeking ways to ensure that provision is made for high quality open space. It could be argued, for example, that the Hungate site would be more attractive to visitors and residents if it had, instead of roads, a network of canals and cycle paths, like Amsterdam.

The report includes recommendations on access to health facilities. Current planning documents require a green travel plan, but this is solely for employees. It surely makes sense that public transport access to doctors surgeries, for example, be included into planning officers' and planning committees' considerations.

Building Control have indicated a willingness to act as a portal for best practice, to ensure that all building developments across the city have access to the best information on environmentally sustainable solutions. The board welcomes this proposal.

Examples of best practice should be available on the internet via a dedicated website. Information on the site should include the data on the performance of renewable energy installations at schools and public buildings across the city. This database will enable the public, architects and developers across York to see that renewable energy, water efficiency and energy efficiency measures do what they say they do. This will encourage the adoption of best practice.

Lastly, this report should be seen in the context of the various other scrutiny reports dealing with the subject of sustainability that have been produced over the past two years.

This subject is complex because it is so broad, as is reflected in the number of recommendations. That breadth allows for the creation of huge swathes of vagueness, seas of loop holes that effectively preclude real progress taking place. It is therefore vital that, wherever possible, the city's planning guidance move as far as it can in 'requiring' progress in its planning documents rather than simply 'encouraging' it.

Cllr Christian Vassie,

Chair of Planning & Transport/Sustainable Development Scrutiny Sub-Committee
City of York Council 8th October 2006

Contents

SUMMARY OF RECOMMENDATIONS

Executive support is sought in particular for Recommendations 1, 2, 3(i), 4, ,5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16 and 17, to ensure that these recommendations can be taken forward as a significant part of the Local Development Framework.

1. That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction, which provides the minimum expected standards (including BREEAM 'Very Good' Future statements from developers) must clearly address the SPG and sustainability policies Local Development Framework documents that will replace it. For example, by:

- **i. Showing that 'whole life' costs of buildings, including sourcing of materials, building materials type and thermal efficiency (BREEAM), have been properly evaluated and accounted for in terms of best practice;**
- **ii. Limiting the footprint of buildings and embracing the 'life-long building principles, by ensuring the capacity to extend into roof space through consideration of appropriate roof angles and building methods to allow for appropriate insulates and / or basements rather than gardens and open spaces.**

2. That the Draft SPG for Sustainable Design and Construction and the Local Development Framework (LDF) documents that will replace it require developers to evidence measures supporting the achievement of the national and regional renewable energy targets.
These targets require major proposals for employment, retailing and residential development to incorporate appropriate renewable energy heating or power systems.
The expectation is that at least 10% of the predicted annual energy requirements of a particular development will be met by means of independent renewable energy generation up until the end of 2010. This will increase to15% from the end of 2010 until the end of 2015 and increase again to 20% from the end of 2015 until the end of 2020".
Developments which do not achieve this target will be required to pay into a penalty fund ring fenced by the authority and used to grant aid projects with higher than minimum required standards of sustainable building and micro-renewable generation across the city.

3. That, in view of part of the development at Fieldside place having been overshadowed by flats built on an adjoining site, greater emphasis needs to be placed in respect of maximising solar gain through all new developments. To this end:

- **i. The Draft SPG for Sustainable Design and Construction and the LDF documents that will replace it should require developers to evidence assessment of the impact of development proposals on solar gain in neighbouring developments, whether they be existing**

structures or proposed structures in receipt of prior planning permission.

ii. All planning proposals should be assessed in the future to ensure that proposed new developments or major refurbishments do not impact upon measures for active (i.e. micro-generation through solar thermal or solar PV technology) and passive (i.e. glazed elements maximizing heating and lighting through day-lighting) solar gain in existing developments surrounding them. The Local Plan, and the LDF documents that will replace it, should ensure that sustainability forms a coherent thread, removing contradictions or conflict between sections on, say, housing and transport and the historic environment.

4. That the Draft SPG for Sustainable Design and Construction and the LDF documents that will replace it include a provision to ensure that all new or significantly refurbished developments should give consideration to incorporating sustainable – renewably powered - street lighting [as defined in this council's Street Lighting Strategy if approved by the Executive]. Officers to research and investigate the inclusion of a more detailed policy to address this issue as part of the development of the LDF

5. That the Draft SPG for Sustainable Design and Construction and the LDF documents that will replace it include a provision for all new developments requiring developers to replace proposals for impermeable hard standing areas with plans incorporating standing (or forms of pavier) which proves higher levels of soak away such as permeable grass through growth paviers.

6. That the Draft SPG for Sustainable Design and Construction and the LDF documents that will replace it include a provision for all new developments requiring developers to provide water butts to ensure rainwater harvest and recycling from roof run-off at properties and minimize reliance on potable water supply and the energy used to treat it.

7. That the Draft SPG for Sustainable Design and Construction and the LDF documents that will replace it include a provision for all new developments requiring developers to show full consideration and incorporation of features for grey water recycling.

8. That, in recognition of the important role broadleaved deciduous trees play in carbon grounding, mitigating the impacts of Climate Change and improving air quality, the City of York Council's Arboricultural Officer lead work to create an Authority wide Tree Policy and Strategy ensuring:

i. Succession planting and the consistent management and protection for all public trees across all directorates. Schools, Parks, Highways, Housing, Children's and Adult's Services, Car Parks and Property.

ii. **The replacement of all trees removed for unavoidable reasons, be these planning, end of life or disease with between 2-5 broadleaved deciduous native species, preferably within close proximity to the area where the original specimen was removed, depending on site conditions.**

iii. **All street and highways development proposals and schemes prior to approval being given for work to be carried out should be verified by the Arboricultural Officer to evidence proposals for:**

a. **Considering and protecting established trees.**

b. **Incorporating new planting of species to compliment highways schemes selected as appropriate to the environmental setting by the Arboricultural Officer**

The resulting Policy and Strategy should be drafted with the objective aim of significantly increasing the number of viable trees within the authority boundary annually. To achieve a minimum target of 7% cover (the national average) within the next 10 years in line with the National Forestry Strategy as York now has the fourth lowest densities of all Regional Local Authorities with only 3.7%. Outcomes and obstacles to achieving this aim will be reported to the Executive annually by the Council's Arboricultural Officer. The Officer's Annual Tree Policy and Strategy report will be recognised as part of the Air quality Strategy and Action Plan and at a time appropriate as part of the proposed Climate Change Strategy.

The resulting Policy and Strategy will be sent to meetings of the Executive Members for City Strategy and Neighbourhood Services, Adult and Housing Services and Children's Services, to ensure its immediate incorporation into other local authority strategic and policy documents. The resulting Strategy will be equally applicable to the Authority's own operations and developers.

9. **That the Draft SPG for Sustainable Design and Construction, and the LDF Core strategy include a provision for all new developments encouraging developers to plant a fruit tree for each new property or, if a fruit tree is not suitable, root stock for location of another other small native species, such as rowan or crab apple, to encourage local produce production and /or provide food for wildlife.**

10. **That the Draft SPG for Sustainable Design and Construction, and LDF Core strategy include a provision for all new developments requiring developers to show planting plans for verges and front gardens. Such plans to include a reasonable proportion of medium to large scale native deciduous tree species to improve air quality and provide shading and, in instances where this will not be proven to obstruct measures for winter 'solar gain' in surrounding buildings, to include native evergreen species such as Holly, Yew and Scots Pine, to support bio-diversity.**

11. That the Draft SPG for Sustainable Design and Construction, and LDF Core strategy include a provision for all new developments where boundaries between adjacent properties need to be identified, requiring developers not to use fencing or walls, and to submit and implement, in place of these, plans for the incorporation of native species hedging at the next nearest suitable planting season, ie. beech, hawthorn, lime, field maple in Autumn and Holly and / or Yew in early spring.

12. That references to the Historic Environment in the Local Development Framework make reference to environmental sustainability as protecting the historic environment, and not exclude environmentally sustainable development and design, as environmental sustainability has a contribution to make towards the protection of historic buildings; in line with Planning Policy Statement 22.

13. That references to the Historic Environment in the LDF make reference to improving the use of good quality, historic buildings, including space above shops, by encouraging the incorporation of high quality insulation and double glazing, where it is possible to do this without compromising the appearance of the building.

14. That the LDF Core Strategy prohibit overdevelopment, particularly in terms of excessively high buildings. Development should enhance the historic environment and, where possible, incorporate buildings and sensitive traffic-free public green space with the mutual aims of;

- **a. Providing good views of architecturally significant build whether this is historic or modern**
- **b. Improving biodiversity and green corridors**
- **c. Improving air quality and rain water soak away**
- **d. Creating a greater percentage of open public space across the city encouraging low cost 24 hour a day leisure activity.**

15. That the LDF Core Strategy show measures for the active preservation of green spaces and gardens, particularly in the city centre, and the inclusion of new green space and/or sustainably designed (i.e. reliant on recyled rainwater and/or powered where relevant by solar means) water features in major new developments, such as Hungate, York Central etc.

16. That the LDF documents must ensure the creation of 'life-long' buildings, i.e. structures that can be adapted to people's changing living and working requirements over time. Plans for new buildings or major refurbishments should embrace 'life-long' homes principals by evidencing;

- **Sufficient amenity space**
- **Capacity for economically reasonable adaptation for mobility aids**
- **Parking provision within the buildings footprint including communal blocks, or flats i.e. within basements etc.**

- **Storage space within the buildings footprint for the separation of recyclates, including communal blocks or flats (i.e. within basements etc.)**
- **Roof angles and cavity on all new build allowing for extension to the liveable space into attics/lofts.**
- **The provision of space, especially in respect of communal blocks, or flats, – be it communal or private – external and/or internal (i.e. communal drying rooms) to hang out washing to defray from the use of dryers.**

17. That the Draft SPG for Sustainable Design and Construction, and LDF Core strategy include a requirement that access to public transport services be of material consideration when evaluating planning proposals for health service provision, such as dentists' and doctors' surgeries, and that this be reflected in the LDF.

18. That work involving engagement with local architects to assess interest, familiarity with and use of sustainable buildings methods be conducted by officers in Buildings Control.

19. That Buildings Control investigate the sourcing and availability of materials for sustainable development in York and make that information readily available to the public.

20. That the City of York Council produce its own Sustainable Developers Guide, using the amalgamated chapters as a starting point

21. That a feasibility study be carried out to explore the viability of Building Control acting as the Council's promoter of sustainable construction, as set out in the 'Promotion of Sustainable Construction Methods and the Implications for Building Control staffing levels' report found as Annex H to this scrutiny report.

22. That a single unified web portal be created with a direct link from the City of York Council's Home page and a title along the lines of 'Climate Change and Sustainable Planning in York', which provides centrally linked information regarding;

i. Supporting information about the (Draft) Supplementary Planning Guidance (SPG) for Sustainable Design and Construction, and the primacy of sustainability within the LDF.
ii. The Air Quality Strategy.
iii. Tree Policy and Strategy.
iv. Bio-Diversity Strategy.
v. Climate Change Policy and Strategy.
vi. All other local authority strategic documents and reports including HECA with a bearing on climate change mitigation.
vii. The energy and water management performance data collected in public buildings, including schools - via the 'Display' mechanism –

with year on year improvements and a description of actions to demonstrate best practice across the city

viii. **Links to External Sites providing best practice guidance on Sustainable Construction.**

ix. **Links to education establishments within the region offering training courses in sustainable construction, environmental management, qualifications in SAP and BREEAM assessment etc. Including 'Science City' where relevant.**

x. **Details of 'Exemplar' projects within the city and the region; i.e. Fieldside place and the Eco-Depot.**

xi. **Links to information regarding grants schemes promoting sustainability i.e. low carbon buildings programme.**

23. **That the City of York Council, in consultation with the Local Strategic Partnership and steering group of LA21, adopt and monitor the following Local Quality of Life Indicators, with a particular bearing on energy and environmental impact:**

24 - Levels of key air pollutants;
25 - Carbon dioxide emissions by sector and per capita emissions;
26 - Average annual domestic consumption of gas and electricity (kwh)

24. **That the improving reputation of the authority related to the standards of sustainable construction applied to the Eco-Depot be maintained through the adoption of a policy requiring equal or higher standards of sustainable construction for all future commissioned properties, or the refurbishment of properties within the authority's portfolio. That this policy be applied whether the property is public amenity, business or domestic - i.e., equally to schools, leisure facilities and office environments.**

25. **That the Executive write to the Yorkshire and Humber Assembly, requesting the development of recognised voluntary standards above the minimum or those readily achievable in buildings envelope promoting lower energy usage and emissions, and thereafter establish a framework for the adoption of Part Y, as outlined in the Energy chapter annexed to this report, an annual awards framework for Developments and a web portal advertising this. Including the consideration of:**

- **Automatic registration and certification based on spec.**
- **Published Information about awards for annual round based on evaluation against spec of final build, details of judging criteria, candidate development and build profiles + Hyper Links**
- **Publication of Outcomes & Event for Regional Award Winners + Hyper Links**
- **Indication of winners as high achieving Exemplar Projects from sum total of data base**

Summary of Implications of Recommendations for City of York Council

Implications Recommendation 1.	
Finance	The main financial implications are based around the additional constraints on the planning process. The impact of these are very hard to quantify without a thorough review and property services implications **must** be sought prior to decisions being made. Any constraint that significantly increases costs for developers will have an impact in terms of the amount of development that will take place in the city, which in turn will have a knock on effect on the level of capital receipts that the Council can realise from the sale of its own land and buildings and therefore reinvest in the capital programme. A reduction in the level of development will result in the Council not meeting other targets such as the number of affordable homes that are built (already set at 50% of any new development). There is the potential that the planning process will stifle new major developments in the city. Whilst the aims of the report are commendable a look at the complete planning package is required to encourage rather than stifle more sustainable developments. It may be sensible to relax elements of the planning process where sustainable development takes place ie in a housing scheme reduce the affordable housing element. Any decision to introduce additional constraints into the planning process is likely to increase developer's costs this could result a reduction in both the desirability of building within York and in the value of relevant development land. The latter of these could result in the council receiving reduced receipts for its disposals which would have a direct impact on the overall capital programme for York.
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 2.	

Finance	As Per Recommendation 1
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 3.	
Finance	As Per Recommendation 1
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 4.	
Finance	As Per Recommendation 1
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 5.	
Finance	As Per Recommendation 1

Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 6.	
Finance	As Per Recommendation 1
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 7.	
Finance	As Per Recommendation 1
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 8.	
Finance	As Per Recommendation 1 The funding for the objective of increasing tree cover in the city boundary from 3.7% to 7% within 10 years, will have to be identified

	either from within existing revenue or capital resources, and form part of future budget processes. (Especially as the proposed increase would cover the equivalent area of around 1,200 football pitches)
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 9.	
Finance	As Per Recommendation 1
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 10.	
Finance	As Per Recommendation 1 Not an expert on this, but I thought that tree planting along streets is now restricted because of interference with utilities. There could be future revenue / capital consequences due to any impact on buildings and boundaries due to the need for future maintenance work caused by the tree planting.
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	

Property	
Other	
Implications Recommendation 11.	
Finance	As Per Recommendation 1
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 12.	
Finance	Don't understand the recommendation so can not comment
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 13.	
Finance	None
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	

Other	
Implications Recommendation 14.	
Finance	None
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 15.	
Finance	As Per Recommendation 1
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 16.	
Finance	As Per Recommendation 1
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	

Implications Recommendation 17.	
Finance	None
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 18.	
Finance	The report does not provide sufficient detail to enable the impact of this to be accurately assessed. However, if these regulations require significant additional work then this will result in pressures on affected areas which will have to be met by reductions in the provision of alternate services or additional resources being deployed. Any decision to deploy additional resources must be considered as part of the Council's budget process alongside the wide range of funding pressures.
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 19.	
Finance	The report does not provide sufficient detail to enable the impact of this to be assessed. However, there are likely costs in terms of Building Control Officer workload. This may result in a need for additional building control inspectors which would have to be identified either from existing resources or form part of a future budget process.
Human Resources	
Equalities	
Legal	

Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 20.	
Finance	The report does not provide sufficient detail to enable the financial impact of this recommendation to be assessed. However, it is likely to result in one off expenditure in terms of developing and producing the guide which would have to be identified either from existing resources or form part of a future budget process.
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 21.	
Finance	The report does not provide sufficient detail to enable the financial impact of this recommendation to be assessed. However, it is likely to result in one off expenditure in terms of feasibility costs which would have to be identified either from existing resources or form part of a future budget process.
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	

Implications Recommendation 22.	
Finance	One off development costs and officer management. The resourcing of this would have to be identified either from existing resources or form part of a future budget process.
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 23.	
Finance	The additional measurement of PI's may result in additional resources that would have to be identified either from existing resources or form part of a future budget process.
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 24.	
Finance	Any decision to introduce additional constraints into the planning process is likely to increase developer's costs this could result a reduction in both the desirability of building within York and in the value of relevant development land. The latter of these could result in the council receiving reduced receipts for its disposals which would have a direct impact on the overall capital programme for York. The additional costs incurred on the Eco Depot were funded from both prudential borrowing and government grant. The on going revenue savings from more sustainable construction do not yet fund the additional costs incurred in construction. If this trend continues either the functional elements of any new Council funded build will be

	compromised, or additional funding will need to be diverted from existi8ng budgets or form part of a future budget process. Such a priority is unlikely to be achievable without a major investment of additional funds from sources external to the Council.
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	
Implications Recommendation 25.	
Finance	None.
Human Resources	
Equalities	
Legal	
Crime and Disorder	
Information Technology	
Property	
Other	

Final Report: Guidance for Sustainable Development.

Summary

1. Members of the Executive are presented with the final report of the Sustainable Development Scrutiny Sub-Committee (formerly Environment & Sustainability Planning and Transport Scrutiny Board) delivering their research and findings regarding the approach our Local Authority might take to delivering more sustainable planning and development.

Background

2. Between 2005 and 2006 Scrutiny at the City of York Council promoted robust strategic approaches to carbon reduction and more sustainable energy sourcing across the authorities own activities[1]. These approaches covered all sectors of authority operations except transportation fuel.

3. Commercial Services Scrutiny Board completed work regarding improved approaches to the recycling and reuse of domestic goods and landfill minimisation.

4. Whilst sustainable energy use and landfill minimisation are key considerations within this report, the work of the former Planning and Transport Scrutiny Board[2] has a broader scope.

5. The report where ever possible highlights the complex inter-relationships between causes and effects implied by the now commonly used yet rarely explained term 'Climate Change'. In doing so it introduces a broad spectrum of interconnected sustainability issues as they relate to planning and recommends approaches the authority must take if it is to meet its targets in respect of planning and the climate change agenda.

Climate Change

6. The world is warming and, for the most part, the international scientific and political community agree this is the result of human activities. These activities have altered the chemical composition of the atmosphere, creating a build up of greenhouse gases[3]; including carbon dioxide (CO_2). The gases act like a thickening blanket, trapping the sun's heat and causing the planet to warm up; this is described as 'global warming'. During the last century, temperatures rose by 0.7C and 2005 was the second warmest year ever

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[1] Through the delivery of reports regarding;
   a. CO_2 reduction from domestic property: public and private
   b. Sustainable Street Lighting
   c. Reducing managing and monitoring energy consumption in council property
   d. Ensuring increasingly sustainable supply and embedded micro-generation in council property

[2] See Annex A for the topic registration form

[3] See Glossary for a definition of Green House Gasses

recorded. Present evidence suggests a further increase of between 1.5C and 5.9C in global mean temperatures over the next decade.

7. As the temperatures have risen, global weather patterns have been affected. Even in Yorkshire we are increasingly enduring extreme weather events such as tornados, flooding and droughts.

8. Internationally, droughts are causing tropical forests to die back and each year more are susceptible to raging summer fires. Record temperatures and drought conditions in July 2006 stopped many Horse Chestnut trees in the UK's producing Conkers'[4]. Our trees are dying, without them less atmospheric CO_2 will be locked up adding to a cycle of destruction unprecedented in the history of the planet.

9. Global droughts are seeing natural food sources and farmed crops fail leading to increased human migration and increasing death rates for both human beings and many wildlife species through famine. All recent endeavours to achieve global economic stability are threatened by climate change.

10. International Glaciers and Polar ice caps are melting, the worlds seas are rising and decreasingly saline, some marine life will die, coastal erosion will increase and so will the risks of flooding.

11. 'Climate Change' is the term which encapsulates all the causes and effects of global warming upon our planet. The international 'Climate Change Agenda' (as set out in the Kyoto Protocol) devolves Nationally in the recently revised UK Climate Change Programme 2006 and Climate Change and Sustainable Energy Act 2006. The Government is committed to support the process of adapting to the changes in climate that will occur over coming decades and has outlined its expectations of local authorities and their public and private partners in respect of this.

12. In addressing climate change local authorities need to understand the issues and imperatives for action, and how to ensure their operations, their partners operations and individual citizens are ready to adapt to the changes and mitigate against the effects locally[5].

13. Members of the former Planning and Transport Scrutiny Board endorse the Housing Scrutiny Boards recommendation for the City of York Council to prepare a Climate Change Strategy and Action Plan.

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[4] See Guardian Article 'Where have all the Conkers gone' **Wednesday October 4, 2006**

[5] Some specific details of the anticipated effects for our region can be sourced via the UK Climate Impacts Programme, (UKCIP) provides scenarios that show how our climate might change and co-ordinates research on dealing with our future climate.

Climate Change and Sustainable Planning and Development

14. National Planning Policy legislation and associated guidance - 2004 to date - has begun to mainstream sustainability in response to climate change. Prior to this time, the environmental dimension of many planning proposals was only partially addressed. Local planning authorities' powers were mainly focused on the spatial[6] and visual impact of a development rather than its long-term impact on natural resources, health, climate etc.

15. The new legislation is forcing change. It is moving forward with the national code for sustainable building, tighter building regulations on thermal efficiency and EU Energy Performance Directives on energy and landfill which, when taken across the piece prioritise sustainability and planning for a future that it is as far a possible environmentally cost neutral.

Recognising Environmental Whole Life Costs and the Eco-Footprint

16. Decisions regarding planning and design and the use of building materials have wide reaching environmental consequences, energy used in the manufacture, delivery, and incorporation of materials and appliances into buildings accounts for over 10% of total energy consumption in the UK alone; described as embodied energy. Choices architects and developers make in sourcing materials impact upon globally finite resources such as minerals, and fossil fuels.

17. Approximately 50% of total ozone damaging Chlorofluorocarbons (CFC's) produced were through uses such as air conditioning, refrigeration, fire extinguishers and insulation in buildings (Blowers, 1993). Poorly evaluated industrial practices, building techniques, waste disposal, and transportation have led to ground, air and water pollution so hazardous to life that we are now having to invest millions in time and costs to reclaim a fit environment for ourselves and future generations. We are realising that our approaches to building must change.

18. Requiring developers to whole life cost, which may be characterised as a systematic approach of balancing capital costs with revenue costs evidencing optimum financial solutions over a building's lifespan, is not a new concept. The building industry embraced this change, by acknowledging that whole life costing was effective at demonstrating the cost effectiveness of applied techniques in the market place.

19. Planning and developers are increasingly required to extend the principals introduced by whole life costing to evidencing the lifespan environmental impacts of their proposals and the materials used for the build.

20. The ecological footprint (or eco-footprint for short) is a tool measuring our ecological performance parallel with that of whole life costing. It tracks how much individuals, organisations, cities, regions and nations, consume and

[6] Spatial: the way things are laid out, in proximity to one another and other natural features

compares this amount to the resources nature can provide, for example land, water energy and other resources.

21. The application of whole life costings principals incorporating environmental or eco-footprinting is not a new concept, for over a decade, the Buildings Research Establishment's (BRE) Environmental Assessment Method (BREEAM) has been used to assess the environmental performance of both new and existing buildings. BREEAM[7] is recognised by the UK's construction and property sectors as a measure of best practice in environmental design and management and has been used as the basis of the Sustainable Buildings Code.

Executive support is sought in particular for Recommendations 1, 2, 3(i), 4, ,5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16 and 17 below, to ensure that these recommendations can be taken forward as a significant part of the Local Development Framework.

RECOMMENDATION 1

That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction, which, provides the minimum expected standards including BREEAM 'Very Good'. Future statements from developers must clearly address the SPG and sustainability policies Local Development Framework documents that will replace it. For example;

i. **By showing 'whole life' costs of buildings, including sourcing of materials, building materials type and thermal efficiency (BREEAM) have been properly evaluated and accounted for in terms of best practice.**
ii. **Limiting the footprint of buildings and embracing the 'life-long building principles, by ensuring the capacity to extend into roof space through consideration of appropriate roof angles and building methods to allow for appropriate insulates and or basements rather than gardens and open spaces.**

[7] BREEAM assesses the performance of buildings in the following areas:
• management: overall management policy, commissioning site management and procedural issues
• energy use: operational energy and carbon dioxide (CO2) issues
• health and well-being: indoor and external issues affecting health and well-being
• pollution: air and water pollution issues
• transport: transport-related CO2 and location-related factors
• land use: greenfield and brownfield sites
• ecology: ecological value conservation and enhancement of the site
• materials: environmental implication of building materials, including life-cycle impacts
• water: consumption and water efficiency

The Integration of Sustainability into Planning Policy Frameworks

22. The National planning policy framework requires Regional Assemblies and Local Planning Authorities to conduct a sustainability appraisal of the development framework documents and adopt sustainable practice in planning. In brief national governments planning policy statements:

Endorse;

a) The use of brown-field site and the refurbishment of existing buildings envelope as a priority.
b) Redevelopment of areas of deprivation to encourage regeneration in line with Local Area Agreements.
c) Redevelopment of town and city centres to ensure mixed usage throughout the 24 hour period.
d) Increased emphasis on mixed development incorporating domiciliary, business shopping and leisure facilities, minimising reliance on transportation.
e) The integration of a greater proportion of green space within all built areas for the combined purposes of leisure and nature habitat. Greater protection for existing green corridors and natural features.
f) The integration of renewable energy, community energy netting and Combined Heat and Power (CHP).
g) Better management of Water to prohibit summer droughts and seasonal flooding through integrated soak-away, grey water recycling and the proper assessment of developmental impact on flood plain or natural run off areas.
h) Greater awareness of transport networking which prioritises pedestrian and cyclist access then access through well devised public transport nets.

Prohibit;

a) The development of out of town shopping complexes etc.
b) Development increasing reliance on private car ownership and transportation.
c) Negative statements and approaches to renewable energy production.

Addressing Climate Change, Insecurity of Fuel Supply and Fuel Poverty.

23. The National Planning Policy framework and buildings regulations require Regional Spatial Strategies (RSS) and Local Development frameworks to incorporate 'Planning Policy Statement 22: Renewable Energy' (PPS22) emphasising the development of positively expressed policy on integrated renewables.

24. National Government requires[8] planning authorities to create policies on a par with Merton, Croydon and Calderdale. National clarification of PPS22 stated that "It is now essential that all planning authorities follow this example".

[8] The Minister for Housing and Planning (Yvette Cooper) Written Ministerial Statements *Thursday 8 June 2006* Communities And Local Government PPS22. See Also requirements in the Climate Change and Sustainable Energy Act 2006

25. Calderdale Council's policy requires at least 10% of the energy to be used in sizable new development to come from on site RE sources up to 2010 with a 'rising' target' established after 2010. The Planning Inspectorate's ruling on the Calderdale's 'step up' microgeneration policy in their Replacement Unitary Development Plan established the opportunity to raise the percentage threshold over time and establish policy which reflects targets within the Kyoto protocol.

26. This will become even more important if energy efficiency standards in building regulations rise reducing the impact of a 10% only target. The Calderdale policy '12.66a' follows;

27. *"To help meet the national and regional renewable energy targets, major proposals for employment, retailing and residential development will be required to incorporate appropriate renewable energy heating or power systems. The expectation will be that at least 10% of the predicted annual energy requirements of a particular development should be met by means of independent renewable energy generation up until the end of 2010. This will increase to15% from the end of 2010 until the end of 2015 and increase again to 20% from the end of 2015 until the end of2020".*

28. In Norwich targets have been further stepped up within the period to a 30% microgeneration target and Chichester has a target that rises to 50%, whilst Milton Keynes requires all new developments have net zero carbon emissions. Nationally where such policies have already been adopted, they run hand in hand with policies ensuring that developers, not achieving targets, pay into a fund to promote higher standards.

RECOMMENDATION 2

That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction and the Local Development Framework documents that will replace it require developers to evidence measures supporting the achievement of the national and regional renewable energy targets.
Whereby, major proposals for employment, retailing and residential development are required to incorporate appropriate renewable energy heating or power systems.
The expectation being that at least 10% of the predicted annual energy requirements of a particular development will be met by means of independent renewable energy generation up until the end of 2010. This will increase to15% from the end of 2010 until the end of 2015 and increase again to 20% from the end of 2015 until the end of 2020".
Developments, which do not achieve this target, will be required to pay into a penalty fund ring fenced by the authority and used to grant aid projects with higher than minimum required standards of sustainable building and micro-renewable generation across the city.

Solar Gain

29. Future building must aim to minimise the energy consumption of business and domestic property whilst maximising the efficiency of energy usage. The relationship between buildings and the local microclimate can reduce the amount of energy required for heating. In addition buildings must be designed to incorporate maximum sourcing of their energy requirements through natural – zero-carbon - not just sustainable means.

30. In order to achieve these objectives architects, designers, planners and builders must demonstrate an understanding of micro-climate, relational positioning, spatial thermal dynamics, and solar gain (unmediated light and heat entering the building from the sun).

31. During the course of their investigations Board Members visited St Nicholas Field's Environmental Community Centre, Kirklees Council regarding the Sun cities and Zen solar programmes and the Housing Association responsible for Fieldside Place. In respect of the latter project they expressed concern regarding the impact of later development through high build shading upon the solar gains designed into Field side place. In response to which they noted the need for a better understanding of such impacts to be evidenced and removed at an early point in development proposals.

RECOMMENDATION 3

That in view of part of the development at Fieldside place having been overshadowed by flats built on an adjoining site greater emphasis needs to be placed in respect of maximising solar gain through all new developments.

i. That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction and the Local Development Framework documents that will replace it require developers to evidence assessment of the impact of development proposals on solar gain in neighbouring developments, whether they be existing structures or proposed structures in receipt of prior planning permission.

ii. That all planning proposals be assessed in the future to ensure that proposed new developments or major refurbishments do not impact upon measures for active (i.e. micro-generation through solar thermal or solar PV technology) and passive solar (i.e. glazed elements maximizing heating and lighting through day-lighting) gain in existing developments surrounding them. The Local Plan, and the Local Development Framework documents that will replace it, should ensure that sustainability forms a coherent thread, removing contradictions or conflict between sections on, say, housing and transport and, the historic environment.

Community Light

32. Sources of energy and how they are used, controlled and maintained, not only impact upon the internal and external layout of a building or buildings but also upon the wider environs and need to be key design considerations at an early point in a projects development.

33. The approach taken to single developments or modernisations may differ from larger sites which should maximise opportunities to create and connect to 'Community Heating and/or Power Networks' in accordance with EU Directives now enshrined in UK legislation.

34. Developers of larger sites should automatically show consideration proposals to develop or expand Community Heating Networks providing a highly efficient and renewable source of energy. The site layout may affect the feasibility of connecting to existing and/or proposed Community Heating Networks. Considerations should include the length of any connecting infrastructure and any potential physical barriers.

35. Considerations ought to extend to lighting schemes. Developers working medium to large scale sites and smaller sites where practical should work in partnership to maximise the use of renewably grid netted and/or solar street lighting and solar lighting for bus shelters or other similar community facilities.

36. Well designed schemes for lighting benefit community safety whilst enhancing architectural and landscape features after dark and add to the marketability of developments. Schemes must not contribute to light pollution and its negative impact on amenity, clarity of the night skies or wildlife, whilst the energy required for the lighting itself should be from renewable sources. To minimise environmental impacts of external lighting schemes developers should ensure:-

- Lighting levels are the minimum necessary to achieve safety and enhancement objectives.
- Energy is photovoltaic or renewably sourced.
- Energy efficient lamps are used.
- Uncontrolled floodlighting should be avoided and all light fittings. should be shielded to minimise any light pollution.
- Particular care is taken to apply the above guidance with floodlighting schemes for sports pitches or late night shopping or leisure amenities complexes as these have historically been high light polluters and high energy consumers.

RECOMMENDATION 4

That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction and the Local Development Framework documents that will replace it include a provision to ensure that all new or significantly refurbished developments should give consideration to incorporating sustainable – renewably powered - street lighting [as defined in this council's Street Lighting Strategy if approved by the Executive]. Officers to research and investigate the inclusion of a more detailed policy to address this issue as part of the development of the Local Development Framework (LDF).

Extreme Water Scenarios

37. Demand for water nationally has more than doubled since 1970, leading to stresses on water supply, treatment and disposal. Rising consumption levels are placing increasing pressure on river, groundwater, flood meadow and other wetland ecosystems.

38. All 'potable' water, that is water treated to make the quality drinkable, requires energy. It is imperative that all new developments are designed to work in harmony with and minimise their impact upon the water environment and reduce demands upon potable water usage.

39. Changed climatic conditions are not only bringing hotter drier summers to the UK but rising sea levels and autumn through spring storms which are exacerbating flood risk in already flood prone areas. Design features which detract from the natural absorption of rainfall into the ground and speed up run-off need to be avoided to mitigate against flood and improve balanced year round ground water levels. This is of particular importance to flood prone cities such as York.

RECOMMENDATION 5

That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction and the Local Development Framework documents that will replace it include a provision for all new developments requiring developers to replace proposals for impermeable hard standing areas with plans incorporating standing (or forms of pavier) which proves higher levels of soak away such as permeable grass through growth paviers.

RECOMMENDATION 6

That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction and the Local Development Framework documents that will replace it include a provision for all new developments requiring developers to provide water butts to ensure rainwater harvest and recycling from roof run-off at properties and minimize reliance on potable water supply and the energy used to treat it.

RECOMMENDATION 7

That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction and the Local Development Framework documents that will replace it include a provision for all new developments requiring developers to show full consideration and incorporation of features for grey water recycling.

Air Quality, Carbon Grounding, and Trees

40. The National Planning Policy framework forces a greater degree of respect for all our natural environment which has been threatened by encroaching development in the past. It also recognises the value of this environment and extending the reach of this environment into our cities to air quality, social inclusion, leisure and amenity.

41. Until carbon grounding technologies become practical the greatest resource we have for removing atmospheric CO_2 are trees, five broadleaved trees at peak health being capable of removing or grounding a ton of carbon annually.

42. Climate change has placed our trees and the other wildlife they support under threat. During the course of the Scrutiny it emerged that in York, the absence of balanced approaches to planning and trees have left us falling far short of National tree density requirements both within our rural and urban landscape. We are the joint fourth poorest local authority for trees regionally.

43. Whilst other local authorities have recognised the importance of trees to air quality by ensuring that their Air Quality Strategy's and Action Plan's work

with well defined Tree Policy's and Action Plan's, York has yet to adopt any corporate and city wide strategic approach to the latter at all.

RECOMMENDATION 8

That, in recognition of the important role broadleaved deciduous trees play in carbon grounding mitigating the impacts of Climate Change and improving air quality, the City of York Council's Arboricultural Officer lead work to create an Authority wide Tree Policy and Strategy ensuring;

i. Succession planting and the consistent management and protection for all public trees across all directorates. Schools, Parks, Highways, Housing, Children's and Adult's Services, Car Parks and Property.

ii. The replacement of all trees removed for unavoidable reasons, be these planning, end of life or disease with between 2-5 broadleaved deciduous native species, preferably within close proximity to the area where the original specimen was removed, depending on site conditions.

iii. All street and highways development proposals and schemes prior to approval being given for work to be carried out should verified by the Arboricultural Officer to evidence proposals for;

a. Considering and protecting established trees.

b. Incorporating new planting of species to compliment highways schemes selected as appropriate to the environmental setting by the Arboricultural Officer

The resulting Policy and Strategy should be drafted with the objective aim of significantly increasing the number of viable trees within the authority boundary annually. To achieve a minimum target of 7% cover (the national average) within the next 10 years in line with the National Forestry Strategy as York now has the fourth lowest densities of all Regional Local Authorities with only 3.7%. Outcomes and obstacles to achieving this aim will be reported to the Executive by the Authority's Arboricultural Officer annually. The Officer's Annual Tree Policy and Strategy report will be recognised as part of the Air quality Strategy and Action Plan and at a time appropriate as part of the proposed Climate Change Strategy.

The resulting Policy and Strategy will be sent to meetings of the Executive Members for City Strategy and Neighbourhood Services, Adult and Housing Services and Children's Services to ensure its immediate incorporation into other local authority strategic and policy documents.

The resulting Strategy will be equally applicable to the Authority's own operations and developers.

RECOMMENDATION 9

That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction, and LDF Core strategy to include a provision for all new developments encouraging developers to plant a fruit tree for each new property or, if a fruit tree is not suitable root stock for location another other small native species such as rowan or crab apple. To encourage local produce production and /or provide food for wildlife.

RECOMMENDATION 10

That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction, and LDF Core strategy to include a provision for all new developments requiring developers to show planting plans for verges and front gardens. Such plans to include a reasonable proportion of medium to large scale native deciduous tree species to improve air quality and provide shading and, in instances where this will not be proven to obstruct measures for winter 'solar gain' in surrounding buildings, to include native evergreen species such as Holly, Yew and Scots pine to support bio-diversity.

RECOMMENDATION 11

That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction, and LDF Core strategy to include a provision for all new developments where boundaries between adjacent properties need to be identified, requiring developers not to use fencing or walls and to submit and implement, in place of these, plans for the incorporation of native species hedging at the next nearest suitable planting season, ie. beech, hawthorn, lime, field maple in Autumn and Holly and or Yew in early spring.

Future Proofing the Past

44. A significant proportion of York's economy is based upon its rich historic built environment which not only makes the city attractive to tourists but also to businesses wishing to locate here. Development must preserve this heritage whilst creating an equally significant and dynamic inheritance for generations in the buildings constructed today.

45. The re-use of existing buildings that do, or could, positively contribute towards the local environment is of primary importance. The majority of buildings can, with investment, be adapted to meet present and future needs. Where buildings are structurally sound and do not present another environmental

hazard demolition should not be considered. The re-use and adaptation of existing buildings represents high sustainable advantages by;

- Reducing the demand for and associated environmental impacts of developing new Greenfield site.
- Reducing the demand for and associated environmental impacts of new building materials.
- Reducing the environmental impacts of the construction process.
- Promoting a sense of place and historic and cultural continuity.
- Providing the opportunity to upgrade insulation, heating, lighting and ventilation efficiency standards.
- Providing the opportunity to adapt previously unusable space – i.e. basements and lofts – to habitable standards.
- Providing the opportunity to modify access – particularly of internal spaces – to disability access standards.

46. Working sustainably within a historic environment was initially considered to be one of the biggest obstacles to achieving higher environmental standards by the Board. Consultation with interested bodies such as English Heritage and Energie Cites however proved that improving air quality, mitigating against flooding and extending a buildings useful life are material to the preservation of our historic environment.

47. Improvements in technologies such as solar PV, which can now be bought in a form that mimics slate, stone or clay roof tiling or, double glazing techniques which allow the embedding of old glazed features such as stained glass between panels are allowing historic buildings to an increasingly full part in the sustainability of city environments.

RECOMMENDATION 12

That references to the Historic Environment in the Local Development Framework, make reference to environmental sustainability, as protecting the historic environment, and not exclude environmentally sustainable development and design, as environmental sustainability has a contribution to make towards the protection of historic buildings; in line with Planning Policy Statement 22.

RECOMMENDATION 13

That references to the Historic Environment in the Local Development Framework, make reference to improving the use of good quality, historic buildings, including space above shops, by encouraging the incorporation of high quality insulation and double glazing where it is possible to do this without compromising the appearance of the building.

RECOMMENDATION 14

That the LDF Core Strategy prohibits overdevelopment, particularly in terms of excessively high buildings, development should enhance the historic environment and where possible incorporate buildings sensitive traffic free public green space with the mutual aims of;

e. Providing good views of architecturally significant build whether this is historic or modern
f. Improving biodiversity and green corridors
g. Improving air quality and rain water soak away
h. Creating a greater percentage of open public space across the city encouraging low cost 24 hour a day leisure activity.

RECOMMENDATION 15

That the LDF Core Strategy shows measures for the active preservation of green spaces and gardens, particularly in the city centre and the inclusion of new green space and/or sustainably designed (i.e. reliant on recyled rainwater and/or powered where relevant by solar means) water features in major new developments, such as Hungate, York central etc.

Future Proofing the Future: Life Long Building.

48. To secure sustainability, development must build in adaptability, durability and flexibility to both its existing and new buildings. Buildings are more likely to be occupied and re-used if they can be easily adapted to meet the changing needs of our population. Flexible builds:

- Attract a greater range of potential purchasers or tenants, ensuring the best sale, or rental values and minimise vacancy time and under-occupation.;
- Increase the sell-on or re-let value of a building.

49. Whilst the approaches to life long building alter subtly at the detailed level to the refurbishment or redevelopment of existing build and new build, certain key principals can be applied to both. First steps are about maximising flexibility across a spectrum of changing needs.

50. Contractors and developers should be able to evidence flexible approaches to building and renovation at point of application, these should;

- incorporate possible mixed uses within a building, or complex of buildings such as living accommodation above shops particularly larger development areas.
- allow for adaptation of the individual space to accommodate for the growing home working market. Particularly domestic property, but also a useful

indicator of the need to be able to adapt industrial and office space to domestic or multi-purpose use later.

- incorporate readily adaptive space layouts;
  - including expansion space such as basements or lofts made thermally efficient and damp proof at point of build, refurbishment or renovation for ease future use.
  - built forms that incorporate easily accessible and changeable utilities installations.
  - flexible spaces for changing spatial requirements of building occupiers, including consideration of the merits of non-structural or frame internal walls.

- Improve or maximise the buildings internal and external accessibility without resorting to mechanical aids such as lifts wherever possible. This will mean best use of: gradients, accessible routes, entrance position, level changes, ramps, and the planning of internal disability access features etc.

RECOMMENDATION 16

That the Local Development Framework documents must ensure the creation of 'life-long' buildings, i.e. structures that can be adapted to peoples changing living and working requirements over time. Plans for new buildings or major refurbishments should embrace 'life-long' homes principals by evidencing;

- **Sufficient amenity space**
- **Capacity for economically reasonable adaptation for mobility aids**
- **Parking provision within the buildings footprint including communal blocks, or flats i.e. within basements etc.**
- **Storage space within the buildings footprint for the separation of recyclates including communal blocks, or flats i.e. within basements etc.**
- **Roof angles and cavity on all new build allowing for extension to the liveable space into attics/lofts.**
- **The provision of space, especially in respect of communal blocks, or flats, – be it communal or private – external and/or internal (i.e. communal drying rooms) to hang out washing to defray from the use of dryers.**

RECOMMENDATION 17

That the Draft Supplementary Planning Guidance (SPG) for Sustainable Design and Construction, and LDF Core strategy to include a requirement that access to public transport services be of material consideration when evaluating planning proposals for health service provision, such as dentists and doctors' surgeries, and that this be reflected in the LDF.

Supporting Understanding and Application of Sustainable Development

51. During the course of the scrutiny, Board Members were aware of the increasing pressure to adopt sustainable practice – discussed in more detail under corporate objectives and other significant drivers below - across all sectors of public and private life. They also considered mechanisms used at other local authorities to encourage greater sustainability.

52. At an authority level these included the production of 'online' and hard copy 'Sustainable Developer Guides' covering best practice and information about local exemplar projects, architects and suppliers promoting high sustainable design and build. Amalgamated chapters of such guidance were created as discussion papers to inform the Board's work and these are attached at Annexes B-G.

53. The Head of Building Control attended the Board's meeting in September 2005 to feed back on discussions with the Joseph Rowntree Trust (JRT), who are keen to work with the Council on sustainable development. The Trust, who are looking for projects coming up in the future where sustainable materials could be used, further highlighted the issue of organisations being able to access information regarding sustainable practice materials and advisors at a local level.

54. The Head of Building Control also advised that discussions had been held with the Federation of Master Builders to gain a better understanding of where clients wanting to commission sustainably designed and constructed property could go to get necessary support and expertise.

55. Members believe that it would be useful to create a unified resource to ensure individuals and organisations such as JRF are pointed to grants funding – such as the sustainable buildings code – trade suppliers, architects and others who could ensure the sustainability of their project was achieved.

56. Members felt that the role of buildings control in enforcing agreed planning consents and assessing builds best fitted them to devising broader community, trade and buildings support and the initial design stages required to create a data resource encouraging the sourcing, use and application of sustainable materials and methods.

RECOMMENDATION 18

That work involving engagement with local architects to assess interest, familiarity with and use of sustainable buildings methods be conducted by officers in Buildings Control.

RECOMMENDATION 19

That buildings control investigate the sourcing and availability of

materials for sustainable development in York and make that information readily available to the public

RECOMMENDATION 20

That the City of York Council produce its own sustainable developers guide using the amalgamated chapters as a starting point

RECOMMENDATION 21

That a feasibility study be carried out to explore the viability of Building Control acting as the Council's promoter of sustainable construction, as set out in the 'Promotion of Sustainable Construction Methods and the Implications for Building Control staffing levels' report found as Annex H to this scrutiny report.

RECOMMENDATION 22

That a single unified web portal be created with a direct link from the City of York Council's Home page and a tile along the lines of 'Climate Change and Sustainable Planning in York' which provides centrally linked information regarding;

- **iv. Supporting information about the (Draft) Supplementary Planning Guidance (SPG) for Sustainable Design and Construction, and the primacy of sustainability within the LDF.**
- **v. The Air Quality Strategy.**
- **vi. Tree Policy and Strategy.**
- **vii. Bio-Diversity Strategy.**
- **viii. Climate Change Policy and Strategy.**
- **ix. All other local authority strategic documents and reports including HECA with a bearing on climate change mitigation.**
- **x. The energy and water management performance data collected in public buildings, including schools, - via the 'Display' mechanism – with year on year improvements and a description of actions to demonstrate best practice across the city**
- **xi. Links to External Sites providing best practice guidance on Sustainable Construction.**
- **xii. Links to education establishments within the region offering training courses in sustainable construction, environmental management, qualifications in SAP and BREEAM assessment etc. Including 'Science City' where relevant.**
- **xiii. Details of 'Exemplar' projects within the city and the region; i.e. Fieldside place and the Eco-Depot.**
- **xiv. Links to information regarding grants schemes promoting sustainability i.e. Low carbon buildings programme.**

Corporate Objectives and other Significant Drivers

57. In considering sustainability in its most meaningful sense it is not surprising that the recommendations made within this report support virtually all of the authorities 'Corporate Objectives' or priorities. A summary of how recommendations support the Authority to demonstrably meet the objectives is given below;

Outward facing objectives

Decrease the tonnage of biodegradable waste and recyclable products going to landfill;

- Recommendation 1: In implying greater consideration for the re-use of materials and the use of materials with longevity exceeding the whole-life, including environmental, costs of sourcing.
- Recommendation 16: In ensuring developers build in appropriate storage facilitating waste separation and recycling

Increase the use of public and other environmentally friendly modes of transport;
Recommendation 17: in ensuring planning proposals consider the local services, especially health, available to people within walking or easy public transportation distance.

Improve the actual and perceived condition and appearance of city's streets, housing estates and publicly accessible spaces;
Recommendations 8,9,10 11 and 15: In promoting greener spaces large and small and the inclusion of trees and other natural softening features throughout the built environment.

Increase people's skills and knowledge to improve future employment prospects;
Recommendations 18,19,20,21 and 22: In supporting people to understand and access the skills, education, techniques and expertise required to conduct effective business in an economic environment increasingly driven by sustainability as a material consideration.

Improve contribution that Science City York makes economic prosperity
See above

Improve the health and lifestyles of the people who live in York, in particular among groups whose levels of health are the poorest
Recommendations 8,9,10 11 and 15: In promoting greener spaces large and small and the inclusion of trees and other natural softening features throughout the built environment. This will improve air quality for all and encourage greater use of open amenity space and walking

Improve the quality and availability of decent affordable homes in the city
Recommendations 1, 2, 3, 6, 7 and 16: in supporting the development of homes which cost lest in terms of energy and water consumption throughout their life and which are readily adaptable to peoples changing life circumstances.

Improving our organisational effectiveness

Improve our focus on the needs of customers and residents in designing and providing services.
All recommendations in supporting the authority its partners and citizens to adapt to and mitigate against climate change.

Improve leadership at all levels to provide clear, consistent direction to the organisation
Recommendations 18,19,20,21 and 22: In supporting people to understand and access the skills, education, techniques and expertise required to conduct effective business in an economic environment increasingly driven by sustainability as a material consideration. Recommendations 23,24 and 25 supporting the authority to act as an exemplar of best practice both internally and in its relationship with partners both locally, nationally and region wide.

Improve the way the Council and its partners work together to deliver better services for the people who live in York
Recommendations 1, 18,19,20,21, 22, 23, 24 and 25: In supporting achievement through partnership to address climate change

Improve efficiency and reduce waste to free-up more resources
Recommendation 24: In mitigating against rising costs from unsustainable practice.

58. In addition to supporting the authority in partnership with individuals, public and private sector organisations to achieve the above Corporate Objectives the recommendations made by the Board ensure that;

i. Our Local Development Framework incorporates minimum enforceable levels of sustainability already tested at other Local Authorities.
ii. Our special planning guidance encourages reflects the ethos of striving for sustainable excellence.
iii. Recent changes to the National Planning Policy framework promoting greater sustainability are embedded within the Local Development Framework from the outset.
iv. Our authority meets the Audit Commission's aims for increased sustainable assessment in the Comprehensive Performance Assessment (CPA); for more information regarding Comprehensive Performance Assessment see glossary.
v. Our citizens are given greater access to and understanding of the imperatives for sustainable building and how to achieve this. Through the authority's acknowledgement of its role as an exemplar and

disseminator of guidance in line with the National Governments Sustainable Development Strategy 'Securing the Future'.

vi. The authority complies with its legislative obligations as defined by the Climate Change and Sustainable Energy Act 2006.

59. At their meeting February 2006 the former Planning and Transport Scrutiny Board were briefed regarding the March 2005 publication of the UK Government Sustainable Development Strategy 'Securing the Future'. The associated guidance for monitoring, entitled 'Local Quality of Life Indicators – Supporting Local Communities to Become Sustainable', includes complementary indicators for Local Authorities and Local Strategic Partnerships[9]. The guidance recommends Local Authorities and Local Strategic Partnerships adopt nine local quality of life indicators, three of which had a particular bearing on sustainable energy and environmental impact:

- 24 – Levels of key air pollutants;
- 25 – Carbon dioxide emissions by sector and per capita emissions;
- 26 – Average annual domestic consumption of gas and electricity (kwh).

60. Whilst the Board was advised that the indicators are presently voluntary (i.e. non-statutory), they were drafted to flesh out statutory indicators and help monitor the effectiveness of Sustainable Community Strategies. The Board decided to approve the following recommendation in their final report.

RECOMMENDATION 23

That the City of York Council in consultation with the Local Strategic Partnership and steering group of LA21 adopt and monitor the following Local Quality of Life Indicators, with a particular bearing on energy and environmental impact:

24 - Levels of key air pollutants;
25 - Carbon dioxide emissions by sector and per capita emissions;
26 - Average annual domestic consumption of gas and electricity (kwh)

61. Whilst the Board recognised the significant step forward the Eco-Depot development represents in the authority's own approach to sustainability within the property portfolio, they were anxious that this should not be an isolated exemplar project. The authority should maintain and promote better environmental building standards in all its future property acquisitions in line with its commitments to Climate Change and its role as champion of best practice.

[9] published August 2005

RECOMMENDATION 24

That the improving reputation of the authority related to the standards of sustainable construction applied to the Eco-Depot be maintained through the adoption of a policy requiring equal or higher standards of sustainable construction for all future commissioned properties or the refurbishment of properties within the authorities portfolio. That this policy be applied whether the property is public amenity, business or domestic, i.e. equally to schools, leisure facilities and office environments.

62. In order to encourage the adoption of higher than minimum standards of sustainability the Board consulted the Yorkshire and Humber Assembly regarding the creation of an awards framework to recognise and reward regional excellence.

RECOMMENDATION 25

That the Executive write to the Yorkshire and Humber Assembly, requesting the development of recognised voluntary standards above the minimum of those readily achievable in buildings envelope promoting lower energy usage and emissions, and thereafter establish a framework for adoption of Part Y as outlined in the Energy chapter annexed in this report, an annual awards framework for Developments and a web portal advertising this, including the consideration of;

- **Automatic registration and certification based on spec.**
- **Published Information about awards for annual round based on evaluation against spec of final build, details of judging criteria, candidate development and build profiles + Hyper Links**
- **Publication of Outcomes & Event for Regional Award Winners + Hyper Links**
- **Indication of winners as high achieving Exemplar Projects from sum total of data base**

Consultation and Research

63. During the course of their investigation and review, Members of the former Planning and Transport Scrutiny Board conducted the following research;

i. Examination of planning guidance for sustainable development used elsewhere in the UK.
ii. Further information from the Local Government Association (LGA) and the Local Government Information Unit (LGIU) where relevant.

iii. Liaison with the City Development Team to ensure sustainability is incorporated into the fourth set of changes to the Local Plan.

iv. Keeping abreast of legislative changes taking place affecting regional planning guidance, including targets for waste disposal and renewable energy, and how statutory requirements and could be incorporated and their implications assessed.

v. Consultation with English Heritage, consultation with and visits to Housing Association responsible for Fieldside Place, St Nicholas Field's Environmental Community Centre, Kirklees Council regarding the Sun cities solar programme and Zen.

64. During the course of the Scrutiny Members considered the enforceable and voluntary mechanisms this and other Local Authorities had available to them to influence sustainability in development including

a) Special Planning Guidance.
b) The Council's current planning policy framework.
c) The developing Regional Spatial Strategy (RSS)
d) The developing Local Development Framework (LDF)
e) The Council's incorporation of sustainable approaches into the design and construction work of its property portfolio.
f) Ways of improving Council advice on sustainable design and construction.
g) Ways of raising awareness of the range of options available for sustainable design and construction
h) The communication of best practice from other local authorities and Europe
i) Provision of affordable housing and housing for an ageing population and their relationship with sustainable design and construction
j) Mechanisms for regular revisions to Supplementary Planning Guidance and related frameworks enforcing sustainability.

The Planning and Transport Scrutiny Board/Guidance for Sustainable Development Sub-Committee would like to particularly acknowledge the invaluable assistance of a number of people for their technical support and advice to the Board throughout various points of the Scrutiny. The Board extends its thanks to each of those listed below.

Kristina Peat	Sustainability Officer CYC
Kate Parsons	Renewable Energy Officer KMC
Martin Grainger	Planning Officer CYC
Gail Goodall	Assistant Planning Officer CYC
John Fowler	Building Control CYC
Harvey Lowson	Arboricultural Officer CYC
Janine Riley	Conservation Architects CYC
Julian Horsler	Equalities Officer CYC

English Heritage
St.Nicholas Fields Environmental Community Centre
The Housing Association Field Side Place

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Background Papers and Further Reading

Title and Author(s)	**Publisher and Date**
	ODPM - Crown Copyright
Planning for Town Centres PPS 6	ODPM – Crown Copyright
Sustainable Development in Rural Areas PPS 7	ODPM - Crown Copyright
Biodiversity and Geological Conservation PPS 9	
Waste PPS 10	ODPM - Crown Copyright
Regional Spatial Strategies PPS11	ODPM - Crown Copyright
Local Development Frameworks PPS 12	ODPM - Crown Copyright
Planning Policy Statement 22: Renewable Energy	ODPM - Crown Copyright
Planning for Renewable Energy A Companion Guide to PPS22	ODPM - Crown Copyright
Planning and Pollution PPS23	ODPM - Crown Copyright
Planning Policy Guidance 25: Development and flood risk	ODPM - Crown Copyright
Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents	ODPM - Crown Copyright
Yorkshire and Humber Energy Policy Statement – Draft 2	Yorkshire and Humber Assembly
Securing The Future – The UK Government Sustainable Development Strategy	Crown Copyright 2005
The Sustainable Buildings Task Group report & The Sustainable Buildings Task Group report: one year on May 2004-May 2005	Department of Trade and Industry June 2004 & 2005
The Energy White Paper Volume 2 Renewable Energy Planning	TSO 2003 AEAT Report to the Government Office for Yorks and the Humber

`The Sustainable and Secure Buildings Act

Draft Yorkshire and Humber Plan

Climate Change and Sustainable Energy Act 2006

` HMSO Crown Copyright 2004

Regional Assembly for Yorkshire and the Humber
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Annex A

Scrutiny Topic Registration

Name of person proposing topic:	**Date:**
Cllr Christian Vassie	25.04.2004
Contact: 01904 449 206	
Suggested title of topic: Planning Guidance For Sustainable Development	

What is the issue that scrutiny needs to address?

Sustainable development is an important aim for City of York Council and this topic would provide the opportunity to feed into the development of supplementary planning guidance so that achieving sustainable development is embedded as a key principle.

By identifying the current nature of planning guidance in relation to sustainable development, its strengths and weaknesses and examples of good practice from elsewhere, the board would be well placed to inform appropriate developments to supplementary planning guidance.

What do you feel could be achieved by a scrutiny review?

The topic would involve looking at what policies the council has in its existing framework in relation to sustainable buildings. The board would also look at how the planning process works and how this relates to achieving sustainable development, the aim would be to take a broad overview of current procedures rather than placing too much emphasis on specific planning applications. This would help the Council work towards a robust LDF and response to Climate Change.

When a thorough understanding of existing procedures is in place the board could look at examples from other local authorities to identify how sustainable development ties in to their planning guidance. They could also work with other groups with special knowledge in the field, such as developers, to identify best practice and innovative ways to develop planning guidance accordingly.

Urgency

Is the topic urgent?	Y

If so, please consider which of the following might apply:

Is there a strict time constraint?	Y
Is there currently high media coverage?	Y
Is there high public pressure to respond?	Y
Does it involve a high risk to the council?	Y

Issues
Please consider whether the following might apply:

Is the topic important to the people of York?	Y
Does the topic involve a poorly performing service or high public dissatisfaction with a service?	N
Is it related to the City of York Council's corporate objectives?	Y
Has there been media interest in the topic?	Y
Can scrutiny help in the development of council policy?	Y

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Energy

Energy (for (add date) *or* in (Local Authority name))

Subsection of Energy Chapter. Introduction to the context national, regional and local, generally including paragraphs containing the following information;

Show present data; i.e. the % of the authority area's greenhouse gas emissions and the energy requirements of the local buildings that contribute towards this. Energy use in buildings accounts for nearly half of the UK's delivered energy consumption and over half of the UK's carbon dioxide emissions. Government Energy policy now recognises the role that energy saving and renewable energy technologies will need to play in reducing emissions of greenhouse gases and the UK's dependence upon fossil fuels.
Explaining sources of data etc

Introduce **Key objectives** i.e;

i. Strategy (climate change where applicable) /Vision/Local planning framework ensures;
   - All new developments are built to the highest standards of energy efficiency
   - Pre-existing developments are modernised and improved to achieve the new standards and targets for energy efficiency

ii. All new and an increasing number of pre-existing buildings obtain their requirements from localised renewables and efficient sources. *(insert set minimum targets with dates – may include ref to regional and national targets framework)* Target date for achieving city wide Carbon Neutrality (*where applicable see Newcastle)*

Highlight positive relationship between **prudent energy management and planning and the developer's and business communities** perspective i.e:

Reducing energy consumption and other resources during construction can result in lower direct costs for the developer, thus helping profitability. Low energy buildings not only reduce energy costs, but also improve building performance reducing damp and/or condensation; which may be expensive to remedy retrospectively and causes significant expenditure for Social Landlords. Damp has historically been a principal factor in properties remaining empty.
Lower energy buildings increase the sellability of a development, as low energy consuming homes and business incorporating renewables technologies have a marketable advantage on competitors when buildings are sold or let i.e;

- Domestic perspective: - costs of mortgage in an inflated market can be balanced against lower monthly outgoings in other areas such as utility costs. Research surveys carried out by CABE, the WWF and the Halifax (July 2004) found that 84% of people would be willing to pay an average of 2% extra on the purchase price their home if they are environmentally sound and 87% of buyers want to know if their homes are environmentally friendly (see cabe.org.uk).
- Lower running costs in business premises reduce overheads, thus supporting maintenance or improvement of net profitability.
- Landlords as potential purchasers of new developments or improvers of existing stock will be increasingly competing with the market advantage in letting low energy buildings. Already the case in the student rented sector nationally.

Highlight importance of adapting to meeting and competing in a **rapidly changing and increasingly regulated market:**

- The once small or specialist 'green' consumer market, has rapidly mainstreamed due to popularisation of the issue – programmes such as BBC2 'No Waste Like Home', newspaper and journal articles on climate change etc. This sector of the market will soon predominate and is prepared to pay a premium for buildings that have been designed to 'green' specifications and leave anything less empty.

- As the domestic market has changed businesses are developing a parallel awareness of the marketing advantages of their own business premises, practices and products having a transparent and measurable 'green image'.

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Introduce importance re **Public Sector Buildings**: Increasingly Local Authorities are aware of the consequences of high energy, the legislative framework requires much more from them to reduce energy consumption and CO_2 emissions. The public sector is inevitably choosing buildings designed to the lowest achievable energy specifications. Developers are wise to plan ahead of the legislation ensuring when legal requirements come into force they can be achieved with minimal confusion and cost.

Introduce importance re **EU Directive on Energy Performance of Buildings:** Directive 2002/91/EC of the European Parliament and Council, on the energy performance of buildings, must be adopted into UK legislation by January 2006. It will greatly affect awareness of energy use in buildings. The legislation will affect all buildings, both domestic and non-domestic.

In brief, the directive aims to improve the energy performance of buildings by requiring:

- Methodology to calculate integrated energy performance of buildings.
- The Energy certification of buildings
- Energy minimising requirements must be met in new buildings. Those buildings with a useful floor area over 1000 m2 must formally consider to the following alternative systems for heating:
  - CHP
  - District or block heating or cooling
  - Heat Pumps
  - Local energy supply based upon renewable energy
- Existing Buildings; large existing buildings being renovated must reduced energy requirements, buildings with a total useful floor area of over 1000 m^2 undergoing renovation must upgrade energy performance.
- Boilers and of air conditioning systems must be regularly inspected.
- Energy Performance Certificates: whenever a building is constructed, sold or rented out, a certificate detailing its energy performance must be made available to the prospective buyer or tenant.

Energy, the Local Economy and Community Well Being

Subsection of Energy Chapter introducing subject relations containing the following information;

Fuel Poverty: Give estimated Statistics for the (Authority/ Region) suggest (number) deaths each year related to fuel poverty. Homes built by previous decades of developers who didn't need to consider the effect of poor thermal efficiency or increasing running costs on the home occupier, or whether or not a household can afford to keep warm and cook, are a significant factor in increased likelihood of illness in their occupants.

Security of Supply: National self-sufficiency in gas is due to end in 15 years and international oil reserves are precarious, - with predictions by oil industry insiders that Oil and Gas reserves may well be reaching or have reached their peak - there are predicted rises in fuel costs across the fossil fuel spectrum . Many dwellings constructed to current Building Regulation standards will not assure the provision of affordable energy for future occupants. (*see also where applicable the Local Authority Fuel poverty Strategy & Action Plan; Hyperlink to web versions)*

Dwellings constructed to the highest standards will ensure current developers are viewed positively as rising fuel costs expose other property developers to accusations of ignoring scarce fuel supply.

Local Economy

Lowering the running costs of our local housing will lead to a net increase in local disposable income of householders, a large percentage of which will be spent in the local economy.

Reducing the running costs of our business premises, will increase profitability and the money available for expansion and job creation. Increasingly new businesses will want to locate to areas guaranteeing the best energy minimisation, local development must ensure a high competitive edge if we are to improve inward investment.

The newly mainstreamed domestic 'green' consumer is being drenched in awareness of the benefits of eco-design not only in terms of lower impact on the environment but financial benefits and quality of life. Their expectations are now beginning to exceed minimum future standards set and our local economy must rapidly adapt to meet these demands.

Being able to record that goods have been produced using sustainable energy will soon be as important a sales or marketing feature as the now common place 're-cycled', 'fair-trade' 'organic' or 'without cruelty to animals' logos. Being able to market homes as low utility users integrating renewable energy sources will be parallel to the marketing benefits of electrical goods rated high efficiency.

Forward thinking developments will raise the profile of the *(local authority area)* increasing its attractiveness to investors and new residents alike.

Low Energy Building

Subsection of Energy Chapter introducing design and build considerations incorporating the following guidance;

Minimising demand and maximising efficiency.

Future building must aim to minimise the energy consumption of business and domestic property whilst maximising the efficiency of energy usage. The relationship between buildings and the local microclimate can reduce the amount of energy required for heating. In addition buildings must be designed to incorporate maximum sourcing of their energy requirements sustainably.

In order to achieve these objectives architects, designers, planners and builders must demonstrate an understanding of micro-climate, relational positioning, spatial thermal dynamics, solar gain and renewable energy sourcing and installation.

Site Layout:

Working with Prevailing Wind Conditions and Shelter: Shelter from the wind reduces wind chill experienced around buildings, the amount of heat required to bring the internal temperature of buildings to thermal comfort and heat loss from air leakage.

To build in wind considerations and shelter principals, buildings should be;

- Orientated with the narrow end of the building to the prevailing wind (include *usual compass bearing direction based on local climatic data*) to reduce exposure.
- Spaced in open or garden settings in groups of buildings around 6 times their height apart to maximise the sheltering effect (although this must be balanced with the thermal massing benefits of higher density developments)
- Planned to incorporate the planting of shelterbelts of trees with growth attainment to the height of the building and at a distance from the building of between 1 and 3 times the height (consideration must be given to avoiding the overshadowing of passive solar elements)

- Designed to reduce the surface area exposed to cold winds; i.e. by having a low roof on the north-east side or by sheltering the exposed side by building up or partially burying with earth-banking.
- Might incorporate courtyard layouts, glazed communal courtyards and walled gardens to create interior to exterior bridge spaces and enhance external spaces.
- Influence the microclimate by using climbing plants to cover unearthed walls extending the boundary layer of warmer, less turbulent air around the building and reducing heat loss.
- Considered in respect of the installation of small to medium scale wind turbines for individual or community electrical generation.

Maximising Solar gains: Sunlight is a free, constantly renewed source of light and heat, so its benefits should be built in. Design incorporating elements to maximise passive solar gain significantly reduce the amount of heating required to achieve and maintain thermal comfort. Converting available sunlight into heat and power reduces the reliance on fossil fuel sources and increases the long-term economic viability of the building.

To build in solar gains, buildings should be;

- Orientated with the main elevation or face of the building to within 30 degrees of due South
- Spaced to ensure buildings structures, shelter break planting and high walls don't overshadow. Note, however, that the planting of native deciduous trees to reduce overheating in summer whilst minimising shadowing in winter should be considered.
- Incorporating a greater proportion of glazed areas on the southern elevations to increase passive solar gain and natural day lighting.
- Using roof lights and atriums to bring light and solar heat into the centre of buildings.
- Incorporating photovoltaic panels, cladding or roof tiles into the buildings design. For maximum efficiency, solar panels should be mounted on a south facing roof at a 30° angle with the horizontal and away from any shadows from trees, surrounding buildings or chimneys.
- Incorporating solar water heating collectors.
- Incorporating Ground Source Heat pumps; as ground source heat pumps extract sunlight energy absorbed into the earth for space heating, the energy source, strictly speaking, is solar.
- Aiming for Zero CO_2 Standard; the point at which you can obtain all your heating from passive solar gains and internal gains from the occupants.

Structure: Energy-efficient buildings minimise heat losses through the building envelope, i.e. the roof, walls, floors and windows, minimise heat losses through air leakage, whilst maximising heat and light gains from the sun.

To build energy efficient structures, buildings should be;

- Incorporating substantial roof insulation, preferably that goes beyond the building regulation minimum requirements eg. 400mm should be used in roof spaces.
- Built using dense construction materials which encourage the storage of heat and slow release over a period of time reducing the heat required to maintain thermal comfort.
- Incorporating bulk massing to high densities into the buildings fabric and through wall, floor and roof insulation using materials from sustainable sources such as wool and loose cellulose fibre from recycled newspapers, cork, and wood fibreboard.
- Using advanced solar and double glazing systems for windows and doors; preferably framed with sustainably sourced wood.
- Avoiding and eliminating the creation of thermal bridges (ie non or poorly insulated parts of the construction including areas where high conductor materials span the interior to exterior) at design. This can significantly affect the overall performance of the building.
- Minimising automatic air leakage and ensuring ventilation is controlled (condensation can be prevented in buildings with low uncontrolled air leakage by providing adequate heating and controlled ventilation).
- Designed to reduce the number of exposed external surfaces or by being compact – usually cubiform structures.

- Including deep roof overhangs to help reduce heat loss and shelter the walls from rain.
- Avoiding the need for mechanical ventilation through the use of passive stack ventilation systems, or in cases where this is not possible mechanical systems establishing 70-90% heat recovery.

Consider Including a Local Case Study Hyper Link or Exemplar Project reference:

Interior Building Layout and details: The layout of a building can significantly impact on the energy required to heat the space to thermal comfort or optimise light.

Energy efficient layouts and interior details;

- Have the lowest ratio of exposed external surfaces to internal space i.e. compact – usually cubiform structures.
- Use dense construction materials within the building and on the internal side of door, wall and roof insulation; such materials store heat and release it over time reducing the overall heat required for constant thermal comfort.
- Situate high occupancy or daytime living rooms towards the naturally lighter and warmer southern elevation of the building.
- Situate Kitchen space towards the Northerly side to reduce overheating from appliances and reliance on energy using air conditioning in summer.
- Create intermediate zone 'air lock' spaces such well sealed porches or lobbies, between the warm inside of a building and the cold outside.
- Include sunspaces such as conservatories and or glazed verandas to improve solar gain during the day. These should be constructed so that they can be thermally isolated from the rest of the building as part of the whole structures temperature regulation.
- Provide clothes drying space for natural drying internally or externally (i.e. clothes-lines, rotary clothes line in a garden and a utility room with a drying rack) to reduce reliance on energy consuming tumble driers.
- Designed incorporating individual or community biomass systems for space and water heating supplementing other onsite renewables already discussed.
- Include high standard well insulated pipework and hot water storage systems
- Include good heating and lighting controls. This may include thermostatic radiator valves and movement to light sensors in residential units to sophisticated Building Energy Management Systems in larger developments.
- Include the Installation of intelligent metering systems

Consider Including a Local Case Study Hyper Link or Exemplar Project reference:

Appliances: The efficiency of appliances used in buildings can dramatically alter the buildings energy consumption, particularly in the case of new or refurbish for sale developments consideration should be given to integrating the most efficient appliances as part of the package. This should include things like lighting systems running on only energy efficient bulbs only, high efficiency rated washing machines etc and low water use systems (taps, showers, washing machines.

Consider Including a Local Case Study – Horsman Ave, York - Hyper Link or Exemplar Project reference:

Site Size: The systems used by buildings to provide heat, cooling or power can significantly alter the occupiers main source energy requirements.

Sources of energy and how they are used, controlled and maintained, will impact upon the layout of the building and should therefore be key design considerations at an early point in the projects development.

The approach taken to single developments or modernisations may be significantly different to that of larger sites which maximise opportunities to create and connect to Community Heating Networks. Developers of larger sites should automatically show consideration proposals to develop or expand Community Heating Networks providing a highly efficient and renewable source of energy. The site layout may affect the feasibility of connecting to existing and/or proposed Community Heating Networks. Considerations should include the length of any connecting infrastructure and any potential physical barriers.

Developers working areas of mixed-use or large scale development unsuited for, or unable to connect onto, a Community Heating Network should consider installing Combined Heat and Power plant to ensure higher efficiency in fuel use.

Lighting Schemes: Developers working medium to large scale sites and smaller sites where practical should consider using solar street lighting and solar lighting for bus shelters or other similar community facilities. External lighting is an important design consideration which needs careful planning at the start of a project.

Well designed schemes for lighting benefit community safety whilst enhancing architectural and landscape features after dark, thus adding to the marketability of developments. Schemes should not contribute to light pollution and its negative impact on amenity, clarity of the night skies or wildlife, and the energy required for the lighting itself should be from renewable sources. To begin minimising the environmental impact of external lighting schemes developers should ensure:

- Lighting levels are the minimum necessary to achieve safety and enhancement objectives;
- Energy is photovoltaic or renewably sourced
- Energy efficient lamps are used;
- Uncontrolled floodlighting should be avoided and all light fittings should be shielded to minimise any light pollution;
- Particular care is taken to apply the above guidance with floodlighting schemes for sports pitches or late night shopping or leisure amenities complexes as these have historically been high light polluters and high energy consumers.

Sustainable Sourcing:

- A minimum of (x%) of a buildings energy use should be through on-site generation from renewable sources, remaining electricity requirements should be through a green tariff with an energy supply company.
- Where possible, connect to a community heating network that guarantees requirements are met from a renewable source; e.g. locally sourced biomass.

Energy Standards, Policy and Legislation

Subsection of Energy Chapter introducing policy framework containing the following information;

Local Context

The (*Local Authority)* (*add where applicable* Energy Strategy, Fuel Poverty Strategy, Climate Change Strategy, Environment Strategy) and vision place a strong emphasis on low energy design, the promotion of renewable energy and increased sustainability within the (*Local Authority)*.

The (*Local Authority)* Local Plan now (check) places requirements on most developers to demonstrate that they have fully considered the use of renewable energy technologies and the possibility of connecting to a community heating network system based upon CHP (*policy/policies???? see Appendix (X) consider Hyperlink for web based versions*). Energy efficiency issues must also be considered in the design process (*policy ???? see Appendix (X) consider Hyperlink for web based versions).*

The national legislative standards represent bare minimum requirements, core buildings regulations issued must conform to these, if a local authority wants genuine achievement equal to or beyond the bare minimum it must use it more informal powers. ***To create a high standards framework to achieve genuinely sustainable objectives Members can adopt a step programme of inquiries and actions ensuring the local authority utilises its powers of influence*** along the following lines;

Step 1. Ensuring Minimal compliance: Verify with/ask Buildings Control what methods they use to enforce the statutory minimum requirements i.e.

a. Do they spot check existing and new developments to ascertain compliance?
b. If not all, do they have a spot checking strategy with a random sample target regime of 15-25% of the total annual?
c. Has a local performance indicator for the purpose of monitoring the spot checking regime been created i.e.; authority aims (on a scale annual increasing by agreed increments over Z time frame (shorter the better if serious)) that by Y target year 100% of all developments (new and adapted) will perform to equal or above minimum statutory requirements. And that this indicator will be refreshed annually (by a part 2 if considered necessary) to ensure it absorbs any raising of the national minimum requirements.
d. Once a spot checking regime and local indicator have been established, buildings control will need to be advised of the expected reporting framework. If this is a particular issue or new issue the LA may wish quarterly reporting to Planning / Environment / other equivalent Member Boards or Panels during the first year, followed by decreasing periodicity as standards are raised.

If the Authority is not doing any of the above Member recommendations can be made to rectify this (considering improvements to resourcing as appropriate) immediately).

Step 2. Simple Actions rewarding minimal practice: Work to generate a pro-active/dynamic relationship between Buildings Control and Environmental Control and create a local 'charter mark' accreditation scheme for good practice where developments measurably comply to standards above minimum requirements: - to smooth accreditation use an automatic assessment for entry process for all developments/builds existing (using data gathered through compliance checks see 1. above) + new builds assessed on completion of build as a matter of course.

Step 3. Raising the standards: Use the Local Authorities powers to create a set of recommended local planning/buildings regulations for sustainability. These might be usefully called '**Part Y'** of the Regs for York, stipulate in Part Y the desire for compliance levels above the minimum required – perhaps with reference to the associated higher voluntary standards suggested by the BRE/ Energy Efficiency Best Practice Programme etal (see voluntary standards below). Whilst compulsory enforcement of such standards can't be immediately achieved, the adoption and publication of such local standards and regulations can be used to;

a. Feed back to the Regional Planning and Infrastructure Commission as a tool for raising the regional bench marks
b. Lobby for the adoption of 'Part Y' as a regional recommended standard; i.e. no longer just part Y for York but Part Y for Yorkshire and the Humber
c. Lobby National Government as a tool for persuading more rigorous legislated or legally enforceable standards in the near future.

Step 4. Building in Incentives to comply with Part Y: lobby the Regional Assembly/Yorkshire Forward etal to:

a. Formally recognise and adopt 'part Y' as the regional standard.
b. Introduce a framework of automatic registration and regional certification for Buildings conforming to the part Y standards – thus creating a data base of best practice exemplars by default.

c. Create an annual awards framework for the automatically registered buildings (at;b), to encourage voluntary compliance by rewarding good practice and publicising its practitioners.

Possible approach to raising issue of Part Y awards scheme. Work with the York's and Humber Assembly/ Yorkshire Forward etal (and/or equivalent bodies) to scope feasibility of a Part Y Annual Awards framework. Including the consideration of;

- *Automatic registration and certification based on details in a part Y template to be completed with applications at LA level.*
- *LA sends duplicate copy of completed Part Y submissions to central body (i.e. Yorks and Humber Assembly/Yorkshire Forward.*
- *Central body publishes completed Part Y submissions automatically on their Web site – perhaps by monthy updating regime - on a best practice data base,*
- *Website also includes Information about awards for annual round based on evaluation against submitted part Y's of final build. Site also details judging criteria, dates for next awards etc*
- *Independent judging panel convened to decide overall winners in various categories Annual Publication of outcomes from recorded Part Y builds and redevelopments*
- *Star Studded Gala Event for Regional Award Winners + Hyper Links*
- *Indication of winners on Web site as high achieving Exemplar Projects - each agreed category - from sum total of data base*

→ *Move to next awards round*

Funding requirements for the additional administration all ends etc would need to be mutually considered.

Regional context

A Regional Energy Strategy for Yorkshire and the Humber is currently being drafted. The Regional Policy Statement setting renewable energy targets for the region has been published (*see Appendix (X) consider Hyperlink for web based versions)*. The Regional Spatial Strategy incorporates an energy hierarchy highlighting the regions priorities, these are;

- Reducing the Need for Energy
- The Conservation of Energy
- The Generation of Energy from Renewable sources.

These priorities will need to be implemented through the development planning process.

National Context

The UK has committed to reducing the 1990 level of CO_2 emissions by 20% by 2010 and 60% by 2050.

The Energy White Paper '*Our energy future – creating a low carbon economy'* reminds us that whilst our demands for primary energy are still increasing our levels of self reliance on coal, gas and oil are declining and by 2020 we could be dependent on imported energy for three quarters of our total primary energy needs. The paper also suggests that the best way of maintaining energy reliability will be through energy diversity. To help us avoid over-dependence on imports, the paper suggests that by 2020 there will be;

- Much more local and community generation from sustainable sources
- Increasingly stringent efficiency standards for buildings and electrical goods
- An increasing number of Zero CO_2 Standard homes and business premises.

In January 2005 national government[1] published its Low or Zero Carbon Energy Sources – Strategic Guide (Interim Publication) outlining the principal renewables sources reliance will come to depend upon and their performance levels.

Home Energy Conservation Act
The Home Energy Conservation Act 1995 (HECA) requires local authorities to promote the improvement of the energy performance of homes in their area. A duty has been placed on Local Authorities to secure a significant improvement in domestic energy efficiency across all housing tenures. The current target is a 30% reduction on 1996 levels by 2010. The Utilities Act 2000 obliges electricity and gas suppliers to achieve energy efficiency improvements and for electricity suppliers to purchase 10% of their supplies from renewable sources.

Building Regulations
Building Regulations (and revisions including Building (Amendment) Regulations) control many aspects of the energy performance of new and refurbished buildings (including homes). The regulations set standards for heat loss through the fabric of the building. In addition, they set standards for heating, hot-water systems, the insulation of pipes and ducts and space-heating controls.

Revisions published in April 2002 increased standards for the insulation of the building fabric and introduced extra standards for reducing cold-bridging at junctions between walls, roofs, floors and windows and reducing air leakage for all buildings. There are specific requirements to improve the energy performance of internal and external lighting in homes and provide operating instructions for heating and hot-water systems. Also included for the first time is the performance of replacement boilers and windows and the requirement to improve insulation if existing buildings are being altered materially.

Revisions published in April and September 2005 require a substantial increase in the performance of central heating boilers and ventilation systems. Further revisions on the conservation of fuel and power covering both dwellings and buildings that are not dwellings and targeting improved standards for the insulation of pipes and water storage, and minimum energy performance requirements for new buildings in the form of target CO_2 emission rates, are expected in early 2006.

Standard Assessment Procedure (SAP)
It is a statutory requirement of the Building Regulations for all new dwellings to be energy rated using the Government's Standard Assessment Procedure (SAP); see also Part L of the Buildings regulations. New dwellings are assessed on a scale from 1 to 120 - a higher score indicating greater energy efficiency. Developers should consider the final energy rating at an early design stage and aim to achieve a minimum rating of above 80.

The Building Regulations are a minimum required standard and it is often in the developer's interest to exceed these standards. This can be seen as particularly advisable in respect of energy conservation and sourcing and current international concerns regarding climate change and the demise of fossil fuels.

Planning
Revisions to the Planning Policy Statement 22 on Renewable Energy now make clear that the wider benefits of renewable energy developments are material considerations in planning decisions.

European Context
EU Directive on Energy Performance of Buildings
Directive 2002/91/EC of the European Parliament and Council, on the energy performance of buildings, came into force on 4 January 2003 and must be adopted into UK legislation by January

[1] Office of The Deputy Prime Minister

2006. It will greatly affect awareness of energy use in buildings. The legislation will affect all buildings, both domestic and non-domestic.
The directive aims to improve the energy performance of buildings by requiring:

- a methodology to calculate integrated energy performance of buildings
- minimum energy requirements for new buildings
- minimum energy requirements for large existing buildings being renovated
- energy certification of buildings, and the regular inspection of boilers and of air conditioning systems.

All new buildings must meet the minimum energy performance requirements. For those with a useful floor area over 1000 m2 governments must ensure that, before construction starts, formal consideration is given to the following alternative systems for heating:

- CHP
- district or block heating or cooling
- heat pumps
- decentralised energy supply based upon renewable energy.

Governments must ensure that, whenever an existing building with a total useful floor area of over 1000 m^2 undergoes major renovation, its energy performance is upgraded

Energy Performance Certificates

The directive also states that when a building is constructed, sold or rented out, a certificate detailing its energy performance must be made available. This can either be to the owner or, by the owner, to the prospective buyer or tenant.

EC regulation 2037/2000

Developers, buildings owners and facilities managers must be made aware of the implications of the EC regulations on refrigerants, and the procurement of new, and the maintenance and servicing routines for exiting refrigeration and air conditioning systems.

EC regulation 2037/2000 bans the use of:

- CFCs for the maintenance or servicing of refrigerating and air conditioning systems
- HCFCs in most new refrigeration and air conditioning systems manufactured after 2001
- new HCFCs for maintaining/servicing existing systems from 2010, with a total ban on all HCFCs from 2015.

International Context

By becoming a signatory nation of the 1997 Kyoto Protocol the UK has signed up to a legally binding target of reducing greenhouse gases as a whole by 12.5% by 2008-12. In line with the advice of the Intergovernmental Panel on Climate Change (IPCC) the UK must aim for a reduction of 60% in CO_2 emissions by 2050.

It will be impossible to achieve such targets without developer maximising the integration of energy from local renewable sources where ever possible**.** This might include solar space and water heating, solar electricity generation (photovoltaics), wind power, biomass fuel and other sources of energy.

Voluntary Standards

In addition to all the legislative standards there are also some voluntary standards which developers are increasingly choosing to meet.

National Home Energy Rating (NHER)

The NHER assesses the energy efficiency of a dwelling based on a wider range of issues than Standard Assessment Procedure (SAP) ratings. These include orientation, location, altitude, size, fuel type, heating and hot water system and household appliances. A scale of 0 to 10 is used, with a higher score indicating a more energy efficient home. (A score of 7 should be considered as a minimum to borderline outcome as this only conforms to the Building Regulations at 2005)

The Energy Efficiency Best Practice Programme is more rigorous, and offers a set of standards for sustainable homes, these include;

- **Zero CO_2 Standard**. When energy demand is reduced as far as possible and you have replaced as much fossil-fuel use as possible with renewable energy, you may be able to create a 'zero CO_2' development. This may be achieved by buying electricity on a 'green' tariff from a company supplying renewable energy. If you use any non-renewable energy - eg, gas for cooking, you will need your own renewable electricity-generation capacity large enough to export sufficient power to the grid in any year to compensate for the CO_2 emissions associated with importing non-renewable energy.
- **Zero Heating Standard**. If, in addition to the Zero CO_2 Standard, you can obtain all your heating from passive solar gains and internal gains from the occupants, then you will have achieved the higher 'zero heating 'standard.
- **Autonomous Standard**. If, in addition to the Zero Heating Standard, you can obtain all your services from on-site resources, then you will have achieved an 'autonomous' standard. A grid-linked electricity system can be used as long as it is a net exporter rather than user of power.

Recognised voluntary standards above minimum or readily achievable compliance may be used in respect of work with the Yorks and Humber Assembly (and/or equivalent bodies) to establish a framework for adoption of Part Y + annual awards for Developments,. Including the consideration of;

- *Automatic registration and certification based on spec.*
- *Published Information about awards for annual round based on evaluation against spec of final build, details of judging criteria, candidate development and build profiles + Hyper Links*
- *Publication of Outcomes & Event for Regional Award Winners + Hyper Links*
- *Indication of winners as high achieving Exemplar Projects from sum total of data base*

→ *Move to next awards round*

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Water

Water (for (add date) *or* in (Local Authority name))

Subsection of the Water Chapter. Introduction of the context national, regional and local generally including paragraphs containing the following information;

Show present data; i.e. (Local Authority name) (Insert as applicable) Climate Change Strategy, Vision, Emergency Plan emphasises that the (Local Authority name) should expect and prepare for drier hotter summers and warmer, wetter winters as a result of global warming.

The UK Climate Impacts Programme (UKCIP) anticipates that global warming will lead to significant changes in rainfall distribution and intensity, with UK properties likely to suffer in the future from water shortages or flood damage. The design, capacity and maintenance of our urban drainage systems may require upgrading in order to accommodate greater storm activity. The impact of on this region has already been felt and our community must work to prepare for an increased propensity to flooding - such as that of 2000 - and the flash flood events of June 2005.

Demand for water (nationally/locally/) has (more than doubled since 1970, /local stats if available) leading to stresses on water supply, treatment and disposal. Rising consumption levels are placing increasing pressure on river, groundwater, flood meadow and other wetland ecosystems. It is therefore important that all new developments are designed to work in harmony with and minimise their impact upon the water environment.
Explaining sources of data etc

Introduce **Key objectives** i.e;
Strategy (climate change where applicable) /Vision/Local planning framework ensures that;

- All new developments are built to high levels of water use minimisation and incorporate and develop flood risk minimisation techniques such as the adoption of soft or permeable landscaping and the incorporation of soak away systems.
- Pre-existing developments are modernised to improve water monitoring, decrease demands on supply and reduce the proportion of hard landscaping.

Highlighting positive relationship between **prudent water management and planning and the developer's and business communities** perspective i.e:
Reducing energy consumption and other resources during construction can result in lower direct costs for the developer, thus helping profitability.

- Increasing a developments sellability is related to the efficiency of the utilities used, building in lower water consumption presents a marketable advantage on competitors when buildings are sold or let.
- Domestic perspective: - costs of mortgage in an inflated market can be balanced against lower outgoings on potable (drinking) water and treatment costs. Research surveys carried out by CABE, the WWF and the Halifax (July 2004) found that 84% of people would be willing to pay an average of 2% extra on the purchase price their home if they are environmentally sound and 87% of buyers want to know if their homes are environmentally friendly (see cabe.org.uk).

- Lower running costs in business premises reduce overheads, thus supporting maintenance or improvement of net profitability.
- Landlords as potential purchasers of new developments or improvers of existing stock will be increasingly competing with the market advantage in letting low water consuming buildings. Already the case in the student rented sector nationally.

Highlight importance of adapting to meeting and competing in a **rapidly changing and increasingly regulated market:**

- The once small or specialist 'green' consumer market, has rapidly mainstreamed due to popularisation of the issue – programmes such as BBC2 'No Waste Like Home'. This sector of the market will soon predominate and is prepared to pay a premium for buildings that have been designed to 'green' specifications and leave anything less empty.

- As the domestic market has changed businesses are developing a parallel awareness of the marketing advantages of their own business premises, practices and products having a transparent and measurable 'green image'.

Introduce importance re **Public Sector Buildings**: Increasingly Local Authorities are aware of the consequences of high water consumption and poor water management, the legislative framework is changing to incorporate the metering and monitoring of water use and consumption. The public sector is inevitably choosing buildings designed to achieve lower levels of water consumption. Developers are wise to plan ahead of the legislation ensuring when legal requirements come into force they can be achieved with minimal confusion and cost.

Water, the Local Economy and Community Well Being

Subsection of Water Chapter introducing subject relations containing the following information;

The main areas developers must consider in relation to the water are increasing sustainable water use and the management of flood risk. The development or refurbishment of buildings provides an ideal low cost opportunity to incorporate these measures.

Flood Risk

Properties with lower risks associated to flooding are inevitably easier to sell or let than those with higher risks. Insurance companies routinely use flood risk information - provided by the Environment Agency - to assess appropriate premiums for building insurance, this has significantly increased premiums for properties within flood risk areas. The Association of British Insurers has warned that buildings knowingly constructed in areas at risk of flooding may not be insurable.

In addition, owners may find that they can become liable for flooding elsewhere if it is found that the root cause is a problem with drainage on their site. Sustainable building solutions can help to significantly reduce flood risk and the associated litigation and insurance costs associated with the development..

Developing a proven track record on the implementation of the change to Part H of the Building Regulations in the developers best interest. Delivering standards above those of the regulations now makes good business sense for developers, so that

once higher standards become a legal requirement they can be achieved with minimal confusion and cost.

Dwellings constructed to the highest standards will ensure current developers are viewed positively when flooding events expose others to accusations of increasing the risks. Our society is increasingly litigious and whilst currently there are few precedents for such action, it is not unimaginable that future individuals and organisations will hold developers and planners to account to account for the property damage and injury related to such incidents.

Local Economy

Lowering the running costs of our local housing will lead to a net increase in local disposable income of householders, a large percentage of which will be spent in the local economy.

Reducing the running costs of our business premises, will increase profitability and the money available for expansion and job creation. Increasingly new businesses will want to locate to areas guaranteeing the best water use minimisation and management plans and achieving high standards of flood damage prevention, local development must ensure a high competitive edge if we are to improve inward investment.

The newly mainstreamed domestic 'green' consumer is being drenched in awareness of the benefits of eco-design, not only in terms of lower impact on the environment but financial benefits and quality of life. Their expectations are now beginning to exceed minimum future standards set and our local economy must rapidly adapt to meet these demands.

Domestic water consumption accounts for around 65% of the UK total yet relatively straightforward water-efficiency measures could reduce this requirement by up to 50%. The price of water has risen steeply over the last decade and is now a significant expense for many households and businesses.

Being able to market buildings as low water utility users - integrating low use fittings, rainfall capture, recycling systems and community sewerage networks – is essential to future economic health.

Forward thinking developments will also raise the profile of the *(local authority area)* increasing its attractiveness to investors and new residents alike.

Water: Flood Risk

Q. Does the Local Authority have a Strategic Flood Risk Assessment for the (City/LA area) to gauge which areas are most at risk *(if so say so then point out that)*. Any developments within an identified area of risk will have to consider how the risk can be reduced through mitigation or other measures.

New developments outside these areas are also required to reduce flood risk elsewhere by incorporating a range of other measures such as sustainable drainage systems (SUDS). SUDS can have other benefits such as contributing towards the aesthetic and recreational quality of landscaping schemes through the introduction of water features and areas of high wildlife value.

Developers must ensure the development is not at risk from flooding by finding out at an early stage if the development is in a flood risk area. This can be achieved by contacting the Environment Agency.

Measures must always be incorporated into the design of developments to address any flood risk (to satisfy the EA and ensure that it is insurable). In large areas of development plans should incorporate as a minimum measure the provision of new flood plain to compensate for the area lost and ensure that other buildings are not put at greater risk.

Consider Including a Local Case Study Hyper Link or Exemplar Project reference:

Water & Building

Subsection of Water Chapter introducing design and build considerations incorporating the following guidance;

Minimising demand maximising efficiency and flood prevention.

Future building must aim to minimise the water consumption of business and domestic property whilst maximising the efficiency of its usage. The relationship between buildings and the local environment can reduce the amount of mains water required for all purposes, improve living and working conditions and protect our natural and built environment from harm.

In order to achieve these objectives architects, designers, planners and builders must demonstrate an understanding of local weather and topographic conditions, the availability of new cost-effective systems for recycling water, curbing its use and treating waste-water, and methods for minimising and replacing hard-surfacing of large areas with soft landscaping alternatives.

Site Layout:

Working with the Landscape: All developments and existing built environments offer opportunities for better water management and developers need to assess sites to maximise the potential of their approach.

To build in good water management principals, developments should be;

- Working in more natural methods of treating sewage. In larger, self-contained schemes these include the use of reed bed or wetland sewage treatment which can also double up as an attractive wildlife habitat and enhance the appearance of the built environment. Such approaches have already been adopted in many new developments in the UK and proven to be effective. The use of such a system at the Millennium Dome in Greenwich has helped to raise the public profile.
- Avoid hard-surfacing of large areas in favour of soft landscaping (e.g. grass or porous paving) which slows the rate of run-off to watercourses. Consider planting on flat roofed areas ('green roofs') if rainwater is not collected for re-use.
- Adopting planned systems of sustainable drainage (SUDs) for surface water drainage. SUDs, slow the rate of flow is (through filter strips, swales, and soakaways). This prevents flooding and erosion and spreads peak flows over a longer period. SUDs also filter out some pollutants (e.g. intercepting oil) and

may provide a local water amenity (e.g. balancing ponds) increasing biodiversity on the site.
- Ensuring that communal green space avoids plants requiring large amounts of water, incorporates dense ground cover to avoid evaporation and includes plans for the mulching of plants at the start of summer to help retain moisture.

Maximising rainfall gains: rain is a free, constantly renewed source of water, so its benefits should be built in. Design incorporating elements to capture rainwater significantly reduce the amount of water from metered sources required for domestic and business activities. Converting available rainwater into usable water reduces the reliance on our fragile water supply and increases the long-term economic viability of the building.
To build in rainfall gains, buildings should be;
- Ensuring rainwater collection can be undertaken at different levels of cost, complexity and saving, as per the hierarchy below:
  - Minimum standard: Incorporation of a rainwater collection system with water butts into all homes and other developments with outside water requirements such as watering landscaped areas.
  - Medium standard: Incorporation of a rainwater collection system for flushing the toilet or for use in the washing machine; requires storage in tanks and filtering.
  - High standard: Incorporation of a rainwater collection system for drinking and cooking requires filtering and purification (systems should aim to avoid reliance on chemicals).

Structure: Water-efficient buildings minimise reliance on mains supply and treatment, whilst maximising gains from rainfall and recycling, and incorporating elements to alleviate flooding.

To build water efficient structures, buildings should be;
- Incorporating substantial rainfall collection systems (see above)
- Incorporating neighbourhood treatment through new technologies such as solar aquatic treatment or 'Living Machines'
- Buildings should be designed to allow recycling of 'grey' water (usually from bath, shower and washbasins) for flushing toilets or for assisting plant growth and other low quality uses.
- Considering construction techniques such as green roofs, which slow the discharge of water into the drainage system. Green roofs may also improve the thermal efficiency of a building and support the natural environment.
- Incorporating garages and storage for garden equipment into the buildings footprint or structure eliminating the building of additional hard structures.
- Avoiding the incorporation of features encouraging the use mains supplies, for hoses or sprinklers

Consider Including a Local Case Study Hyper Link or Exemplar Project reference:

Interior Building Layout and details: The layout of a building can significantly impact on the way in which water is used.

To build water efficient layouts;
- Buildings should be designed to allow recycling of 'grey' water (usually from bath, shower and washbasins); generally for flushing toilets or for assisting plant growth and other low quality uses.
- Buildings should be designed to allow for the use of composting toilets and waterless urinals.

- Water meters for both potable water and sewerage should be installed wherever possible as real water savings can be achieved when occupiers pay for what they use. Ensure these are installed correctly and regularly serviced.
- Water management systems detecting exceptional usage caused by leaking pipe-work or other faults and enabling the effective monitoring of general usage should be installed.
- To eliminate the running of taps for a long time before they receive hot water low-water use fittings should be installed as near to the hot-water source as possible.
- Buildings should be designed to encourage the use of showers (not power showers) in preference to baths.

Consider Including a Local Case Study Hyper Link or Exemplar Project reference:

Appliances: The efficiency of appliances used in buildings can dramatically alter the buildings water consumption, particularly in the case of new or refurbish for sale developments, consideration should be given to integrating the most efficient appliances as part of the development package. This should include things like;

- As a target measure install composting toilets and waterless urinals - these use no water and should not smell.
- or as a medium measure install measure dual-flush or low-flush toilets that can reduce water use by up to 20%.
- as a minimum measure install water displacement devices in older cisterns to reduce capacity.
- Always install showers (except for 'power showers') which are more efficient than baths; using a third of the water.
- Spray taps for washbasins - they can save 80% of water use.
- Install Low-water use fittings which should be as near to the hot-water source as possible to reduce 'dead legs' and the consequent waste from running the hot tap until it gives hot water.
- Install water-efficient washing machines (both domestic and industrial) and dishwashers.

Consider Including a Local Case Study – St Nicholas Field Environmental Community Centre, York? - Hyper Link or Exemplar Project reference:

Site Size: The systems used by buildings to provide water for all purposes and treat sewerage can significantly alter the occupiers main source water requirements.

Sources of water for drinking and non-potable purposes and how they are used, controlled and maintained, will impact upon the layout of the building and should therefore be key design considerations at an early point in the projects development.

The approach taken to single developments or modernisations may be significantly different to that of larger sites which maximise opportunities to create and connect to Community Sewerage and Water Treatment Networks.

Developers of larger sites should automatically show consideration proposals to develop or expand Community Sewerage and Water Treatment Networks providing an efficient and safe source of water. The site layout may affect the feasibility of creating such systems. Considerations should include the length and capacity of any connecting infrastructure and any potential physical barriers.

Developers working areas of mixed-use or large scale development unsuited for, or unable to develop Community Sewerage and Water Treatment Networks should consider developing neighbourhood or local treatment through new technologies such as solar aquatic treatment or 'Living Machines'.

Water Standards, Policy and Legislation

Subsection of Water Chapter introducing policy framework containing the following information;

Question: How can you evidence that - The (Local Authority) is committed to ensuring present and future demands for water, are met more effectively. In doing so, the (Local Authority), will endeavour to;

- reduce the threat of flooding, and minimise the effects of flooding
- decrease incidences of water pollution endangering wildlife and public supply
- Mitigate against water shortage. By endeavouring to increase the availability of new cost-effective systems for recycling water, curbing its use and treating waste-water
- Insure materials specification and of on-site construction practices respect the vulnerability of all watercourses, aquifers and environmentally sensitive areas.
- Encourage the widespread adoption of metering and not oppose the increased cost of water supply and treatment where these can be justified.
- Back stringent Regional, National and EU policies/legislation to reduce water use, pollution and flood risk.

The Local Context

Does the (Local Authority Name) Local Plan reflect national and regional policies in seeking to ensure that new developments minimise their impact on the water environment and do not create a flood risk problem.
Has a Strategic Flood Risk Assessment has been carried out for the Local Authority Area that takes into account the impact of climate change on the flood risk area? This information should be used to guide planning decisions.

To create a high standards framework to achieve genuinely sustainable objectives Members could adopt the step programme of inquiries and actions detailed at this point in the Energy Chapter

The Regional Context

Check that Environment Agency has produced a regional water resources strategy to guide the management of resource over the next (XX) years.

Refer to the Regional priorities for water resource management set out in the Environment Agency Regional Strategy (*cite the publication title and date* consider with web based versions providing a hyperlink or embedding an adobe document if permissions/format allow).

Provide a one-two paragraph synopsis of the content.

Check that The draft Regional Planning Guidance for Yorkshire and the Humber (ref) places a priority on water conservation and flooding issues in recognition of the

increasing pressures on water resources and the implications of climate change. Check which Policy Statements (ref) outline the approach to be taken with the water environment and sets out the regional approach to managing flood risk (Policy ref), *Include a sentence about the requirements imposed* i.e. sustainable drainage systems to be designed into all new developments where practicable.

The National Context

Policy changes and legislation enacting the objectives of the EU Water Framework Directive in the UK represent the core legislation in this area(see European Context below).
In the **'UK Government Sustainable Development Strategy – Securing the Future'** a clear intention to move quickly to enforcing higher economic contributions from all those who use, and also those who may pollute water is signalled. It may be implied that the day of compulsory 'pay for impact' metering of mains water, waste and sewerage is not far off and developers would be wise to install metered systems in readiness.
Recent revision of the Building Regulations will control the use of water for the first time.
Planning Policy Guidance note on Flood Risk and Planning (PPG25) explains how flood risk should be considered at all stages of the planning and development process. The guidance makes clear that the susceptibility of land to flooding is a material planning consideration and that the Environment Agency has the lead role in providing advice on flood issues.

The European Context

The European **Water Framework Directive -** Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 - is the most important piece of water legislation from the EC to date and sets a framework which should provide substantial benefits for the long term sustainable management of water. This legislation requires that;

- All inland and coastal waters to reach at least "good status" by 2015.
- River basins are managed holistically to deliver good ground and surface water outcomes; river basin management plans are published by 2009
- Ecological targets for surface waters are met.

Voluntary Standards

More work needed to establish the terms of voluntary standards (EcoHouse etc), encouraging adoption of measures beyond those required, introduce these here. .

Buildings – Adaptability, Durability and Materials

Subsection of the 'Buildings – Adaptability, Durability and Materials Chapter'. Introduction to the context national, regional and local, generally including paragraphs containing the following information;

Decisions regarding the use of materials have wide reaching environmental consequences, energy used in the manufacture, delivery, and the incorporation of materials and appliances into buildings accounts for some 10% of total energy consumption in the UK alone. Choices developers make in sourcing materials impact upon globally finite resources such as minerals, and fossil fuels. Upward of 250 million tonnes of material are extracted from quarries each year for cement bricks and aggregates.

In addition, the construction industry uses many other materials and components, which all have a range of effects on the environment arising from their production, use, maintenance and final disposal. The construction industry in the UK is estimated to use six tonnes of building materials per person each year in developments; 20% on infrastructure (civil engineering) and 80% on buildings.

Approximately 50% of total CFC's produced have been through uses such as air conditioning, refrigeration, fire extinguishers and insulation in buildings (Blowers, 1993). Poorly evaluated industrial practices, building techniques, waste disposal, and transportation have led to ground, air and water pollution so hazardous to life that we are now having to invest millions in time and costs to reclaim a fit environment for ourselves and future generations. Approaches to building must change.

To reduce the energy used, chemicals required and emitted during the mining, manufacture, finishing and transportation of building materials and development we must adopt a holistically sustainable approach to;

- Pre-build site analysis, records and planning
- Pre-build land reparation and risk mitigation planning
- Pre-demolition salvage, recycling and waste and pollutant management
- Re-use and adaptation of existing builds
- The accurate specification and quantity surveying of materials.
- The sustainability of sourcing and storing materials
- The resilience or durability of materials used and their suitability to re-use or recycling
- The effectiveness of maintenance plans and contracts

The **Sustainable Buildings Task Group Report: one year on** to National Government makes it clear that building control and planning officers will be increasing required to assess future development plans and final builds to ensure that sustainability issues have been fully addressed throughout the project. Developers, must begin to understand and utilise the range of tools available for assessing the overall impact of development and buildings performance and, be prepared to declare the chosen assessment tools and outcomes used in their designs and development plans. The Building Research Establishment (BRE) tool BREEAM has been recommended by the Sustainable Buildings Task Group (SBTG) as the basis for assessment arrangements for the finally adopted code.

Site Approaches

Subsection of the 'Buildings – Adaptability, Durability and Materials Chapter'. Introducing pre-development considerations.

Sustainable principles and approaches should be established at the outset of the design development process to mitigate against pollution, maximise recycling potentials and ensure long term durability of builds. A pre-demolition, pre-development site appraisal and plan should be completed from the outset to establish the proper approach to sustainable value management and contracting. Such sustainable plans and approaches established at site assessment point are far easier to continue through the construction and commissioning of the building and final maintenance contracts.

Site appraisals should map a site's biodiversity, microclimate and topography, including features above and below ground (such as archaeology, minerals and water), its existing structures, location, access and egress routes, its relationship to the neighbouring environment and community.

Topographic and Bio Features:

A sustainable pre-demolition, pre-development site appraisal and plan should evidence;

- An awareness of ground stability and structure, noting such features as deep plastic clay beds, shales, previous undermining and minerals extraction or other features increasing likelihood of subsidence and implying the need for specialist approaches to foundations. Noted subsidence risk features can then be used to ensure foundations and utilities infrastructure are designed to mitigate against high cost future maintenance or at worst case scenario destabilising leading to demolition.
- Early evaluation of ground substrate properties in consultation with a qualified adviser establishing necessary excavation levels to reduce unnecessary levels of concrete in foundations and floors.
- Consideration of the hydraulic status quo. Including the value of the soils and substrate to the maintenance of stable/usual year round water tables and the likely impact of alteration in the development area to this. The existing pattern of surface water drainage and the existing pattern and courses of natural substrate drainage should also be recorded. Noted hydraulic features can then be used to ensure the incorporation of alternate flood plain and the planned;
    - mitigation of pollution of natural water courses during and post demolition and build (see also water chapter)
    - approach taken to incorporating sustainable drainage systems (SUDS) and soft landscaping and soak away flash flood reduction features. (see also water chapter)
- Consideration of asset bio-features such as trees established hedge rows and scarce native species. Noted bio-features should be maintained wherever possible and the development planned to incorporate them by avoiding damage to roots and aerial parts. Site access for development and building foundations should be designed to reflect impact distances from bio-features.
- Quantity surveying should be included at an early stage to establish volumes of build materials including topsoil and subsoil already on site and plans made for the on-site storage of these for landscaping later, thus minimising adverse impacts on soil resources and wasted transportation

Environmental Reparation: Our understanding of bio-hazards and appropriate waste disposal has significantly improved, today's developers may however inherit site conditions evidencing past insensitivity to such issues. A sustainable pre-demolition, pre-development site appraisal and plan should evidence an evaluation of the need to cleanse soils of any toxicity and safely remove any hazardous materials present, such as asbestos. See also **Land remediation tax relief** in the 'Standards, Policy and Legislation' section of this chapter.

Built Site Context: As well as ensuring that developments preserve bio-features and do not detrimentally impact on their natural surroundings, a sustainable pre-development site appraisal and plan should evidence;

- Understanding of how the development can link with, expand or create sustainable utilities infrastructure i.e.
  - Community renewables heating and lighting networks (see the Energy Chapter)
  - Community reed bed, wetland or other sustainable sewage treatment networks and, planned systems of sustainable drainage (SUDs) (see the Water Chapter)

- Understanding of how the development can link with, expand or create sustainable transport infrastructure (especially transport links, to schools, hospitals, and so on) i.e.
  - Enter consultation with bus companies regarding likely future needs and how these can be incorporated and enhanced (see the Transport chapter)
  - Plan in cycle lanes and storage (see the Transport chapter)
  - Expand off road pedestrian routes and cuts as well as pavements (see the Transport chapter)

- Understanding of how the development can maintain or enhance the character of the existing buildings (see also Historic Environment Chapter). Where priority should be given to;
  - Renovation and reuse of architecturally significant structures in previously developed sites.
  - The high use of legally reclaimed building materials of a type blending with the existing architecture

- Understanding of how the development can incorporate the need for open space and leisure serving the broader community interest (see also Land Use and Open Space Chapter)

- Understanding of how the development can expand and blend the natural environment into the built environment in the interests of wildlife and bio-diversity (see also Wildlife and Bio-diversity Chapter)

Sustainable Demolition: Between 70 and 80% of building construction materials are derived from natural resources such as stone, timber and clay. Given this, developers need to reject historically adopted rapid demolition and clearance approaches in favour of adopting deconstruction principals maximising the potential for materials to be reclaimed for reuse and recycling. Where the contracted party for demolition is separate from the contracted party for construction, the contracts should clearly indicate the joint and separate responsibilities for sustainable development issues such as pollution, waste management, sourcing etc.

A sustainable pre-demolition, pre-development site appraisal and plan should evidence;

- The application of quantity surveying to the understanding of the volumes of onsite pre-demolition materials and their potential for re-use and recycling in order to;

  - Develop appropriate on site separation and secure (from natural elements and human beings) storage facilities for reclaimed materials for re-use and recycling.
  - Develop appropriate on site cleaning and refinishing facilities for reclaimed materials for re-use and recycling which do not pollute ground water or soil.
  - Assess what of the total volume of the separated materials under all categories will be reused on site to minimise overestimation of quantities of new materials and associated environmental impacts through transportation and waste.

- Enter into effective contracts with other local developers/buildings suppliers for the removal of volumes of the separated materials not required under all categories for use elsewhere.
- Minimise the volumes of new materials required and their associated transportation impacts.
- Develop a waste minimisation plan emphasising recycling and reuse and minimising landfill which will then continue to operate throughout construction.

- An understanding of the differing reclamation methods required for differing materials to ensure greatest salvage gains and reusable condition. For example;
  - Reusable bricks, masonry stone and slates need to be removed by hand, cleaned if possible at site and stored on pallets to avoid damage and ease handling.
  - Timber flooring, roof beams, doors, door frames and window frames panelling and shuttering need to be carefully hand removed and freed of screws and nails – both for health and safety reasons and to ease reuse. All sound timber products should be stacked or stored in conditions mitigating against damage from weather.
  - Ceramic (i.e. sinks, baths and toilets, period tiles), metal (fire surrounds etc) need careful hand removal and storage if they are to be kept in re-use condition.

- An understanding of the recycling opportunities and methods presented by materials that are not of adequate standards for re-use. For example;
  - Where the site conditions permit, separate crush and pack rubbles and hardcore, for use in order of preference;
    - on site (low quality aggregate uses bedding paving, roads, etc)
    - on other sites where crushing will save on excess transport
  - Separate timber which can't be reused into treatment contaminated product and non-contaminated product, shred and store the latter for later use as mulch around landscaping features. Check whether the former can be used in large scale local waste to fuel or bio-mass burning plants before sending to landfill.
  - Separate glass for recycling, where the site conditions permit and health and safety considerations allow, crush and pack to minimise transportation.
  - Separate metal products for recycling

- An understanding of waste reduction targets setting with the aim of minimising waste production throughout the phases of each development project. Waste arising during construction should be estimated within agreed targets then measured and compared with established benchmarks (for example the BRE SMARTWaste web-based tool) and where the demolition is a sub-contract of the developers contract the primary contractor should consider the feasibility of penalty clauses for the creation of waste exceeding targets within an agreed % excess.

Adaptability and Durability in Design

Subsection of the 'Buildings – Adaptability, Durability and Materials Chapter' covering the core concepts in respect of new developments and refurbishment or redevelopment of existing structures.

In York and the region we are proud inheritors of a long history of inhabitation, amongst our buildings are structures of significance from the Roman period through to our recent industrial past. Successful cities adapt as their economic bases change and the demand for housing and the nature of workplaces alter. Sustainability is about improving quality of life today in a manner respecting the needs of future generations. Development must preserve this heritage whilst creating an equally significant and dynamic inheritance for generations in buildings constructed today.

Flexibility: To secure sustainability development must build-in adaptability, durability and flexibility to both its existing and new buildings. Buildings are more likely to be occupied and re-used if they can be easily adapted to meet changing needs. The developer should remember that flexible builds;

- Attract a greater range of potential purchasers or tenants ensuring the best sale, or rental values and minimise vacancy time and under occupation.
- Increase the sell-on or re-let value of a building.

Whilst the approaches taken alter subtly at the detailed level to the refurbishment or redevelopment of existing build and new build, certain key principals can be applied to both. First steps are about maximising flexibility across a spectrum of changing needs.

Contractors and developers should be able to evidence flexible approaches to building and renovation at point of application, these should;

- incorporate possible mixed uses within a building, or complex of buildings such as living accommodation above shops particularly larger development areas.
- allow for adaptation of the space to accommodate for the growing home working market. Particularly domestic property, but also a useful indicator of the need to be able to adapt industrial and office space to domestic or multi-purpose use later.
- incorporate readily adaptive space layouts;
    - including expansion space such as basements or lofts made thermally efficient and damp proof at point of build, refurbishment or renovation for ease future use.
    - built forms that incorporate easily accessible and changeable utilities installations.
    - flexible spaces for changing spatial requirements of building occupiers, including consideration of the merits of non-structural or frame internal walls.
- Improve or maximise the buildings internal and external accessibility without resorting to mechanical aids such as lifts wherever possible. This will mean best use of: gradients, accessible routes, entrance position, level changes, ramps, and the planning of internal disability access features etc.

Reuse: Many abandoned industrial buildings and disused churches are now being refurbished as domestic and business premises. The re-use of existing buildings that do, or could, positively contribution towards the local environment is of primary importance. The majority of buildings can, with investment, be adapted to meet present and future needs. Where buildings are structurally sound and do not present another environmental hazard demolition should not be considered.

The re-use and adaptation of existing buildings represents high sustainable advantages by;

- Reducing the demand for and associated environmental impacts of new building materials
- Reducing the environmental impacts of the construction process
- Promoting a sense of place and historic and cultural continuity.
- Providing the opportunity to upgrade insulation, heating, lighting and ventilation efficiency standards
- Providing the opportunity to adapt previously unusable space – i.e. basements and lofts – to habitable standards.

- Providing the opportunity to modify access – particularly of internal spaces – to disability aware standards

Whilst the re-use and adaptation of existing buildings represents high sustainable value it must be ensured that adaptations respect;

- Important aspects of the building that have historical or cultural importance or are protected by listed building status. When restoring listed buildings or working in conservation areas the effect should be in keeping with the original designs.
- The increased need for visible materials to blend with their surroundings. The use of traditional local materials particularly if recycled can ensure the building respects its surroundings whilst also encouraging the of local materials and reducing the need for transportation.
- The need to conform with planning and building regulations for any change of use.
- The need to remove any hazardous materials present, such as leaded paints or asbestos.

New Developments: Whilst adhering to all the principals for future flexibility and being sensitive of the conservation areas, new builds should be designed to;

- Ensure high structural standards facilitating a long and useful life avoiding premature obsolescence and dereliction.
- Incorporate flexible layouts that allow for the greatest variety of possible future adaptations and uses can be accommodated
- Include adaptable storage minimising the need for future expansion of the built area; including the consideration of basement garages.
- Include basements insulated, ventilated and damp proofed to allow for future expansion of the liveable area. Consider the following points;
    - 'partial depth' basements provide for better natural lighting, ventilation and damp-proofing than conventional basements;
    - providing a basement can enable more efficient use of individual plots, but should be carefully designed to avoid the creation of substandard living accommodation;
    - basements can provide a substructure that is less susceptible to frost heave, settlement and moisture changes in the subsoil.
- Favour pitched roofs over flat roofs for the following advantages:
    - less maintenance is usually required
    - they provide more ready locations for solar panels (see energy chapter)
    - Additional rooms can be readily created in the space provided if trussed rafters are avoided and careful consideration is used in the choice of roof insulation.
- Make extensive use of recycled and renewable construction materials and techniques.

All Developments:

- Should be designed to incorporate as far as possible the sustainable approaches to resource management covered in the Energy, Water and Waste Chapters.
- Provide for convenient and secure cycle storage whether commercial or domestic buildings
- Provide storage areas for separating containers for recyclable materials.

Sourcing Materials & Construction

Subsection of the 'Buildings – Adaptability, Durability and Materials Chapter'

This section builds on and the sustainable approaches introduced in previous sections of this chapter to ensure they can be carried through the next phases, to recap;

- Establish pre-demolition or pre-build site evaluation and management reports and plans.
- Adopt deconstruction approaches to demolition maximising recovery, recycling and re-use.
- Re-use existing structures over new build as a priority.
- Design both new and re-used structures for adaptability and environmental efficiency.

By point of materials sourcing and construction it would be assumed that the Build/Project Manager and site have organised to;

- Provide easy access to appropriately separated and stored recovered materials from demolition for re-use.
- Ensure that the volumes of such materials have been deducted from the quantity surveying calculations for total materials required; much construction waste could be avoided by carefully calculating the quantities of materials required.
- Have unneeded reclaimed and recyclable materials moved to another site or supplier to minimise damage.
- Established a waste management area for the continued separation of recycle, re-use materials throughout the build
- Consulted on and entered agreements for expanding or creating sustainable and renewable utilities infrastructure.

Some long-lived or durable materials require significant amounts of energy to produce but the final product may require little maintenance and be simply re-used without significant further energy, water or processing being required. Other reasonably available materials may degrade in such a way as to emit harmful substances into the environment or require significant processing to render safe as waste, and/or not contribute significantly to landfill at the end of their useful life.

By point of materials sourcing and construction it would be assumed that the Build/Project Manager will also be ready to adopt a **Life Cycle Analysis** approach to the acquisition of materials and build techniques. Life Cycle Analysis is a tool created to evaluate the sustainability of buildings and the materials contained in their construction at all the stages involved by minimising;

- Reliance on primary sourced raw materials,
- Energy and pollutants required to processing or manufacture and package products
- Energy required for and impacts of storage, transportation and retailing
- Energy required for and impacts of use and maintenance of materials and final build

Whilst maximising;

- The life span, durability and adaptability of the build
- The buildings performance efficiency
- Re-use and recycling
- The incorporation of sustainably sourced materials
- The sustainable management and mitigation of waste

Sustainable Construction can be improved through strict application of the following principles:

- Increase Thermal Mass by using materials with a high capacity to absorb heat energy within a building structure for later released as air temperature drops.
- Incorporate Earth Sheltering by covering surfaces except the south facing side, to provide additional insulation and/or to reduce visual impact and the area of exposed external wall.
- Improve sound insulation through thermal massing and/or earth sheltering this is particularly important in high density developments, such as terrace housing, flats and built up work environments.
- Ensure Ventilation is Natural by using natural cross air flows controlled and adjusted by building users. Install blinds to prevent build-up of heat from sunlight.
- Increase the longevity by incorporating durable materials and products
- Use design details to protect and prolong the life of the building for example;

- Incorporate features (such as deep roof overhangs) that protect the building from extreme weather
- Avoid vulnerable materials and details such as exposed roof parapets.

- Maximise the developments autonomy, or ability to supply its own energy, drainage and water needs.
- Incorporate thermal insulation to above current Building Regulation requirements. Ensure that windows and external doors are draught sealed. And incorporate air-lock or air lobbies to reduce heat loss. See also Energy Chapter.
- Improve thermal buffering by exploring the potential to link buildings or by attaching conservatories, garages and greenhouses to the outside of heated rooms.
- Improve solar gains through south facing windows with low emissivity double glazing to reduce heat loss etc and ensure window frame materials are thermally efficient timber frames have better thermal resistance than steel or aluminium. See also Energy Chapter
- Work with the natural environment;
  - Avoid herbicides and fertilisers that can damage soils and habitats.
  - plant on walls to help reduce heat loss, airborne dust, ground CO_2 and provide wildlife habitat
  - Plant trees shelter belt trees to reduce wind chill and provide summer shade whilst grounding CO_2 and providing wildlife habitat

Sustainable Acquisition of Materials can be improved through strict application of the following principles:

- Re-use materials from local sources wherever possible. Including reclaimed materials (e.g. second-hand timber) and recycled materials (such as glass / concrete or brick rubble for aggregates).
- Secure locally produced materials to minimise the impact of transportation and support the local economy. Specify that contractors do likewise and insist on examining their supply chain.
- Only buy reclaimed materials from reputable suppliers, to avoid supporting illegal markets of materials taken without consent or inappropriately from listed buildings and buildings of conservation importance, i.e. redundant buildings contributing to the environment of the area e.g. old farm, church and mine buildings which should not be 'robbed' of walling stone or slate.
- Only buy new materials from reputable suppliers, to avoid supporting illegal markets; i.e. specify that all timber hardwood and softwood is Forestry Stewardship Council accredited
- Assess when materials will be required and stagger delivery of materials to be 'Just-in-time'– causing lower likelihood of damage from handling and storage.
- Explore the local market in sustainable prefabricated elements, this has the following advantages;
  - Off-site manufacture is usually very well controlled and so it may produce less waste during construction to put together parts of the building off site.
  - External parts of the house will be erected quickly and internal fitting out may be done at the same time adding to efficiency in terms of reducing construction times. This could include foundations, using pre- cast ground beams on piled foundations for example, as well as the more obvious external and internal walls.
  - Specialist construction of some high rated sustainable elements off site may reduce some of the learning curves issues builders need to overcome to compete in a sustainable market place.

Sustainable Materials Choice can be improved through strict application of the following principles:

- Choose materials with a high-recycled content; recycled metals are often also more economically attractive, especially steel
- Ensure most materials that can be easily recycled when the life of the building comes to an end for example;
  - bricks, are easier to reclaim for reuse when lime mortar is used rather than Portland cement mortar.
  - Avoid composite materials that cannot easily be separated
- Favour materials from renewable resources over non-renewable sourced materials for example;
  - FSC certified timber rather than metal,
  - bio aggregates over primary sourced
  - linoleum made from natural oils and minerals rather than PVC
  - Specify FSC accredited high quality timber window frames and door jams rather than uPVC or aluminium.
  - Choose insulates based on such as sheep shoddy, recycled paper, straw, cork and hemp to create low impact, high thermal mass building and insulation materials
- Avoid materials such as plastic, steel and aluminium which require a high energy input in their manufacture and thus should be used sparingly.
- If stone is chosen for the benefits of being durable, easy to recycle, low maintenance and a high thermal capacity, it should be remembered that unless it is reclaimed these benefits are almost wholly offset by the need for transportation and the impacts of extraction.
- If brick is chosen for the benefits of being durable and re-usable, it should be remembered that unless it is reclaimed these benefits are almost wholly offset the high energy input into their production. This should be mitigated by specifying the sourcing of locally produced to reduce transport costs and the use of lime mortars in construction to facilitate recycling.
- If products such as cement and concrete blocks are chosen then lightweight versions using bio-mass such as hemp, waste or by-product materials should be specified.
- Specify the use of lime mortars in construction rather than Portland cements. Lime mortars not only to facilitate recycling but also significantly contribute to environmental health by absorbing nearly it's own weight of carbon dioxide from the atmosphere during the setting process.
- Choose timber for as many purposes as possible, for example structural timber, cladding, carcassing, window frames and door sets, internal joinery and panel products. Its growth locks up or grounds atmospheric carbon, its processing is relatively low energy and the thermally efficiency of the product is high. Take care however to ensure that it is sourced as locally as possible from well managed, independently FSC certified sources.
- Consider entering into the rapidly evolving use of Bio-Building Materials;
  - Packed Earth is highly sustainable requiring little energy in its manufacture and can be sourced as a by product of crop processing, i.e. beat cleansing for sugar production. It can provide high levels of insulation and in addition, earth sheltered buildings provide opportunities for habitat creation and landscape improvement.
  - Straw Bale is highly sustainable and can be sourced as a by product of cereal crop processing. It has incredible thermal mass and noise reduction properties.
  - Hemp is highly sustainable and can be sourced as a by product of oil crop processing. It also has incredible thermal mass and noise reduction properties.
  - Turf and sedum roofing which reduces rainfall run-off, improve insulation and provide habitat for birds and animals.
- Always use materials that do not produce toxic emissions within the building or whose production and end of life disposal leads to toxic waste;

- Choose natural water based paints or at least those low in Volatile Organic Compounds (VOCs).
- Many traditional wood preservatives used in timber treatment are toxic – attacking the nervous system and liver and increasing susceptibility to cancers. It is better to use hardwood, to avoid getting timber wet and to inspect and maintain the wood regularly. Ensure where timber elements are preserved it is with easily biodegraded low toxicity preservatives; Borates for example.
- Ensure paint strippers don't contain solvents such as dichloromethane, a known and highly toxic carcinogen that can be hazardous to health. In favour of those supplied by Environmental Buildings and décor suppliers based on water safe biodegradable alternatives and containing little or no solvents.
- Specify formaldehyde-free MDF
- Rule out PVCs in Window frames, doors and floor and surface coverings
- Rule out substances containing CFCs (chlorofluorocarbons) and HCFCs (hydrofluorocarbons); ensure CFC's aren't used as refrigerants in air conditioning for example
- Ensure insulants do not contain, or require during manufacture, ozone-depleting substances
- Ensure that fire suppression systems do not contain halons or penta/octa/deca-BDE (bromodiphenyl ether) flame-retardants

There is a growing body of research on the effects of long-term exposure to potentially hazardous materials such as adhesives, mastics, fungicides and other products containing solvents and other volatile organic compounds (VOCs). However, where there is little research available on the effects but a material may present a potential risk its use should still be avoided.

Maintenance

Subsection of the 'Buildings – Adaptability, Durability and Materials Chapter'

The ongoing maintenance, repair and refurbishment of buildings can have a greater environmental impact over their lifespan than their original construction. (Rethinking Construction 2003)

Strictly maintenance and management objectives should be considered at the outset or design stage of projects, as the choice of materials and complexity of its services and monitoring systems (especially for water and energy), will be crucial in determining how efficiency of its operation.

Maintenance responsibilities should be clearly defined, between occupants, utility companies, local authorities and specialist contractors. Owners and occupiers need to be provided with high quality guidance about using a new or refurbished building, improving their capacity and inspiration to optimise its 'green' potential. The onus should be on routine repair rather than replacement or structural change this is important as;

- In some older buildings some types of modernisation may trigger a decline that could threaten their survival.
- In some New Eco-builds some types of modernisation may affect overall performance of heating, ventilation and insulation.

On completion, buildings should be subject to Pre Occupancy Evaluation (POE) to ensure agreed standards have been met and to finalise the scope of maintenance contracts and guidance.

To Ensure Sustainable approaches extend through maintenance;

- Check the quality of the managing companies and/or maintenance contractors previous work and whether ISO-14001 certification has been gained. Take steps before entering into contracts to test their understanding of, and commitment to, sustainable projects, find out if they have been demonstrably successful in previous sustainable projects.
- Assess the future maintenance needs and regime at the design point to;
  - Devise a thorough, and realistic maintenance and assessment programme
  - Ensure that materials, labour and skills can be locally sourced
- Ensure contracts include measures to monitor environmental performance and enforce agreed penalties if targets are not met.
- Whilst choosing longer lasting materials and appliances that can save on operational and repair costs over time, avoid "maintenance-free" products if they involve the replacement of whole components rather than partial repair. Keep and check all manufacturers' servicing schedules.
- Ensure utilities controls are easily comprehensible and install accessible metering even if this is not required as it will provide an early warning system for problems.
- Ensure that funds and maintenance plans are available for routine, medium and long term management of habitats created or surrounding development schemes. Adjust seasonal maintenance regimes for soft landscaping to encourage wildlife and plant diversity, avoid herbicides and fertilisers that can damage soils and habitats.
- For larger schemes, consider training sessions or courses where key occupiers or managers can be 'targeted'.
- Provide a handover manual/occupiers pack with the option of a demonstration at handover; emphasising sustainable practices, clarifying maintenance responsibilities, explaining operating instructions for systems.
- Encourage occupier involvement in the management and monitoring of the developments environmental performance against targets for example;
  - In the analysis of energy and water meter readings.
  - In recycling waste.
  - In the upkeep of grounds / gardens.
  - By encouraging evaluation and feedback about living and working conditions.
  - By encouraging zero-tolerance for non-sustainable neighbourly conduct.

Standards, Policy and Legislation

Subsection of the 'Buildings – Adaptability, Durability and Materials Chapter' introducing policy framework containing the following information;

Local Context

Questions: Does the Authorities Local Plan include a policy relating to substitute materials?
Does this policy enshrine the re-use of building materials from other developments where this is technically and economically feasible as a top level priority?
Has the Local Authority considered facilities for or entertained favourable agreements with suppliers regarding recycled materials storage and distribution?
Does the local authority have a related policy requiring new buildings to be designed for flexibility with the future in mind including creating opportunities to adapt to the changing needs of occupants and the creation of flexible interior layouts?
National policy urges increased use of secondary or recycled aggregates, how do the regional and local planning policies reflect this?
Does the Local Authority have qualified BREEAM Assessors amongst its personnel in readiness for the adoption of the code on Sustainable Building?
Has the Local Authority developed a voluntary 'considerate and sustainable constructor's charter'?

To create a high standards framework to achieve genuinely sustainable objectives Members could adopt the step programme of inquiries and actions detailed at this point in the Energy Chapter

Regional context

Questions: How does the Local Authority know and evidence that at the regional level:

- Is sustainable construction is a key area of action for the Regional Assembly's do they have a Promoting Sustainable Development Group or equivalent?'
- Are there key objectives in the Integrated Regional Strategy to manage the natural resources of the region sensibly, minimise waste, and to encourage re-use and recycling of waste materials.
- What policies (list i.e. Policy 31,32) of the Regional Planning Guidance for promote the use of local building materials etc.
- Could the region facilitate – reducing costs to each Local Authority overall - the qualification of BREEAM Assessors in readiness for the adoption of the code on Sustainable Building

National Context

The Government has expressed its commitment to achieving more sustainable developments at the Better Buildings Summit in October 2004 which led to the establishment of the Sustainable Buildings Task Group (SBTG) chaired by Sir John Harman. The task group have now published two reports regarding the reduction of the environmental footprint of buildings including the contribution of building materials. The group have made further recommendations regarding the quality and sustainability of new and refurbished buildings.

The Government is committed to a new Code for Sustainable Building by April 2006 and has been recommended by the SBTG to;

- *Impose a condition on the contract sale of land bought from the public sector so that new housing must apply the code*
- *Adopt a standard of the Code comparable to the EcoHomes 'very good' …encouraging Regional and Spatial Strategies to do the same.*
- *Create a programme of action for.. Local Authorities to adopt the Code for Sustainable Building by April 2006*
- *Develop the Code to apply to existing housing stock*
- *Adopt Assessment arrangements based on BREEAM*
- *Ensure Part L of the Buildings regulations (on energy efficiency) achieve a 25% level of improvement. And adopt a robust post build checking regime through the buildings regulations to ensure a high level of compliance and enforcement.*
- *Deliver on its target 25% improvement in water efficiency in New Build through regulation*
- *Through the Buildings Regulations require industry to use minimum 10% recycled, reused or reclaimed materials in construction work.*
- *Bring in measures requiring new multi-occupancy build to provide space for the separate collection of recyclable materials*
- *Provide new policy and best practice guidance on Sustainable Building to accompany PPS1 incorporating the Code for Sustainable Building.*
- *Introduce fiscal measures rewarding building quality and environmental performance*

- *Use the compulsory introduction of the Home Information Pack to improve environmental performance of existing housing stock including water efficiency and eco-labelling.*

Source Sustainable Buildings Task Group report: one year on Progress 17th May2004 –17th May 2005

Such standards as adopted must be quickly incorporated into local authority policies, planning guidance and post completion checking regimes.

- **Building Regulations** require minimum standards for heat loss through the fabric of the building, heating, hot-water systems, the insulation of pipes and ducts and space-heating controls. April 2002 Revisions increased standards for the insulation of the building fabric and introduced extra standards for reducing cold-bridging at junctions between walls, roofs, floors and windows and reducing air leakage for all buildings. The performance of replacement windows and improvements to insulation if existing buildings are being altered materially. And proposed 2006 revisions on the conservation of fuel and power covering both dwellings and buildings that are not dwellings and targeting improved standards for the insulation of pipes and water storage, and minimum energy performance requirements for new buildings in the form of target CO_2 emission rates.

- **Revisions to the Planning Policy Statement 22 on Renewable Energy** now make clear that the wider benefits of renewable energy developments are material considerations in planning decisions.

- **Aggregates Levy**
  The aggregates levy, is applicable to any sand, gravel or crushed stone extracted in or imported into the UK. The levy makes the price of aggregates reflect environmental costs by increasing the cost primary sourced aggregates (in line with the 'polluter pays principle') and making the use of recycled and secondary materials more viable. Revenues raised are marked for the delivery of local environmental improvements aimed at delivering local environmental benefits to areas subject to the environmental costs of quarrying. The Aggregates Levy Sustainability Fund uses revenue from the Aggregates Levy to reduce the environmental impacts per tonne of aggregates extraction and helps to stimulate the market for recycled and secondary materials

- **Land remediation relief:** Businesses may claim relief from corporation tax if they clean up contaminated land, in the UK acquired by the company to carry out its trade and contaminated at the time it was acquired either wholly or in part. The relief can total upto of 150 per cent of the clean-up cost. Land remediation tax relief should be claimed for in **tax returns** and companies making a loss because of spending money on cleaning up land may apply for a tax credit of 16 per cent. The relief is only available to companies, not to individuals or partnerships.

European Context
Need more checking at this point as there have been a number of recent changes which need addressing.

International Context
By becoming a signatory nation of the 1997 Kyoto Protocol the UK has signed up to a legally binding target of reducing greenhouse gases as a whole by 12.5% by 2008-12. In line with the advice of the Intergovernmental Panel on Climate Change (IPCC) the UK must aim for a reduction of 60% in CO_2 emissions by 2050.

It will be impossible to achieve such targets without developer maximising the integration of energy from local renewable sources where ever possible**.** This might include solar space and water heating, solar electricity generation (photovoltaics), wind power, biomass fuel and other sources of energy.

Voluntary Standards
In addition to all the legislative standards there are also some voluntary standards which developers are increasingly choosing to meet, and which the Sustainable Buildings Task Group have used as indicative of the scope of the developing National code, these include;

Environmental Standard Award
The Environmental Standard Award is administered by the Building Research Establishment (BRE) and is intended to provide an indication that a development has reduced its impact on the environment. New homes are assessed under a range of criteria including emissions of greenhouse gases and CFC's, use of materials, site ecology, water use and levels of comfort.

BREEAM

For non-residential development assessment methods such as the BREEAM rating can be applied. Using BREEAM, buildings are given a score which provides an indication of their environmental impact. Issues considered include CO_2 emissions, healthy building features, air quality and ventilation, minimising ozone depletion and acid rain, recycling and re-use of materials, ecology of the site, water conservation, noise and lighting. Major building elements (i.e. upper floor slab, external walls, roof and windows) should achieve an overall 'A' rating as detailed in the Green Guide to Specification 'A' (BRE 1998).

ANNEX A

Renewable Energy

Renewable Energy, electricity and/or heat, is sourced from fuels;

- Which always replenish themselves, - such as the heat of the sun, wind and water movement
- Or with a little management can be continuously restored – such as wood, reeds, straw
- Or occur as the captured bi-product of other natural cyclic processes – such as the gasses produced from the anaerobic (airless decomposition by bacteria) of sewage or the decay of organic (primarily soft green) waste.

The following parts of the Chapter present a guide to;

- The different sources of renewable energy,
- Their associated technologies
- And practical considerations in respect of the applicability or ease of using a particular source in a given environment.

Biomass

Biomass: is the shared description for the controlled release and use of the energy potential locked up in **trees and plants** – straw, reeds or willow - or created as a part of regularly recurring natural processes – the bi-products of the process of decomposition or the bacterial **digestion** of natural things i.e. sewerage, various farm wastes or decaying material such as garden clippings and/or other largely natural materials such as paper.

Dry Bulk Green Biomass: releases the locked up energy through burning the primary fuel source - wood, straw, poultry litter (mix of straw and droppings) or crops purposely grown for energy such as miscanthus a perennial reed, rush or wet land grass. Energy produced from green biomass can be as adaptable as that from coal burning - i.e. everything from the heating of a domestic property to the fuelling of a national grid connected power plant. Like Coal burning green biomass produces Carbon Dioxide (CO_2), it fundamentally differs from the burning of gas, oil or coal however in the following respect plant life needs CO_2 which they take from the air or atmosphere to grow. As they do so they 'ground', or lock up the form of carbon that would otherwise contribute to global warming and release life giving oxygen to the animal kingdom. Green biomass fuel sources can therefore be described as 'Carbon Neutral' in that the carbon they produce as CO_2 on burning is generally less than or equal to the carbon they use and render safe whilst growing.

Green Biomass Primary Sources

- **Straw** is a natural bi-product of cereal or seed-oil crop production in the UK and can either be used straight after the harvest of grain, or burnt

after it has been used as bedding for livestock; extending the marketable value of the product for our agricultural industry.

- **Wood** or more accurately trees, particularly those species that can be grown on short rotation coppice or pollard[1] like Willow, Plane and Poplar have a variety of additional benefits depending on the location of source. Willow has been used for many hundreds of years for the ability of its roots to stabilise and add structure to fragile river banks that would otherwise be more likely to silt up rivers and contribute to overspill and flooding; CO_2 related global warming has increased the likelihood of flood incident in the UK. Poplar and Sycamore are highly resistant to pollutants and can be planted in close proximity to city environments cleansing air and making city living healthier where other species would die. Vigorous young Poplars[2] are relatively resistant to pollutants, have a rapid growth cycle and add value as graceful compact shelter belt forms.

  Other sustainable sources of wood include forest management bi-products left over from timber processing, grounds maintenance/tree surgery waste and reclaimed demolition timber etc. Whilst non coppiced or pollarded wood is also a potentially valuable source of biomass it must come from FSC certified sustainable sources, where trees felled for fuel, are replaced by an equal or greater planting of new trees of the same kind.
- The growth of **Miscanthus** is best suited to water meadow (places that get wet or flooded in winter but drain naturally in summer; may sometimes be described as flood plain habitat. Historically these environments have been under threat due to forced drainage to create further space for economically viable agricultural land.
- **Oil seed crops** such as Rape, Hemp and Maize (Sweet Corn) are already being processed to produce alternative sources of transport fuels to petrol or conventional diesel such as ethanol (a form of alcohol) and **biodiesel**.

  In addition to the production of seed for oil, **Hemp** stem fibre can be used in the production of fine grade natural fibres equivalent to cottons, thermal mass insulation or as a fuel in the same way as straw. Unlike Cotton agricultural Hemp will grow in UK climatic conditions – cutting out or largely reducing the transportation impacts - and needs little or no pesticide or supplementary fertiliser minimising other environmental pollutants.

  The stem fibres and husk of other oil seed crops whilst not as adaptable as Hemp may be used in digested to burn or burnt.
- Non-hazardous organic industrial, construction or municipal bio-wastes (such as arboricultural thinnings) may also be applicable. Additional care must be taken with such sources to guarantee that emissions and residues from such waste to fuel sources don't cause environmental problems.

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[1] coppice or pollard: the controlled cutting of a tree to promote rapid shoot growth which is harvestable on a recurrent basis usually 3-4 years,

[2] Poplars due to their tall tongue shaped growth (which catches the full brunt of prevailing winds) and susceptibility to concealed heart wood rotting should, on a relatively short aging cycle, be renewal felled and replaced in the interests of public safety.

Anaerobic Digestion captures and diverts for fuel the methane produced by the rotting of **wet wastes** (such as soft green materials including municipal bio-wastes or slurry) in temperature-controlled containers through a process known as anaerobic digestion. This can then be used to fuel gas engines producing electricity and heat.
Examples of chicken litter combustion, animal slurry digestion and straw combined heat and power projects are already powering well in this country. Adoption of digestion systems may offer local authorities an opportunity to manage compostable green wastes more effectively.

Biomass to Power
At domestic to medium scale (municipal or office build) wood may be used as wood chip, wood pellets or logs, in wood/pellet burning stoves or wood chip/pellet boilers for space and water heating. For single room heaters or stoves with automated wood pellet feed used for heating a single rooms and hot water or a whole house.

For commercial or larger scale community electricity production wood and other biomass materials can be used in a variety of ways generally assessed on the scale of production desired;

- In electricity producing combustion plants the material is burned to effect steam generation.
- Gasification plants heat the material with air steam or oxygen in such a way that gases are given off for burning in boilers, chambers or turbines.
- Or through Pyrolysis processing plants where the green material is heated in the absence of oxygen producing;
    - Combustible gases of an energy value generally ½ that of natural gas,
    - Low energy charcoal which can be upgraded if required
    - and a bio-oil liquid effluent (which must be treated to prevent water pollution.

Most medium to large scale biomass generation lends itself to co-generation or the production of combined-cycle or combined heat and power (**CHP** see below) production improving the total energy output of the operating system. Depending on the primary fuel source and generating system deployed the ashes formed may be applicable for use as;

- Soil improvers/fertiliser for agricultural purposes
- Road clinker
- Or must be considered and assessed for safety as landfill

Large scale Biomass also presents established grid connected opportunities to explore **Co-firing Potential,** where a proportion of the energy produced from fossil fuel combustion is supplemented.

Critical Factors in Assessing the applicability of Biomass:-

Availability of primary fuel source: -

- Land use in the Yorkshire and Humber Region is chiefly agricultural, rural areas covering around 80% of the region; accounting for about $^{1}/_{5}$ of the population. Cereal, seed oil and hemp crop production are pre-established in the York area. In addition to which there may be sufficient animal husbandry – assessments regarding the relationship to pig, cattle and poultry - to support litter based and/or slurry digestion biomass systems. These possibilities could possibly create secondary income streams for the farming community, and additionally CHP nets for 'off-gas' communities which are generally rural thus creating a valuable sustainable cycle.
- Large tracts of the N.York Moors are given over to managed forestry, however, the home demand for the supply of good grade sustainably sourced building timber should take precedence over fuel supply, reducing likely overall volumes for biomass to sawmill processing waste.
- The Vale of York has some tracts of degraded or species poor flood meadow (which would need careful differentiation from species rich acreage) and river margin which might be considered for environmentally aware miscanthus production and/or willow coppice.

Security and Costs of Supply: -

- Transportation costs and associated emissions are a significant factor in determining the economic and sustainable viability of Biomass. Depending on the energy value of the primary fuel type, experts suggest that ideally the harvest or collection site should be between 10-25 miles from the energy conversion site.
- Secure primary biomass sources are well evaluated on their understanding of timed cycles of source renewal, demand, storage and handling required. Or the ability to predict the local capacity to produce the required volumes of the chosen fuel material to maintain constant and efficient operation of the system over a period ensuring systems life profitability once processing, generation, staffing, transportation, waste management and other associated costs have been deducted.

Design and Permissions: -

- Generally a high level chimney or twin walled stainless steel pipe flue are required to vent gasses released on combustion away from the building, for safe atmospheric dispersal; such flue systems may be fan assisted to improve performance.
- For medium to large scale combustion systems wall mounted air-grill ventilation is required to provide adequate combustion flow, domestic burners and stoves draw from room which will need adequate through flow from air-bricks or similar. Flow does cause some heat loss which can be compensated for by fitting positive pressure ventilation in the roof space and heat recovery systems.
- The Local Authority Planning Department should be contacted prior to flue fitment especially where proposed flue heights exceed the roof-line

as planning consent is likely to be required. The Planning Department will also wish to consider proposals in respect of their relationship to conservation areas and areas of outstanding natural beauty.

- Under the clean air act wood must only be burned on exempt appliances in smokeless zones.
- Installation must comply with safety and buildings regulations.
- Local Planning Authorities handling applications for anaerobic digestion, must carefully consider the potential impacts of odour and proposals put forward for its control. Where odour would have an impact, plants should not be located in close proximity to existing residential areas. (Planning Policy Statement 22: Renewable Energy)
- Whilst the need to transport fuel to Biomass plant may lead to increases in traffic in determining planning applications, and should ensure this is minimized by citing plants as close as possible to proposed fuel sources, the authority should recognise that the primacy of other considerations (i.e connections to the Grid and the potential for CHP). (Planning Policy Statement 22: Renewable Energy)

Biomass Exemplars
The UK has some of the largest examples of the use of Biomass to generate electricity in Europe.

Large Scale
At 38MW Ely Power Station generates over 270GWh each year and is possibly the largest straw burning power station in the world. Planning permissions have allowed Ely to successfully incorporate oil seed rape and miscanthus fuel sourcing in addition to cereal straw. The plant requires 200,000 tonnes of fuel each year; supplied by Ely's sister company Anglian Straw. The power output from the plant is sold under an NFFO contract that terminates in 2013.

At 38.5MW generation, Thetford chicken litter fuelled plant Norfolk consumes 420,000 tonnes of litter each year and is possibly the largest biomass plant in Europe. The plant located at the heart of poultry production in England uses litter sourcing managed by a dedicated team. The plant has successfully trailed the burning of feathers and other agricultural residues. EPR operates and maintains the energy plant and as a bi-product quality fertilizer is marketed through a group owned subsidiary. Power output from the plant is sold under an NFFO contract that expires in 2013.

Small-Medium Scale
In Feb 2004 RSPB Wetland Centre Old Moor South York's entered into contract with a local sawmill for delivery of 1 ton of sawmill off cut material – delivered bi-weekly (summer) and twice weekly winter - to power a 100KW boiler.

For more Information:-

British Biogen - The Industry Trade Association; for more information about every aspect of biomass in this area www.britishbiogen.co.uk

DEFRA, English Rural Development Programme; for advice about support schemes for growing energy crops and establishing producer groups. www.defra.gov.uk/erdp/shemes/energy/default.htm

The National Non-Food Crops Centre, York; for advice about systems, crops and industry contacts www.nnfcc.co.uk

Clear skies for; individual and community grant support for automated pellet feed room heaters and stoves. www.clear-skies.org

Heat Pumps

Heat Pumps rely on the absorption of the heat produced by the sun being drawn into a compression unit with an evaporator coil heat exchanger which works like a fridge in reverse; making it possible to produce heat from external air temperatures of as little as –15^{o} C, or constant UK ground (12ºC), or water temperatures.

All heat pumps require an **operating power supply**; preferably solar photovoltaic panels or a wind turbine if the system is to be considered truly renewable. For each unit of energy the pumps use they will generate 3-4 units of power so other sources of operating supply would still deliver 60-75% renewable heating. Users could also consider subscribing to a green tariff scheme, promoting the use of renewables by generation companies.

With Air Source;

- The Heat pump **compressor** which takes the air delivered and upgrades it using the latent heat of a refrigerant to up to 75^{o}C.
- The heat gained is transferred to a space heating distribution system such as conventional radiators.

Critical Factors in Assessing the Applicability of Air Source Heating

- Systems are low noise, robust and reliable requiring little maintenance and offering a typical 20 year life expectancy.
- The units are small (roughly the size of a large suitcase) and wall mounted
- Safety characteristics rank high as there is no reliance on combustion
- Systems are most effective for smaller scale units with fairly high constant level heating demands i.e. domestic or office space etc
- Systems are simpler to install than ground source

With Ground Source

- A **closed underground, piping circuit** which has water pumped through it as the conducting medium transferring the underground energy. There are two principal types;
    - **Vertical heat exchangers**; which run deep into a narrow shaft fairly close to the building

  - Or Horizontal or **Slinky Exchangers** where the pipes coil in long narrow trenches away from the building
- The Heat pump **compressor** which takes the water delivered at about 11°C and upgrades it using the latent heat of a refrigerant to between 40-50°C.
- The heat gained is transferred to a space heating distribution system i.e.
  - Under floor heating (which is the most efficient)
  - Low surface temperature radiators
  - Or low temperature air distribution

Critical Factors in Assessing the Applicability of Ground Source Heating

- Systems are low noise, robust and reliable requiring little maintenance and offering a typical 20-25 year life expectancy.
- Safety characteristics rank high as there is no reliance on combustion
- Reversible ground heat systems can also be used to remove heat from a building and deposit it back into the ground to cool the building during hot weather
- Supplementary systems are required if the system is used for hot water provision as ground source alone will not heat to required levels for pasteurisation; this could be solar.
- Systems are most effective for units with fairly high constant level heating demands i.e. schools, residential care homes etc
- Systems will actually work more efficiently in the presence of a high water table

Water Source; works roughly equivalent to ground source only the piping circuit is laid in flat loops at the bottom of a pond or lake.

Design and Permissions: -

The permissions pointers for the operating power supply will need to be considered i.e. if solar see relevant permissions summary.

There should not be need to obtain Planning Consents for the ground source system itself as it hidden within the building or ground.

There should not be need to obtain Planning Consents for the air source system in anything other than protected builds or conservation areas.

Heat Pump Exemplars: -

For more Information:-

Heat King manufactured in Brighouse for information about local supply www.heatking.co.uk

The European Heat Pump Website; www.fiz-karlsruhe.de/hpn/hpn.html

The UK Heat Pump Network for; finding out more about the developing market and environmental and economic best practice www.heatpumpnet.org.uk

The website of the Ground Source Heat Pump Club: www.gshp.org.uk

Clear skies for; general information about Ground Source Heat systems, and, individual and community grant support for installation www.clear-skies.org

The Geothermal Heat Pump Consortium for; a range of residential and commercial sector case studies as well as technological information www.geoexchange.org

The IEA Heat pump programme for; information serving the Industry needs on policy, development and distribution www.heatpumpcentre.org

Hydropower

For centuries we have used water wheels to drive mills and machinery, Hydropower could indeed be described as the catalyst of the industrial revolution in this country. In 2004 modern Hydropower accounted for the largest share of renewable sourcing, some 4% of all electricity produced in the UK. Most generation still comes from large dam projects installed many years ago but small scale hydro is increasing, and it is suggested that the York's and Humber region has potential to create at least 9.5MW of capacity from smaller scale generation.

All hydropower technologies turn the potential or kinetic energy of water into electrical generation by means of a hydro turbine.

Small Scale Hydro Turbines comprise of;

- Water power "dropped" from behind a dam or storage reservoir or from a flow head within the river such as water intake above a weir or behind a dam. It is now possible to produce a few tens of kilowatts of electricity from low water "heads" of 2 - 3 metres.
- After adequate volumetric flow and/or water pressure - which will determine the amount of power attainable - have been established most hydro systems require a water transport system and flow control system channelling the water to the turbine.
- Water passing through the turbine generates energy in the same manner as the blades of a wind system, the turbine is connected to an electrical generator converting the kinetic energy into electricity.
- The electricity generated in small systems may be direct current (DC) which can be stored in batteries but needs to be run through an invertor or DC/AC converter producing Alternating Current for domestic circuit use. Electricity may also be diverted to the grid.
- The water passed through the turbine then directed back to the water course through an outflow.

Critical Factors in Assessing the Applicability of Hydro Power: -

- As a general rule of thumb, capital costs rise as available head decreases. Sufficient head to give an output over the systems life ensuring payback of the installation investment capital should be established.
- A degree of existing infrastructure, i.e. a disused mill/weir etc are likely to improve project profitability.
- Costs vary immensely depending on the type of hydro resource available and the system installed.
- A system producing less than 10kW may not worth grid connecting, unless grid connection infrastructure is already present. 10kW size systems are better suited to battery charging or secondary backup for a critical load, such as old generators.

Design and Permissions: -

A licence needs to be obtained for a hydro project from the Environment agency.

Planning permission may also be required from the local authority.

Hydro Exemplars: -

For more Information:-

For more information about hydropower and list of suppliers, please visit the British Hydropower Association's website at www.british-hydro.org

For information on grants, please visit the Clear-Skies website at www.clear-skies.org

Solar Energy

Sunlight is a free, constantly renewed source of light and heat, and its benefits are increasing being built-in to new developments or added into refurbishment or re-use projects. There are three primary approaches used to harness solar power in the UK today;

- **Passive-solar gains**,
- **Photovoltaic** cells that generate electricity,
- and **Solar-thermal** panels that heat water.

Passive-Solar Gains: rely on design specifications and material elements aimed at maximising the conversion of sunlight into heat and significantly reducing the amount of heating required to achieve and maintain thermal comfort. To build in solar gains and maximise the absorption of radiant energy into the buildings fabric buildings should be;

- Orientated with the main elevation or glazed face of the building to within 30 degrees of due South
- Spaced to ensure buildings structures, shelter break planting and high walls don't overshadow. Note, however, that the planting of native deciduous trees to reduce overheating in summer whilst minimising shadowing in winter should be considered.
- Incorporating a greater proportion of glazed areas on the southern elevations to increase passive solar gain and natural day lighting.
- Using roof lights and atriums to bring light and solar heat into the centre of buildings.
- Using advanced solar and double glazing systems for windows and doors; preferably framed with sustainably sourced wood.

Whilst full application of passive-solar gains techniques may not be practical in all locations due to prior spatial positioning, as many of the techniques as possible should be incorporated into re-use, refurbishment or new build projects to reduce the reliance on supplementary energy sourcing.

Photovoltaics:

'Photovoltaic' is a word conflation of the Greek *photo* meaning light and *voltaic* associated with energy production.

Photovoltaic (PV) systems or PV cells are constructed using thin layers of semi-conducting material, most commonly silicon, which on exposure to light, generate electrical charges. The charges are conducted away by metal contacts as direct current (DC) to an invertor or DC/AC Converter providing Alternating Current for domestic circuit use. Alternatively DC can be used of a specific DC lighting circuit, but this technique is primarrly used in properties that are not grid connected.

To give the desired electrical output multiple cells must be connected together , as single cell output is small, the cells are encapsulated (typically in glass) to form a **module** or 'panel'. Electricity produced can either be used immediately or stored for later.

Photovoltaics lend themselves to a variety of familiar applications and operation scales. Simple cell systems are commonplace in calculators and watches, mini panels in some battery collector systems for domestic burglar alarms, garden lighting or fountains, and increasingly larger systems for parking meters and street lights.

The adaptability of PV lends itself to larger scale output where multiple PV modules or panels are connected together to form an **array**. When production exceeds demand arrays can be grid connected to the electricity network selling power back to an electricity supply company. Grid connection acts as an energy storage system, eliminating the need to include battery storage into the PV system.

Critical Factors in Assessing the applicability of Photovoltaics:-

PV technology offers enough scope to potentially generate pollution and noise-free electricity in any environment without necessarily using extra situational space.

- PV modules or arrays generate more energy when they are positioned in fixed units facing near south (south-east, south-west) away from any shadows from trees, surrounding buildings or chimneys at a tilt angle of 30-60 degrees or mounted on solar tracking systems.
- They can be incorporated into the buildings façade in a number of ways, sloping rooftops using frame mounts being ideal, where the frame provides an underflow air path to avoid excess heat build up under the panel.
- Photovoltaic systems can also be incorporated into the actual building fabric for example;
- Monochrystalline glass encapsulated cell systems – life expectancy 25-30 years - can be incorporated into the glazing of conservatories or sunroofs where the building provides airflow.
- Polychrystalline cell systems – life expectancy 20-25 years – have an iridescent blue black mirror glass finish which can be usefully incorporated to stunning aesthetic effect in wrapped roof arrays on modern builds.
- Amorphous systems have a matt colourised finish that may be more architecturally discrete for some locations. PV roof tiles are also now available and can be fitted as would standard tiles making them a good choice if re-roofing is required. This rapidly growing market in PV innovation, is being mainstreamed by the UK Major Photovoltaic Demonstration Programme who may provide project funding; see www.solargrants.org.uk.
- Photovoltaic systems can be the most cost effective power source where grid power supplies are unavailable or difficult to connect to. PV adapts well to combined sourcing for community generation networks where biomass, wind or other renewables generation, forms part of a hybrid power supply system.
- Consideration should always be given to the desired systems output or electricity needed which should be a determining factor in the type of system chosen.
- To directly generate hot water – solar-thermal not PV technology is required.

Solar-thermal

Solar Panels, also known as solar-thermal "collectors", use the sun's heat to warm water, or another liquid, as it is passed through the panel. The warmed fluid then progresses to a heat store (at the simplest level a hot water tank) supporting the provision of hot water or space heating via a central heating system. Solar thermal collectors will work throughout daylight hours, even if the sky is overcast and there is no direct sunshine.

Critical Factors in assessing the applicability of solar-thermal: -

Solar thermal technology comes in two varieties - flat plate and evacuated tubes - and will potentially generate around 50-60% of a buildings hot water requirements pollution and noise-free over the year; in summer months the output will be greater with either system. The Department of Trade and Industry estimate that half the existing UK housing stock could easily be fitted with solar hot water panels.

Flat plate collectors are the simplest form and generally have a lower efficiency than evacuated tube systems that may require location over a larger surface area to meet demand. They are constructed from sheet metal painted black (encouraging absorption of the suns energy) and housing coiled piping attached to the sheet panel that picks up the heat from the metal. The unit is set in an insulation box covered with glass or clear plastic at the front reducing heat loss and exposure, the pipes are generally copper improving conduction and in the UK climate pipe work contains non-toxic anti-freeze (glycol). The hot liquid passes through transfer piping which passes through the water storage system loosing its heat load before returning to the collector.

Evacuated Tube collectors: are more efficient systems, which rely on the grouping of highly insulated vacuum tubes, reducing heat loss from the absorption surface.

- Optimum systems size should be calculated using software to simulate system performance throughout the year. Typical UK domestic installation uses a flat plate panel of 3 to 4m^2 or evacuated tube system 2m^2 connected to a storage tank of 150- 200L, at the other end of the scale solar-collectors are being used for large scale water heating in swimming pools and leisure centres. Over-sizing of domestic systems is unlikely to justify the greater investment in additional energy savings.
- During the summer months modern systems can be so efficient that the hot water may run too hot, creating a risk of scalding. To protect the young and old who are most vulnerable and reduce this risk the installation of thermostatic mixing valves as part of the system approach should be considered.
- The system will usually require the installation of a new large hot water cylinder. Vented cylinder systems work with a cold pressure cistern systems housed in the loft. Mains pressure (un-vented) cylinders and thermal store cylinders ensure hot water is maintained at the same pressure as the mains supply allowing, for example, the running of power showers without additional pumping.
- Costs for professional installation vary significantly and independent advice should be sought to ensure the best system for the situation and value for money. Collectors should have been independently tested for thermal performance (to BS EN 12975 or BS EN 12976 standards) and suppliers should provide this information. The Clear Skies website (www.clear-skies.org) or scheme help-line on 08702 430 930 is a good first point of reference.

Design and Permissions

- The Local Authority Planning Department should be contacted prior to the installation of collectors or PV if there are proposals to install in conservation areas.
- Installation must comply with safety and buildings regulations.

Solar Exemplars
The Region already has some of excellent examples of the use Solar PV and Solar thermal

Large Scale
Primrose Hill Solar Regeneration Initiative, Newsome, Huddersfield
PV and solar thermal installation on 121 new and existing houses commenced in March 2005 on existing properties and new build in late 2005. On completion this will be one of the largest comprehensive solar installations in the country delivered as part of an overall regeneration plan for the Primrose Hill area. Combined capacity will deliver 76,706 kW/yr PV
108,990 kW/yr Solar Thermal creating annual savings of 33 tonnes of CO2 and £4,985.90 PV (@6.5p/kWh) from avoided electricity import.

Medium Scale
Titanic Mill CO_2 neutral development, Linthwaite, Kirklees
Mill conversion to luxury apartments project incorporating a roof mounted 50kWp solar PV system generating 38,115 kW/yr, saving annually 16 tonnes of CO_2 and £2,401 (@6.3p/kWh) in avoided electricity import. It is also proposed that the Mill uses hybrid sourcing through biomass, to make the development carbon neutral once completed.

Fieldside Place, York?

Small Scale

For more Information:-

Solar Trade Association's website at www.solartradeassociation.org.uk

PV-UK The Photovoltaics Industry Trade association www.pv-uk.org.uk

For UK PV grants; www.solarpvgrats.co.uk

Clear skies for; general information about Solar Collectors and PV systems, and, individual and community grant support for installing Solar Collectors and PV systems www.clear-skies.org

Wind

People have wind energy as basic mechanical power for grain milling and water pumping for centuries. Wind **turbine** technology harnesses the energy of the wind more fully to generate electricity for export to community networks, the grid or single applications.

Wind Energy is used across a broad spectrum of applications in the UK from the charging of small battery systems producing electricity remote from the distribution network, to large multi-turbined **wind farms** producing electricity on the scale of conventional power stations.

Wind turbine systems comprise of ;

- A set of blades - most commonly three - mounted on a horizontal axis with a rotation pivot which will move the blades to capture the most favourable directional force.
- The blades are connected by a rotor shaft, either directly to an electrical generator, or to a generator via a gearbox for larger turbines.
- The electricity generated in small systems tends to be direct current (DC) which can be stored in batteries but needs to be run through an inverter or DC/AC converter producing Alternating Current for domestic circuit use.

Critical Factors in Assessing the Applicability of Wind power: -

- Low cost electricity can be produced the windiest sites for as little as 2 pence per kWh, comparing more than favourably with increasingly costly electricity from conventional sources. Typical wind powered electricity costs between 2p/kWh and 10p/kWh dependant on scale and location.
- Wind power produces no pollutants or emissions during operation and modern designs are generally quiet. Energy used in the manufacture of the system is repaid within 3-9 months of operation.
- The near silent operation of modern designs is described as causing less noise than the wind in the leaves of a tree. Gearbox free turbines are always best for noise sensitive environments. Local Authorities are required to assess[3] aerodynamic noise from installations such as wind turbines and ensure that they are located and designed in such a way to minimize these. (Planning Policy Statement 22: Renewable Energy)
- Small wind turbines can be situated on the top of buildings or towers in the built environment to capture the increased wind speeds at higher levels; these must be very securely mounted however as strong gusts and turbulence will otherwise cause vibration of the turbine increasing wear. The advice of a structural engineer regarding mounting implications should be sought.
- Land used for situating turbines does not diminish in agricultural value and both short and long term job opportunities are created in the building and maintenance of turbines.
- Wind systems may be perceived as visually impacting upon the environment, whilst this is less likely to be a valid objection with small scale applications in built environments it is still the most contentious aspect in locating wind farms.

Design and Permissions: -

[3] The 1997 report by ETSU for the Department of Trade and Industry should be used to assess and rate noise from wind energy development this is available at http://www.dti.gov.uk/energy/renewables/publications/noiseassessment.shtml

The Local Authority Planning Department should be contacted prior to the installation of turbines as they will wish to consider proposals in respect of their relationship to conservation areas or areas of outstanding natural beauty.

Local Planning Authorities should not treat wind turbine proposals prohibitively, issues of impact on air-operations and separation distances from power-lines, roads, and railways should be addressed by the developer before submitting planning applications and not included in local authority policy. (Planning Policy Statement 22: Renewable Energy)

Installation must comply with safety and buildings regulations.

Wind Exemplars: -

For more Information:-

The British Wind Energy Association – the largest renewable energy trade association in the UK - for; more information about wind power and a list of suppliers, www.bwea.com

Clear skies for; general information about turbine systems, and, individual and community grant support for installation www.clear-skies.org

Other

Biodiesel is primarily applicable to transport at the present time. Most car manufacturers will support a blend of 5-10% Biodiesel and 95-90% fossil diesel and this is increasingly available in petrol stations, blends can match conventional fuel performance in most cars without engine adaptation and consequently the market place availability of these new fuels is expanding.

With minimal cost engine modifications, filtered vegetable oils can also be used as effective fuel for diesel powered engines; modification kits are now readily available for DIY or garage adaptation and don't stop the engine running on fossil diesel if necessary. Biodiesel can also be prepared from used vegetable oils (from industrial food processing, restaurants etc.)

For more information: -

British Association for Bio Fuels and Oils (BABFO) – the trade body for producers: www.biodiesel.co.uk

Veg Oil Motoring: www.vegoilmotoring.com

For Biodiesel retailers: www.biodieselfillingstations.co.uk

For suppliers of Biodiesel: www.rixbiodiesel.co.uk
or www.broadlandfuels.co.uk

Or if your thinking of making your own: www.lowimpact.org

Geothermal energy takes the form of heat rapidly conducted from the earths molten core to reservoirs within 10K of the earths surface. This may naturally create, or be used to create, superheated steam powered generation and hot water and space heating for community networked industrial, agricultural and domestic application. Geothermal offers huge global energy supply potential and already powers plants in Italy, the USSR New Zealand and the US. Iceland's capital city Reykjavik sources 95% of its buildings heat requirements from geothermal springs supplying 86℃ heated water. Unlikely application to York's and the Humber.

Combined Heat and Power (CHP[4]) is not in and of itself a renewable energy source, CHP units were originally designed to maximise efficiency in fossil fuel firing, using natural gas, commercial grade oils and coal. Increasingly however CHP is used to maximise the energy potential of co-fired plants, waste to fuel systems and biomass combustion. The latter application being totally renewable, in this application CHP delivers the double bonus of creating significant reductions in greenhouse gas emissions additional to the carbon neutral primary sourcing.

The application of Combined Heat and Power improves the efficiency of traditional combustion power generation by reclaiming the heat produced as a by-product of electricity generation; as little as 35-50% of the energy value of fuels used in large power stations are converted to power. Diverting the reclaimed heat load through CHP systems for local space heating requirements raises the useable energy value of the primary fuel source by another 35-40%. CHP systems will also reduce the amount of primary fuel required for heating and electricity generation by around 35% and cuts in overall CO_2 emissions of 30% may also be expected.

The core components of a CHP system are;

- A fuel feed to a prime mover the combustion engine driving the generator and creating the heat source; in larger systems one or more prime movers usually driving electrical generators
- The generator itself producing electricity, coupled to the prime mover
- A heat recovery system processing heat from generator exhaust and the generator itself through a radial exchange cycle cooling system.
- Heat generated in the process is usually piped away into the equivalent of large-scale community or district radiator systems for space heating.

Critical Factors in Assessing the applicability of CHP: -

Primary considerations are the same as for biomass in respect of;

- Secure local availability of the fuel choice
- Permissions for chimney height and the appearance of the plant and measures for the mitigation of air pollution.

[4] Sometimes described as 'cogeneration' or 'total energy', particularly in the United States or European Union

The economic benefits of retro-fitting CHP – particularly when an old boiler system needs replacing for example - for smaller scale single user applications are well understood, in 2002 43% of UK CHP schemes had an installed electrical capacity of less than 100 kWe[5].

CHP at medium to large scale requires the co-development and installation of community heating network infrastructure lending itself well to the redevelopment of urban sites, new community build or rural cluster expansion.

- Higher build densities and layouts reduce the pipeline lengths servicing buildings thus reducing loss between point of heat production and delivery. Layouts of 40 to 45 dwellings per hectare have been suggested.
- Combined industrial and residential uses including hospitals and schools have been proven to successfully spread heat demand over different time periods making for better use of the output.
- A base with facilities for the CHP plant engineering, operations and maintenance staff will be required and including one major institution – i.e. government offices, a leisure centre or a hospital - may help provide this.
- Surplus power may be sold back to the grid.

Design and Permissions: -

See biomass

For more Information:-

www.cibse.org/chp

Information about micro-CHP which is expanding in the UK ;
www.microchp.co.uk

Hydrogen Fuel Cells are electrochemical conversion units which change oxygen and hydrogen into water producing electricity and heat during the process. The cells do not need recharging and will run constantly so long as they are fed oxygen and water.

Obtaining sufficient Hydrogen to feed the cells is done by splitting oxygen of from water molecules through electrolysis and this requires a power supply which will only make a fuel cell use renewable if the primary energy source is. The obvious benefit of renewably powered fuel cell technology is that the only by product is water.

Fuel cell technology is still at demonstration stage and therefore too costly and under tested for wide scale recommendation, wider scale commercialization is anticipated by 2010.

For more information: -

[5] DTI's Digest of UK Energy Statistics 2002

The Department of Trade and Industry website for independent information www.dti.gov.uk/energy/renewables/technologies/fuel_cells.html

Renewable Energy Standards, Policy and Legislation

Subsection of the Renewable Energy Chapter introducing policy framework containing the following information;

Local Context

The (*Local Authority)* (*add where applicable* Energy Strategy, Fuel Poverty Strategy, Climate Change Strategy, Environment Strategy) and vision place a strong emphasis on low energy design, the promotion of renewable energy and increased sustainability within the (*Local Authority)*.

The (*Local Authority)* Local Plan now (check) places requirements on most developers to demonstrate that they have fully considered the use of renewable energy technologies and the possibility of connecting to a community heating network system based upon CHP (*policy/policies???? see Appendix (X) consider Hyperlink for web based versions*). Energy efficiency issues must also be considered in the design process (*policy ???? see Appendix (X) consider Hyperlink for web based versions).*

Planning Policy Statement 22: Renewable Energy

States that;

1. **Developers** of renewable energy projects should engage in active consultation and discussion with local communities at an early stage in the planning process, and before any planning application is formally submitted.

2. **Local Development Documents should** contain positively expressed policies **designed to promote and encourage**, rather than restrict, the development of **renewable energy resources**. These should incorporate;

- Targets – which may be regionally devolved - for renewable energy projects in all new developments and some existing buildings, requiring a percentage of the energy to be used in new residential, commercial or industrial developments to come from on-site renewable energy developments. Such policies:
  - should ensure that requirement to generate on-site renewable energy is only applied to developments where the installation of renewable energy generation equipment is viable given the type of development proposed, its location, and design;
  - should not be framed in such a way as to place an undue burden on developers, for example, by specifying that all energy to be used in a development must be from on-site renewable generation.

Nb: Many Local Authorities are incorporating targets at levels above the recommended 10% by 2010 and 20% 2020 and/or at intervals interim to the basic targets to encourage more rapid assimilation of renewables into the locality.

- Only focus on the key criteria that will be used to judge applications. More detailed issues may be appropriate to supplementary planning documents.
- The specific requirements of renewable energy developments in both urban and rural areas.
- Recognise that some previously developed sites, whilst being unsustainable in terms of other land uses (e.g. a site in a remote location unsuitable for housing) may offer opportunities for developing some forms of renewable energy projects.
- The minimisation of visual effects (e.g. on the siting, layout, landscaping, design and colour of schemes
- Local Strategic Partnerships should foster and promote community involvement in, knowledge and greater acceptance by the public renewable energy projects
- Create criteria based policies which set out the circumstances in which particular types and sizes of renewable energy developments will be acceptable in nationally designated areas. Small-scale developments should be permitted within areas such as National Parks, Areas of Outstanding Natural Beauty and Heritage Coasts provided that there is no significant environmental detriment to the area concerned.
- Only allocate specific sites for renewable energy in plans where a developer has already indicated an interest in the site, has confirmed that the site is viable, and that it will be brought forward during the plan period.

Local Development Documents should not;

- Create planning policies ruling out or constraining the development any type of renewable energy technologies in any given location without sufficient reasoned justification. Government may intervene in the plan making process where it considers constraints proposed by local authorities are too great or poorly justified.
- Set arbitrary limits on scale of installations and noting for instance that visual impact may only be temporary if conditions are attached to permissions which require the future decommissioning of the installation
- Create “buffer zones” around international or nationally designated areas and apply policies to these zones that prevent the development of renewable energy projects
- Make assumptions about the technical and commercial feasibility of renewable energy projects. Technological change can mean that sites currently excluded as locations for particular types of renewable energy development may in future be suitable.
- use a sequential approach in the consideration of renewable energy projects (giving for example priority to the re-use of previously developed land for renewable technology developments) but encourage renewable

energy resources where ever the potential resource exists and will be economically feasible.

When dealing with Planning Applications Officers should;

- Recognise that wider environmental and economic benefits of all proposals for renewable energy projects, whatever their scale, are material considerations that should be given significant weight in determining whether proposals should be granted planning permission.
- Deal with the visual effects of installations on a case by case basis according to the installation type location and the landscape setting using objective assessment
- Give careful consideration to the visual impact of projects, located in the green belt, and encourage developers to demonstrate that projects clearly outweigh any harm by reason of inappropriateness; including wider environmental benefits associated with increased production of energy from renewable sources.
- Only grant permissions for renewable energy projects in sites with nationally recognised designations where they demonstrate that the objectives of designation in an area will not be compromised, and that any significant adverse effects on the qualities for which the area has been designated are outweighed by the environmental, social and economic benefits.
- Consider if the renewable energy project would have an adverse effect on an internationally designated nature conservation site (Special Protection Areas, Special Areas of Conservation, RAMSAR Sites and World Heritage Sites), permission should only be granted where there is no better alternative solution and there are imperative reasons of overriding public interest, including those of a social or economic nature.
- Assess planning applications against specific criteria set out in regional spatial strategies and local development documents, ensuring that such criteria-based policies are consistent with, or reinforced by, policies in plans for assessing other issues for renewable energy applications.

When dealing with Planning Applications Officers should not;

- Use local landscape and local nature conservation designations in themselves to refuse planning permission for renewable energy developments.
- Reject planning applications simply because the level of output is small.

Further guidance on the framing of such policies, together with good practice examples of the development of on-site renewable energy generation, are included in the companion guide to PPS22.

Regional context

A Regional Energy Strategy for Yorkshire and the Humber is currently being drafted. The Regional Policy Statement setting renewable energy targets for

the region has been published (*see Appendix (X) consider Hyperlink for web based versions)*. The Regional Spatial Strategy incorporates an energy hierarchy highlighting the regions priorities, these are;

- Reducing the Need for Energy
- The Conservation of Energy
- The Generation of Energy from Renewable sources.

These priorities will need to be implemented through the development planning process.

Planning Policy Statement 22: Renewable Energy
States that the **Regional Spatial Strategy should include;**

- Set targets for renewable energy capacity in the region to be achieved by 2010 and by 2020. Targets should be expressed as the minimum amount of installed capacity for renewable energy in the region expressed in megawatts and possibly additionally in terms of the percentage of electricity consumed or supplied.
- Where appropriate, targets in regional spatial strategies may be disaggregated into sub regional targets, possibly giving a broad indication of how different technologies could contribute towards regional targets. Specific technologies should not be given fixed targets such that technological change may make new sources of renewable energy more applicable in the longer term.
- Monitoring of progress towards achieving targets and regular review and revision of targets upwards should be by regional planning bodies. The fact that a target has been reached should not be used as a reason for refusing planning permission for further renewable energy projects.
- Criteria based policies applicable across the region, or clearly identified sub-regional areas. These should be used to identify broad areas at regional/sub-regional level where development of particular types of renewable energy may be considered appropriate.

National Context

The UK has committed to reducing the 1990 level of CO_2 emissions by 20% by 2010 and 60% by 2050.

The Energy White Paper '*Our energy future – creating a low carbon economy'* reminds us that whilst our demands for primary energy are still increasing our levels of self reliance on coal, gas and oil are declining and by 2020 we could be dependent on imported energy for three quarters of our total primary energy needs. The paper also suggests that the best way of maintaining energy reliability will be through energy diversity. To help us avoid over-dependence on imports, the paper suggests that by 2020 there will be;

- Much more local and community generation from sustainable sources
- Increasingly stringent efficiency standards for buildings and electrical goods

- An increasing number of Zero CO_2 Standard homes and business premises.

In January 2005 national government[6] published its Low or Zero Carbon Energy Sources – Strategic Guide (Interim Publication), outlining the principal reliance will come to depend upon renewables sources and their performance levels.

The Utilities Act 2000 obliges electricity and gas suppliers to achieve energy efficiency improvements and for electricity suppliers to purchase a minimum 10% of their supplies from renewable sources.

Planning

Revisions to the Planning Policy Statement 22 on Renewable Energy (incorporated under the local and regional sections above) now make clear that the wider benefits of renewable energy developments are material considerations in the approval of planning permissions.

European Context

EU Directive on Energy Performance of Buildings: Directive 2002/91/EC of the European Parliament and Council, on the energy performance of buildings, came into force on 4 January 2003 and must be adopted into UK legislation by January 2006. It will greatly affect awareness of energy use in buildings. All new buildings must meet the minimum energy performance requirements. For those with a useful floor area over 1000 m2 governments must ensure that, before construction starts, formal consideration is given to the following alternative systems for heating:

- CHP
- district or block heating or cooling
- heat pumps
- decentralised energy supply based upon renewable energy.

Governments must ensure that, whenever an existing building with a total useful floor area of over 1000 m^2 undergoes major renovation, its energy performance is upgraded

International Context

By becoming a signatory nation of the 1997 Kyoto Protocol the UK has signed up to a legally binding target of reducing greenhouse gases as a whole by 12.5% by 2008-12. In line with the advice of the Intergovernmental Panel on Climate Change (IPCC) the UK must aim for a reduction of 60% in CO_2 emissions by 2050.

[6] Office of The Deputy Prime Minister

It will be impossible to achieve such targets without developer maximising the integration of energy from local renewable sources where ever possible**.** This might include solar space and water heating, solar electricity generation (photovoltaics), wind power, biomass fuel and other sources of energy.

Voluntary Standards

In addition to all the legislative standards there are also some voluntary standards that developers are increasingly choosing to meet. The Energy Efficiency Best Practice Programme offers a set of standards for sustainable homes, these include;

- **Zero CO_2 Standard**. When energy demand is reduced as far as possible and you have replaced as much fossil-fuel use as possible with renewable energy, you may be able to create a 'zero CO_2' development. This may be achieved by buying electricity on a 'green' tariff from a company supplying renewable energy. If you use any non-renewable energy - eg, gas for cooking, you will need your own renewable electricity-generation capacity large enough to export sufficient power to the grid in any year to compensate for the CO_2 emissions associated with importing non-renewable energy.
- **Zero Heating Standard**. If, in addition to the Zero CO_2 Standard, you can obtain all your heating from passive solar gains and internal gains from the occupants, then you will have achieved the higher 'zero heating 'standard.
- **Autonomous Standard**. If, in addition to the Zero Heating Standard, you can obtain all your services from on-site resources, then you will have achieved an 'autonomous' standard. A grid-linked electricity system can be used as long as it is a net exporter rather than user of power.

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LAND USE

Land Use (for (add date) *or* in (Local Authority name))

Subsection of the 'Land Use Chapter'. Introduction to the context national, regional and local, generally including paragraphs containing the following information;

Available land in the UK is scarce, and stress must be placed on delivering the majority of new development using brownfield sites, reclaimed contaminated land or sites with only the lowest proven ecological value. Land formerly developed and existing buildings requiring refurbishment are priority resources which must be used to restrict the loss of greenfield sites. Sustainable land management should distribute use and activity in a manner creating access and opportunities, for current and future generations without diminishing future natural resources.

Sustainable urban design offers a strong competitive advantage, improving development quality and mix, integrating open space and historic features, will draw people to live and work in an area. Increased vibrancy will generate better footfall and interaction and activity throughout the day and night acting as a natural deterant to crime and improving the sense of community ownership, safety and enjoyment. In turn property and land values will increase.

Brownfield sites are generally located in areas with good or reparable public transport infrastructure and encouraging mixed build development of such sites provides people with facilities for their full range of needs, such as leisure, work, shopping and living, whilst decreasing their need to travel.

Brownfield sites will often still have ecological and/or architectural value. This must not be underestimated as it will enhance the value of the future environment if carefully assessed and protected prior to development. The character of the area and its surroundings must inform approaches to the design and landscaping of developments and all development should incorporate well integrated open space encouraging walking, leisure and appreciation of the final built features.

As well as giving a context for the buildings and amenity space, green-space and landscaped areas provide refuge for wildlife, soak away areas for surface water and the opportunity to retain existing trees and hedgerows or build in such features. All new development should ensure no net negative impact on the cities wildlife and habitat resources.

Developers should carry out surveys identifying the ecological impacts of their proposals. Where adverse impacts are identified a detailed mitigation package should be submitted. Developers will also be encouraged to show how their proposals will improve the ecological value of a site particularly in respect of previously contaminated land. Developers should;

- seek to avoid adverse impacts on designated nature conservation sites;
- ensure there are no adverse impacts on species listed in the UK Biodiversity Action Plan.
- take measures to ensure existing wildlife features are retained and enhanced;
- avoid culverting and canalisation of watercourses, exploiting opportunities to re-open culverts, re-establish natural watercourses and maximise the wildlife value of these
- adopt landscaping and planting schemes incorporating native or natural vegetation types as far as possible

- enhance wildlife resources through habitat creation and the creation and improvement of links between other areas of habitat
- make provision for the long term management of nature conservation resources, considering this at the design stage.
- Avoid planting schemes reliant on high summer watering or the use of peat or artificially produced fertilizers. Schemes using composted materials and mulching being preferable.

Aiming to create attractive environments for the combined purposes of living and working contributes to the regeneration of areas and the benefit of the wider community including health. Generously planted well designed, safe and attractive external spaces complementing the local landscape will encourage healthier, outdoor lifestyles.

To reaffirm this objective street layouts where cars predominate and safety is an issue should be avoided. Overall the principal goal of new development should be to minimise the need to travel. Early site appraisal should provide basic information necessary to determine accessibility by walking, cycling, public transport and car.

Developments should ensure ease of movement for pedestrians and cyclists as a priority. The movement of pedestrians and cyclists on routes both within and beyond the immediate development should be considered. In developments incorporating greater family orientated residential schemes developers should take special care to plan safe routes to schools which may cover related off road cycling or pedestrian provision.

The aim of all new development should be to minimize traffic throughout, reducing speeds and avoiding opportunities for rat-running. Site layouts should be determined according to a hierarchy, with access and movement priority being given to pedestrians and cyclists first. Developers should consider the following pointers in terms of their proposals;

Pedestrians:

- provide convenient routes throughout the site, that are easy, safe and attractive to use
- avoid steep gradients and ensure that routes are accessible to disabled people, particularly wheelchair users
- avoid the creation of routes through dark alleys and provide lighting where appropriate
- provide clear signposting showing route destinations, link routes to local facilities, public transport nodes, open spaces and longer distance footpaths
- provide a generous number of well located pedestrian crossing points on busy sections of road, design to slow traffic speeds, improve safety and reduce noise
- provide a pleasant environment and microclimate through planting to provide shelter and orientation towards the sun, provide path-side seating at appropriate locations

Cyclists:

- segregate cycle lanes from the general traffic where cyclists safety may be reduced within the carriageway, separate tracks may be considered in larger developments, if they can rejoin the road network safely
- only consider joint pedestrian and cycle routes where separate facilities for cyclists within the carriageway are not feasible, as pedestrian safety must not be compromised

- provide direct, safe and attractive routes, ensuring routes are as continuous as possible, avoiding frequent route stoppage, diversions or confusion to motorists. Ensuring the safety of cyclists is paramount at major junctions which should be of cycle friendly design
- link routes within developments to the wider authority cycle network
- provide secure sheltered cycle parking close to, or inside buildings, encouraging future owner employers to provide high standard secure long stay cycle parking and appropriate changing and shower facilities

Public transport and service vehicles:

- design should incorporate potential to link with or extend bus services and other public transportation, effective access for essential service vehicles should be provided.
- route layouts should utilize the minimum possible space allowing safe access and egress for buses and service vehicles
- bus shelter facilities and timetable information, should be provided encouraging use of public transport
- where developments generate additional demand for transportation including the need for improvement or extension, a contribution towards improving public transport provision may be required.

Private vehicles:

- service roads to the development should be engineered to occupy minimal space and designed to reduce speeds which may be stipulated as 20mph or less, particularly at junctions and pedestrian/cycle crossings, ensuring the priority of benign travel choices
- provide traffic free areas wherever possible.
- The Local Planning Authority may encourage the development of car free residential areas in urban areas with good access to public transport, cycle and pedestrian routes served by a range of facilities, such as schools, shops and other amenities. In such circumstances owners/tenants will be required to agree that they will not own a car to ensure off site parking problems do not result.

When deciding upon the appropriateness of site location developers should also consider the following issues:

- the need to locate large traffic generating uses close to existing key transport hubs
- the potential for links to the existing transport network, especially public transport, pedestrian and cycle routes and the need to consult with relevant bodies
- Best practice use and enhancement of a site's strongest links with surrounding areas

The National Governments Planning Policy Framework encourages Local authorities to ensure that:

'Development which attracts a lot of people should be concentrated in or on the edge of existing towns or suburban centres, or be within areas which are or can be well served by public transport. Higher density housing should be encouraged within easy walking distance of these centres'.

Higher building densities (ie greater numbers of people or dwellings per unit of area) give the most efficient use of land. Within urban areas such densities potentially reduce the need to travel, by incorporating local shops, working spaces and community facilities and may thus encourage higher use of public over private transport.

The highest densities should be adjacent to designated city and town centre areas ensuring that the majority of people live as close as possible to existing public transport routes, shops and facilities. Minimum levels of density especially in respect of the residential aspect of developments may be specified by the Local Planning Authority and developers may wish to consult the authority prior to submission of plans.

The creation of high density mixed tenure and use development will generally only improve vitality and diversity reducing the need to travel where housing and tenure types are integrated sensitively and adequate provision is made for 'affordable housing'.

The City of York Council specifies that a minimum of 30% affordable housing should be achieved as a proportion of all development including dwelling space. Developers should show the considered creation of mixed communities in the variety of sizes and types of housing and other property integrated within site plans.

Mixes should clearly show how potential problems of disturbance and nuisance caused by neighbouring potentially conflicting uses (eg. residential and nightclubs) have been addressed in the layout.

Higher densities should achieve other objectives and planners and developers should show in new development how provision has been made;

- to ensure proposals incorporate high levels of onsite renewable energy sourcing and expand or develop community grid networking, and/or combined heat and power (CHP) (see also the Energy Chapter and Renewable Energy Chapter). Developments facilitating CHP and district heating schemes are those which:
  - have groups and densities reducing installation and transmission costs
  - are located close to the power/heat source
  - comprise a mix of uses (eg. housing, offices and leisure) which help balance demand for power/heat over a twenty four hour period throughout the year.

- for the incorporation of existing natural and historic features (see also Chapter ‘Buildings Durability Adaptability and Materials’) which give rise to a 'sense of place or identity'.
- to ensure the integrity and quality of natural water courses and tables are not compromised (see also Chapter Water) Sites which are at risk from flooding or where the development would result in the loss of natural conservation space should be avoided.
- to foster urban regeneration, whilst sustaining and enhancing the vitality and viability of existing centres, ensuring appropriate weight is given to each of the key aspects of sustainability: environmental, social and economic.
- to ensure back gardens are designed for maximum privacy and shared gardens to incorporate a garden room layout encouraging diversity of use where possible.
- to provide space for food growing and kitchen waste recycling.

Standards, Policy and Legislation

Subsection of the 'Land Use Chapter' introducing policy framework containing the following information;

Local Context

Sustainability Appraisals

Local Planning Authorities are now required to conduct Sustainability Appraisals of the authority area, in consultation with environmental bodies (the Countryside Agency, English Heritage, English Nature and the Environment Agency) community groups and other stakeholders. Sustainability Appraisals document the relationships between the bio-diversity, human health, economic wellbeing and the architectural and cultural value of the Local Authority area.

Using the findings of the Sustainability Appraisal, as a baseline to improve from, the Local Planning Authority will assess proposals for development to ensure they show due consideration for and a balanced appreciation of environmental, health and equalities impacts and economic and social wellbeing. This process, described as Impact Assessment, will be carried out prior to granting consent for all major and some small scale development or redevelopment.

The Sustainability Appraisal process ensures that all plans, programmes and strategic documents reconcile the maintenance and improvement of the physical (or natural) environment with increased social and economic wellbeing.

The Sustainability Appraisal process provides a decision evaluation tool for Regional Planning Bodies and Local Authorities to:

- Assess the quality and format of base line data, highlight gaps, and ensure data is presented using criteria which translates locally regionally and nationally for comparator purposes.
- Methodically measure likely future impacts or improvements of proposals; i.e. through cyclical review.
- Ensure that proposals and options do not negatively impact upon environmental wellbeing or the quality of life of people living in an area and provide a starting point for more detailed assessment of proposals through impact assessments.

This is obviously important in respect of land use and related planning documents such as Transport Plans, Local Development Framework Core Strategy.

This said, Local Authorities should ensure that the Sustainability Appraisal tool they create can be used as a generic tool for the assessment of all strategic documents to capture the synergies and reduce conflicts. Ensuring that corporate documents embed sustainability through assessment and review.

Sustainability Appraisals and Impact Assessments support Local Authorities to identify problems or potential problems, sensitivities or damage and adopt approaches to strategic intervention and future planning objectives which will offset, remedy or improve the situation.

In accordance with the national Planning Policy Statement framework and Local authorities must now mark some clear breaks from recent development patterns, evidencing in the process a more rigorous approach to sustainability it is the Local Planning Authorities duty to ensure;

- Proposals for new out of town shopping centres cannot be granted by Local Authorities, where such proposals are considered the decision will be dependant on the regional view of their impact and benefit.
- Urban sprawl prevention and protect and discourage development of greenfield sites.
- Maximised access to and enjoyment of the countryside fringing urban areas
- The promotion of the use of brownfield central sites as a priority.
- The redevelopment of, or even new development of centres in deprived areas with the purpose of improving both the economic and physical environment.
- That planning for the largest or primary centre within the authority does not detriment the provision of goods and services within smaller centres.
- That development where ever possible incorporates mixed-usage i.e. shops and primary fronts - including businesses and recreation facilities with residential dwellings.
- That development is of a higher density, where sensitivities to the historic or cultural environment allow, to minimise the buildings footprint whilst increasing usable floor space.
- That development proposals minimise car usage and incorporate considerations which fully use, extend or enhance public transport networks, and, safe walking or cycling provision.

Local Development Documents

At a local authority level the current mixed system of unitary development plans (in West Yorkshire and South Yorkshire) and the two tier system of structure and local plans (in North Yorkshire and the Humber Authorities) is being replaced by local development frameworks (LDFs).

Strategic documents are interpreted by local development documents offering more detailed policy advice. Local Development Framework Documents (LDFs) are the principal reference point for decisions on planning applications. Developers are strongly advised to contact the Local Planning Authority about the content of these.

Proposals are often referred to and/or discussed with one or more specialist statutory organisations that input to the planning process. An example would be the Environment Agency having an interest where a major drainage facility or a waste licence is required.

Supplementary Planning Guidance/Documents

In addition to Local Development Documents, Local Authorities will also produce supplementary planning documents (formerly guidance (SPG)) this may take the form of design guides, area or site development briefs or issue-based documents elaborating on policies (or proposals) in the local development documents.

Supplementary planning documents must be adhered to by developers and will indicate where design constraints and opportunities may occur. Some SPGs, may specify the types of contribution(s) expected from larger site developers, for

instance those towards open space, public transport provision, and environmental performance criteria.

Developers should seek advice from the Local Planning Authority (LPA) before starting any development, whether new or refurbishment. LPA officers will be able to support them in understanding how the system works and where planning permissions and/or building regulation approvals for proposals are required.

Developers should also be aware that under PPS6 Planning for Town centres Local Authorities are encouraged to use tools such as area action plans, compulsory purchase orders and, where considered appropriate, town centre strategies to address the transport, land assembly, crime prevention, planning and design issues associated with the growth and management of their centres.

Regional context

When the Planning and Compulsory Purchase Act 2004, went through Parliament it changed the current pattern of development plans giving focus to the planning system. At a regional level Regional Planning Guidance (RPG) will be replaced by a 'Regional Spatial Strategy' (RSS) which will have statutory backing.

The RSS replaces RPG as the region's planning framework. It sets out a regional framework that addressing the 'spatial' implications of broad issues like healthcare, education, crime, housing, investment, transport, the economy and environment. This is all about 'how much', 'how big' and 'where' in the region.

Consultation on the 'pre-draft RSS' began in January 2005, the 'pre-draft' stage set out options and ideas on what could be in the draft RSS when it is submitted to Government. The consultation exercise ended in April 2005 and drew together input from over 170 organisations/individuals and generated around 4,000 comments in total. A 'Pre Submission Consultation Statement', setting out the Regional Assembly for Yorkshire and the Humber's consultation in the RSS process is available on their website.

National Context

Section 39(2) of The Planning and Compulsory Purchase Act, makes sustainability appraisal a mandatory requirement, plans must be prepared "with a view to contributing to the achievement of sustainable development".

Developers must understand that the system is statutory, i.e. governed by legislation, and that decisions are steered by planning policies that filter to the local level from the national level.

Planning Policy Statements

The principal form of central government guidance which influences the planning system is a series of Planning Policy Statements (PPSs) issued by the Office of the Deputy Prime Minister (ODPM). These set out policy thinking on a broad range of topics, from housing and transport to renewable energy, and must be taken into account by local authorities and government agencies when they write their planning policies or consider development proposals.

Minerals and Waste: Developers should also be aware that there are specialised Minerals and Waste Local Plans which apply across the whole county.

Land remediation relief: Businesses may claim relief from corporation tax if they clean up contaminated land, in the UK acquired by the company to carry out its trade and contaminated at the time it was acquired either wholly or in part. The relief can total upto of 150 per cent of the clean-up cost. Land remediation tax relief should be claimed for in **tax returns** and companies making a loss because of spending money on cleaning up land may apply for a tax credit of 16 per cent. The relief is only available to companies, not to individuals or partnerships.

European Context

The EU Strategic Environmental Assessment Directive

The SEA Directive now incorporated into required national planning frameworks was created with the objective of providing a high level of protection for the environment and ensuring that environmental considerations are integrated into the preparation and adoption of plans and programmes with a view to promoting sustainable development. Environmental assessments are required under the terms of the directive on plans and programmes which are likely to have significant effects on the environment.

Waste

Waste (for (add date) *or* in (Local Authority name))

Subsection of the 'WasteChapter'. Introduction to the context national, regional and local, generally including paragraphs containing the following information;

Unchecked, development produces significant levels of waste during the stages of demolition, construction and the later activities of future occupants. National Government has set challenging targets for waste recovery and recycling to ensure the objectives of the European Landfill Directive are met and waste is managed sustainably. To underpin this, landfill tax has been created to rise annually and encourage a curb on waste management that does not benefit our future environment.

To maintain both environmental and economic sustainability our present approaches to waste must increasingly follow the three R's principal;

Reduce; choose materials and products that are not excessively packaged, buy only what we will consume and lobby manufacturers to package in sustainable materials that can be readily recycled.

Re-use; separate materials, which may still have a valuable life span for others or ourselves and store such reclaimed materials securely until they can be re-deployed. This may simply mean mending items we might otherwise dispose of or taking old clothes to charity stores. Or finding out who locally will overhaul computers, white goods – fridges, cookers etc – or tools before finding them a new home. See also Chapter 'Buildings Adaptability Durability and Materials' 'Sustainable Demolition' section.

Recycle; the majority of waste we produce can be recycled, vegetable matter will make good compost for gardens and parks, most glass can be readily melted down to produce new products and that which can't may be used as road aggregate. Paper can be converted into new card and paper products and even certain plastics can be reformed anew.

Three main areas should be considered when constructing or refurbishing developments for sustainable waste management.

- Create a pre-build waste management site and strategy for the separation and re-use of materials; see Chapter 'Buildings Adaptability Durability and Materials'
- Ensure after auditing reusable onsite materials that new materials bought in are minimised in favour of reclaimed materials.
- Ensure the layout and design of the development provides future occupants with good waste separation facilities, working with the Local Authority to determine what will be needed. Facilities for waste segregation and recycling should be designed so that they are safe and convenient to use for all potential occupants.

Considering sustainable waste management during construction and as part of the design process creates distinct advantages for the developer including:

- Reducing direct costs to the developer in terms of landfill tax and waste handling costs including transportation and labour
- Increasing profitability of the build by more thorough quantity surveying and sustainable local sourcing of reclaimed materials

- Meeting the demands of the green consumer market who may pay a premium for buildings that have been designed to 'green' specifications or reject those which have not.

How Waste can be Reduced throughout Construction

- Audit the site for reclamation of onsite materials and take a deconstruction rather than demolition approach to buildings which need to come down
- Establish a recycling and reuse waste segregation and build centre on the site to ensure all materials including reclaimed or recyclable materials are properly stored and handled to minimise damage
- Carry out a waste audit identifying waste by type and making proposals for dealing with those waste streams. The emphasis should be on recycling both on and off site
- Carefully set aside and protect topsoil for use later in landscaping
- Use prefabricated assemblies as waste can be reduced, re-used and recycled more easily under factory conditions
- Use materials such as FSC timber, avoid all PVC based products, choose natural floor coverings, recycled materials in building fabric, low VOC-paints, etc which will not cause a future hazard.
- Avoid the practice of over-ordering construction materials.
- Choose reclaimed materials where possible i.e. bricks and stone where possible, timber, ornamental features, glass etc.
- Minimise the need to buy in aggregates but crushing suitable re-useable damaged brick etc on site

Use the BRE SMARTWaste tool to monitor waste as it is generated at site so immediate qualified steps can be taken to reduce it. The SMARTWaste (Site Methodology to Audit, Reduce and Target Waste) system is a web-based, integrated, approach to evaluating waste and its generation. It can be applied to any waste generating activity, and is adapted for the construction, demolition, refurbishment, manufacturing and pharmaceutical industries. In addition to identifying cost savings, improvements to resource use and productivity, the system is designed to demonstrate continuous improvement through:

- waste benchmarking
- identifying key demolition products for reuse or recycling
- identifying key waste products for reduction, reuse and recycling
- sourcing local resource and waste management facilities
- sourcing local supplies of reclaimed and recycled building products.

It includes four core tools: SMARTStart: defining preliminary environmental performance indicators (EPIs) for waste generation on a site by site, and organisation basis
SMARTAudit (detailed audit): a robust and accurate mechanism benchmarking waste and categorising by source, type, amount, cause and cost.
SMARTStart+ (monitoring and target setting): an opportunity to measure performance of contractors; an essential requirement under best value and continual improvement.
BREMAP (resource exchange): a geographical information system (GIS) that allows firms to reduce their transport of bulky waste by locating the nearest most suitable waste management site.
Tailored Pre Demolition Audits are also available. The audit provides a list of key demolition products (KDP) that can be assessed using a reclamation valuation

survey and translated into embodied energy and hectares of rainforest as an indicator of environmental quantification.

Standards, Policy and Legislation

Subsection of the 'Waste Chapter' introducing policy framework containing the following information;

Local Context

This section should outline the Authorities approach to strategic waste management and recycling indicating how the authority intends to achieve compliance with the other standards included below.

It should also detail any arrangements the authority made or its policy stance in relation to;

- the development of Aggregate Recycling Facilities in appropriate locations
- the development and or creation of reclaimed buildings materials storage facilities
- Other recycling or re-use provision the authority either offers or supports in conjunction with partner organisations

Questions: Does the Authorities Local Plan include a policy relating to substitute materials? Does this policy enshrine the re-use of building materials from other developments where this is technically and economically feasible as a top level priority?
Has the Local Authority considered facilities for or entertained favourable agreements with suppliers regarding recycled materials storage and distribution?
National policy urges increased use of secondary or recycled aggregates, how dothe local planning policies reflect this?
Has the Local Authority developed a voluntary 'considerate and sustainable constructor's charter'?

Regional

A draft of the new Regional Spatial Strategy (RSS) 'PLANet Yorkshire and to National Government by the Yorkshire and Humber Assembly by the end of April 2005.

In July 2001 the Assembly commenced work on the Regional Waste Strategy and this was finally adopted in 2003. The challenges set out in the Regional Waste Strategy are significant – the region currently performs poorly in terms of many sustainable waste management indicators.

During 2001-02 significant effort was made to raise the profile of waste management issues in the region. Numerous sub-regional and local events were held with stakeholder groups, local authorities and the public. Presentations set out the extent of the challenges and a range of potential responses were debated.
The Assembly also established a Regional Waste Steering Group to prepare the draft Regional Waste Strategy. A land-use planning focused Regional Technical Advisory Body (RTAB) has been subsequently set up to advise the region on waste planning issues and offer technical advice on the implementation of the policies presented in RSS. The spatial/land use planning elements of the Regional Waste Strategy were subsequently included in the Selective Review of RPG.

The Regional Waste Strategy for Yorkshire and the Humber is expected to be based upon the following aims:

- Working towards zero growth in waste at the regional level by 2020;
- Reducing the amount of waste sent to landfill in accordance with the EU Landfill Directive;
- Exceeding government targets for recycling and composting, with the objective to bring all parts of the Region up to the levels of current best practice;

Planning Policy Statement 10 for Sustainable Waste Management indicates that Regional Planning Bodies should prepare and deliver waste planning strategies that:

- Help deliver sustainable development through driving waste management up the waste hierarchy, addressing waste as a resource and looking to disposal as the last option but one which must be adequately catered for;
- Enable sufficient and timely provision of waste management facilities to meet the needs of their communities;
- Help implement the national waste strategy, and supporting targets, and are consistent with obligations required under European legislation;
- Help secure the recovery or disposal of waste without endangering human health and without harming the environment and ensure waste is disposed of as near as possible to its place of production;
- Reflect the concerns and interests of local communities, the needs of waste collection authorities, waste disposal authorities and business and encourage competitiveness;
- Protect green belts but recognise the particular locational needs of some types of waste management and that the wider environmental and economic benefits of sustainable waste management are material considerations that should be given significant weight in determining whether proposals should be given planning permission
- Ensure the layout and design of new development supports sustainable waste management.

European and National

The EU Directive on Waste, Planning Policy Statement 10 for Sustainable Waste Management (PPS10), and the National Waste Strategy for England and Wales (2000) all promote a comprehensive approach to waste management:
Reduce the amount of waste produced;
Make the best us of the waste that is produced; and,
Choose waste management practices which minimise risks of immediate and future environmental pollution and harm to human health.

In 2002 an Aggregates Levy was introduced for primary aggregates, with the aim of encouraging the use of recycled material. In 1999 only 17% of the aggregates used by the construction industry were recycled. The aim is to increase this to 25% by 2006.

The Antisocial Behaviour Act (Nov 2003) highlights a number of problems including flytipping.

The Clean Neighbourhoods and Environment Act 2005 contains a range of measures to improve the quality of the local environment by giving Local Authorities

and the Environment Agency additional powers to deal with things such as fly-tipped waste and litter.

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CITY OF YORK COUNCIL

Annex H

Meeting of the Sustainability Committee

Promotion of Sustainable construction methods and the implications for Building Control staffing levels.

Purpose of Report

Assessment of the level of staffing within Building Control to cope with:

a) the increase in workload due to volume and legislative change,

b) the aspirational requirements of City of York Council with regard to supervision of sustainable construction.

Background

Since 1985 the Building Control Section has been in competition for its service. Initially this competition was in the housing market, but with the advent of Approved Inspectors over the last eight years, this now includes commercial and small domestic (extensions, loft conversions etc.) work. The threat of Approved Inspectors with regard to Building Control and the Council as a whole has been identified at a previous Scrutiny Committee review of Building Control.

If CYC Building Control fails to maintain its current market share (90%) as a result of not being able to achieve performance indicators, then this will lead to an increase in the amount of Approved Inspector schemes taking place with the City. If Approved Inspectors take a greater market share, then CYC's presence on construction sites within the city will diminish. This potential situation was of considerable concern to the Scrutiny Committee, as it recognised that in many instances Building Control was the "eyes and ears" of CYC. It also recognised that Building Control is the first point of contact for customers, developers and the public for a wide range of council departments, as well as being a major income generator.

Present Working

At present CYC Building Control is a highly motivated focused team, who have high expectations with regard to service delivery, of themselves, their team and the achievement of the Council's goals.

The number of Performance Indicators that now form the basis of the District Surveyors Association's (DSA) performance standards, are such that only a well-motivated Building Control Team can provide the required service delivery to customers both internal and external.

Building Control Section has achieved a service delivery above those targets indicated within its customer contract. This achievement is against a background that has seen workload increase by 30% over the last 3 years. Changes in April 2002 and January 2005 have brought replacement double-glazing and electrical installations within the scope of the Building Regulations. This requires Building Control to check new installations for compliance. Although an independent accreditation scheme is in place it is anticipated that CYC Building Control will have to inspect 35% of the total market for double-glazing and up to 20% for electrical installations. It is also anticipated that conservatories (currently exempt work) will be brought under the scope of the Building Regulations in the near future. This will inevitably lead to an increase in both workload and income.

The DSA produce a nationally accepted and adopted standard procedure for assessing the numbers of Building Control surveyors /Admin required to carry out a Local Authority's Building Control function. If this procedure were to be applied to CYC, it indicates that 14 Building Control surveyors and 4 Admin Officers would be required given the amount and complexity of the work that is undertaken. Whist it can be argued that these numbers are arbitrary, it does indicates a massive difference when compared to the current establishment – 7 Building Control surveyors and 2 Admin.

Promotion and inspection of Sustainable construction.

City of York Council has clear aspirations to promote the use of sustainable materials and construction practices within the local authority. Building control has clearly a key role to play in this and it is a role it is keen to undertake.

To engage in such a role there are important issues to be considered:

- The promotion of sustainable methods will require training for the staff.
- Once trained the knowledge will need to be conveyed to our customers either by seminar or by printed material.
- There will need to be an enhanced site presence, as some inspections relating to sustainable methods of construction will not be covered by statutory inspections that are currently being carried out.
- The supervision of sites not subject to City of York Building Control site visits (Approved Inspector/NHBC supervised projects) and who promotes the sustainability issues at design stage on these projects must be addressed.
- Staffing and resources.

Staffing level requirements.

Building Control is currently working at 100% capacity. In addition to this, staff are working overtime where necessary, consultants and temporary staff are brought

in as required to cover peaks in workflow or if staff are on leave. For Building Control to take on any additional duties then additional staff and resources will have to be provided from outside of the current Building Control budget.

It is considered that 2 additional surveyors and 1 additional administration officer would enable the Building Control Section to meet not only its currently increasing workload requirements, but also workload generated by an input in to sustainable development and construction issues. (Construction methods, materials etc plus the development of literature both hard copy and online, through the Building Control web site.

The implications of the implementation of Easy@York are as yet unclear, and although the use of a one- stop shop and call handling centre will reduce the considerable number of phone calls the section receives it will not reduce the other back office work that the sections admin staff carry out.

To conclude Building Control is actively in favour of promoting the use of sustainable materials and construction methods, it will, however, require assistance to carry out such promotion

John Fowler
Head of Building Control & Property Information
May 2005

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Scrutiny Management Committee **23 October 2006**

Report of the Head of Civic, Democratic and Legal Services

Schedule of Registered Scrutiny Topics Available for Review

Summary

1. The purpose of this report is to ask members to reconsider two registered scrutiny topics which were deferred from the meeting of 25 September. Members may make recommendations as to whether either of them can be the subject of Ad Hoc Scrutiny Sub-Committees either immediately or in the future.

Background

2. At their meeting on 25 September members considered Topic 139 on the subject of Local Transport Plan 2 which was originally submitted by Cllr Tracey Simpson-Laing. It was decided to defer a decision to enable the Executive Member to be invited to the next meeting in order to clarify the position before a decision is made whether or not to review the topic.

3. Members also decided to defer Topic 120 on Traffic Congestion in York, also submitted by Cllr Simpson-Laing, which was considered to be related to 139.

4. Cllr Ann Reid, Executive Member for City Strategy, has been invited to the meeting to explain the processes and the involvement of members in determining the strategy and implementation of LTP2

Consultation

5. Consultation with relevant officers was been carried out when these topics were originally registered and this report is to enable members to consult further with the Executive Member. This should enable them to decide if it would be useful to take either of these topics further or consider some alternative

course of action.

Options

6. Having regard to the topic registration forms and feasibility reports members may decide to:

    a. Not progress the topics further, giving reasons
    b. Retain one or both topics on the list of those available for progression to an Ad Hoc Sub Committee pending resources becoming available at a later date.
    c. Form an Ad Hoc Sub Committee now to consider one of the topics.

Analysis

7. Members will be aware that they authorised the formation of two new Ad Hoc Scrutiny Sub-Committees at the September meeting. Following this meeting, all other Ad-Hoc Scrutiny Sub-Committee work outstanding should be drawing to a conclusion, provided Members are able to endorse the two outstanding reports on this agenda. This will leave capacity in scrutiny officer resources to undertake 1 further review in the near future.

Corporate Priorities

8. Having a full and effective scrutiny programme can only help contribute to the Council's overall aims to improve its organisational effectiveness.

9. Specifically, the two topics under consideration as part of this report relate to the following corporate priorities:

……

Implications

10. There are no known Financial, HR, Equalities, Legal, Crime and Disorder, IT or other implications at this stage associated with this particular report.

Risk Management

11. There are no known risks associated with these specific topics at this stage in the process.

Recommendations

12. Members are asked to consider the outstanding scrutiny topics and decide whether to proceed with either at this stage.

Reason: In order to carry out their responsibilities in managing the Scrutiny function in York

Contact details:

Author:
Barbara Boyce
Scrutiny Officer
01904 551714
barbara.boyce@york.gov.uk

Chief Officer Responsible for the report:
Suzan Hemingway
Head of Civic, Democratic and Legal Services

Report Approved ✓ **Date** *12.10.06*

Wards Affected: **All** √

For further information please contact the author of the report

Annexes

Related feasibility studies and topic registration forms.

Background Papers

None

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Annex A

SCRUTINY TOPIC REGISTRATION FORM

Dear Reader

Scrutiny Members examine the decisions, policies and performance of the Council and make recommendations where they feel things could be improved for the citizens of York.

This non-Executive Member cross-party role was created by the Local Government Act 2000 which is all about modernising local government and creating better ways for citizens to be more involved in local decision making.

The scrutiny boards will consider possible suggestions about issues to look at from anyone, so long as these are not specific issues of an individual nature which should be taken up with a local Councillor or addressed through the Corporate Complaints system.

Scrutiny at York has already investigated things as diverse as the response to the 2000 floods, affordable housing, provision for young people in York, rail-side safety and street cleaning.

If you have a suggestion for something the scrutiny boards might consider, then please fill in this registration form and return it to us, either by post or by e-mail.

Madeleine Kirk

Cllr Madeleine Kirk
Chair, Scrutiny Management Committee

SCRUTINY TOPIC REGISTRATION FORM

SUGGESTED TITLE OF TOPIC LTP2	
ABOUT YOU Please fill in as many of the details as you are able to.	
Title (delete as applicable): **Other please state** Cllr	
First Name: Tracey	**Surname:** Simpson-Laing
Address: 21 Salisbury Road Leeman Road York YO26 4YN	**Daytime Phone:** (01904) 640947 **Evening Phone:** (01904) 640947 **Email:** cllr.tsimpson-laing@york.gov.uk

Are You (delete as applicable)	
• **A Resident of York**	YES
• **A Visitor**	NO
• **A City of York Councillor**	YES
• **A City of York Council Employee**	NO
• **A Representative of a Voluntary Organisation or Charitable Trust** (if YES please tell us the organisations title and your relationship to the organisation below)	NO
• **Other** (please comment)	

ABOUT YOUR PROPOSED TOPIC
Please write your responses to as many of the questions below as you are able to.

WHY DO YOU THINK THIS TOPIC IS IMPORTANT?
-This issue is of vital importance to the people of York in terms of the proposals for the next five years and the longer term planning for the next fifteen years. We need to understand if the right strategy has been adopted given the failure to consult on strategic options.
-Need to avoid repeating any mistakes for LTP3
-Need to understand how certain schemes have been prioritised and see if adjustments to the strategy and spending profiles are needed to make the best use of LTP2 resources.
-The LTP2 has failed to include local actions to address air quality issues in the five areas of the City identified as being in breach of air quality standards.

DO YOU KNOW IF THIS TOPIC IS IMPORTANT TO OTHER PEOPLE? IF SO, WHO AND WHY?
The draft LTP2 itself has received extensive press coverage, and more generally, transport issues are of major public interest. There is strong public pressure on the council to address key transport issues – which is only likely to increase.
The LTP2 must be prepared in line with a strict schedule – which would therefore impose a clear timetable on the work of the scrutiny board on this topic.

WHAT DO YOU THINK SCRUTINY OF THIS TOPIC MIGHT CHANGE, DO OR ACHIEVE?
-It will analyse whether the LTP2 will deliver the anticipated results and what the effect the 7% growth in traffic will be on travel times, business and air quality issues.
-Identify why in terms of the 2005 APR the authority only received a 'fair' assessment and what is needed to avoid it in the future.

DO YOU HAVE IDEAS ABOUT THE APPROACH SCRUTINY MEMBERS MIGHT TAKE TO YOUR SUGGESTED TOPIC?

The Scrutiny Board should play an active part in consulting with residents. In addition they should meet with experts and interest groups in York (cycling groups, bus users, businesses etc) to hear first hand their views on the plan and what they would like to see in terms of action on transport in the City in future.

WOULD YOU BE HAPPY TO TALK TO SCRUTINY MEMBERS ABOUT YOUR PROPOSED TOPIC AT FORMAL MEETINGS? YES
PLEASE ENCLOSE ANY SUPPORTING DOCUMENTS OR OTHER INFORMATION YOU FEEL MIGHT BE USEFUL BACKGROUND TO THE SUBMISSION OF THIS TOPIC FOR CONSIDERATION.

OUR COMMITMENT TO YOU

Thank you for proposing a new scrutiny topic. As Members of the Scrutiny Management Committee and Scrutiny Boards we promise the following things;

- To advise you of any meetings where a decision will be taken as to whether to progress your topic and invite you to attend
- If Members would like you to speak in support of your topic at such meetings you will be notified and supported through the process by a Scrutiny Officer
- If you do not wish to speak you do not have to; your choice will not influence fair consideration of your topic.

Please return this form to the address below or send it by email. If you want any more information about Scrutiny or submitting a new topic for consideration then please contact the Scrutiny Team.

By Writing to:

The Scrutiny Services Team
C/o The Guildhall
York
YO1 9QN

Or Email: Scrutiny.services@york.gov.uk

Or Phone: 01904 552038

For Scrutiny Administration Only

Topic Identity Number	**139**
Date Received	**22 May 2006**
SC1- date sent	

Annex B

Report on Results of Feasibility Consultation

Registered Topic: LTP2 (No 139)

This topic was registered by Cllr Tracey Simpson-Laing in May 2006. The following officers and/or members have been consulted about these topics and have provided a response based on their professional knowledge.

Response from the Executive Member for City Strategy

I feel that that there is no real value in progressing the LTP 2 as a Scrutiny Topic. As LTP 2 has been formally adopted by the Council and submitted to the Department for Transport (DfT) and it is difficult to see how a Scrutiny Review of it would add any real value.

Provisional LTP 2 received a 'very promising' status from the DfT, making it officially in the top 16 in the country and there is no reason to suspect that mistakes have been made. As with LTP1, the format and process may change in line with changes to national transport policy over the 5 year period as required by the DfT. Delivery of the LTP 2 strategy is continually reviewed through approval of the capital programme at EMAP - this therefore gives an arena for any changes and discussion of existing and future.

On the specific points in the Topic Registration Form:-

“We need to understand if the right strategy has been adopted given the failure to consult on strategic options.”

The strategies that were chosen in the LTP2 were based on extensive public consultation which included the successful Tell Ann Campaign (covering all Ward Committee and Parish Councils), extensive distribution of questionnaires and face to face meetings with key stakeholders and residents for which the council was praised by the DfT. In addition when DfT disseminated good practice regarding public consultation, York was used as an example of just that, in DfT presentations to other Local Authorities.
The LTP seeks to establish the individual strategies from which an emerging overall strategy will be developed. It needs to be flexible enough for the strategy to change with circumstances e.g the amount of funding the council receives or the emerging regional. LTP should not be looked at in isolation from other, wider, initiatives.

“Need to avoid repeating mistakes for LTP3”

This presumes we have made some, I would be interested to know where.

“Need to understand how certain schemes have been prioritised and see if adjustments to the strategy and spending profiles are needed to make the best use of LTP2 resources.”

Our priorities are set by the need to address a number of different issues. To a large extent these are set for us by the need to achieve targets within the LTP and therefore secure future funding based upon our performance. This very much restricts how and where we commit resources. The LTP itself sets out our spending profile over the 5 year period against which we are measured. Programmes are put together to meet strategic as well as local demands. Members have had the opportunity of shaping those programmes through the capital programme process.

“The LTP2 has failed to include local actions to address air quality in the five areas of the City identified as being in breach of air quality standards”

Our approach is to address the underlying cause of the poor air quality, less polluting vehicles, reductions in congestion, promotion of more environmentally acceptable vehicles, promotion of public transport, cycling and walking rather than introduce restrictions that would only redirect the problem somewhere else

“The LTP2 must be prepared in line with a strict schedule – which would therefore impose a clear timetable on the work of the scrutiny board on this topic.”

As already stated LTP2 has already been approved by Council and submitted to DfT in line with their timetable. If this is this an attempt to put together a process for delivering the plan then I think the way it is reported to Members already does this.

“This Scrutiny topic will analyse whether LTP will deliver the anticipated results and what the effect the 7% growth in traffic will be on travel times, business and air quality issues**.**”

We have set targets in the LTP against which we will be measured. Our ability to achieve those targets will depend upon the soundness of the various strategies, our ability to deliver them and the resources provided.

“Identify why in terms of the 2005 APR the authority only received a ‘fair’ assessment and what is needed to avoid it in the future.“

The reasons were highlighted by the DfT and are being addressed as LTP2 progresses.

“The Scrutiny Board should play an active part in consulting with residents.”

This must be for the Board to decide if this topic goes ahead. However, a new round of consultation on the LTP (if based on the previous extensive consultation) would require significant staff time which could be put to far better use developing proposals for addressing the issues through the adopted strategies in the LTP.

The issues have brought to Members on several occasions and continue to do so at regular intervals and there has been ample opportunity for Members to question and shape the process and content.

Response from Marketing and Communications

In July 2005, York's provisional five year Local Transport Plan (LTP) was submitted to the Department for Transport. The provisional plant highlighted issues that arose from the first stage of consultation undertaken in 2004. The main findings from this consultation revealed that reducing congestion, improving access to jobs, education and leisure and improving health by helping more people to walk and cycle are the city's top three priorities for transport policy.

To evaluate whether the draft plan reflects the needs of the city and how effective it will be at cutting traffic, improving accessibility and health, a consultation programme was drawn up to consult residents and local businesses (LTP2). In October 2005 residents and local business were invited to comment on the Plan via a self-completion survey. The surveys were posted to 351 local businesses in the city and residents were able to complete a survey at ward committee meetings or by picking one up from a council reception area, at the library or via the council's website.

A Better 4 York video was also available to give residents an outline of the plan before completing the survey. The video incorporated the Plan's main objectives and was shown at ward committee meetings and available to download via the council's website. A copy of the Plan was also available on the website.

11% of the 351 businesses invited to comment on the LTP2 plan completed a self completion survey (N=39) and 137 residents completed a survey. The research assessed residents' views about the plan's strategy for the whole city, rather than specific local areas. Overall, 81% of respondents supported the aims and objectives of York's Second Local Transport Plan.

Response from Policy Development Team

I don't have too much to add regarding this scrutiny topic, other than that I think issues identified in the scrutiny request would hopefully be being considered already e.g. learning from LTP2 to inform LTP3, especially as this issue has a high profile locally and nationally at the moment. Because of this high profile though, members may particularly want to find solutions and so scrutiny could create an added focus in doing this.

Response from Equalities Officer

Any evaluation of LTP2 needs to consider whether appropriate equality objectives and measures were identified and given sufficient priority

Members should consult with community forums representing people from disadvantaged communities (e.g. Older People's Assembly, BME Citizens Open Forum, Disabled People's Forum, LGBT Forum, and Inter-Faith Forum)

Report prepared by Barbara Boyce Scrutiny Officer Tel. 01904 551714		Report prepared August 2006

For further information please contact the author of the report

Annex C

SCRUTINY TOPIC REGISTRATION FORM

SUGGESTED TITLE OF TOPIC **Reducing Traffic Congestion in York**	
ABOUT YOU Please fill in as many of the details as you are able to.	
Title (delete as applicable): Mr Mrs Miss Ms **Other please state Councillor**	
First Name: Tracey	**Surname: Simpson-Laing**
Address: 21 Salisbury Rd **Leeman Rd** **York**	**Daytime Phone:** **Evening Phone:** **Email:**

Are You (delete as applicable)	
• **A Resident of York**	YES / NO
• **A Visitor**	YES / NO
• **A City of York Councillor**	**YES** / NO
• **A City of York Council Employee**	YES / NO
• **A Representative of a Voluntary Organisation or Charitable Trust** (if YES please tell us the organisations title and your relationship to the organisation below)	YES / NO
• **Other** (please comment)	

ABOUT YOUR PROPOSED TOPIC
Please write your responses to as many of the questions below as you are able to.

WHY DO YOU THINK THIS TOPIC IS IMPORTANT?

LTP 2 will see set the future of transport and its infrastructure for the coming decades. If the submission is not robust it could have devastating consequences for the city, both materially and financially

DO YOU KNOW IF THIS TOPIC IS IMPORTANT TO OTHER PEOPLE? IF SO, WHO AND WHY?

Residents top concern for a number of years has been the issue of congestion and the future of the city.

WHAT DO YOU THINK SCRUTINY OF THIS TOPIC MIGHT CHANGE, DO OR ACHIEVE?

Scrutiny will give Councillors, organisations and members of the public the opportunity to see the 'document' before submission. The process of Scrutiny will give Councillors the chance to ensure that it meets the aspirations being set by members of the Planning & Transport Panel in their current work and discussions and allow members to question the Executive Member on any issues they have concerns on.

DO YOU HAVE IDEAS ABOUT THE APPROACH SCRUTINY MEMBERS MIGHT TAKE TO YOUR SUGGESTED TOPIC? Members should be presented with the draft document 4 weeks before the first meeting of discussion to allow time for reading and questions that they may wish to ask officers. At the initial meeting I would see the format of an Officer presentation with Q & A's. Following this at the second meeting the Executive Member would be requested to attend to answer questions/justify decisions. A 3rd and 4th meeting would enable members to address issues and draw up a report to enable amendments to the draft LTP2 before its submission.
WOULD YOU BE HAPPY TO TALK TO SCRUTINY MEMBERS ABOUT YOUR PROPOSED TOPIC AT FORMAL MEETINGS? Yes
PLEASE ENCLOSE ANY SUPPORTING DOCUMENTS OR OTHER INFORMATION YOU FEEL MIGHT BE USEFUL BACKGROUND TO THE SUBMISSION OF THIS TOPIC FOR CONSIDERATION.

OUR COMMITMENT TO YOU

Thank you for proposing a new scrutiny topic. As Members of the Scrutiny Management Committee and Scrutiny Boards we promise the following things;

- To advise you of any meetings where a decision will be taken as to whether to progress your topic and invite you to attend
- If Members would like you to speak in support of your topic at such meetings you will be notified and supported through the process by a Scrutiny Officer
- If you do not wish to speak you do not have to; your choice will not influence fair consideration of your topic.

Please return this form to the address below or send it by email. If you want any more information about Scrutiny or submitting a new topic for consideration then please contact the Scrutiny Team.

By Writing to:

The Scrutiny Services Team
C/o The Guildhall

Or Email: Scrutiny.services@york.gov.uk

Or Phone: 01904 552038

York
YO1 9QN

_____

For Scrutiny Administration Only

Topic Identity Number	**120**
Date Received	**13 April 2005**
SC1- date sent	

Annex D

Report on results of feasibility consultation
Registered topics: Reducing Traffic Congestion in York (no. 120)

This topic was registered by Cllr Tracey Simpson-Laing on 13 April 2005. The following consultees below have commented this topic and have provided a response based on their professional knowledge.

Reducing traffic congestion in York (no. 120)

The AD/Departmental Officers have provided the following response:-

As the overall shape of council policy on all transport related issues was set down in the first Local Transport Plan (LTP), which runs from 2001 to 2006, in both cases if a review is to take place the starting point should be 2001.

In the case of 120 I am not sure how a review can take place of LTP2, which is the way it is worded, as it is still in the process of preparation, will cover the years 2006 to 2011 and will go through all the usual Member (ie.Executive) approval procedures before submission to Government. Therefore, again, I assume all that can be scrutinised is what has been done under LTP1.

Regarding the other questions the benefits of the Councils approach to reducing congestion are documented in the Annual Progress Report on the LTP. Any positive achievement from the review process would only be likely to arise from comparing that with what had been achieved elsewhere under similar circumstances.
Any relationship with other initiatives would point to considering both topics together as parking policy has a direct impact on congestion. However, so do many other factors such as Park and Ride and the state of the national economy and it is not always easy to disentangle the causes of change. Because the level of congestion has a direct impact on, inter alia, air quality, fuel consumption and economic development it would have links with the portfolios of Cllr Waller and the Leader.

Turning to parking the same comment as above regarding the Annual Progress Report applies and again unless there is some attempt to benchmark what has happened elsewhere in the same period, the benefits of a review of what has happened in York alone will be limited.
Moreover from what is said above it follows that a review should to address other issues including the impact of parking changes on congestion and other areas of interest.
The Executive have received a number of reports on parking matters in the last year and the portfolio links are as referred to above.
Again I apologise for not being able to address all the questions in a structured way.

Overall my conclusion is that although this topic could be looked at independently there are limited benefits in doing so because it is too closely related to other facets of transport policy. If it was to go ahead, either separately, jointly or taking into account other factors of relevance (a very wide-ranging remit) the review(s) would need to be based on what has happened since 2001.

The Excutive Member has provided the following response:

Little to add to the comments above. The title and the justification don't seem to tie up. How can we scrutinise a process that we are in the middle of? LTP2 will go through the normal consultation process and if we did as suggested then we would miss the date that we have to have the draft submitted by.

Marketing and Communications have provided the following response:

Each year, the Residents' Opinion survey includes a list of service areas and ask respondents to consider each one and select whether they would like to see more, less or the same spent on each one in the coming financial year. In 2004, the results for managing traffic were:

	More	Same	Less
Managing traffic	40%	48%	12%

In 2003, the Residents' Opinion survey asked respondents which things they thought were most in need of improvement in York. Reducing the level of traffic congestion was considered the third most pressing improvement at 43%. The top improvement was reducing the level of crime (51%) and the second was road and pavement repairs (44%).

In January 1999, four focus group discussions were held in York with local residents. The fundamental objectives of the discussions were to discover the views of local residents regarding traffic and travel in York, in particular, cause and effect of traffic congestion and to gauge receptiveness to a number of measures detailed in the Government's "White Paper for Transport".

All four groups were forthcoming with suggestions which may help to curtail York's congestion problems. Spontaneous suggestions to reduce congestion included:

- Improve public transport system (frequency, cost, routes)
- Re-introduce the old 'Hopper' bus service
- Re-open old railway stations (ie Haxby) to offer an alternative route
- Operate a river bus service / monorail / metro system
- Road user charging - pay to come into York, perhaps at rush hour
- Increase non-central car parks
- Increase car park charges
- Place weight and time restrictions on delivery vehicles

- Improve cycle routes to include bridges for crossing roads
- Encourage large employers to incentivise use of public transport / cycling
- Increase the number of Park and Ride facilities
- Offer discount vouchers for York's attractions to incentivise tourists to use Park and Ride
- Give discounts to groups of bus users

Over the last few years, Marketing and Communications have run a number of focus groups and included questions in Talkabout about usage and barriers to using alternative forms of transport e.g. residents have been asked for their views on bus travel, cycling and walking.

The Neighbourhood Pride Unit has provided the following response:

The issue of traffic congestion is of general interest . However, it's likely that residents situated towards the centre of the city (Micklegate, Guildhall, Holgate, Fishergate) where congestion is most concentrated or those situated along the main arterial routes in and out of the city (Fulford, Dringhouses and Woodthorpe, Hull Road, Clifton, Skelton, Rawcliffe and Clifton Without) will have the biggest interest in this matter. LTP issues would be of particular interest to the wards identified above and would make an interesting agenda item for ward committees.

It would not directly realte to the York Pride agenda, though a reduction in congestion would help make neighbourhoods safer, cleaner places and presumably would increase the % of people who were satisfied with their local area / neighbourhood.

The Policy Unit has provided the following response:

Traffic congestion - I'm not sure what member involvement DEDS has planned already in relation to LTP2 and so although I think it would be useful for all members to be able to have a say on LTP2's development, I can't comment as to whether this scrutiny topic would be duplicating any existing work. I do understand though that addressing congestion is a major element of LTP2 already

The Perfomance Improvements team has provided the following response:

The specific issue of parking isn't mentioned in the vision for York , only the more high level aims of reducing congestion, environmental impact etc.

Adapted from report prepared July 2005 on topics 120 and 121

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Scrutiny Management Committee **23 October 2006**

Report of the Head of Civic, Democratic and Legal Services

WORK PLANNING AND PROCESS MANAGEMENT FOR SCRUTINY REVIEWS

Summary

1. This report sets out the work undertaken on establishing eligibility criteria and processes for managing scrutiny reviews, since reporting last to Members in July 2006.

Background

2. At the meeting in July 2006, Members received a report setting out early initial proposals for introducing criteria, a database for monitoring purposes and establishing a procedural process for managing reviews. Further work has now been undertaken, culminating in the preparation of the following:

    - Eligibility Criteria for reviews [Annex A];
    - A proposed process for applying the criteria [Annex A];
    - Process for managing reviews, stage by stage [Annex B];
    - A built database

Consultation

3. Discussions have continued to take place within the Scrutiny team, over the summer, to establish an approach to work planning, to help the team fulfill its role within available resources.

4. Responses from a network of scrutiny contacts in other Local Authorities were evaluated and the proposals for criteria reflect working practices in some of those authorities.

5. The Performance & Improvements team have been consulted upon and contributed to the work on developing effective criteria and an appropriate system for application;

6. A qualified IT developer has been engaged to produce a database for monitoring and business management requirements, to an agreed specification. Scrutiny Officers are currently testing the database.

Options

7. Members comments are sought on the proposed eligibility criteria, suggested process for applying it and on the process for managing reviews. Members have the option to support all as drafted, propose amendments or not to introduce any of these processes.

Analysis

8. In business terms, it would be advisable to at least establish some agreed working practices for the scrutiny function with a view to improving the service provided.

Corporate Priorities

9. The aims in creating this work management process for scrutiny fit with the Council's overall corporate priorities for improving its organizational efficiency.

Implications

10. There are no known implications in relation to the following at this stage of the preparatory work other than those relating to information technology. A qualified IT developer has been engaged to design the database for monitoring of scrutiny information. The developer is familiar with the Council's IT systems and processes, having been engaged by several other Council departments on specific projects. IT&T have been informed about this arrangement and raised no objections. Costs for the developer will be met from within existing budgets.

- **Finance**
- **Human Resources (HR)**
- **Equalities**
- **Legal**
- **Crime and Disorder**
- **Property**
- **Other**

Risk Management

11. The risks associated with not establishing an agreed framework and some working practices for the scrutiny function will be to

the continuing detriment of the service with regard to the delivery of reviews and the continuity of service provided.

Recommendations

12. Members are asked to consider the attached Annexes and approve the proposed eligibility criteria and management process for scrutiny reviews.

Reason:
To establish some agreed processes within which the scrutiny function can operate.

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Chief Officer Responsible for the report:
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Head of Civic, Democratic and Legal Services

Report Approved ✓ **Date** *12.10..06*

Specialist Implications Officer(s)
None

Wards Affected: **All** √

For further information please contact the author of the report

Background Papers
Report to Scrutiny Management Committee – 24 July 2006

Annexes
Annex A – Eligibility Criteria & Process
Annex B – Scrutiny Management Process

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SCRUTINY WORK PLANNING - ELIGIBILITY CRITERIA

All incoming registered scrutiny topics to be assessed against the following criteria. As a guide, a topic should meet 3 of the criteria before being eligible to proceed to review, with an exception that any topic registered under and sufficiently evidenced against criterion 3 below could proceed to review in any event (subject to SMC agreement)

No.	Proposed Criteria	Evidence	Scrutiny Role		
			Policy Development	Service Improvement & Delivery	Accountability of Executive Decisions
1	In keeping with corporate prioritie	Relevant Priorities Delivery & Innovation Plans under Corporate Strategy	✓	✓	✓
2	National/local/regional significance eg. A central government priority area, concerns joint working arrangements at a local 'York' or wider regional context	White Papers Legislation Local Agreements/strategies (inc. CYC ones) Regional Strategies Council Plan CPA assessment	✓	✓	✓
3	Public Interest (ie. in terms of both proposals being in the public interest and resident perceptions)	Media reports Surveys Pressure Groups Public Participation/consultation	✓	✓	✓
4	* Under performance/service dissatisfaction * review could be rejected if issue being resolved elsewhere	Inspection reports Surveys Complaints Ombudsman findings Judicial Reviews CPA Year end performance reports	✓	✓	
5	Level of Risk	Risk register' Budgetary risk, ie. Overspending Inspection/Audit reports CPA assessment	✓	✓	
6	Service Efficiency	Inspection reports Executive Performance Monitoring reports		✓	✓

Applying the Criteria

Step 1:

SO to establish

(I) whether the topic being addressed elsewhere by Council Officers or externally, through published reports, action plans, responses to inspection reports and general fact finding. Such analysis to include an assessment of whether the issue(s) raised in the topic could usefully be addressed as part of any ongoing or planned work;

(ii) whether topic has been registered previously within the last 6 months and rejected. If so, whether the new registration incorporates any changes which would warrant reconsideration by Members.

Step 2:

SO to assess each topic against criteria based on information provided in topic registration and on available evidence gathered, including consultation responses.

Step 3:

SO to give an estimate of resources required to review topic, including their time, the time of other officers and external support, as well as any other potential financial cost to be incurred as part of review. Such estimate to include an indication of impact on other work commitments should review

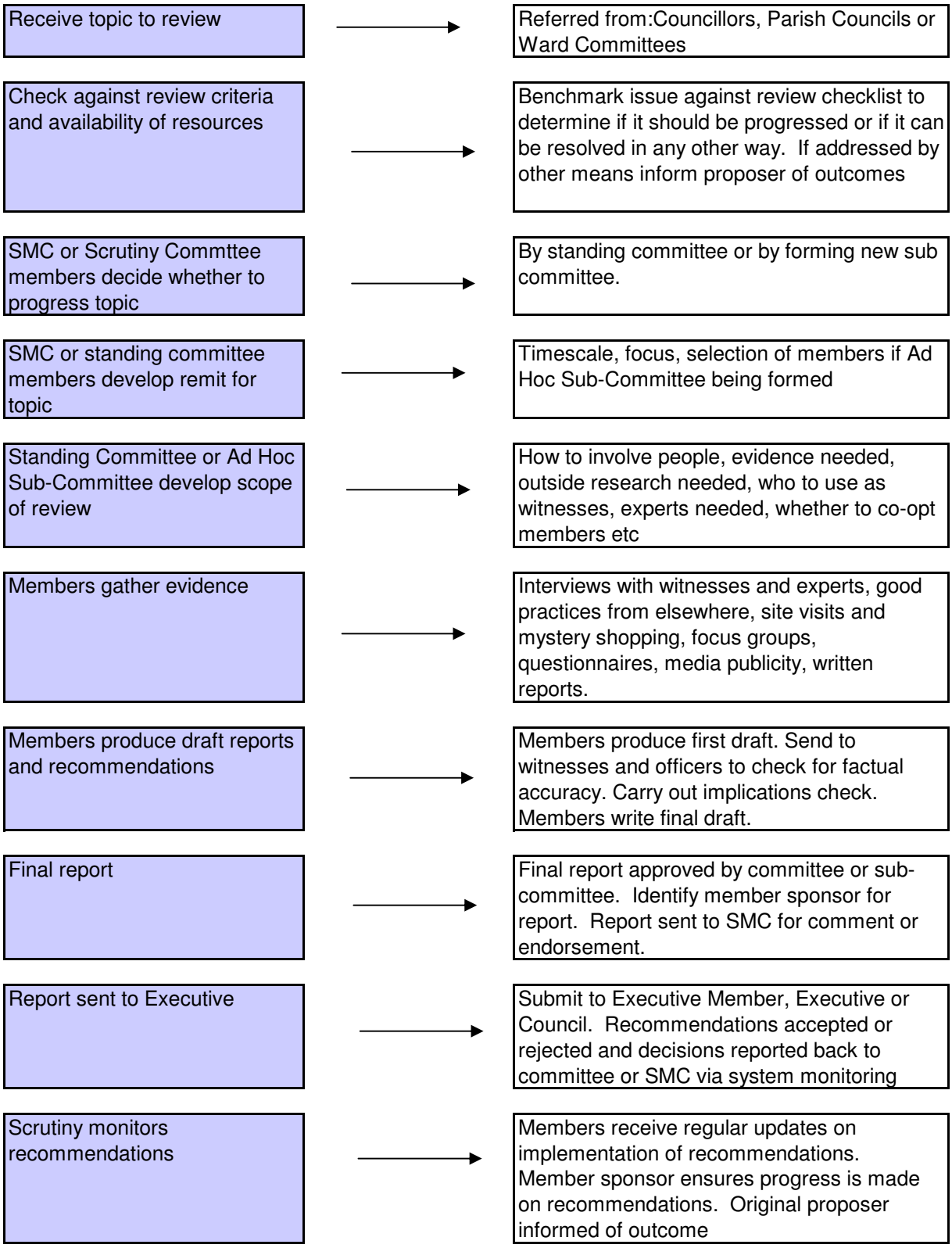
Step 4:

SO to make a recommendation to SMC on whether to proceed to review based on Steps 1-3 above and provide an estimated timescale for review.

Step 5:

Information gathered and analysis undertaken to be incorporated into feasibility study, together with any recommendation and timescale for review (if applicable). SO to request a priority rating from SMC as part of the feasibility process.

Proposed Scrutiny Process for CYC



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Scrutiny Management Committee **23 October 2006**

Report of the Head of Civic, Democratic and Legal Services

Remit for Scrutiny Review of use of Council owned land in Tang Hall area

Summary

1. This report asks Members to agree the remit for a new Scrutiny review of Council owned land in the Tang Hall area of York, as previously allocated at the last meeting of this Committee. It also clarifies the position relating to the proposed membership of the new Ad-Hoc Sub-Committee agreed to take on this review.

Background

2. At the meeting of 25 September 2006 members agreed to form an Ad Hoc Scrutiny Sub-Committee with the purpose of reviewing the use of Council owned land in the Tang Hall area of York. The topic was originally submitted by Cllrs Looker, Kind and Potter. This report asks members to agree the remit for the new Sub-Committee. A draft remit is attached at Annex A.

Consultation

3. Scrutiny officers have consulted with Cllr Looker, Potter and Kind in order to produce the draft remit and the draft attached fully reflects the comments made.

Options

4. Having regard to the draft remit Members may decide to:

    a. Agree the remit as presented
    b. Make amendments to the remit.

Analysis

5. It is expected that this review will be completed within approximately 3 to 4 months and the outcome will be recommendations to assist the process of producing an Area Asset Management Plan for Tang Hall.

Membership of Ad-Hoc Sub-Committee

6. At the last meeting of this Committee, Members started to consider the proposed membership of the new Ad-Hoc Sub-Committee. To ensure membership properly reflects proportionality requirements, the basis membership of the Sub-Committee will need to one of the following, dependent upon its required size;

   3 (Liberal Democrat) : 2 (Labour)
   4 (Liberal Democrat) : 2 (Labour) : 1 (Green)

   An update on those Members expressing interest in being on the Sub-Committee will be given at the meeting.

Corporate Priorities

7. Having a full and effective scrutiny programme can only help contribute to the Council's overall aims to improve its organisational effectiveness

8. Specifically, this review, by the way it will be conducted, helps to 'focus on the needs of customers and residents in designing and providing services and could help to 'improve the actual and perceived condition and appearance of the city's publicly accessible spaces'.

Implications

9. Any implications relating to any of the following corporate factors will be addressed throughout the review and as a result of the scoping report to be submitted to the first meeting of the Ad-Hoc Sub-Committee:

   - Finance
   - Human Resources
   - Equalities
   - Legal
   - Crime & Disorder
   - IT&T
   - Property

Risk Management

10. Any associated risks will be identified through the review process and as a result of the scoping exercise referred to above.

Recommendations

11. Members are asked to approve the draft remit at Annex A as a basis for scoping this review and to determine final membership of the Ad-Hoc Sub-Committee

Reason: In order to progress the authorised work of the Scrutiny sub-Committee

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Chief Officer Responsible for the report:
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Head of Civic, Democratic and Legal Services

Report Approved ✓ **Date** *12.10.06*

Wards Affected: Heworth and Hull Road **All** ☐

For further information please contact the author of the report

Annexes

Annex a – draft remit for Scrutiny topic

Background Papers
None

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Annex A

Remit for Scrutiny topic no 91 – Use of Council Owned Land in Tang Hall Area

Objectives

- To carry out a local scrutiny review aimed at making better use of council owned land and buildings in the area in both community and resource terms.
- To evaluate the options for resolving these issues
- To make recommendations which will inform the pilot Area Asset Management Plan being prepared for this area.

Scope

1. To decide the boundary of the area to which this review refers.
2. To carry out an audit of the property within that boundary which is owned by City of York Council
3. To consult with the community and any other relevant parties to help inform the process
4. To identify options for maximising the community use of buildings, land and other appropriate capital assets in the area.

Officer and partner involvement

Colleagues from Asset and Property Management and the Education team

Executive Members for Corporate Services and Children's Services, as necessary

Co-optees from local residents' groups/school governors etc

Timescale

Within the periods of preparation of the Tang Hall Area Asset Management Plan and of the development of the proposed Children's Centre in the area, in so far as practicable.

Constraints

Members will need to work directly with the Head of Property Services and his colleagues, and call upon other relevant colleagues in Children's Services, Adult Services and Leisure as required, in order to ensure that their recommendations have the maximum impact on improvements to facilities in Tang Hall and fit within the terms of the Asset Management Plan and any other related developments or commitments.

Resource Needs

Members are asked to consider any budget and resource requirements associated with reviewing this topic, with a view to estimating those requirements in the scoping exercise.

Scrutiny Management Committee **23 October 2006**

Report of the Head of Civic, Democratic and Legal Services

Update on Work of Health Scrutiny Committee

Summary

1. The Health Scrutiny Committee are in the process of agreeing the aspects of North Yorkshire and York Primary Care Trust's financial recovery plan which they will scrutinise for their impact on the citizens of York. The Chair of the Committee, Cllr Ian Cuthbertson, will update members on information they have received so far.

Background

2. At their meeting on 9 October members of the Health Scrutiny Committee held discussions with the Chief Executive of York Hospitals NHS Trust on alterations to provision at York District Hospital, including changes to in-patient beds.

3. There have also been recent updates on dental services in York, services provided by Yorkshire Ambulance Service and the PCT's Referral and Clinical Advice Service.

4. Members have also responded to national consultations on proposed replacements for Patient and Public Involvement Forums and also regulations on smoke-free premises.

Consultation

5. Members working in health scrutiny are in close and frequent consultation with colleagues from the health trusts and other organisations which impact on the healthcare of people in York.

Options

6. Members may receive this report and ask any relevant questions of the Chairman of the Health Scrutiny Committee.

Analysis

7. Members need to consider the future workload of the committee when requesting frequent updates from any source.

Corporate Priorities

8. The work of the Health Scrutiny Committee is aimed at making a contribution, through its review, towards the 'health of people who live in York' and the life chances of its most disadvantaged and disaffected children, young people and families'.

Implications

9. There are no known Financial, HR, Equalities, Legal, Crime and Disorder, IT or other implications at this stage.

Risk Management

10. In compliance with the Councils risk management strategy, there are no known risks associated directly with this report.

Recommendations

10. Members are asked to receive the report on the progress of the Health Scrutiny Committee.

Reason: in order to meet the delegated authority of Scrutiny Management Committee as defined in CYC's constitution.

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Report Approved ✓ **Date** *16.10.06*

Specialist Implications Officer(s)
None

Wards Affected: **All** √

For further information please contact the author of the report

Annexes
None

Background Papers
None