

# 7 SUSTAINABILITY FRAMEWORK

## 7.1 SUSTAINABLE DEVELOPMENT

Sustainable development has been established on the international political agenda since the Rio Earth Summit of 1992, and established on the UK Government policy agenda since the publication of its first sustainability strategy in 1994. Since then, the body of policy and legislation that explicitly and implicitly supports sustainable development has grown at a rapid rate.

The widely accepted definition of sustainable development, which was coined for the Brundtland Report - 'Our Common Future' is 'development which meets the

needs of the present without compromising the ability of future generations to meet their own needs'<sup>1</sup>.

The goal of sustainable development is to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations.<sup>1</sup>

According to the UK Government Sustainable Development Strategy<sup>2</sup> (March 2005), the priorities for sustainable development are:

- Living within environmental limits
- Ensuring a strong, healthy and just society
- Achieving a sustainable economy
- Promoting good governance
- Using sound science responsibly

Sustainability is enshrined in national planning policy. This is evident from Planning Policy Statement 1 that states that: "Sustainable development is the core principle underpinning planning".

## 7.2 SUSTAINABILITY REQUIREMENTS FOR NEW DEVELOPMENTS

In order to ensure that sustainable design and construction is fully integrated within the regeneration proposals, the following process should be followed:

- Inclusion of sustainable design and construction objectives in development briefs. These should consider the local site context and draw upon information contained in any earlier site appraisal carried out as part of the allocation or identification of the land for development and pay particular regard to any development brief for the site.
- Appointment of developers, design teams and contractors with the necessary skills and experience to address sustainable design and construction issues.
- Development of a sustainable design and construction strategy for the development as part of early scheme development. This should draw upon the full skills of the design team to develop forward thinking approaches to addressing the issues covered by this guide. The strategy should ideally establish firm targets for energy and water use and establish target ratings against EcoHomes and BREEAM (see pages 43 & 44).
- Appraisal of this strategy using the Sustainable Design and Construction checklist such as the SEEDA checklist (see page 44).



Securing the Future: Delivering the UK sustainable development strategy

<sup>1</sup> [www.sustainabledevelopment.gov.uk/what\\_is\\_sd/history.htm](http://www.sustainabledevelopment.gov.uk/what_is_sd/history.htm)

<sup>2</sup> Securing the Future: Delivering the UK sustainable development strategy (March 2005)

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- Preparation of a Sustainable Design and Construction Statement that will identify how the objectives set out in these guidelines have and will be met. This should be submitted as part of the planning application. The statement should provide a brief summary of those measures that have and will be taken to address sustainable design and construction and where it has not been possible to implement the policies and guidelines contained in this document the statement should explain why.
- The Development Management team will use the Sustainable Design and Construction checklist to appraise proposals they receive.

## ENVIRONMENTAL BENCHMARKING AND ASSESSMENT SCHEMES

### Assessment requirements

In determining whether applications for development meet the sustainability requirements for this masterplan, the Councils will expect that all new offices, industrial units, schools and retail developments are assessed using the BRE's Environmental Assessment Method (BREEAM). Similarly all new housing must be assessed using the most up to date version of the EcoHomes scheme.

The Councils will expect all developments to reach a minimum of 'very good' status against the BREEAM criteria unless there are compelling reasons why this cannot be achieved.

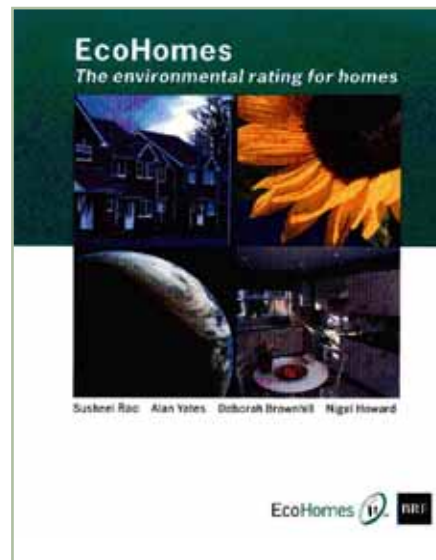
There are a number of assessment methods that the Councils would use for setting standards for new buildings on developments. These are: EcoHomes for new housing; BREEAM for non-domestic buildings and sustainability checklists for all proposed developments.

### EcoHomes

EcoHomes is a standard method for assessing the performance of new housing in relation to sustainable development objectives. It sets out a range of best practice criteria against which the performance of a proposed scheme can be compared. These cover: Energy; Transport; Pollution; Materials; Water; Land Use and Ecology; and Health and Well-being. Where these criteria have been met, 'credits' are achieved and the development can be awarded a rating of Pass, Good, Very Good or Excellent. A licensed assessor must carry out the assessment.

Assessments are usually carried out at the design stage. The developer or their consultants must complete a detailed proforma that sets out details of the proposed specification. This will for example include energy calculations demonstrating the predicted CO<sub>2</sub>

emissions, confirmation that insulation materials are HCFC free, confirmation that timber will be obtained from sustainable sources etc. The licensed assessor will review this information and award credits where the specification meets the required EcoHomes criteria. Depending on the number of credits obtained and their relative weighting, an overall score and rating will be determined which is displayed on a certificate issued by the BRE. Assessors can also offer pre-certification guidance aimed at reducing a schemes impacts and improving its rating.



Ecohomes sustainability guidance

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The scheme can be used to set standards of performance for new housing as part of the brief or tender documents, and can also be used to assess the performance of design proposals. The certificate can be used for marketing purposes or for demonstrating compliance with development standards. EcoHomes can be used to assess all standard forms of new housing including: private and social housing schemes, flats/apartments and houses. For other types of housing - most sheltered homes, nursing homes, student accommodation etc, a bespoke EcoHomes assessment has to be carried out.

Although it is a voluntary assessment scheme, EcoHomes is increasingly being used to establish targets of performance for new housing. The Housing Corporation's Scheme Development Standards currently include an essential requirement that all schemes meet an EcoHomes "Pass" rating and this is set to increase to "very good" in April 2006. These standards apply to all Housing Corporation-funded homes. English Partnerships and other regional development agencies are now setting EcoHomes targets for new developments on their land.

Further details on the EcoHomes Scheme can be downloaded from:

[products.bre.co.uk/breeam/ecohomes.html](http://products.bre.co.uk/breeam/ecohomes.html)

## **Building Research Establishment Environmental Assessment Method (BREEAM)**

The ECD Partnership and BRE originally developed BREEAM in 1990. Versions have subsequently been developed for the following building types:

- New Non Food Industrial and Warehouse Units BREEAM 5/93
- New and Existing Offices BREEAM 2003
- New and Existing Retail
- New Schools

The BREEAM schemes seek to minimise the adverse effects of new buildings on the environment at global and local scales, whilst promoting healthy indoor conditions for the occupants. The environmental implications of a new building are assessed at the design stage, and compared with good practice by independent assessors. The issue covered include: Management; Energy; Transport; Pollution; Materials; Water Consumption; Land Use; Ecology; and Health and Well-being. An overall rating of the building's performance is given using the terms Pass, Good, Very Good or Excellent. This is determined from the total number of BREEAM criteria met and their respective environmental weighting. The assessments follow a very similar process to EcoHomes.

All new government buildings are required to obtain a BREEAM rating of "Excellent" and both the Environment Agency and English Partnerships require a BREEAM score of "Very Good" for new commercial buildings on their sites.

Further details on all the BREEAM schemes can be downloaded from:  
[products.bre.co.uk/breeam/index.html](http://products.bre.co.uk/breeam/index.html).

## **Surrey Design**

The objectives and principles set out in Surrey Design are a good basis for assessing development proposals. This design guide has been devised with the purpose of promoting high quality design in new developments in Surrey and aims to supplement the principles in national and regional planning guidance.

With this in mind, any new development should use the design guide as a benchmark for design standards.

## **Sustainability Checklists**

Many Local Authorities have produced sustainability checklists that can be used by planners to assess developers proposals. These deal with a wider range of sustainability issues than BREEAM (which is limited to buildings).

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The South East England Development Agency (SEEDA) has produced a sustainability checklist for use by developers and local authorities, which is currently being revised. The web based checklist allows the sustainability aspects of a development to be addressed, and enables organisations such as local authorities, SEEDA and the Government Office of the South East (GO-SE) to understand the level of performance that might be achieved. It may also be used by developers to demonstrate the sustainability credentials of their development. The checklist aims to form a common framework for the South East.

Surrey County Council is also producing its own list of sustainability criteria that may be used in assessing applications.

## 7.3 EXAMPLES OF SUSTAINABLE DESIGN AND CONSTRUCTION REQUIREMENTS



Ecological enhancement

The Councils expect new development in the Preston area to fully embrace the principles of sustainable development. As such, the following sustainability measures are given as examples of issues addressed by BREEAM and EcoHomes which should be implemented in any new development.

### Ecological enhancement

An ecological survey will be carried out on all development sites to identify those features that should be protected, and to provide recommendations for enhancing the ecology of the site. Any recommendations for wildlife planting and encouraging flora and fauna should be implemented.

It is expected that action will be taken by developers to preserve and enhance wildlife corridors running through development sites and that hedgerows and trees adjacent to or on the development site will be protected.

### Solar water heating

Solar thermal systems, or solar hot water



Solar water heating

systems use the energy from the sun to heat water, most commonly (in the UK) for hot water needs. Ideally the collectors should be mounted on a south-facing roof, although south-east/south-west will also function successfully at an angle of around 30 degrees from the horizontal. Developments should be laid out so that sloping roofs (or at least a component of them) face south-east/south/south-west.

Solar water heating should be considered and applied where feasible. If solar water heating is not built-in to individual house designs, information on systems and on grants available to homeowners under the Government's Clear Skies Programme could be provided to purchasers and tenants in the Homebuyer's Handbook. Solar water heating can typically provide around 50% of a home's hot water requirement-more where the occupants adapt their behaviour to make best use of the system-reducing demand for gas and/or electricity.



Timber from sustainable sources

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## Timber from sustainable sources

Timber from Forest Stewardship Council (FSC) or Pan-European Forest Certification Scheme (PEFC) or other equivalently managed sources should be specified for both structural elements and internal finishing elements. It should also be specified for external work. Developers will be expected to show written confirmation from the timber suppliers.

Forest management can be environmentally appropriate and socially beneficial, but it can also be environmentally and socially damaging. The Council will give preference to timber and timber products that have been independently certified by a credible, globally applicable forest certification scheme and can demonstrate that the products are derived from well-managed sources.

If independently certified timber proves to be unavailable, contractors should, as a second resort only, use timber from a known source, and will attempt to gain as much assurance as possible that the forest is well-managed and will provide documentation of proof. Documentation must be provided to prove that every attempt has been made to obtain certified sources before exploring alternatives - flexibility in terms of species specification should be pursued.

All timber should be sourced from well-managed and licensed European sources to

reduce transport energy requirements. Where available and where it does not significantly increase costs, timber should be selected from suppliers certified by the FSC or PEFC. Timber from unknown origins should not be used. Significant credits can be obtained under Ecohomes and BREEAM schemes by specifying FSC or PEFC certified timber for internal and external timber uses.

## 7.4 SUSTAINABILITY APPRAISAL

A sustainability appraisal of the proposals for the Preston Area Regeneration Masterplan has been undertaken by the Sustainable Development Group of FaberMaunsell.

The proposals are being assessed against a number of sustainability objectives. These objectives have been developed from a review of planning policy and the results of the consultation exercises for the project. These objectives are used to determine the preferred options for the project and opportunities for further improvement are identified as the proposals are developed.

Figure 7.1 summarises the methodology for undertaking the sustainability appraisal for the project.

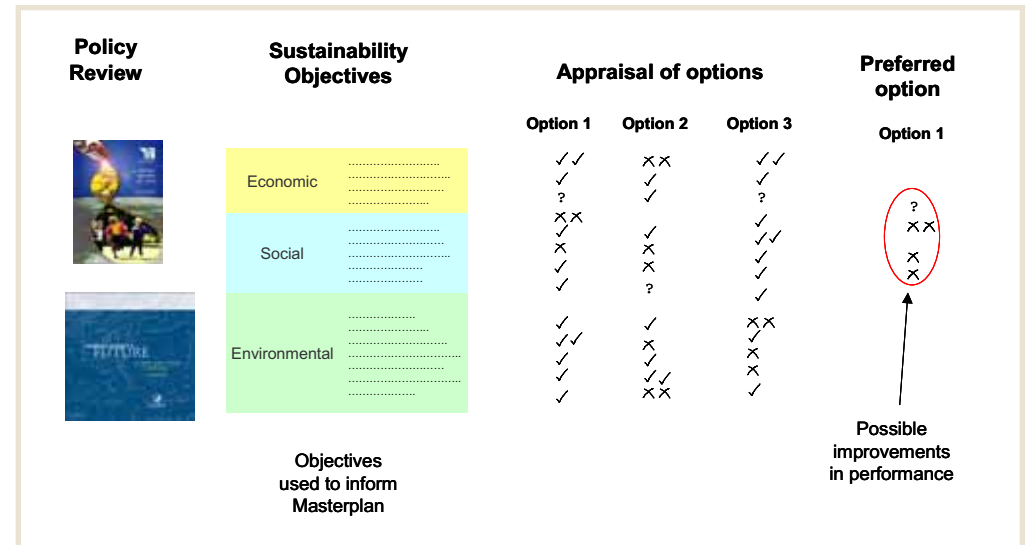


Figure 7.1 Sustainability framework methodology

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## 7.5 SETTING SUSTAINABILITY OBJECTIVES

The information in the table in Appendix 2 demonstrates in full how the Preston Area Regeneration Masterplan should meet the various aspirations towards environmental, social and economic issues incorporated in the relevant planning policies and guidance. It therefore forms the Sustainability Framework which has informed the development of the proposals for the Preston Masterplan.

The table summarises the 15 categories for Sustainable Development for design and construction, how they are supported by relevant policies (Local Plan for Reigate and Banstead and The Surrey Structure Plan). Various sustainability objectives that are specific to the Preston Area Regeneration Masterplan are then proposed. It should be noted that the objectives cover all the possible issues that relate to sustainability, and not all issues can be addressed by the masterplan.

The emphasis of the objectives is on social and environmental aspects, rather than economic aspects, as this reflects the Government's 15 sustainability indicators.

## 7.6 POTENTIAL INCLUSIONS TO ENHANCE THE SUSTAINABILITY PERFORMANCE

The following comments could be incorporated to enhance the sustainability performance:

- Propose sites for the provision of community recycling facilities.
- Propose an adult education service in the community facilities.
- Propose a sexual health and family planning advice facility within the community facilities or youth centre.
- Developers should be required to undertake an ecological study of all new development sites and recommendations for protection and enhancement of ecology should be integrated into development proposals.
- Incorporate cycle parking facilities for all new housing, existing housing.
- Include requirements to store rainwater for use in landscaping and gardens.
- Include a summary of the key issues that should be addressed by development proposals. This will include energy efficiency.
- A requirement for existing housing to be upgraded with energy efficiency measures such as improved insulation standards, heating controls etc
- Include a summary of the key issues that should be addressed by development proposals. This will include renewable energy.

- A summary of the key issues that should be addressed by development proposals is included in the masterplan. This will include materials selection.

## 7.7 FURTHER STUDIES

There are opportunities at the masterplan level to minimise impacts and develop strategies that are not addressed in the scope of the masterplan as it stands. The following list sets out further recommendations for studies or reviews that could be undertaken to improve the sustainability performance of the Preston area:

- To undertake a review of the existing leisure centre and determine whether measures could be taken to attract local patronage.
- To review the capacity of doctors surgery and to provide a wider network of community health support facilities.
- To undertake an ecological study of the Preston area to identify existing habitats and opportunities to enhance the ecological value of the area.
- To undertake a renewable energy feasibility study across the whole of the Preston area to establish feasibility of community renewable energy (e.g. community wind turbine) or low carbon technologies (district heating).

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- To undertake a review of the existing infrastructure, particularly the sewage and surface water drainage, to ensure that the existing drainage has the capacity to handle the proposed new buildings and that flood risk is mitigated where possible.

It would also be beneficial to include sustainability requirements into development briefs and we would recommend that developers are required to achieve an 'Excellent' BREEAM or EcoHomes rating for all new buildings and should obtain Certification on completion of the buildings through a post-construction review. These development briefs could also include additional targets (beyond BREEAM requirements) for measures such as: building-integrated renewable energy; provision of water efficiency measures and sustainable drainage measures.