

WWF - UK

Fiscal Incentives for Sustainable Homes

May 2002

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May 2002

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CONTENTS

	<i>EXECUTIVE SUMMARY</i>	<i>1</i>
<i>1</i>	<i>INTRODUCTION</i>	<i>5</i>
<i>1.1</i>	<i>BACKGROUND TO THE STUDY</i>	<i>5</i>
<i>1.2</i>	<i>METHODOLOGY OF THE STUDY AND STRUCTURE OF THIS REPORT</i>	<i>6</i>
<i>2</i>	<i>THE UK FISCAL CONTEXT</i>	<i>8</i>
<i>2.1</i>	<i>INTRODUCTION</i>	<i>8</i>
<i>2.2</i>	<i>THE GOVERNMENT'S FISCAL STRATEGY</i>	<i>8</i>
<i>2.3</i>	<i>UK GOVERNMENT'S ATTITUDE TO ENVIRONMENTAL TAXATION</i>	<i>9</i>
<i>3</i>	<i>SUSTAINABLE HOMES</i>	<i>12</i>
<i>3.1</i>	<i>INTRODUCTION TO SUSTAINABLE DEVELOPMENT AND HOMES</i>	<i>12</i>
<i>3.2</i>	<i>THE CONCEPT OF SUSTAINABLE HOMES</i>	<i>12</i>
<i>3.3</i>	<i>ACCREDITATION OF SUSTAINABLE HOMES IN THE UK</i>	<i>14</i>
<i>3.4</i>	<i>SUSTAINABLE HOMES IN THE UK</i>	<i>15</i>
<i>3.5</i>	<i>BARRIERS TO SUSTAINABLE HOMES</i>	<i>16</i>
<i>4</i>	<i>EXISTING POLICIES</i>	<i>17</i>
<i>4.1</i>	<i>THE IMPORTANCE OF A BALANCED POLICY MIX</i>	<i>17</i>
<i>4.2</i>	<i>CURRENT GOVERNMENT TARGETS AND PROGRESS</i>	<i>18</i>
<i>5</i>	<i>POTENTIAL FISCAL INCENTIVES FOR SUSTAINABLE HOMES</i>	<i>30</i>
<i>5.1</i>	<i>LONG LIST OF POTENTIAL FISCAL MEASURES</i>	<i>30</i>
<i>5.2</i>	<i>BRIEF DESCRIPTION OF THE POTENTIAL FISCAL MEASURES</i>	<i>32</i>
<i>5.3</i>	<i>PRELIMINARY REVIEW OF PROPOSALS FOR FISCAL MEASURES AND SELECTION OF PRIORITY MEASURES</i>	<i>36</i>
<i>6</i>	<i>EVALUATION OF THE PROPOSED FISCAL MEASURES</i>	<i>37</i>
<i>6.1</i>	<i>STAMP DUTY RELIEF ON PROVISION AND PURCHASE OF SUSTAINABLE HOME</i>	<i>38</i>
<i>6.2</i>	<i>REDUCED VAT RATES FOR ACCREDITED SUPPLIES</i>	<i>45</i>
<i>6.3</i>	<i>ABOLITION OF ZERO PERCENT VAT RATE FOR NEW RESIDENTIAL BUILD</i>	<i>41</i>
<i>6.4</i>	<i>CAPITAL ALLOWANCES FOR EXPENDITURE ON THE CONVERSION OF PREMISES INTO 'SUSTAINABLE' DWELLINGS</i>	<i>45</i>
<i>7</i>	<i>CONCLUSIONS AND RECOMMENDATIONS</i>	<i>50</i>

EXECUTIVE SUMMARY

WWF- UK has instigated its Sustainable Homes project as it feels sustainable homes would help “anchor the idea of sustainability in people’s everyday lives” and contribute to “environmental, social and economic benefits to households, including safer, cleaner neighbourhoods, and lower energy bills at no extra cost to the environment”.

As part of this project WWF has invited the UK Government to make a public commitment at the World Summit on Sustainable Development (WSSD) in Johannesburg in September 2002 to develop one million sustainable homes in the UK by 2007.

In order to inform its request to Government to commit to such an ambitious target, WWF-UK is currently involved in a wide range of actions, including stakeholder dialogue. This is hoped to provide a clear definition of what constitutes a sustainable home later this month. In parallel, WWF-UK commissioned ERM, to undertake a study to establish the UK’s current policies towards sustainable homes and the identification of potential future fiscal measures.

The study was designed to help WWF:

- identify the baseline of existing fiscal measures which have an impact on the supply of homes, including incentives and disincentives for moves towards more sustainable homes;
- investigate where changes to existing fiscal measures, or new types of measures, could benefit the drive towards more sustainable homes; and
- help communicate these ideas to Government.

In this study we have reflected on what provides the right ‘infrastructure’ for people to live more sustainably, *ie* homes “through which people can make a concrete and quantifiable contribution to sustainable development” (WWF – One Million Sustainable Homes). We therefore focused on the ‘shell’ of a home, rather than people’s way of living within the shell.

In the absence of a clear definition of a sustainable home, this study used a preliminary definition based around 11 sustainability issues including: bringing land and empty homes back into use, promoting mixed use developments and increased use of public transport, dealing with flood risk, climate change, fuel Poverty, waste, water use, materials and health and well-being.

Although, some of these issues are and could be addressed by direct regulation, fiscal incentives could be a very important tool for developing

sustainable homes, especially since financial (and fiscal) barriers are commonly identified as being amongst the most important barriers to incorporating sustainability in the new build or renovation of homes.

The analysis of the sustainability issues and the UK's current policies brought to light a number of areas where additional fiscal measures would be useful in providing incentives for sustainable homes. The following Table provides a summary of the long list of potential fiscal measures on the basis of their link to the identified sustainability issues, their likely impact and potential acceptability to Government. The latter is based on our views of the likely costs to Treasury and the fit of the instrument with current Government financial (and other policy) objectives.

Summary Review of Proposals

	Targeting sustainability	Likely size of impact	Acceptability to Government
1. Abolition of zero percent VAT rate on new build	+++	+++	+
2. Vacant land value taxation and /or Greenfield levy	+++	++	+
3. Reduced VAT rate on accredited supplies	+++	++	++
4. Product charges on non-sustainable building materials and equipment	+++	++	-
5. Subsidies for the installation of sustainable equipment	+++	++	+
6. Tax free savings for sustainable home mortgages/re-introduction of MIRAS for sustainable home mortgages	+++	+	+
7. Stamp duty relief for sustainable homes	+++	++	+++
8. Discretionary abolition of 50% council tax relief on second homes	++	-	+++
9. Capital allowances for expenditure on sustainable conversions	+++	++	++
10. Increase of rent-a-room relief	++	-	++

Note: Three + is maximum

On the basis of this review we have selected four fiscal measures, which seem to be most promising. In line with recent fiscal policy, these are rewarding desirable behaviour through tax relief and reduction of rates rather than penalising undesirable behaviour by *eg* imposing taxes. The four measures are:

1. *Stamp duty relief on the first sale of sustainable homes and rebate of the stamp duty paid on land on which sustainable homes are built or premises which have been converted into sustainable homes*

This measure would consist of providing 100% stamp duty exemption on the first sale of sustainable homes, be it new build or renovations. In addition, there would be a rebate system for the stamp duty paid by developers who develop sustainable homes; *ie* they could claim back the stamp duty paid on land (in case of new build) or the existing 'non-sustainable' property (in case of renovations).

2. *Reduced VAT rate of 5% on accredited supplies*

A reduced VAT rate of five per cent would be applied to accredited 'sustainable' supplies. These supplies would have to be defined by Government but could include for example:

- rainwater harvesting systems for non-drink water use in the home;
- grey water recycling systems;
- household water saving fixtures ⁽¹⁾ (*eg* low-flush toilets, shower heads, kitchen faucets etc.);
- low solvent paints;
- recovered materials; and
- other certified materials including primary resources such as timber.

3. *Abolition of the zero VAT rate on the construction of new buildings for residential use – replace with a reduced VAT rate (5%) conditional upon achieving sustainability rating. New residential build that does not achieve the sustainability ratings would be taxed at 17.5 per cent*

This measure aims to remove the current perverse incentive encouraging new build over conversions. The system of zero VAT on the construction of new buildings for residential use would be abolished. Instead it would be replaced with a reduced VAT rate (*ie* 5%) conditional upon achieving sustainability rating. Any new residential build that would not achieve the sustainability ratings would be taxed at 17.5 per cent.

4. *Capital allowances for expenditure on the conversion of premises into 'sustainable' residential dwellings for the rental market*

This measure aims to encourage developers and property owners involved in residential conversions to do so in a more sustainable manner by

(1) This could be extended to household appliances. These are however, not seen, as part of the shell of a house and are thus excluded from this specific study.

providing a capital allowance (a means to offset investment expenditure against income) for costs made for sustainable conversions.

One of the main issues in this study was the absence of a clear definition of what constitutes a sustainable home. Without such a definition, it is not possible to quantify the impact (*eg* in terms of more sustainable homes), nor the financial cost for Treasury of the potential fiscal measures.

We therefore recommend that for WWF to take this research forward would require:

- further defining what sustainable homes are;
- once sustainable homes are defined, further analysing the potential impacts and effects on Treasury receipts by detailed quantification;
- talking to interest groups and partners; and
- taking soundings with relevant Government Departments and other organisations.

1 INTRODUCTION

1.1 BACKGROUND TO THE STUDY

This report has been prepared by Environmental Resources Management for WWF-UK.

WWF- UK set up the Sustainable Homes project because sustainable homes can bring “environmental, social and economic benefits to households, including safer, cleaner neighbourhoods, and lower energy bills at no extra cost to the environment”. It is felt sustainable homes would help “anchor the idea of sustainability in people’s everyday lives”. WWF’s project addresses the refurbishment of existing stock as well as new build. Sustainable homes are designed to cause as little damage to the environment as possible, and to address vital social and economic considerations such as the provision of public transport and local amenities.

As part of the Sustainable Home Project WWF has invited the UK Government to make a public commitment at the World Summit on Sustainable Development (WSSD) in Johannesburg in September 2002 to develop one million sustainable homes in the UK by 2007.

This is a very ambitious target of an average 200,000 sustainable homes a year ⁽¹⁾. In order to inform its request to Government to commit to such an ambitious target, WWF-UK is currently involved in a wide range of actions. WWF has initiated a stakeholder dialogue process, which is being independently facilitated by Article 13 consultants. Over 300 organizations in the UK have received a consultation questionnaire on the issue of sustainable homes, aiming to identify the current barriers to sustainable homes and ways to overcome them. The stakeholder dialogue will identify a consensus opinion on the definition of a sustainable home, and the ultimate aim of the dialogue is to gain a commitment to action from key players.

In parallel, WWF-UK commissioned ERM, to undertake a study to establish the UK’s current policies towards sustainable homes and the identification of potential future fiscal measures.

This report aims to provide an overview of the current use of fiscal incentives (and other major policy initiatives) in the provision of homes in the UK. It also considers which additional fiscal incentives (or removal of perverse incentives) would make a positive contribution to the development of more sustainable homes.

(1) Government projections for new households, using 1996-based population projections, are that 3.8 million new dwellings are required in England between 1996 and 2021 (Projections of Households in England to 2021, Press Notice 297 (March 1999) – Households Growth Down – John Prescott). This equates to an average of 225,000 new homes per year, of which around 150,000 will be new builds (Barlow, Bartlett, Hooper and Whitehead, 'Land for Housing : Current Practice and Future Options', JRF, 2002).

As no definition of sustainable homes has so far been determined, we have considered a wide range of issues, which are commonly accepted as components of sustainable homes, and have studied which fiscal measures would help address these by means of new build or renovations of dwellings.

The objectives of this study are to:

- identify the baseline of existing fiscal measures which have an impact on the supply of homes, including incentives and disincentives for moves towards more sustainable homes; and
- investigate where changes to existing fiscal measures, or new types of measures, could benefit the drive towards more sustainable homes.

We have not quantified the potential effect of such measures, or indeed their contribution to reaching WWF's target of one million sustainable homes by 2007, as this would have required a strict definition of what homes will be accepted as 'sustainable'.

Fiscal incentives are a major component of Government policy and are mostly used in combination with other instruments such as grants or regulation. The latter can help improve the effectiveness of fiscal instruments or reduce their unwanted side effects. Whilst we fully recognise the need for a mix of policy instruments to encourage sustainable homes, this study has focused on fiscal instruments.

1.2 METHODOLOGY OF THE STUDY AND STRUCTURE OF THIS REPORT

The study is based on the following:

- identification of existing policies, including fiscal incentives and grants, currently in place to encourage the supply of homes;
- drawing up of a long list of potential fiscal measures which would encourage more sustainable new build or renovations;
- preliminary review of potential fiscal measures using a simple three star rating system for the targeting of sustainability, impact and potential acceptability to Government of the measures;
- selection of a shortlist of the most promising fiscal measures;
- evaluation of the priority measures; and
- conclusions and recommendations.

The structure of the report reflects this process.

Before the evaluation of fiscal measures, *Section 2* provides an overview of the UK's fiscal regime, the framework in which any recommendations for change will be considered by the Government. *Section 3* introduces the concept of sustainable homes and the most important issues at stake. *Section 4* details existing policies that work to incentivise elements of sustainable housing. *Section 5* lists potential fiscal incentives that could further support the existing policies. *Section 6* provides an analysis of the priority fiscal measures made in *Section 5* and *Section 7* provides final recommendations on fiscal measures drawing on the results of the analysis.

Annex 1 provides a list of relevant government targets, a discussion of the opportunity for sustainable homes to contribute to these targets, a summary of current policies in these areas and a full list of proposed new fiscal policies. *Annex 2* provides more information on the BRE's EcoHomes accreditation system and *Annex 3* describes the issues of 'Green Mortgages'

2 THE UK FISCAL CONTEXT

2.1 INTRODUCTION

The possibility of introducing fiscal incentives for sustainable homes (or removing perceived barriers) has to be seen in context of the Government's fiscal strategy.

The recently published Budget 2002 illustrates the Chancellor's Budgetary caution but also allows for tax concessions in favour of the environment and urban regeneration. One important example is the reduced VAT rate, which will be extended to include renewable energy heating systems, micro combined heat and power domestic systems and factory-insulated hot water tanks from 1 June 2002. In recent years concessions have also been introduced to encourage urban regeneration and encouraging use of Brownfield rather than Greenfield land for new build.

This section gives a brief background to the UK fiscal system as a framework in which to see potential changes to encourage sustainable homes.

2.2 THE GOVERNMENT'S FISCAL STRATEGY

Governments raise revenues from a variety of sources, which are classified as direct or indirect taxation:

- Direct taxation is levied on income from business activity (corporation tax),⁽¹⁾ employment (income tax)⁽²⁾ or investments.

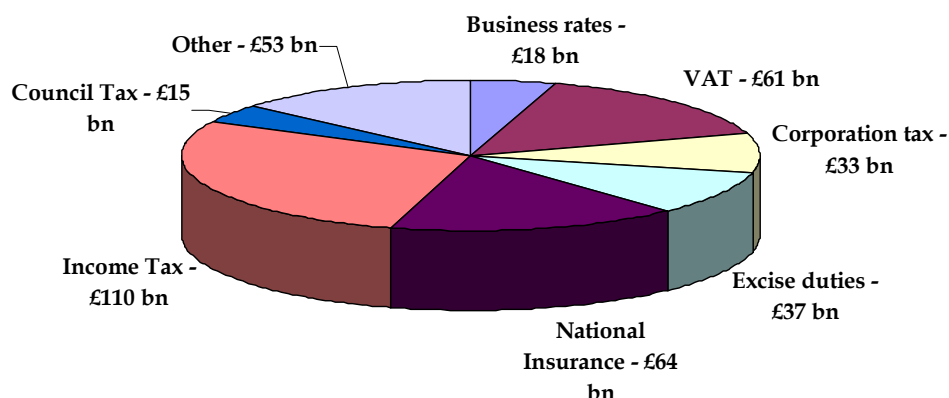
- Indirect taxation is levied on goods and services:
 - VAT is levied on value added at each stage in the supply chain *ie* the Value Added Tax);,
 - Customs and excise duties are levied on sale of various products and services (the oldest is beer duty, the most recent excise duty is air passenger duty introduced in November 1994) and include a wide variety such as betting and gaming duty, road fuel tax, climate change levy and landfill tax.

Figure 2.1 illustrates where the Treasury's tax receipts of £391 billion (2001) come from. The 'other' category includes *eg* capital taxes, stamp duties and vehicle excise duties.

(1) Charged on profits (all sources of income other than dividends from UK companies of companies and unincorporated bodies that are not partnerships).

(2) Income tax is levied on earnings from employment and self-employment, rents, interest and dividends.

Figure 2.1 Treasury Tax Receipts 2001-2002



Source: HM Treasury 2001-02 figures

Although UK tax income relies heavily on a limited number of fiscal instruments (personal income tax, corporate tax, VAT and Customs and Excise Duties), there are many exemptions and allowable benefits (costs and expenses that can be deducted from the tax base on which tax due is calculated). Regulations have in some cases become so complicated it is inevitable that many of the potential beneficiaries of tax exemptions, never actually benefit as they do not know of the exemption.

2.3 UK GOVERNMENT'S ATTITUDE TO ENVIRONMENTAL TAXATION

Environmental policy is designed to combat the costs of human behaviour to our natural environment. Governments have the option of protecting the environment by means of a 'direct regulatory' approach or a more 'economic' or market oriented approach. The command-and-control approach uses standards to alter behaviour whereas the economic approach is based on the use of incentives.

Taxation is possibly one of the most widely used methods of economic incentives. One of the key advantages of environmental taxes is that they correct for market failures by incorporating the costs of pollution and other environmental costs into prices and thus implementing the 'Polluter Pays Principle'. However, environmental taxation is not always applauded politically as it can be perceived to create problems in international competitiveness, proportionally high impacts on low-income categories, conflicts between national and international legislation etc.

However, Governments can also use other fiscal measures. For example, an alternative to taxing undesirable behaviour is the rewarding of environmentally friendly behaviour, thus re-balancing relative prices.

Although UK Government has, like many other Governments around the world, introduced the concept of environmental taxation (eg Climate Change Levy, Aggregates Levy and Landfill tax), its fiscal measures have recently concentrated on rewarding good behaviour rather than taxing bad behaviour (the carrot vs. stick argument). This has been done with the help of a wide variety of fiscal measures, including for example, duty exemptions, reduced VAT rates and capital allowances.

The current Government's strategic framework for delivering its environmental objectives is set out under the following themes:

- tackling climate change and improving air quality;
- regenerating Britain's towns and cities; and
- protecting Britain's countryside.

The Government has put in place a wide range of policies to help achieve these objectives. There include both carrot (rewarding environmentally sound behaviour) and stick (penalizing environmental degradation). Some of the more important policies are illustrated next.

To help tackle climate change and improve air quality:

- introduction of climate change levy package from 1 April 2001;
- an emissions trading scheme;
- Green Fuel Challenge to promote cleaner fuels;
- a new Green Technology Challenge to further promote cleaner technologies;
- tax incentives for businesses to promote greener modes of travel; and
- fuel duty differentials to promote use of cleaner and alternative fuels.

To help regenerate Britain's towns and cities:

- a stamp duty exemption for property transactions in Britain's disadvantaged areas;
- a cut in VAT to 5% to encourage renovation and conversion of existing property;
- 100% capital allowances for creating flats over shops; and
- 150% accelerated tax credits to help clean-up contaminated land.

To help protect Britain's countryside:

- introduction of the aggregates levy and the Sustainability Fund from April 2002;
- acceptance of voluntary proposals from industry to reduce the environmental impact of pesticides use to be implemented from 1 April 2001;

- pre-announced annual increase in landfill tax to £12 per tonne, and plans to consult on future reform of the landfill tax credit scheme whilst challenging industry to allocate more tax credits towards sustainable waste management; and
- set a challenging target for the waste industry to allocate 65% of tax credits towards sustainable waste management.

The recently published Budget 2002 includes a whole set of environmental measures.

- extension of the reduced VAT rate to include renewable energy heating systems, micro combined heat and power domestic systems and factory-insulated hot water tanks;
- new climate levy exemptions, and detailed changes to the levy rules;
- landfill tax credits consultation;
- reduced VED rates for the cleanest cars and vans;
- duty cuts for cleaner fuels; and
- additional enhanced capital allowances for energy-saving technologies and low-emission cars.

In addition to these measures, the Government also announced that it will “review the potential to extend the use of economic instruments for environmental purposes” ⁽¹⁾, including addressing environmental issues and improving household energy efficiency. And Government is committed to develop “with stakeholders its strategy to tackle environmental issues using economic instruments where appropriate over the coming months” ⁽²⁾.

This study into the use of fiscal measures to encourage sustainable homes therefore fits in well with the planned discussions and research.

(1) Source: Budget 2002 - Press release 17 April 2002 (HM Treasury)

(2) Source: Budget 2002 - Press release 17 April 2002 (HM Treasury)

3 SUSTAINABLE HOMES

3.1 INTRODUCTION TO SUSTAINABLE DEVELOPMENT AND HOMES

Sustainable development is widely defined as ‘*development, which meets the needs of the present without compromising the ability of future generations to meet their own needs*’⁽¹⁾. The UK Government is committed to sustainable development, *ie* aiming to ensure a better quality of life for everyone, now and for generations to come, which it interprets as a requirement to meet four objectives at the same time (the quadruple bottom line):

- social progress which recognises the needs of everyone;
- effective protection of the environment;
- prudent use of natural resources; and
- maintenance of high and stable levels of economic growth and employment.

3.2 THE CONCEPT OF SUSTAINABLE HOMES

The majority of the existing UK housing stock has significant social and environmental impacts. The use of inappropriate materials, the destruction of natural habitats, pollution and the excessive use of energy and water all damage the local and global environment. Reducing the environmental impact of UK homes is therefore a crucial component of moving towards sustainable development.

The concept of sustainable development can be applied to the shell of a home (including its location), or the way we live in those homes and our communities. Although there is no commonly agreed definition of what constitutes a ‘*sustainable home*’, in this study we have considered a range of issues which may affect the sustainability of the shell of a home, both new homes and the renovation of existing homes.

We have thus reflected on what provides the right ‘infrastructure’ for people to live more sustainably, *ie* homes “through which people can make a concrete and quantifiable contribution to sustainable development” (WWF – One Million Sustainable Homes).

The issues at stake for construction or renovation of more sustainable homes have been categorised around the following 11 topics:

- ***Bringing Land Back into Use*** -therefore relieving some of the pressure for new developments on Greenfield sites.

(1) World Commission on Environment and Development in 1987, in ‘Our Common Future’, commonly referred to as the Brundtland Report.

- ***Bringing Empty Homes Back into Use*** - using existing buildings and reducing the need to use new materials for new-build homes.
- ***Promoting Mixed Use Developments*** - create more sustainable patterns of development by building in ways, which exploit and deliver access to jobs, education and health facilities, shopping, leisure and local services. Thus reducing the need to travel and isolated 'dormitory' housing schemes.
- ***Promoting Increased use of Public Transport***- 22% of the CO₂ emitted in the UK is due to energy used by the occupants travelling between buildings ⁽¹⁾. Location of housing will impact on whether it will be practical for occupiers to use public transport or walk to work. The design of homes will also be a factor in whether people choose to work from home.
- ***Dealing with flood risk*** - halt the current rate of loss of floodplain and ensure that they are protected from inappropriate development. The damage that results from flooding is a direct consequence of past decisions about the location, nature and scale of development. The Easter 1998 floods caused £400 m worth of damage.
- ***Climate Change*** - the domestic sector accounts for 26% of total UK carbon dioxide emissions ⁽²⁾. Energy use (and resulting greenhouse gas emissions) can be greatly influenced by building design or renovation - for example, passive solar and adequate insulation can make an important contribution towards reducing energy required for heating.
- ***Fuel Poverty*** is defined as the inability to afford adequate warmth and other energy services for ten per cent of total household income. This is a big social problem in the UK as there are currently around 4 million households classed as fuel poor. The government has a goal of eradicating fuel poverty in the UK by 2010, key to achieving this target will be improvements in the energy efficiency of the UK housing stock.
- ***Waste (Construction Waste) and recycling*** - About 17% of waste going to landfill sites is directly related to construction. Indirect arisings, such as quarrying and other waste probably doubles this figure ⁽³⁾. The use of sustainable building material could significantly reduce waste produced by construction. The provision of facilities to encourage recycling can also contribute to reducing waste arisings.
- We are currently using ***Water*** at an unsustainable rate in many areas of England and Wales. Water use in the home can be greatly reduced through the use of water efficient fixtures and by the use of rainwater collection and grey water recycling systems.
- The choice of ***materials*** used during the construction and renovation of a home are a key area of sustainable design as materials extraction and production can have both environmental and social impacts.
- ***Health and well-being*** - commonly covers issues such as allowing sufficient private space in the design of a home, ensuring adequate insulation in walls and avoiding the use of toxics in building materials.

(1) Sustainable Construction, Construction Best Practice Programme, DETR

(2) Energy Efficiency Strategy, Working Paper, PIU September 2001.

(3) Sustainable Construction, Construction Best Practice Programme, DETR

This categorisation of issues is used further in this report (see *Sections 4, 5 and 6*) to assess which policies are required to develop sustainable homes in the UK.

This organisation of the concept of sustainable homes around issues rather than a strict definition corresponds with the approach taken by the BRE's ⁽¹⁾ EcoHomes accreditation method (see *Section 3.3 and Annex 2*). EcoHomes considers seven issues: energy, water, pollution, materials, transport, ecology and land-use, health and well-being.

It is important to realise that although we are concentrating only on the shell of homes, the building of new homes and renovation of existing homes raise different issues. For example, location aspects such as use of Brownfield versus Greenfield sites and proximity to public transport and other local amenities are only important in case of new build. Renovation on the other hand, can introduce sustainability through focussing on building materials, energy efficient equipment etc.

3.3 ACCREDITATION OF SUSTAINABLE HOMES IN THE UK

There are a number of organisations that have developed 'accreditation criteria' by which to assess new housing developments, an important example of that is the BRE's EcoHomes.

EcoHomes is an environmental assessment method for new and renovated housing including houses and apartments ⁽²⁾. New developments are awarded a rating – pass, good, very good or excellent which is dependent on how they fare against a set of criteria. It focuses on rewarding developers who improve environmental performance through good design, rather than high capital cost measures. Assessments are carried out at the design stage of the development or renovation. More information can be found in *Annex 2*. Since its launch in May 2000, around 800 homes have been accredited by the scheme. Approximately 2,000 buildings are in the process of being rated and another 4,000 are waiting to be certified ⁽³⁾.

Other examples of similar assessment methods or benchmarks for sustainable construction are:

- SpeAR – the Sustainable Project Appraisal Routine, managed by Ove Arup and the benchmarking schemes provided by the European Green Building Forum and the Irish Energy Centre House of Tomorrow project.

(1) The Building Research Establishment.

(2) BRE also run a similar scheme aimed at office buildings called The Building Research Establishment Environmental Assessment Method (BREEAM).

(3) Personal Communication, BRE, April 2002.

- In America the Green Building Council operates a Green Building Rating System called leadership in Energy and Environmental Design (LEED) that assesses the 'green' credentials of commercial buildings.

There are also a number of assessment tools that look more specifically at certain aspects of sustainable homes, for example the Standard Assessment Procedure (SAP) which measures how energy efficient a home is.

3.4 SUSTAINABLE HOMES IN THE UK

Although sustainability is not the main concern for developers and renovators in the UK, there are several pilot projects and a wide range of organisations considers the issues surrounding sustainable homes. There are several examples of local and national housing projects in the UK that demonstrate several elements of best practice in sustainable homes, examples include projects developed by individual architects, housing co-operatives, Local Authorities and Housing Associations and the Government's Millennium Villages.

The Beddington Zero Energy Development (BedZED), developed by the Peabody Trust, is one such example and is an environment friendly, energy efficient mix of homes and workspaces. The development has transformed the site of a disused sewage works and has been constructed in a sustainable way that will enable residents to live in a sustainable way.

The Housing Corporation is leading the way and has supported many pilot projects. It has also recently adopted environmental standards into the Housing Quality Indicators, a number of which are connected to sustainable housing. For example, the Housing Corporation aims to achieve a 'good' EcoHomes rating (see *Section 3.3*) for 50% of ADP (Approved Development Programme) ⁽¹⁾ funded new build housing and for 60% of new homes to be built on Brownfield. As the Housing Corporation is responsible for investing public money in housing associations and for protecting that investment and ensuring it provides decent homes and services for residents, it can have a significant influence on developing sustainable homes.

English Partnerships was asked by Government to establish a series of Millennium Communities. The Communities will demonstrate the value of mixed-use development as a model for communities in diverse areas across England, encourage innovation in building technologies and help promote sustainable development that addresses energy and construction issues. There are currently four Millennium Communities: at Greenwich in London; at Allerton Bywater near Leeds; at New Islington in Manchester (formerly the Cardroom Estate); and at the Nar Ouse Regeneration Area in King's Lynn.

(1) £3 billion is invested by the Housing Corporation over 3 years to allow for 85,000 new homes as Social Housing Grants.

3.5 *BARRIERS TO SUSTAINABLE HOMES*

A variety of barriers to constructing (whether new build or renovations) sustainable homes are commonly identified.

The following list is an illustrative example ⁽¹⁾ of the issues that are perceived as barriers:

1. Fiscal barriers (*eg* fiscal impacts, higher upfront costs, lack of incentives or re-use/reconditioning may be too costly).
2. Legislative and political barriers (*eg* lack of political will and support, policies not tied to financial impacts, policies that encourage wasteful construction).
3. Construction and building barriers (*eg* safety concerns, availability of products and services, educational barriers, lack of education on sustainable matters of civil servants, builders, architects, and end-users).

As financial (and fiscal) barriers are commonly identified as being amongst the most important barrier, fiscal incentives can be a very important tool for developing sustainable homes.

(1) Identified during workshops on Green Building issues in San Jose, USA (www.ci.san-jose.ca.us)

4 EXISTING POLICIES

4.1 THE IMPORTANCE OF A BALANCED POLICY MIX

Although this project focuses on fiscal incentives for sustainable homes, it recognises the importance of other policy measures. In many cases fiscal incentives form just part of a much wider package of other policy measures.

The following issues illustrate this well.

Development is primarily regulated through the *planning regime*, a plan-led approach to the location of new development and regeneration of existing neighbourhoods. In relation to the regeneration of deprived areas this is supplemented by the availability of local and national direct funding programmes. Government often has a policy choice between providing through public expenditure or through tax relief. Where policy is aiming to influence the decisions of individuals or private sector organisations then tax relief and other fiscal measures are an important policy tool. Any fiscal incentives need to sit within regeneration strategies that in turn sit with national and regional planning priorities. Planning is a devolved responsibility and England, Wales, Scotland and Northern Ireland all have their own regulations.

Most national **climate change** policy is led by international agreement. However, there are nations that are showing leadership in this area (eg the UK's 20% domestic CO₂ target which goes above and beyond the Kyoto international target). It is unlikely that any nation will go far beyond international commitments on their own. It is therefore likely that future emphasis in this area will be dependent on international rather than national agreement and action. Increasingly areas of the UK's more detailed environmental policy are determined at a European level, for example, the setting of minimum standards for energy consumption in appliances and national targets for renewable energy, recently agreed in the European Commission Renewable Energy Directive. However, there is still a big role for national policy to play eg in terms of supplying grant and advice programmes for energy efficiency and national renewable support mechanisms. Current national climate change policy is co-ordinated through the UK's Climate Change Programme and focuses on energy efficiency measures and increasing the share of electricity generated from renewable energy. Particularly in the domestic sector the focus is on grant and information programmes to encourage homeowners to install energy efficiency measures. Building Regulations also play a big part in setting minimum energy efficiency standards for new build. These policies are supported by the reduced level of VAT which has been awarded to many energy efficiency measures.

Fuel Poverty is primarily tackled through grant funding improvements to the energy efficiency of a house alongside winter fuel payments and schemes such as affordable warmth, which lease central heating systems to residents. Again reduced VAT plays a useful role in supporting these schemes and the cost of the central heating systems under the affordable warmth programme has been reduced as they qualify for capital allowances. The issue of fuel poverty has been taken on by the devolved administrations. Eg The National Assembly for Wales assumed responsibility for fuel poverty issues following devolution and has subsequently established the New Home Energy Efficiency for Wales (New HEES); taken full responsibility for administering the Home Energy Conservation Act (HECA); will shortly be taking full responsibility for administering the Warm Homes and Energy Conservation Act and for developing Wales' fuel poverty strategy.

Policy on *Water Resources* is primarily being led by DEFRA and the Environment Agency in England and Wales, the Scottish Environmental Protection Agency (SEPA) and the Scottish Executive in Scotland and the Northern Ireland Assembly in Northern Ireland. At the household levels it seems there is currently a lack of policies to incentivise increased water efficiency. The national installation of water meters is currently being undertaken and the Environment Agency have developed a number of regional strategies looking at water abstraction and use over the next 25 years. They make a series of recommendations on increasing water efficiency within their strategy that could usefully be backed up by grant and information programmes and fiscal incentives – similar to those in the field of energy efficiency.

4.2 CURRENT GOVERNMENT TARGETS AND PROGRESS

Table 4.1 illustrates current UK Government targets, progress towards these targets and current policies for the issues identified as being at the core of more sustainable homes in section 3.2. This includes a number of non-fiscal policies, including funding programmes. As there are a great many of these funding programmes, both national and regional, we have only illustrated a limited selection of them.

Many Government targets were published in the May 1999 Government publication *A better quality of life: a strategy for sustainable development for the UK* which aimed to bring “the environment, social progress and the economy alongside each other at the heart of policy making”. Since then the devolved Government of Scotland has published some of its own targets in *Meeting the needs* (April 2002). In the following table we have indicated where targets from the devolved administrations have replaced UK targets.

Table 4.4.1 Policy and Fiscal Incentives for Sustainable Homes

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target
<i>Bringing Land Back Into Use</i>	England: 60% of new homes to be built on previously developed land by 2008 (or by converting existing buildings - DTLR)	<p>Fiscal</p> <ul style="list-style-type: none"> • Relief of 150% of qualifying expenditure on cleaning up contaminated land ('land remediation expenditure'). <p>Policy</p> <ul style="list-style-type: none"> • PPG3 in England and equivalents in other devolved administrations (NPPGs in Scotland, TANs in Wales, and planning policy in Northern Ireland) 	<p>In 1997 55% of new homes were built on previously developed land and in 1998 this was 57% [DTLR].</p> <p>NLUD database estimates there was 17,300 hectares of derelict land in England in 1998, which would need some form of remedial work before development.</p>
<i>Bringing Empty Homes Back Into Use</i>	England: all social housing to meet set standards by 2010 [DTLR].	<p>Fiscal</p> <ul style="list-style-type: none"> • Capital allowances in respect of expenditure on the conversion of parts of business premises into flats. • Reduced VAT (5%) for costs of: <ul style="list-style-type: none"> • renovating dwellings that have been empty for 3 years or more; • converting a residential property into a different number of dwellings; • converting a non-residential property into a dwelling or number of dwellings; and • converting a dwelling into a care home (or other qualifying 'relevant residential' use), or into a house in multiple occupation. 	<p>The number of vacant dwellings in England in 1998 was 753,000, which was 3.6% of the total housing stock [DTLR].</p> <p>Some 4% of all private housing stock is vacant, a higher proportion than in public sector housing where this constitutes about 3% and local authority housing where it is about 2% [DTLR].</p> <p>The percentage of homes judged unfit to live in decreased from 8.8% in 1986 to 7.2% in 1996.</p>

*Bringing
Empty Homes
Back Into Use
continued*

- Zero VAT rate for:
 - Approved alterations to 'protected' buildings
 - sale of renovated houses that have not been used for residential purposes for at least 10 years.
- Exemption of rental income of £4,250 within personal tax allowance (rent-a-room relief). Deductions available against rental income and losses may be set against other income accruing to the individual.

Perverse Fiscal Incentive

- Zero VAT rate for the construction of new buildings for residential or charitable use.

Examples of funding Programmes

- *Housing Renewal Areas* - Local authorities declare renewal areas as part of their private sector renewal strategy to regenerate a particular run-down area. This can be done either by clearance or by giving renovation grants to individuals or groups of residents.
 - *Community Chests* - £50 m over three years with grants available from £5 to £5,000 to support community groups target issues such as health, crime, housing, employment and education issues.
 - *Neighbourhood Renewal Fund* - £900m over 3 years for 'deprived' local authorities. Can be used to help
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improve housing standards, plus reduction of crime and improving health care.

- *Townscape Heritage Initiative* - £623 m regeneration of historic towns and cities.
- *Heritage Economic Regeneration Scheme* £18 m investment in under-used retail premises and run-down public areas.

Policy

- Planning policy

*Promoting
Mixed Use
Developments*

Examples of funding Programmes

- *English Cities Fund* - £100m committed rising to £250 m. Investment in mixed use projects in town and city centre fringe location, concentrating on urban priority areas.
- *Igloo Regeneration Fund* - £200m to invest in well-designed, mixed-use regeneration schemes in inner-city area. Project chosen on merit by the fund.

Policy

- Planning policy (eg PPG3, PPG6 and PPG13 in England)

<p><i>Reducing the Need to Travel and Promoting Increased use of Public Transport</i></p>	<p>To reduce congestion on inter-urban trunk road network and in large urban areas to below current levels by 2010 by promoting integrated transport solutions and investing in public transport and the road network.</p> <p>Increase rail use from levels in 2000 by 50% by 2010. Increase bus use from levels in 2000 by 10% by 2010. Double light rail use by 2010 from 2000 levels.</p> <p>Reduce number of people killed or seriously injured in road accidents by 40% by 2010 and the number of children killed or seriously injured by 50% compared with the average for 1994-1998.</p> <p>Scotland is aiming to stabilise road traffic to 2001 levels by 2021 and to transfer 21 million lorry miles per year of Scottish roads onto rail and water by March 2003⁽¹⁾</p>	<p>Examples of funding Programmes</p> <ul style="list-style-type: none"> • <i>Home Zones</i> - £30 m over 3 years. Grants to local authorities to improve the quality of life in residential streets. Includes 'designing out' traffic, providing play areas for children and street furniture. • <i>Clear Zones</i> - being piloted by DTLR, to include car free or low emissions zones; controlled access to town centres and new services like home delivery [DTLR]. <p>Policy</p> <ul style="list-style-type: none"> • Eg in England PPG3, PPG6, Transport White Paper and PPG13 	<p>Road traffic in 1999 was 1.7% greater than in 1998, about the same rate of growth as that for the previous year.</p>
<p><i>Climate Change</i></p>	<ul style="list-style-type: none"> • 20% CO₂ emission reduction by 2010 (at least 5 MtC / year reduction by 2010 expected to come from the domestic sector) • 12.5% greenhouse gas emissions reduction 2008 - 2012 - Kyoto target 	<p>Fiscal</p> <ul style="list-style-type: none"> • a number of measures listed under energy efficiency and renewable energy (see below) <p>Other</p> <p>Domestic Sector Elements of the Climate Change Programme include:</p> <ul style="list-style-type: none"> • Building Regulations 	<p>Currently on target to meet the Kyoto target.</p> <p>There is a further programme of measures in place to work towards the 20% target within the <i>Climate Change Programme</i> but this target remains extremely challenging given current progress.</p>

(1) Scottish Executive Environment Group - Meeting the Needs, April 2002.

		<ul style="list-style-type: none"> • Energy efficiency (see below) • Community Heating systems • Home Energy Efficiency Scheme (HEES) • Appliance Standards and labelling 	
<i>Energy Efficiency</i>	<ul style="list-style-type: none"> • No formal target for energy efficiency but the domestic sector expected to deliver at least 5MtC/year savings by 2010 primarily through energy efficiency measures ⁽¹⁾. • 10 GW Combined Heat and Power (CHP) by 2010. <p>Opportunity for sustainable homes</p> <ul style="list-style-type: none"> • at least 60% energy efficiency improvement reducing energy use, cost and emissions. • Drive innovation in the energy sector – technology and systems, development and demonstration of new generation, technology, integration of small-scale plant onto grid, development of innovative energy services. 	<p>Fiscal</p> <ul style="list-style-type: none"> • A 5% reduced VAT rate is applied to grant-funded installations of energy saving materials (for insulation, draught stripping, central heating system controls, including thermostatic radiator valves, hot water system controls, and solar panels). In the Budget 2002 this concession was extended to renewable energy heating systems, micro combined heat and power domestic systems and factory-insulated hot water tanks (in force from 1 June 2002). <p>Other</p> <ul style="list-style-type: none"> • Wide range of grant programmes for home owners (for example through the Energy Efficiency Commitment, HEES and Local Authorities) and advice organisations targeted at encouraging the installation of energy efficiency measures in existing housing stock – funding for domestic homes totals at least £250 million annual funding which will rise to £350 million from 2002 • Improved energy efficiency requirements in building regulations. 	<p>In order to meet the target a substantial increase in energy efficiency activity is required.</p> <p>At the end of 2000 there was 4.632 GWe installed good quality CHP. It will be difficult to meet the 2010 target, particularly given the recent difficulties that CHP has been experiencing with the New Electricity Trading Arrangements.</p> <p>The Community Energy Programme is a £50 million UK-wide programme promoting community heating through grants to install new schemes and refurbish obsolete infrastructure and equipment. Funding has been allocated: £20m in 2002/03 and £30m in 2003/04 adding around 130 MWe towards the Government's target of 10,000 megawatts of installed CHP by 2010. It will also help 100,000 people on low incomes heat their homes.</p>

(1) Climate Change, The UK programme, DETR, 2000

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- CHP is exempt from the Climate Change Levy (benefits non-domestic customers only)

Renewable Energy

- 10% of the UK's electricity through renewable sources by 2010 ⁽¹⁾
- Scotland: 18% of electricity from renewables by 2010 (currently 10.4%)⁽²⁾

Opportunity for sustainable homes

- Renewable energy use in one million sustainable homes could avoid emissions of up to 4Mt CO₂ pa.
- Mainstreaming cutting edge sustainable energy technologies (eg solar and biomass fired CHP) will contribute significantly (up to 1TWh per annum) to both renewables and CHP targets

Fiscal

- 5% VAT rates for solar hot water and other forms of renewable heating systems and solar panels (Photo Voltaics)

Other

- Package of support measures including – renewables obligations (in Scotland, England and Wales), capital grant, capital grant scheme and climate change levy exemption. Particularly relevant for household renewables will be grant programmes targeted at community and household scale renewables – around £35 million over the next few years.

In 2000 2.8% of electricity was generated from renewable energy sources – the 10% target will be extremely challenging to meet. Much will depend on planning and individual attitudes towards renewable energy installations.

(1) New and Renewable Energy: Prospects for the 21st Century, DTI, 2000
 (2) Scottish Executive Environment Group - Meeting the Needs, April 2002.

<i>Fuel Poverty</i>	<ul style="list-style-type: none"> The UK Fuel Poverty Strategy sets a target for vulnerable households to ensure that by 2010 no older householder, no family with children, and no householder who is disabled or has a long-term illness need risk ill health due to a cold home. Scotland target: eliminate fuel poverty by 2016 <p><i>Opportunity for sustainable homes</i></p> <ul style="list-style-type: none"> Dramatic improvement in building fabric and integrated sustainable energy supply can provide adequate warmth, light, at low prices and low or zero emissions 	<p>Fiscal</p> <ul style="list-style-type: none"> Central heating systems leased under the Government's Affordable Warmth programme qualify for capital allowances (the Affordable Warmth programme - developed by Transco, DTI and DETR supports the installation of insulation and energy efficient central heating system in social and privately owned homes of those who are classed as fuel poor). <p>Other</p> <ul style="list-style-type: none"> The UK Fuel Poverty Strategy sets out a number of measures that are being implemented to tackle fuel poverty in the UK. For example The Home Energy Efficiency scheme in England which aims to improve the energy efficiency of households for those classes as fuel poor (included in the funding listed above for energy efficiency measures) and the £200 Winter fuel payments available to those over 60 	<p>The number of homes in fuel poverty has fallen over the last decade from around 5.5 million in 1996 to under 4 million in 2000 ⁽¹⁾ mainly due to falling fuel prices and improved energy efficiency in homes.</p> <p>To achieve Government fuel poverty objectives, energy efficiency programmes will also need to include more measures targeting solid wall properties. These are the most expensive to heat, but also the most costly to insulate.</p>
<i>Waste (Construction Waste)</i>	<ul style="list-style-type: none"> UK: By 2005, to reduce the landfill or industrial and commercial waste to 85% of 1998 levels. UK: By 2020, to reduce the landfill of biodegradable municipal waste to only 35% of its 1995 level. 	<p>Fiscal</p> <ul style="list-style-type: none"> Landfill levy currently £2 per tonne of inert waste (most of construction waste is classified as inert waste - due to be reviewed in 2004). Aggregates Levy (introduced in April 2002). Levy has been set at £1.60 per tonne of aggregates 	<p>Over the last few years there has been a substantial increase in the amount of construction and demolition waste used as aggregate. However, the overall waste targets are extremely challenging and there is still much potential for reduction of wastes in this area.</p>

(1) The UK fuel poverty strategy, DEFRA, DTI, 2001

(2) Scottish Executive Environment Group - Meeting the Needs, April 2002.

(3) Sustainable Construction, Construction Best Practice Programme, DETR

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- England and Wales: By 2010, to recover value from 45% of municipal waste (at least 30% by recycling or composting)
 - Scotland currently produces 2.9 million tonnes (mt) municipal waste – target to reduce to 2.6 mt by 2010 and 2.3 mt by 2020. Landfill should be reduced from 1.7 mt (current) to 1.25 by 2010.⁽²⁾

Other

Minerals Planning Guidance (MPG6) – for England.
Minerals planning guidance (Wales) Planning policy:

- aggregates and products from aggregates should be recycled wherever possible and where technically, economically and environmentally acceptable, construction and demolition wastes should be used instead of primary materials.
- sets targets for the use of construction and demolition wastes and secondary aggregate materials for use as aggregate to roughly double their use from about 30 million tonnes per year in 1989 to about 55 million tonnes per year by 2006, with a target of 40 million tonnes per year by 2001.

Opportunity for sustainable homes

- UK construction industry currently uses six tonnes of building materials per person, mostly

produced. Some of the revenue is recycled to business through NI reductions of 0.1%. Some of the money (£35 million for the UK for the next 2 years) will be spent on reducing the environmental impact of quarrying through a number of measures.

sands and gravels ⁽³⁾.

- Sustainable building material will significantly reduce the 20% of UK waste produced by construction.

<i>Water</i>	<p>Although there is no specific Water Resources Target, the Environment Agency has regional targets in its Strategy for England and Wales ⁽¹⁾</p> <p><i>Opportunity for Sustainable Homes</i></p> <p>Grey water collection and use for specific tasks such as watering the garden or washing the car</p> <p>Use of Water Efficient Appliances and fixtures for example:</p> <ul style="list-style-type: none">• Toilet use can be reduced by almost 10 l/h/d by introduction of dual flush or low flush systems. ⁽²⁾• Efficient shower heads and flow restrictions.	<p>Fiscal</p> <ul style="list-style-type: none">• Water and sewage services are zero rated (except where supplied for industrial purposes) <p>Other</p> <ul style="list-style-type: none">• National Water Metering Installation - provides reductions in consumption ranging from 3% to 21%.• The Environment Agency has prepared a strategy for eight regions covering England and Wales and has set indicative targets for each region for reduction in water use by 2010 and 2025. They are keen to work with a number of organisations to encourage water efficiency. In Scotland, SEPA is active in this area. <p>Policy</p> <ul style="list-style-type: none">• PPG25	<p>The Environment Agency's Water Strategy concludes that in much of England and Wales, water is a scarce resource and that there is much work to be done in the area of improving water efficiency.</p>
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(1) Water Resources for the Future - Strategy for England and Wales, March 2001, Environment Agency

(2) Water Resources for the Future - Strategy for England and Wales, March 2001, Environment Agency

<i>Materials Use</i>	<p>Minimising waste arisings and encouraging the use of recycling therefore the need for minerals extraction through reducing waste arisings (discussed above).</p> <p>Use of sustainable materials – for example reduced embodied energy, recycled, renewable, locally sourced.</p> <p>Design homes with materials that will last or that can be reused or recycled</p>	<p>Fiscal Aggregates levy (see above)</p> <p>Other</p> <ul style="list-style-type: none"> the use of sustainable materials , recycled materials or materials from renewable sources is encouraged in the UK. However, currently key policy in this area is information dissemination and there is no legislation. Green Guides are available to provide advice – for example BRE’s Green Guide Specification for Houses. 	
<i>Health and well-being</i>	<p>Crime</p> <ul style="list-style-type: none"> Reduce fear of crime by March 2002. <p>Open Space</p> <ul style="list-style-type: none"> Everyone to have access to well-maintained and safe parks, play areas and other open spaces close to where they live and work. 	<p>Fiscal</p> <ul style="list-style-type: none"> Reduced VAT rate for grant funded installation of central heating systems and home security goods (such as fire alarms, locks etc.). <p>Examples of funding Programmes</p> <ul style="list-style-type: none"> <i>Green Spaces and Sustainable Communities</i> - £125 m available through grants to 11 identified partnerships. Focuses on grants to improve LNR, playing fields and open space provision. <i>Home Zones</i> - £30 m over 3 years. Grants to local authorities to improve the quality of life in residential streets. Includes ‘designing out’ traffic, providing play areas for children and street furniture. 	<p>Crime</p> <ul style="list-style-type: none"> Domestic burglary fell by 7% between 1999/00. Violent crime rose by 16% between 1998/99 and 1999/00.

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- *Urban Park Programme* - £255 to restore and improve parks and gardens.
 - *Neighbourhood Warden Scheme* - £13.5m to fund wardens to improve the quality of life by promoting community safety, helping with environmental improvements and housing management and community development.
 - *Health Action Zones* - brings together organisations within and beyond the NHS to tackle health inequalities and modernise health services. 26 HAZs in England.
 - *Reducing Burglary Initiative* - targeted communities with the worst domestic burglary problems. Grants available for home security improvements.
 - Consultation on the reform on the use of *Planning Obligations* to secure positive benefits that will make development more sustainable as part of planning Green Paper [DTLR]

Policy

- Planning policy, eg PPG3 and PPG6 in England
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5.1 LONG LIST OF POTENTIAL FISCAL MEASURES

The analysis of current policies in *Section 4.2* has brought to light a number of areas where additional fiscal measures could be useful in providing incentives for sustainable homes.

These have been listed in *Table 5.1* in accordance with the issues' categorisation.

Table 5.1 Potential Fiscal Incentives for Sustainable Homes

Issue	Proposals for fiscal incentives and grants
<i>Bringing Land Back Into Use</i>	<ol style="list-style-type: none"> 1. Abolish zero VAT rate for new residential build, make reduced rate conditional upon achieving sustainability rating. 2. Vacant land value taxation. 3. Greenfield levy – introduction of VAT or increased capital gains tax rates for the sale of Greenfield land for development. 4. Increased tax-free allowance (eg through ISAs) on funds to be used for purpose of 'green' mortgages. 5. Reduced stamp duty for 1st sale of new build house built on Brownfield 6. Remove the existing 50% council tax discount for second homes (furnished dwellings which are no-one's main residence) (1) as a means to reduce the need for new homes.
<i>Bringing Empty Homes Back Into Use</i>	<ol style="list-style-type: none"> 7. Application of higher stamp duty rates on purchase of second home. 8. Reduced stamp duty for houses sold for 1st residential use after being empty for 3 (reduced rate) to 10 years (no stamp duty). 9. Capital allowances in respect of expenditure on the conversion of premises into 'sustainable' dwellings (linked to sustainability criteria). 10. Reduced VAT (5%) for costs of making dwellings more sustainable. 11. Increase of rent a room relief 12. Reinstating MIRAS for sustainable homes. 13. Insurance premium relief on homes built on Brownfield. <p>Non fiscal incentives</p> <ul style="list-style-type: none"> • Supplementary business rates to fund town improvements • Link funding programmes to sustainability criteria • Landfill tax credits to be passed on to local authorities to promote sustainable housing development
<i>Promoting Mixed Use Developments</i>	<p>Non fiscal incentives</p> <ul style="list-style-type: none"> • Link funding programmes to sustainability criteria.

(1) Note that in Wales councils can restrict this discount to 25% or even 0% because of the high proportion of Welsh holiday homes. Scotland not only charges a council tax but also a separate council water charge. This water charge is always payable even where the 50% council tax relief for second homes has been granted.

Issue	Proposals for fiscal incentives and grants
<i>Promoting Increased use of Public Transport</i>	14. Increase relative cost of resident parking permits; eg by granting stamp duty exemptions on new developments close to public transport/ and or without designated parking space.
<i>Reducing flood risks</i>	15. Differential stamp duty / council tax rates for housing with little or no risk (in area as defined by Environment Agency). 16. Grants or reduced VAT rates on the installation of sustainable drainage systems.
<i>Climate Change</i>	17. Lowering stamp duty for 'low emission' homes.
<i>Energy Efficiency</i>	18. Differential stamp duty may potentially be an effective measure to incentivise energy efficiency –two possible approaches are: <ul style="list-style-type: none"> • rebating stamp duty if identified energy efficiency measures are undertaken within a given period after purchase (Energy Efficiency Strategy PIU Working Paper, September 2001 and EST, telephone conversation). • linking stamp duty to 'energy efficiency labels' – eg in Denmark house sellers have to commission an energy assessment for homes under 15 000m². From this assessment the house is given an energy label and a survey report. This informs potential buyers on the energy efficiency of the house. 19. Addition of a 'product charge' on energy intensive appliances or services (eg air conditioning charges in Austria).
<i>Renewable Energy</i>	20. Inclusion of other small-scale renewable systems and community renewables, such as wind and hydro, for eligibility for reduced VAT.
<i>Fuel Poverty</i>	No specific proposals have been identified for fuel poverty as tax incentives for energy efficiency target a similar objective.
<i>(Construction) Waste Water</i>	21. Increase landfill levy. 22. Encouraging the use of recycled grey water, for example in WCs, through decreasing VAT, or allowing enhanced capital allowances for grey water recycling systems. In Tokyo these systems are mandatory for buildings with a potential water reuse of more than 100m ³ per day. 23. Tax breaks (capital allowances for builders, reduced VAT) for rainwater harvesting systems for non-drink water use in the home and water saving installations such as low-flush toilets etc.
<i>Materials Use</i>	24. Reduced VAT rate on recovered materials. 25. Reduced VAT rates on sale of certified materials. 26. Product charges on materials found to be unsustainable.
<i>Health and well-being</i>	27. Reduced VAT rate on low solvent paints (cf. Slovakia). 28. Product charge on leftover paint and paint containers (cf. Canada – to fund the paint and coatings collection programme). 29. Product charge on solvents and flammable liquids (cf. Canada – to fund the Residuals Stewardship programme).

5.2 *BRIEF DESCRIPTION OF THE POTENTIAL FISCAL MEASURES*

It is clear from the above table that several proposed incentives are slight variations of one main change, *eg* reduced VAT rates for certain products. We have therefore re-ordered the proposals in the following 11 potential fiscal incentives, each of which is described briefly.

5.2.1 *Abolition of zero percent VAT rate for new residential build*

This fiscal measure would abolish the current system of zero VAT on the construction of new buildings for residential use. Instead it would be replaced with a reduced VAT rate (*ie* five percent) conditional upon achieving sustainability rating. Any new residential build that would not achieve the sustainability ratings would be taxed at 17.5 per cent.

5.2.2 *Vacant land value taxation and Greenfield tax*

This measure would introduce vacant land tax rather than business rates and council tax, thus removing the exemption currently enjoyed by landowners who leave land derelict. The charge would be based on acquisition cost and reviewed annually, for so long as the property is vacant. Taxing land value rather than property and businesses on the land provides an incentive to develop, penalises landowners who leave land idle and discourages speculation.

A Greenfield tax, *eg* by raising a tax on housing development taking place on Greenfield sites but not on Brownfield sites, would make building on Greenfield more expensive and therefore less attractive. Note however that many Brownfield sites may be of great ecological importance as they have been left derelict for a long time.

5.2.3 *Reduced VAT rates for accredited supplies*

A reduced VAT rate of five per cent would be applied to accredited 'sustainable' supplies. These supplies would have to be defined by Government but could include for example:

- Rainwater harvesting systems for non-drink water use in the home;
- Grey water recycling systems;
- Household water saving fixtures ⁽¹⁾ (*eg* low-flush toilets, shower heads, kitchen faucets etc.);
- Low solvent paints;
- Recovered materials; and
- Other certified materials including primary resources such as timber.

(1) This could be extended to household appliances. These are however, not seen, as part of the shell of a house and are thus excluded from this specific study.

5.2.4 *Product charges on non-sustainable building materials and equipment*

This instrument would impose product charges on defined non-sustainable materials used in the construction and fitting out of residential dwellings. This would make the sustainable products relatively cheaper and could therefore achieve similar results as a reduced VAT on accredited supplies. Unlike many other countries, the UK has so far not implemented any environmental product charges apart from the aggregates levy, which could be seen as a product charge (albeit on input materials). Examples of product charges in other countries include charges on: beverage containers batteries and plastic bags.

5.2.5 *Subsidies for the installation of sustainable equipment*

A system of subsidies could be introduced for accredited materials. This could be through grant funding as is *eg* currently done for the installation of solar electricity equipment through the Energy Saving Trust. With grant funding of £20 million available to subsidise take-up of solar electricity across a wide audience, it is hoped solar PV technology will become an attractive investment for domestic to large corporate customers.

The main problem with subsidy systems, as is the case for many fiscal measures, is the setting of the correct level, which is dependent on the price elasticity (*ie* demand sensitivity to prices) of the goods being subsidised and possibly its substitutes.

5.2.6 *Tax free savings for sustainable home mortgages or re-instating a system similar to MIRAs for sustainable homes*

This system of enhanced tax-free savings (*eg* enhanced ISA limits) would be linked to the provision of sustainable home mortgages (see also *Annex 3*).

Some banks and building societies already provide guarantees on what people's savings will or will not be used for. For example, Savings placed with the EBS fund mortgage lending on energy efficient housing, ecological renovation, derelict and dilapidated properties, small-scale ecological enterprises, and low-impact lifestyles. Savings used for 'sustainable home mortgages' would be granted enhanced tax-free savings. Such a system would attract additional funds to be recycled for use of reduced rate mortgages. Several mortgage lenders in the UK already use discounted rates for 'green mortgages' by linking them *eg* to SAP (Standard Assessment Procedure) energy efficiency ratings.

An alternative way of using mortgage costs to benefit sustainable homes would be the re-introduction of MIRAS (mortgage interest relief at source) for sustainable mortgages only.

5.2.7 *Stamp duty relief for sustainable homes*

This measure would consist of providing 100% stamp duty exemption on the first sale of sustainable homes, be it new build or renovations. In addition, there would be a rebate system for the stamp duty paid by developers who develop sustainable homes; *ie* they could claim back the stamp duty paid on the land (in case of new build) or the existing 'non-sustainable' property (in case of renovations).

5.2.8 *Discretionary abolition of 50 per cent council tax exemption for second homes*

This fiscal measure would consist of granting discretionary powers to local authorities to abolish the current system of 50% council tax exemption for second homes and long-term empty homes. This measure is currently ⁽¹⁾ under review by the DTLR in the form of a consultation paper 'Council Tax: A Consultation Paper on Proposed Changes for Second Homes and Long term Empty Homes'. This paper proposed to give local authorities the discretion to remove or reduce the existing 50 percent council tax discount for second homes and invites views on how the additional council tax raised should be distributed and whether the proceeds should be ring-fenced for housing purposes.

5.2.9 *Capital allowances for expenditure on the conversion of premises into 'sustainable' dwellings*

This fiscal measure would consist of capital allowances (means to offset investment expenditure against income) for expenditure on the conversion of premises into 'sustainable' residential dwellings for the rental market.

5.2.10 *Increase of rent-a-room relief*

A 'rent-a-room' relief is available for owner-occupiers and tenants who let furnished rooms in their only or main residence. No tax is currently payable if the gross rents for the tax year do not exceed £4,250. This corresponds to a rent of about £82 a week. If this maximum gross rent limit were increased, it could marginally encourage the letting out of spare rooms by offsetting the higher mortgage costs for the owner-occupiers, thus further limiting the need for new homes by providing extra income.

5.2.11 *Tax-free employer allowances*

This instrument would consist of allowances for tax-free contributions for employers to employees to cover the cost of setting up a home office. A similar system currently exists in the Netherlands. Similar allowances are already allowed *eg* for providing free transport to work provided by an employer.

(1) 'Council Tax: A Consultation paper n proposed changes for second homes and long term empty homes'. Responses were invited by 15 February 2002 but were still being received and logged at the beginning of March. A first report on the outcome of the consultation is expected by mid April.

This system would require the setting of clear conditions on issues such as the amount of time the 'home office' is used to avoid abuse.

5.3 PRELIMINARY REVIEW OF FISCAL MEASURES AND SELECTION OF PRIORITY MEASURES

The following *Table 5.2* provides a summary review of the long list of potential fiscal measures on the basis of their link to the identified sustainability issues, their likely impact and potential acceptability to Government. The latter is based on our views of the likely costs to Treasury and the fit of the instrument with current Government financial (and other policy) objectives.

Table 5.2 Summary Review of Proposals

	Targeting sustainability	Likely size of impact	Acceptability to Government
11. Abolition of zero percent VAT rate on new build	+++	+++	+
12. Vacant land value taxation and /or Greenfield levy	+++	++	+
13. Reduced VAT rate on accredited supplies	+++	++	++
14. Product charges on non-sustainable building materials and equipment	+++	++	-
15. Subsidies for the installation of sustainable equipment	+++	++	+
16. Tax free savings for sustainable home mortgages/re-introduction of MIRAS for sustainable home mortgages	+++	+	+
17. Stamp duty relief for sustainable homes	+++	++	+++
18. Discretionary abolition of 50% council tax relief on second homes	++	-	+++
19. Capital allowances for expenditure on sustainable conversions	+++	++	++
20. Increase of rent-a-room relief	++	-	++

Note: Three + is maximum

On the basis of this review we have selected four fiscal measures, which seem to be most promising. These are:

1. Stamp duty relief on sustainable homes;
2. Reduced VAT rate on accredited supplies;
3. Abolition of zero percent VAT rate on new build; and
4. Capital allowances for expenditure on sustainable conversions.

Each is discussed in more detail in the following Section.

6 *EVALUATION OF THE PROPOSED FISCAL MEASURES*

In this section, we evaluate the four front-runners in more detail. For each measure we have reviewed the following components:

1. Objective – what is this fiscal measure hoping to achieve and how does this relate to providing sustainable homes?
2. Current system – detailed description of the current system.
3. Components of the proposed change – detailed consideration of the proposed change and its components.
4. Impact of the proposed change - what is the likely impact of this measure?
5. Government support and precedents – is this proposal likely to receive Government support and are there any potential political objections? It is important to note that in the Budget 2002, a commitment was made to “consider ways in which economic instruments may be used to improve energy efficiency, consistent with its objectives of eliminating fuel poverty and not introducing new taxes on household energy” (p.131 Budget 2002). How does this proposed fiscal measure relate to previous concession or changes made by the Government?

6.1 STAMP DUTY RELIEF ON PROVISION AND PURCHASE OF SUSTAINABLE HOMES

“Stamp duty relief on the first sale of sustainable homes and rebate of the stamp duty paid on land on which sustainable homes are built or premises which have been converted into sustainable homes”

6.1.1 Objective

This measure would provide an incentive for both developers and homebuyers:

- developers would be encouraged to provide sustainable homes as they could claim back the stamp duty paid on the land or existing property;
- home buyers on the other hand, would be encouraged to look out for homes, which receive accreditation for being more sustainable than others as these would be cheaper. The demand for sustainable homes would thus be encouraged which should result in more sustainable homes being provided.

6.1.2 Current System

Stamp duty is a considerable part of land and home buying costs. The UK stamp duty rates on property transactions in the UK are:

- Below £60,000 the stamp duty is nil;
- Up to £250,000 the rate is 1%;
- Between £250,000 and £500,000 the rate is 3%;
- Over £500,000 the rate is 4%;

In Budget 2001 the government brought in stamp duty exemption⁽¹⁾ for land in disadvantaged areas valid from 30 November 2001. The areas to which this exemption applies were laid down in ‘Stamp Duty Disadvantaged Areas Regulations 2001’⁽²⁾:

- In England these are defined as wards in the ‘Index of Multiple Deprivation 2000’ as published by the former DETR and those listed in tables A to I of the Regulation.
- For Wales these are the electoral divisions as contained in the ‘Welsh Index of Multiple Deprivation 2000’ published by the National Assembly for Wales and as listed in Table J of the Regulation.
- For Scotland these are contained in ‘Revising the Scottish Area Deprivation Index’ as published by the Scottish Executive and listed in Table K of the Regulation

(1) Capped to properties up to £150,000 (Budget 2001). Budget 2002 wishes to extend this to all commercial property (including those with value above £150,000).

(2) Statutory instrument 2001 No. 3747

- For Northern Ireland these are those areas contained in ‘Measures of Deprivation in Northern Ireland 2001’ published by the Northern Ireland Statistics and Research Unit and listed in Table L of the Regulation

This exemption is estimated to cost the Treasury £100 million a year in reduced revenues.

6.1.3 Components of the Proposed Change

“Stamp duty relief on the first sale of sustainable homes and rebate of the stamp duty paid on land on which sustainable homes are built or premises which have been converted into sustainable homes”

Table 6.1 Components of the stamp duty relief proposal

Components of the proposal	Definitions and potential issues
<i>Stamp Duty Rate</i>	This measure would grant a full stamp duty exemption (<i>ie a de facto</i> 0% rate), in the form of a 0% stamp duty on the purchase of a sustainable home, and a stamp duty rebate of 100% on the original purchase of land or properties on which sustainable homes were developed.
<i>First sale</i>	The exemption would be limited to the first sale of the home as this would further encourage the introduction of sustainable homes to the existing stock. This also allows for the constant revision of sustainable home criteria as technologies advance and products become more easily available.
<i>Object of sale</i>	The exemption applies to all conveyances and transfers of land and on all property transactions, no matter what the value of the transfer
<i>Sustainable homes</i>	The stamp duty exemption would be tied to an accreditation of sustainable homes. The accreditation will warrant buyers a stamp duty exemption and will give the developers the ability to reclaim the stamp duty they paid on the original property or land. Some of the criteria could include: <ul style="list-style-type: none"> • Energy efficiency of the home; • Proximity to public transport (only for new build); • Absence of designated parking space (both new build and conversions); • Use of sustainable materials; • Build on non-ecologically valuable Brownfield; Etc.

6.1.4 Impact of the Proposed Change

The incentive could be substantial for developers but would be more limited in terms of the demand side of homes. As there is currently a differential stamp duty system in which the stamp duty rate is dependent on the value of

the transaction (ranging from nil to 4 per cent), the impact will be highest on high value properties. For example, sustainable homes sold from more than £250,000 will be free of stamp duty whereas similarly priced non-sustainable homes will attract a four percent duty. The impact is therefore likely to be unevenly spread across the country, as *eg* there are more high value properties in the Southwest of England than in northern regions.

6.1.5 *Government Support and precedents*

As described above (section 6.1.2), the UK Government has already brought in a system of stamp duty exemptions for specific policy objectives, more specifically urban regeneration through stamp duty exemptions on land in disadvantaged areas. There is therefore no reason why Government could not use stamp duty relief as an instrument to encourage sustainable homes.

6.2 ABOLITION OF ZERO PERCENT VAT RATE FOR NEW RESIDENTIAL BUILD

Currently a Zero VAT rate applies to new build housing. The proposal is to replace this with a reduced 5 percent VAT rate, conditional upon achieving a sustainability rating.

'Abolition of the zero VAT rate on the construction of new buildings for residential use – replace with a reduced VAT rate conditional upon achieving sustainability rating. New residential build that does not achieve the sustainability ratings would be taxed at 17.5 per cent'.

6.2.1 Objective

This measure aims to revert the perverse incentive that encourages new build rather than renovations. Under current regulation, the construction of new residential buildings is zero rated for VAT whereas renovations attract 5 or 17.5 per cent VAT.

It can be more sustainable to make better use of what already exists in building stock, by way of rehabilitation rather than building anew. The creation of sustainable communities and vital and viable town centres can be assisted by the conversion and renovation of property. These sustainability objectives run alongside the benefits related to resource conservation.

6.2.2 Current System

“Value added tax (VAT) is charged on the supply of goods and services in the UK and on the import of goods and certain services into the UK. It applies where supplies are made in the course of business by a taxable person.”⁽¹⁾

Generally the same VAT rate is to be applied to all supplies, irrespective of their end use. There are however two VAT rates:

- a standard rate of 17.5 percent;
- a reduced rate of 5 percent to be applied only to a limited number of supplies.

The only exception to this is the (temporary – see *section 6.2.3*) system of zero rated supplies. This exemption applies to the following ‘building’ transactions:

- the construction of new buildings for residential or charitable use;
- alterations to protected buildings;
- conversions of buildings from non-residential to residential by registered housing associations; and
- the sale of renovated houses that have not been used for any residential purpose (empty) for at least 10 years all attract zero percent VAT.

(1) Tolley's Tax Guide 2001-2002, p. 119.

The UK Government has been actively promoting renovation in the past few years through granting a reduced VAT rate to the following supplies:

- 5 percent reduced rate on renovation of dwellings that have been empty for three years or more (Budget 2001);
- 5 percent reduced rate on residential conversions that result in a change of number of dwellings in the property (Budget 2001);
- 5 percent reduced rate for converting a non-residential building into a single household dwelling or a number of household dwellings (Budget 2001);
- 5 percent reduced rate for the cost of converting residential property into residential communal homes, such as care homes and houses in multiple occupation (Budget 2001);
- Extension of the 5 percent reduced rate of VAT to the construction, renovation or conversion of a building into a garage as part of the renovation of a property that qualifies for the reduced rate (Budget 2002 – will come into force 1 June 2002); and
- 5 percent reduced rate on renovation of residential communal homes, such as care homes and homes with multiple occupation which have been empty for more than three years, and for the conversion of non-residential buildings into residential community homes (Budget 2002 – will come into force 1 June 2002).

VAT registered traders collect VAT on behalf of Customs and Excise on all sold goods and services and reclaim VAT paid on goods and services bought in by them. This implies that small businesses and the self-employed not registered for VAT cannot reclaim VAT on goods and services bought in. The exception to this is the VAT refund for DIY builders and converters. Non-VAT registered DIY builders and converters can claim VAT back on goods and services used for zero rated property work (*ie* new build and renovations of properties that have been empty for 10 years or more), and on some reduced rate property work (converting a non-residential building into a dwelling or a number of household dwellings and renovating a house that has been empty for more than 10 years). However, DIY converters cannot claim back the VAT on other reduced rate work (residential conversions that result in a change of number of dwellings in the property and renovation of dwellings that have been empty for three years or more).

6.2.3 General Background to VAT and the UK Government discretionary powers

In order to fully grasp the scope for change that the UK Government can make it is important to understand that VAT is a European tax (VAT receipts help fund the European Union Budget) and is therefore EU regulated.

The main VAT legislation is laid down in the so-called Sixth VAT Directive of 1977 (*Sixth Council Directive 77/388/EEC of 17 May 1977 on the harmonisation of the laws of the Member States relating to turnover taxes – Common system of value added tax: uniform basis of assessment*).

The EU allows Member States to impose two VAT rates only (Article 12 *Sixth Council Directive 77/388/EEC*):

- The standard rate: a minimum of 15 percent - no maximum;
- The reduced rate: a minimum of 5 percent - no maximum.

The UK operates a standard rate of 17.5 percent and a reduced rate of 5 percent. Other countries have opted for higher rates, *eg* Belgium uses a reduced rate of 6 percent and a standard rate of 21 percent.

The zero VAT rate used in the UK for certain goods and services is a transitional (until the 'final' EU VAT regulation comes into place) derogation to the system of normal or reduced VAT rates only. This reduced rate lower than the minimum rate of 5 percent was allowed in Article 28 (2a) of the *Sixth Council Directive 77/388/EEC* for supplies for which this rate was already in place on 1 January 1991.

The UK is allowed to retain its zero rated exemptions but cannot introduce it for any other goods and services, which were not in the original list. The introduction of a 0 percent VAT rate in Budget 2001 for the sale of renovated houses that have not been used for any residential purpose (empty) for at least 10 years is in fact a very wide interpretation (*sic!*) of the original derogation of zero rated new housing. The Government feels that houses, which were empty for 10 years or more, are in fact empty shells and the work required is very similar to the building of new buildings. Note that VAT exempt is altogether different as the company selling zero rated goods or services is still VAT registered and can therefore claim VAT back. Provision of VAT exempt services and goods does not require VAT registration, which however also means that VAT cannot be reclaimed.

The reduced rate (5 percent in the UK) can only be applied to a limited list of 17 categories of supplies of goods and services (see Annex H of the *Sixth Council Directive 77/388/EEC*). This includes the 'supply, construction, renovation and alteration of housing provided as part of a social policy' (Annex H - 9). Under a more recent change to the Directive ⁽¹⁾ Member States also have the opportunity to reduce the VAT rate on labour intensive-services. This extends Annex H and includes *eg* services related to the '*renovation and repairing of private dwellings, excluding materials which form a significant part of the value of the supply*'.

6.2.4 Components of the Proposed Change

'Abolition of the zero VAT rate on the construction of new buildings for residential use – replace with a reduced VAT rate conditional upon achieving sustainability

(1) Council Directive 1999/85/EC of 22 October 1999 amending Directive 77/388/EEC as regards the possibility of applying on an experiment basis a reduced VAT rate on labour-intensive services.

rating. *New residential build that does not achieve the sustainability ratings would be taxed at 17.5 per cent'.*

Table 6.2 *Components of the VAT on New Residential Build Proposal*

Components of the proposal	Definitions and potential issues
<i>Abolition of zero rate</i>	No new residential build could attract the zero VAT rate.
<i>New residential build</i>	<p>This includes the following supplies:</p> <ul style="list-style-type: none"> • the construction of new buildings for residential use; • conversions of buildings from non-residential to residential by registered housing associations; and • the sale of renovated houses that have not been used for any residential purpose (empty) for at least 10 years. <p>The zero VAT rate would however still apply to the following non residential build:</p> <ul style="list-style-type: none"> • the construction of new buildings for charitable use; and • alterations to protected buildings.
<i>Sustainability rating</i>	Government would need to agree on what is required from new build for it to take advantage of the reduced rate. This could take the form of criteria such as described eg in BRE's EcoHomes (see <i>Section 3.3</i>).
<i>Conditional reduced VAT rate (5%)</i>	If new build met the criteria agreed it would attract the 5 per cent reduced VAT rate, putting it on the same level as many renovations. However, if the new build were not seen to meet the criteria it would be taxed at the standard VAT rate of 17.5 per cent.

6.2.5 *Impact of the Proposed Change*

Essentially the fiscal change would make it in the advantage of developers, and new-home buyers, as they will be footing the final bill, to take notice of sustainability concepts. In addition, the higher VAT rate (minimum 5 percent, maximum 17.5 per cent) would remove the current perverse incentive, which favours new build over renovations.

6.2.6 *Government Support and precedents*

The current zero per cent VAT rate is an exemption from EU regulation, which once it is given up cannot be re-instated (see *Section 6.2.3*). For this reason only, the Government may be hesitant in giving it up. However, this change would generate additional revenues, which, in light of recent Budget 2002 statements, would be welcomed without doubt. The downside would be that the system would require more administration in terms of monitoring and enforcement of what buildings are eligible for the reduced rate (on sustainability grounds) and those which are not. In addition, Government would have to build a case for the reduced rate to be applied to new build under EU regulation.

6.3 REDUCED VAT RATES FOR ACCREDITED SUPPLIES

Apply a reduced VAT rate of five per cent to accredited 'sustainable' supplies, including for example:

- *Rainwater harvesting systems for non-drink water use in the home;*
- *Grey water recycling systems;*
- *Household water saving fixtures ⁽¹⁾ (eg low-flush toilets, low-flow shower heads, low flow kitchen faucets etc.);*
- *Low solvent paints;*
- *Recovered materials; and*
- *Other certified materials including primary resources such as wood.*

6.3.1 Objective

The construction or renovation of a home requires the input of many products, most of which are subject to VAT. As these products and equipment can have a considerable impact on the overall sustainability of the shell of a home, it is important to provide incentives to people to buy more sustainably.

6.3.2 Current System

The current UK VAT system is described in Section 6.2.2 above.

A reduced five percent VAT rate currently applies to the supply of services of:

- installing energy saving materials in all homes;
- installing, maintaining and repairing central heating systems and qualifying security goods in the homes of qualifying pensioners to the extent that the supply is funded by a grant made under a relevant scheme; and
- installing heating system measures in the home of a qualifying person to the extent that the supply is funded by a grant made under a relevant scheme;

The energy saving materials, which currently qualify for the reduced rate when installed by a contractor, are:

- insulation for walls, floors, ceilings, roofs, lofts, water tanks, pipes and other plumbing fittings;
- draught stripping for windows and doors;
- central heating system controls, including thermostatic radiator valves;
- hot water system controls; and

(1) This could be extended to household appliances. These are however, not seen, as part of the shell of a house and are thus excluded from this specific study.

- solar panels ⁽¹⁾.

Note that the reduced rate only applies to the installation of energy saving materials in:

- owner occupied homes;
- homes rented from private landlords;
- homes rented from local authorities and housing associations;
- residential caravans;
- residential boats;
- relevant residential buildings such as old people's homes, children's homes and nursing homes; and
- non-business charity buildings.

The reduced rate does thus not apply to:

- building work which does not involve the installation of energy saving materials;
- the installation of secondary or double glazing and similar products, such as 'low-emissivity' glass;
- the supply and installation of energy efficient domestic appliances, such as condensing boilers or energy efficient fridge freezers;
- the purchase of energy saving materials for installation on a 'DIY' basis; and
- the purchase of energy savings materials by businesses.

The 2002 Budget extended the reduced rate to include renewable energy heating systems, micro combined heat and power domestic systems and factory-insulated hot water tanks. This will come into force on 1 June 2002.

Note that none of these reduced rates apply to DIY fittings but only those installed by professional builders.

6.3.3 *Components of the Proposed Change*

Apply a reduced VAT rate of five per cent to accredited 'sustainable' supplies, including for example:

- *Rainwater harvesting systems for non-drink water use in the home;*
- *Grey water recycling systems;*
- *Household water saving fixtures* ⁽²⁾ *(eg low-flush toilets, low-flow shower heads, low flow kitchen faucets etc.);*
- *Low solvent paints;*
- *Recovered materials; and*

(1) Solar panels are defined as solar collectors such as evacuated tube or flat plate systems, together with associated pipework and equipment, such as circulation systems, pump, storage cylinder, control panel and heat exchanger; or photovoltaic (PV) panels with cabling, control panel and AC/DC inverter.

(2) This could be extended to household appliances. These are however, not seen, as part of the shell of a house and are thus excluded from this specific study.

- Other certified materials including primary resources such as wood.

Table 6.3 *Components of the reduced VAT for sustainable supplies proposal*

Components of the proposal	Definitions and potential issues
<i>Reduced VAT rate</i>	The reduced VAT rate is five percent in the UK
<i>Accredited supplies</i>	The Government would need to draw up a list of supplies warranting the reduced rate just as it has done for the reduced rate applicable to energy saving materials.

6.3.4 *Impact of the Proposed Change*

A reduced VAT rate on approved supplies would make these comparatively cheaper than their non-approved counterparts, thus encouraging the sale of the more sustainable products. This type of demand-led change will encourage producers to try and meet the sustainability criteria, as the market share of their products will otherwise drop.

6.3.5 *Government Support and precedents*

As explained in *Section 6.2.3*, VAT is a European tax and UK Government therefore has to stick to certain rules. With respect to the implementation of a reduced VAT rate this implies that the supplies must fall within one of the allowed categories ⁽¹⁾.

For the supplies for sustainable homes the only potentially appropriate category is that of ‘Supply, construction, renovation and alteration of housing provided as part of a social policy’. The government has so far been interpreting this category quite widely and has included energy saving materials. The rationale was that it would reduce the winter deaths and ill health caused by cold homes. However, the reduced rate now applies to energy saving materials in all homes and since Budget 2002 even includes renewable energy heating systems, micro combined heat and power domestic systems and factory-insulated hot water tanks.

(1) As described in Annex H of the 6th Council Directive.

6.4 CAPITAL ALLOWANCES FOR EXPENDITURE ON THE CONVERSION OF PREMISES INTO 'SUSTAINABLE' DWELLINGS

'Capital allowances for expenditure on the conversion of premises into 'sustainable' residential dwellings for the rental market'

6.4.1 Objective

These measures aim to encourage developers and property owners involved in residential conversions to do so in a more sustainable manner.

6.4.2 Current System

A 'capital allowance' is a means to offset investment expenditure against income. Inland Revenue currently divide the source of personal income into five categories called the schedules.

Table 6.4 Sources of personal income

Schedule	Description
A	Income from land, mainly rent
D	<ul style="list-style-type: none"> • Case I Income from a trade carried out in the UK • Case II Income from a profession carried out in the UK • Case III Interest, annuities and other annual payments • Case IV Income from securities outside the UK • Case V Income from professions outside the UK • Case VI Other annual profits which are not covered by the other schedules
E	Income from employment or office (including Directors) and pensions
F	Dividends paid by UK resident companies

Note that capital expenditure cannot be deducted to calculate income profits (as opposed to allowable expenditure). However, taxable profits may be reduced by capital allowances on certain assets; *eg* plant and machinery, industrial and agricultural buildings, patents, etc.

Capital allowance is normally not possible for construction or conversions but this was changed in 2001, when regulation was introduced ⁽¹⁾ providing '100 per cent capital allowances in respect of expenditure on the conversion of parts of business premises into flats'. This measure, commonly referred to as the flats above shops scheme, allows costs to be deducted from Schedule A letting income as the capital allowance can only be claimed when providing flats for rent. Note though that this relief system does not apply to conversions, which form part of a larger scheme of development. *Ie* housing associations cannot take advantage of it.

6.4.3 Components of the Proposed Change

The components of the proposed tax relief are listed in *Table 6.5*.

(1) In force from 11 May 2001.

Table 6.5 *Components of the capital allowance on sustainable conversion proposal*

Components of the proposal	Definitions and potential issues
<i>Capital allowance</i>	A reduction of the taxable profits.
<i>Capital allowance on Schedule A income</i>	The allowances will be deducted as expenses from Schedule A (see <i>Table 6.4</i>) letting business.
<i>Level of allowance</i>	The ‘flat over shops allowance’ was for 100 per cent as an incentive for inner city regeneration. As the counterpart (<i>ie</i> for non sustainable conversions) is zero, a 20 per cent allowance could already be effective.
<i>Sustainable conversions</i>	This would include all conversions (<i>ie</i> also large scale development schemes by <i>eg</i> Housing Corporation etc), which comply with sustainability criteria as set out by Government
<i>Time of allowance</i>	Capital allowances can take the form of initial allowances (<i>ie</i> in the first year) and writing down allowance (<i>eg</i> per cent over 20 years). We propose an initial allowance as that would help offset some of the (perceived) higher costs for construction/conversion taking into account sustainability criteria.

6.4.4 *Impact of the Proposed Change*

The impact of the proposed change could be quite large assuming the allowance is set at a level which would (be perceived) to offset the (perceived) higher costs for ‘sustainable’ conversions. Setting the Capital Allowance at the correct level would therefore require consultation with industry.

The impact of the capital allowance would be intensified by the proposed reduced VAT rate on accredited supplies and the possibility to reclaim for the stamp duty paid on the purchase of the original premises.

6.4.5 *Government Support and precedents*

As indicated above the UK Government introduced a capital allowance for conversion last year. Although the objective was different, regeneration instead of sustainable homes, there is no obvious reason why the Government would be opposed to the principle of the allowance.

This study has considered how fiscal measures can contribute to the encouragement of more sustainable homes as defined around the following range of issues: bringing land and empty homes back into use, promoting mixed use developments and increased use of public transport, dealing with flood risk, climate change, fuel poverty, waste, water use, materials and health and well-being.

Although, it is felt that some issues would be better dealt with by direct regulation, we have only considered the use of fiscal measures in this study. It is likely that optimal policy will be a combination of direct regulation and market incentives.

Having reviewed a whole range of potential fiscal measures and funding systems, we selected four frontrunners on the basis of their link to sustainability issues, their likely impact and potential acceptability to Government. These are:

1. Stamp duty relief on the first sale of sustainable homes and rebate of the stamp duty paid on land on which sustainable homes are built or premises which have been converted into sustainable homes
2. Reduced VAT rate of 5% on accredited supplies
3. Abolition of the zero VAT rate on the construction of new buildings for residential use – replace with a reduced VAT rate conditional upon achieving sustainability rating. New residential build that does not achieve the sustainability ratings would be taxed at 17.5 per cent
4. Capital allowances for expenditure on the conversion of premises into ‘sustainable’ residential dwellings for the rental market

We have reviewed these proposals in more detail and described how they might work. Combined, these measures would help tackle issues such as pressures on Greenfield, vacant Brownfield, use of sustainable materials and installing water and energy efficiency measures.

As one of the main problems hampering this study was the absence of a clear definition of what constitutes a sustainable home, we have not at this stage quantified the impact (*eg* in terms of more sustainable homes), nor the financial cost for Treasury of the potential fiscal measures.

We therefore recommend for WWF to take this research forward by:

- further defining what sustainable homes are;

- once sustainable homes are defined, further analysing the potential impacts and effects on Treasury receipts by detailed quantification;
- talking to interest groups and partners; and
- taking soundings with relevant Government Departments and other organisations.

Annex 1

Government Targets,
Existing Policies and
Proposed New Fiscal
Policies

Table 1.1 Policy and Fiscal Incentives for Sustainable Homes

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<i>Bringing Land Back Into Use</i>	England: 60% of new homes to be built on previously developed land by 2008 [DTLR]	<p>Fiscal</p> <ul style="list-style-type: none"> Relief of 150% of qualifying expenditure on cleaning up contaminated land ('land remediation expenditure'). stamp duty exemption for disadvantaged areas. <p>Policy</p> <ul style="list-style-type: none"> Planning policy, eg PPG3 in England 	<p>In 1997 55% of new homes built on previously developed land and in 1998 57%. [DTLR].</p> <p>NLUD database estimate 17,300 hectares of derelict land in England in 1998, which would need some form of remedial work before development.</p>	<ul style="list-style-type: none"> Zero VAT rate for new build conditional upon sustainability rating. Introduce vacant land tax rather than business rates/council tax, thus removing tax exemption enjoyed by landowners who leave land derelict. Charge levied based on acquisition cost and reviewed annually, for so long as the property is vacant. Taxing land value rather than property and businesses on the land provides an incentive to develop penalises landowners who leave land idle and discourages speculation. [DTLR/Friends Of the Earth/Land Value Taxation Campaign]. Introduction of Greenfield levy through VAT and Capital Gains Tax when selling land for development [Countryside Agency].

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
				<ul style="list-style-type: none"> • Greenfield Development Land Tax - A tax of 50% to be levied on the increase in the value of land and buildings due to a change in planning permission [The Progressive Tax League]. Civic Trust support Greenfield development levy between 10% - 17.5%. • Abolition of stamp duty on first time sale of houses on Brownfield sites • Tax relief for land and property remediation and infrastructure works as revenue deduction. Would bring forward the capital relief for investors and treat it as a revenue deduction, inn the same way relief is given for developers [KPMG for DTLR] • Give tax relief for developers who hold brownfield portfolios [KPMG for DTLR] • Reduction of corporation tax on acquisition and clean up of brownfield land [Urban Task Force].

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<i>Bringing Empty Homes Back Into Use</i>	England: all social housing to meet set standards by 2010 [DTLR].	<p>Fiscal</p> <ul style="list-style-type: none"> • Capital allowances in respect of expenditure on the conversion of parts of business premises into flats. • Reduced VAT (5%) for costs of: <ul style="list-style-type: none"> • renovating dwellings that have been empty for 3 years or more; • converting a residential property into a different number of dwellings; • converting a non-residential property into a dwelling or number of dwellings; and • converting a dwelling into a care home (or other qualifying 'relevant residential' use), or into a house in multiple occupation. • Zero VAT rate for: <ul style="list-style-type: none"> • Approved alterations to 'protected' buildings • sale of renovated houses that have not been used for residential purposes for at least 10 years. 	<p>The number of vacant dwellings in England in 1998 was 753,000, which was 3.6% of the total housing stock [DTLR].</p> <p>Some 4% of all private housing stock are vacant, higher proportions than in public sector housing where they constitute about 3% and I local authority housing about 2% [DTLR].</p> <p>The percentage of homes judged unfit to live in decreased from 8.8% in 1996 to 7.2% in 1996.</p>	<ul style="list-style-type: none"> • Introduction of 100% Capital Allowance for creating flats over shops for letting to encourage better use of vacant and under-utilised space [DTLR/DEFRA] • Application of higher stamp duty on second home purchase [CA] • Local authorities to be given the discretion to charge full council tax on empty and second homes [DEFRA/DTLR/Progressive Tax League] • Introduce VAT at 5% on new build housing [Friends of the Earth] • Introduce VAT at 17.5% on construction of new homes [The Progressive Tax League] • Increase council tax levels for single-occupancy and allow local authorities to use increase income levels to fund sustainable regeneration schemes of existing housing areas [Progressive Tax League]

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
		<ul style="list-style-type: none"> • Perverse Fiscal Incentive <ul style="list-style-type: none"> • Zero VAT rate for the construction of new buildings for residential or charitable use. • Exemption of rental income of £4,250 within personal tax allowance. Deductions available against rental income and losses may be set against other income accruing to the individual. 		<ul style="list-style-type: none"> • Making sustainability criteria a more explicit objective for communities bidding for funds. Could build on English Partnership’s Millennium Village general eight point criteria and eco-homes building criteria • Local Tax Reinvestment Programme to allow local authorities to collect and retain additional non-domestic rates and council tax for a defined period of time to plough back into sustainable development projects and schemes [DTLR] • Increase ‘rent a room’ tax exemption’ [KPMG for DTLR] • Reinstate MIRAS for ‘sustainable homes’ • Insurance premium relief on homes built on brownfield sites [KPMG for DTLR] • Corporation tax deferment on brownfield acquisitions [KPMG for DTLR]
		<p>Funding Programmes</p> <ul style="list-style-type: none"> • <i>Housing Renewal Areas</i> – Local authorities declare renewal areas as part of their private sector renewal strategy to regenerate a particular run-down area. This can be done either by clearance or by giving renovation grants to individuals to individuals or groups of residents. 		
		<p>Policy</p> <ul style="list-style-type: none"> • Planning policy, eg PPG3 in England 		

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<i>Promoting Mixed Use Developments</i>		<p>Funding Programmes</p> <ul style="list-style-type: none"> • <i>English Cities Fund</i> - £100m committed rising to £250 m. Investment in mixed use projects in town and city centre fringe location, concentrating urban priority areas. • <i>Igloo Regeneration Fund</i> - £200m to invest in well-designed, mixed-use regeneration schemes in inner-city area. Project chosen on merit by the fund. <p>Policy</p> <ul style="list-style-type: none"> • Planning policy, eg PPG3, PPG6 and PPG13 in England 		<ul style="list-style-type: none"> • Making sustainability criteria a more explicit objective for funding bids. Could utilise EP millennium village 8 point criteria • Make public funding for area regeneration schemes conditional upon the production of an integrated masterplan [DTLR/Urban Task Force]

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<i>Reducing the Need to Travel and Promoting Increased use of Public Transport</i>	<p>To reduce congestion on inter-urban trunk road network and in large urban areas to below current levels by 2010 by promoting integrated transport solutions and investing in public transport and the road network.</p> <p>Increase rail use from levels in 2000 by 50% by 2010.</p> <p>Increase bus use from levels in 2000 by 10% by 2010.</p> <p>Double light rail use by 2010 from 2000 levels.</p> <p>Reduce number of people killed or seriously injured in road accidents by 40% by 2010 and the number of children killed or seriously injured by 50% compared with the average for 1994-1998.</p> <p>Scotland is aiming to stabilise road traffic to 2001 levels by 2021 and to transfer 21 million lorry miles per year of Scottish roads onto rail and water by March 2003⁽¹⁾</p>	<p>Funding Programmes</p> <ul style="list-style-type: none"> • <i>Home Zones</i> - £30 m over 3 years., Grants to local authorities to improve the quality of life in residential streets. Includes ‘designing out’ traffic, providing play areas for children and street furniture. • <i>Clear Zones</i> - being piloted by DTLR, to include car free or low emissions zones; controlled access to town centres and new services like home delivery [DTLR] <p>Policy</p> <ul style="list-style-type: none"> • <i>Eg in England</i> PPG3, PPG6, Transport White Paper and PPG13 	<p>Road traffic in 1999 was 1.7% greater than in 1998, about the same rate of growth as that for the previous year.</p>	<ul style="list-style-type: none"> • The inclusion of car parking spaces within the council tax ratings <i>eg</i> if not take up a parking permit then get charged lower council tax or where no dedicated parking charge lower council tax • Increasing the cost of residents parking permits • Allowance for tax free contributions for employers to employees to cover the cost of setting up a home office. Need to set some conditions on amount of time the ‘home office’ is used [<i>as eg</i> in the Netherlands]

(1) Scottish Executive Environment Group - Meeting the Needs, April 2002.

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<i>Climate Change</i>	<ul style="list-style-type: none"> 20% CO₂ emission reduction by 2010 (at least 5 MtC / year reduction by 2010 expected to come from the domestic sector) 12.5% greenhouse gas emissions reduction 2008 - 2012 - Kyoto target 	<p>Fiscal</p> <ul style="list-style-type: none"> a number of measures listed under energy efficiency and renewable energy (see below) <p>Other</p> <p>Domestic Sector Elements of the Climate Change Programme include:</p> <ul style="list-style-type: none"> Building Regulations Energy efficiency (see below) Community Heating systems Home Energy Efficiency Scheme (HEES) Appliance Standards and labelling 	<p>Currently on target to meet the Kyoto target.</p> <p>There is a further programme of measures in place to work towards the 20% target within the <i>Climate Change Programme</i> but this target remains extremely challenging given current progress.</p>	<ul style="list-style-type: none"> Lowering stamp duty for low emission homes.

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<i>Energy Efficiency</i>	<ul style="list-style-type: none"> No formal target for energy efficiency but domestic sector expected to deliver at least 5MtC / year savings by 2010 primarily through energy efficiency measures ⁽¹⁾. 10 GW CHP by 2010 <p><i>Opportunity for sustainable homes</i></p> <ul style="list-style-type: none"> at least 60% energy efficiency improvement reducing energy use, cost and emissions Drive innovation in the energy sector – technology and systems, development and demonstration of new generation, technology, integration of small-scale plant onto grid, development of innovative energy services. 	<p>Fiscal</p> <ul style="list-style-type: none"> A 5% reduced VAT rate is applied to grant-funded installations of energy saving materials (for insulation, draught stripping, central heating system controls, including thermostatic radiator valves, hot water system controls, and solar panels. In the budget 2002 this concession was extended to renewable energy heating systems, micro combined heat and power domestic systems and factory-insulated hot water tanks (in force from 1 June 2002). <p>Other</p> <ul style="list-style-type: none"> Wide range of grant programmes for home owners (for example through the Energy Efficiency Commitment, programmes targeting fuel poverty such as HEES and Local Authorities) and advice organisations targeted at encouraging the installation of energy efficiency measures in existing housing stock – funding for 	<p>In order to meet the target a substantial increase in energy efficiency activity is required.</p> <p>At the end of 2000 there was 4.632 GWe installed good quality CHP. It will be difficult to meet the 2010 target, particularly given the recent difficulties that CHP has been experiencing with the New Electricity Trading Arrangements.</p>	<p>In the 2002 Budget the Government made a commitment to ‘consider ways in which economic instruments may be used to improve energy efficiency, consistent with its objectives of eliminating fuel poverty and not introducing new taxes on household energy’ (Budget 2002 P 131).</p> <ul style="list-style-type: none"> Differential stamp duty may be an effective measure to incentivise energy efficiency – two broad approaches: <ul style="list-style-type: none"> making stamp duty dependant on the energy or carbon rating of a home or; rebating stamp duty if identified energy efficiency measures are undertaken within a given period after purchase (Energy Efficiency Strategy PIU Working Paper, September 2001 and EST tel con).

(1) Climate Change, The UK programme, DETR, 2000

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
		<p>domestic homes totals at least £250 million annual funding which will rise to £350 million from 2002.</p> <ul style="list-style-type: none"> • Improved energy efficiency requirements in building regulations. • CHP is exempt from the Climate Change Levy (benefits non-domestic customers only). 		<ul style="list-style-type: none"> • Link stamp duty to 'energy efficiency labels' eg in Denmark house sellers have to commission an energy assessment for homes under 15,00 m². From this assessment the house is given an energy label and a survey report. This informs potential buyers on the energy efficiency of the house.
		<p>The Community Energy Programme is a £50 million UK-wide programme promoting community heating through grants to install new schemes and refurbish obsolete infrastructure and equipment. Funding has been allocated: £20m in 2002/03 and £30m in 2003/04 adding around 130 MWe towards the Government's target of 10,000 megawatts of installed CHP by 2010. It will also help 100,000 people on low incomes heat their homes. Funding has been allocated.</p>		

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<i>Renewable Energy</i>	<ul style="list-style-type: none"> • 10% of the UK's electricity through renewable sources by 2010 ⁽¹⁾ • Scotland: 18% of electricity from renewables by 2010 (currently 10.4%)⁽²⁾ <p><i>Opportunity for sustainable homes</i></p> <ul style="list-style-type: none"> • Renewable energy use in one million sustainable homes could avoid emissions of up to 4Mt CO2 pa. • Mainstreaming cutting edge sustainable energy technologies (e.g. solar and biomass fired CHP) will contribute significantly (up to 1TWh pa) to both renewables and CHP targets 	<p>Fiscal</p> <ul style="list-style-type: none"> • 5% VAT rates for solar hot water and other forms of renewable heating systems and solar panels (PV) <p>Other</p> <ul style="list-style-type: none"> • Package of support measures including – renewables obligations (in Scotland, England and Wales), capital grant schemes and climate change levy exemption. Particularly relevant for household renewables will be grant programmes targeted at community and household scale renewables – around £35 million over the next few years. 	<p>In 2000 2.8% of electricity was generated from renewable energy sources – the 10% target will be extremely challenging to meet. Much will depend on planning and individual attitudes towards renewable energy installations.</p>	<ul style="list-style-type: none"> • Addition of a 'product charge' on energy intensive appliances or devices such as those that are added to a property eg air conditioning is penalised in Austria. • Inclusion of other small scale renewable systems and community renewables eg wind and hydro for eligibility for reduced VAT. <p>Government commitment to economic instruments (see energy efficiency)</p>

(1) New and Renewable Energy: Prospects for the 21st Century, DTI, 2000
(2) Scottish Executive Environment Group - Meeting the Needs, April 2002.

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<p><i>Fuel Poverty (Fuel poverty is defined as the inability to afford adequate warmth and other energy services for 10% of household income)</i></p>	<ul style="list-style-type: none"> The UK Fuel Poverty Strategy sets a target for vulnerable households to ensure that by 2010 no older householder, no family with children, and no householder who is disabled or has a long-term illness need risk ill health due to a cold home. Scotland target: eliminate fuel poverty by 2016 <p><i>Opportunity for sustainable homes</i></p> <ul style="list-style-type: none"> Dramatic improvement in building fabric and integrated sustainable energy supply can provide adequate warmth, light, at low prices and low/zero emissions 	<p>Fiscal</p> <ul style="list-style-type: none"> Central heating systems leased under the Government's Affordable Warmth programme qualify for capital allowances (the Affordable Warmth programme – developed by Transco, DTI and DETR supports the installation of insulation and energy efficient central heating system in social and privately owned homes of those who are classed as fuel poor). <p>Other</p> <ul style="list-style-type: none"> The UK Fuel Poverty Strategy sets out a number of measures that are being implemented to tackle fuel poverty in the UK. For example The Home Energy Efficiency scheme in England which aims to improve the energy efficiency of households for those classes as fuel poor (included in the funding listed above for energy efficiency measures)and the £200 Winter fuel payments available to those over 60 	<p>The number of homes in fuel poverty has fallen over the last decade from around 5.5 million in 1996 to under 4 million in 2000 ⁽¹⁾ mainly due to falling fuel prices and improved energy efficiency in homes.</p> <p>To achieve Government fuel poverty objectives, energy efficiency programmes will also need to include more measures in solid wall properties. These are the most expensive to heat, but also the most costly to insulate.</p>	<p>Proposals for energy efficiency will be helpful for fuel poverty.</p>

(1) The UK fuel poverty strategy, DEFRA, DTI, 2001

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<i>Waste (Construction Waste)</i>	<ul style="list-style-type: none"> UK: By 2005, to reduce the landfill or industrial and commercial waste to 85% of 1998 levels. UK: By 2020, to reduce the landfill of biodegradable municipal waste to only 35% of its 1995 level. England and Wales: By 2010, to recover value from 45% of municipal waste (at least 30% by recycling or composting) Scotland currently produces 2.9 million tonnes (mt) municipal waste – target to reduce to 2.6 mt by 2010 and 2.3 mt by 2020. Landfill should be reduced from 1.7 mt (current) to 1.25 by 2010.⁽¹⁾ <p><i>Opportunity for sustainable homes</i></p> <ul style="list-style-type: none"> UK construction industry currently uses 6 tonnes of building materials per person, mostly sands and gravels ⁽²⁾. Sustainable building material will significantly reduce the 20% of UK waste produced by construction. 	<p>Fiscal</p> <ul style="list-style-type: none"> Landfill levy currently £2 per tonne of inert waste (most of construction waste is classified as inert waste – due to be reviewed in 2004). Aggregates Levy (introduced in April 2002). Levy has been set at £1.60 per tonne of aggregates produced. Some of the revenue is recycled to business through NI reductions of 0.1%. Some of the money (£35 million for the UK for the next 2 years) will be spent on reducing the environmental impact of quarrying through a number of measures. 	Over the last few years there has been a substantial increase in the amount of construction and demolition waste used as aggregate. However, the overall waste targets are extremely challenging and there is still much potential for reduction of wastes in this area.	<p>Non-Fiscal</p> <p>Green coding system applied to all building materials – trials are further developed in the supply chain.</p> <p>Many countries use fiscal incentives for waste disposal but not specific to building materials.</p> <p>Support for training in this area. It is reported that 30% of construction is reworked (sustainable Construction , Construction Code of Best Practice Programme).</p> <p>Fiscal</p> <ul style="list-style-type: none"> Increase land fill levy Increase aggregates tax or broaden it out wider than just aggregates to other primary materials

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
		<p>Policy</p> <ul style="list-style-type: none"> • Minerals Planning Guidance (MPG6) – for England. Minerals planning guidance (Wales) Planning policy. • aggregates and products from aggregates should be recycled wherever possible and where technically, economically and environmentally acceptable, construction and demolition wastes should be used instead of primary materials. • sets targets for the use of construction and demolition wastes and secondary aggregate materials for use as aggregate to roughly double their use from about 30 million tonnes per year in 1989 to about 55 million tonnes per year by 2006, with a target of 40 million tonnes per year by 2001. 		

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<i>Water</i>	<p>No specific Water Resources Target</p> <p>Environment Agency have regional targets in their Strategy for England and Wales ⁽³⁾</p> <p><i>Opportunity for Sustainable Homes</i></p> <p>Grey water collection and use for some tasks – e.g. watering the garden or washing the car</p> <p>Use of Water Efficient Appliances and fixtures for example:</p> <ul style="list-style-type: none"> • Toilet use can be reduced by almost 10 l / h / d by introduction of dual flush or low flush systems ⁽⁴⁾ • Efficient shower heads and flow restrictions 	<p>Fiscal</p> <ul style="list-style-type: none"> • Water and sewage services are zero rated (except where supplied for industrial purposes) - (fiscal instruments such as water emission and water use charges are dependent on use (ie sustainable living) and less the shell of the home). <p>Other</p> <ul style="list-style-type: none"> • National Water Metering Installation - provides reductions in consumption ranging from 3% to 21%. • The Environment Agency has prepared a strategy for eight regions covering England and Wales and has set indicative targets for each region for reduction in water use by 2010 and 2025. They are keen to work with a number of organisations to encourage water efficiency. SEPA is also active in this area in Scotland. 	<p>N/A -. Environment Agency Water Strategy concludes that in much of England and Wales, water is a scarce resource and that there is much work to be done in the area of improving water efficiency.</p>	<ul style="list-style-type: none"> • Differential stamp duty or council tax in relation to location of housing within ‘little or no risk’, ‘low to medium risk’ and ‘high risk’ areas as defined by the Environment Agency [ERM]. • Grants or VAT relief for the installation of sustainable drainage systems [ERM] • Impose a floodplain levy for development within the floodplain [EA]. • VAT reductions for A rated water efficient dishwashers and washing machines. • Encouraging the use of recycled grey water, for example in WCs through decreasing VAT or allowing enhanced capital allowances for grey water recycling systems. In Tokyo these systems are mandatory for buildings with a potential water ruse of more than 100m³ per day.
		<p>Policy</p> <ul style="list-style-type: none"> • PPG25 		

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<i>Materials Use</i>	<p>Minimising waste arisings and encouraging the use of recycling therefore the need for minerals extraction through reducing waste arisings (discussed above).</p> <p>Use of sustainable materials – for example reduced embodied energy, recycled, renewable, locally sourced.</p> <p>Design homes with materials that will last or that can be reused or recycled</p>	<p>Other</p> <ul style="list-style-type: none"> • the use of sustainable materials , recycled materials or materials from renewable sources is encouraged in the UK. However, currently key policy in this area is information dissemination and there is no legislation. • Green Guides are available to provide advice – for example BRE’s Green Guide Specification for Houses. • Certification systems – such as BRE’s Green Guide to housing Specification. 		<ul style="list-style-type: none"> • Tax breaks (capital allowances for builders, Vat breaks) for rainwater harvesting system for non-drink water use in the home. • Tax breaks for use of water saving installations such as low-flush toilets <i>etc.</i> <p>Fiscal</p> <ul style="list-style-type: none"> • Reduced VAT rate on recovered materials (cf Belgium – 0%) • Reduced VAT rates on sale of certified materials • Product charges on materials found to be unsustainable; • an incentive for sourcing local materials; • incentive to ensure avoidance of CO₂ intensive components.

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
<i>Health and well-being</i>	<p>Crime</p> <ul style="list-style-type: none"> Reduce fear of crime by March 2002 <p>Open Space</p> <ul style="list-style-type: none"> Everyone to have access to well-maintained and safe parks, play areas and other open spaces close to where they live and work 	<p>Fiscal</p> <ul style="list-style-type: none"> Reduced VAT rate for grant funded installation of central heating systems and home security goods (such as fire alarms, locks etc.) <p>Funding Programmes</p> <ul style="list-style-type: none"> <i>Green Spaces and Sustainable Communities</i> - £125 m available through grants to 11 identified partnerships. Focuses on grants to improve LNR, playing fields and open space provision. <i>Home Zones</i> - £30 m over 3 years. Grants to local authorities to improve the quality of life in residential streets. Includes 'designing out' traffic, providing play areas for children and street furniture. <i>Neighbourhood Warden Scheme</i> - £13.5m to fund wardens to improve the quality of life by promoting community safety, helping with environmental improvements and housing management and community development. 	<p>Crime</p> <ul style="list-style-type: none"> Domestic burglary fell by 7% between 1999/00. Violent crime rose by 16% between 1998/99 and 1999/00. 	<p>Non Fiscal</p> <ul style="list-style-type: none"> EU legislation is proposed to limit emissions of VOCs from paints and varnishes. Making sustainability criteria a more explicit objective for communities bidding for public sector funding. Could utilise EP millennium village 8 point criteria. <p>Fiscal</p> <ul style="list-style-type: none"> Reduced VAT rate on low solvent paints (cf Slovakia); Product charge on leftover paint and paint containers (cf Canada - fund the paint and coatings collection programme); Product charge on solvents and flammable liquids (cf Canada - fund the Residuals Stewardship programme)

Issue	UK Government target - Opportunity for Sustainable Homes to contribute to Targets	Existing Fiscal Incentives and Other Policies targeted at sustainable homes	Progress towards target	Proposals for fiscal incentives and grants
		<ul style="list-style-type: none"> • <i>Reducing Burglary Initiative</i> – targeted communities with the worst domestic burglary problems. Grants available for home security improvements. • Consultation on the reform on the use of <i>Planning Obligations</i> to secure positive benefits that will make development more sustainable as part of planning Green Paper [DTLR] • <i>Health Action Zones</i> – brings together organisations within and beyond the NHS to tackle health inequalities and modernise health services. 26 HAZs in England. • <i>Urban Park Programme</i> - £255 to restore and improve parks and gardens. 		
		<p>Policy</p> <ul style="list-style-type: none"> • Policy PPG3 and PPG6. 		

Annex 2

EcoHomes

ECO-HOMES?

What is Eco-Homes?

Eco-homes is an environmental assessment method for new and renovated houses and apartments. New developments are awarded ratings – pass, good, very good and excellent depending on how they fair against a set of criteria (described below). It focuses on rewarding developers who improve environmental performance through good design, rather than high capital cost measures. Assessments are carried out at the design stage of the development or renovation.

What are the Eco-Homes Criteria?

Eco-Homes criteria are grouped into seven categories: Energy; Water; Pollution; Materials; Transport; Ecology and Land Use and Health and Well-being. Eco-home criteria are deliberately not prescriptive where possible in order to allow some flexibility. Detailed descriptions of the criteria are given in *Table.1*.

Table.1 *EcoHomes Criteria*

Category	Criteria
Energy	<ul style="list-style-type: none">• Carbon Dioxide production due to energy consumption (credits are awarded according to kg/m²/yr – 1 credit for less than 60 kg/m²/yr – up to 10 for zero or less than kg/m²/yr);• Building envelope performance (1 credit for 10% improvement on the Building Regulations or existing performance up to 5 credits for 30% improvement);• Provision of drying space (1 credit for providing drying space in a secure environment on site)• Ecolabelled goods (credits are awarded for having energy efficient appliances rated B or above – or C or above in the case of washer / dryers);• External lighting (credits are granted from energy efficient external lighting).
Water	<ul style="list-style-type: none">• Water Consumption (credits are given for water consumption levels ranging from – 1 credit for water consumption of less than 45m³ per bedspace to 5 credits for water consumption of less than 25m³).
Pollution	<ul style="list-style-type: none">• HCFC Emissions (credits are awarded for zero ozone depletion potential in the roof, walls and floor);• Low NO_x emission (credits are awarded for boilers with low NO_x emissions).

Category	Criteria
Materials	<ul style="list-style-type: none"> • Timber and timber panel products for building elements (credits are awarded for timber is sourced from suppliers covered by government certification schemes on sustainable management or where timber products are manufactured from either pre or post consumer waste streams); • Timber and timber products for finishing elements (again credits are awarded for timber sourced from government certification schemes on sustainable management or where timber products are manufactured from either pre or post waste streams); • Recyclable Materials (credits are awarded for the provision of a number of internal or external bins of a certain capacity); • Environmental Impact of Materials (credits are awarded for using materials will lower environmental impacts – these are described further under BRE’s Green Guide to Housing Specification (see <i>Box.1</i>).
Transport	<ul style="list-style-type: none"> • Public transport (credits are granted for the development being within 1000m (with a safe walking route) of public transport which provides a frequent service that travels to a local town or city centre); • Cycle Storage (credits are granted for spaces to store cycles within the house); • Local Amenities (credits are granted for proximity to food shops, post boxes and other locals facilities.) • Home Office (a credit is awarded if there is space within the dwelling for the resident to set up an office and work from home).
Ecology and land use	<ul style="list-style-type: none"> • Ecological value of the site (credits are awarded for building on land which meets defined criteria for low ecological value, or where land is ecologically valuable designing with recommendations following an audit be the association of wildlife trust consultancies or another qualified organisation, or for designing features into the site for positive enhancement of the site ecology and for the protection of existing features); • Change of ecological value of the site (credits are awarded for change in ecological value of a site – ranging from 1 credit for changes between -9 and - 3 natural species hectares and 4 credits for changes of greater than +9 natural species hectares); • Building footprint (1 credit is awarded where 60% of the development’s total floor area divided by the footprint of the building is greater than 2.5 and 2 for where 80% of the development’s total floor area divided by the footprint of the building is greater than 2.5).
Health and well being	<ul style="list-style-type: none"> • Daylighting (credits are awarded for designing the rooms to meet the daylighting criteria set out in British standards); • Sound Insulation (credits are awarded for the provision of party walls with performance above Building Regulation standards); • Private Space (a credit is provided for the provision of outside space that is at least partially private).

Box.1

The Green Guide to Housing Specification

Provides guidance to designers and specifiers on the environmental impacts of common specifications used in housing.

The guide covers typical wall, roof and floor constructions as well as including other elements such as kitchen units and landscaping. Environmental impacts rated include climate change, fossil fuel depletion, toxicity, waste disposal and minerals extraction.

The guide provides information for each specification and environmental impact by using a simple A-C rating.

Relative weightings of Ecohomes Criteria

A total of 86 credits are available under the current EcoHomes assessment method. *Table.2* illustrates the total possible credits that can be gained under each criteria category. As illustrated it is possible to gain the most credits under the materials and energy categories.

Table.2 *Eco Homes Criteria and Relative Weighting*

Subject	Total Possible Credits
Energy	20
Transport	7
Pollution	7
Materials	31
Water	5
Land use and ecological value	9
Health and Well being	7
Total	86

The percentage of credits gained in each category is then multiplied by the factors listed below, these factors weight the areas according to importance:

- Energy and transport – 0.30;
- Pollution – 0.15;
- Materials – 0.15;
- Water – 0.10;
- Land use and ecological value – 0.15; and
- Health and Well Being – 0.15.

This results in a maximum possible score of 100. *Table.3* illustrates the scores that a development must gain to achieve a rating under Ecohomes.

Table.3 *Ecohomes Ratings*

Rating	Score
Pass	36-47
Good	48-59
Very Good	60-69
Excellent	70+

Who uses Eco-Homes?

There are several examples of local and national housing projects in the UK that demonstrate several elements of best practice in sustainable homes, examples include projects developed by individual architects, housing co-operatives, Local Authorities and Housing Associations.

Since its launch in May 2000, around 800 homes have been accredited by EcoHomes. Approximately 2,000 buildings are in the process of being rated and another 4,000 are waiting to be certified ⁽¹⁾.

(1) Personal Communication, BRE, April 2002.

Annex 3

Green Mortgages

GREEN MORTGAGES

Green mortgages are offered by a number of mortgage lenders in the UK and other European Countries. A reduced mortgage rate is offered on the basis that the dwelling meets established sustainability or energy efficiency criteria. The principle could easily be expanded to fit a 'sustainable homes' definition, such as EcoHomes. The following section sets out examples of green mortgages currently available in the UK.

The Norwich and Peterborough Building Society

The Norwich and Peterborough Building Society (NPBS), in the UK, offer green mortgages for new homes with a SAP (Standard Assessment Procedure) energy efficiency rating of 80 or more. They offer a 1.25% discount for new build and 1.0% for existing homes off its variable rate for the first four years. Typical examples are shown in *Box 1*.

Box 1

Typical Examples of Norwich and Peterborough Building Society's Green Mortgages

Green Mortgage with a Discount of 1.25% for the First Four Years for New Build

A borrower, applying for a repayment mortgage of £85,000, secured over 25 years for the buying of a house at £100,000. Assuming a standard variable rate of 5.69%, monthly repayments for the 48 month discounted rate period would be £470 followed by 252 monthly repayments of £532 for the remaining term of the mortgage. This represents a total saving of £2,976 in the four year period.

Green Mortgage with a Discount of 1% for the First Four Years for Existing Properties

A borrower, applying for a repayment mortgage of £85,000, secured over 25 years for the buying of a house at £100,000. Assuming a standard variable rate of 5.69%, monthly repayments for the 48 month discounted rate period would be £482 followed by 252 monthly repayments of £532 for the remaining term of the mortgage (based on our current standard variable rate of 5.69%). This represents a total saving of £2,400 in the four year period.

Source : Norwich and Peterborough Building Society www.nps.co.uk/mortgages/typex_green

Existing green mortgage holders can also take advantage of favourable loan rates for carrying out energy saving improvements, in the first year. Loans are available between £1,000 and £25,000 at a discount of 2.5% on the normal APR.

In addition, for the first five years of each green mortgage eight trees are planted each year. This could make the home 'carbon neutral', when the estimated emissions of CO₂ from the home are offset by the estimated absorption rate of CO₂ by the new trees. The NPBS works with Future Forests Limited, who help to offset the damage done to the environment by businesses and individuals. Norwich and Peterborough forests will be created in East Anglia and Lincolnshire as a result of customers taking out our green mortgages.

The Ecology Building Society

The Ecology Building Society (EBS) describes its lending policy as designed 'to promote sustainable housing and sustainable communities'. Savings placed with the EBS fund mortgage lending on:

- energy efficient housing;
- ecological renovation;
- derelict and dilapidated properties;
- small scale ecological enterprises; and
- low-impact lifestyles.

The EBS offers a 0.5% discount for a period of one year from the start of the mortgage after which the rate will revert to the residential rate, which is applicable at that time. After a period of four years from the start of the mortgage, all residential borrowers will benefit from a reduction of at least 0.25% in the interest rate. To be eligible for this further reduction, borrowers must have complied with all general and special mortgage conditions, have conducted their account satisfactorily and be in full residence of the property. This discount will be guaranteed for the remainder of the term. *Box.2* shows some examples of the types of schemes which have qualified for an EBS mortgage.

Box.2

Examples of Ecological Building Society Schemes

Eco-Renovation in Northern Ireland

A small generator was installed to harness enough renewable energy for all lights and some sockets. Heating is being provided by a multi-fuel stove, with an oil burner as back-up and waste water is being recycled into reeds and vegetables. Slabs of insulation, used in refrigerated lorries and recovered from a dump, provide dense insulation and, on all walls, apart from those facing south, glass wool insulation has been packed into new frames. New windows are double glazed (the inner panel K glass) and made from local timber.

New Build in Lancashire

The house is based on a chemical-free build. The exterior comprises of Douglas Fir stone sourced from a local derelict building and slate recycled from an old mill roof. The timber frame is made from a manufactured I-beam known as Masonite, a Swedish product, giving a 200mm cavity for extra insulation. In the cavity Warmcel (re-cycled newspaper treated with borax) is used to give it an insulation specification making central heating unnecessary. This is enhanced by the use of 2+1 glazing in all windows but the roof lights.

Source : Ecology Building Society www.ecology.co.uk

Other green mortgage providers, include:

- Sunpowered Energy Systems Ltd in association with UDALL Financial Services www.sunpowered.co.uk/green_mortgage; and
- Co-operative Bank www.co-operativebank.co.uk