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**Sherford Sustainability
Framework Final Report**

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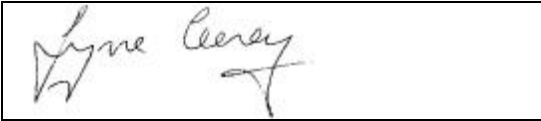
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12th March 2006

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EXECUTIVE SUMMARY

This Sustainability Framework for Sherford has been developed by BRE in collaboration with Red Tree (2004) LLP (hereafter referred to as Red Tree), and a wide range of stakeholders (see stakeholders list in the 'Introduction'). It is based on the approach BRE developed in producing the Regional Sustainability Checklists for Developments for each English region. The Sustainability Framework for Sherford has been further tailored to take into full consideration local planning policy and sustainability guidance, as well as other issues relevant to the Sherford site. The Framework is in line with PPS1, Sustainable Communities and Building Regulations.

This report represents the final output of an independent assessment undertaken by the BRE of the Red Tree outline planning application for the Sherford Site.

The six documents used to inform this assessment and provide the required evidence were:

- § *Sherford Masterplan November 2006*
- § *Sherford Town Code November 2006*
- § *Sherford Environmental Statement Ref: D108531 November 2006*
- § *Sherford Section 106 Agreement Draft Head of Terms November 2006*
- § *Sherford Flood Risk Assessment*
- § *Sherford Transport Assessment.*

The proposed Sherford development achieved an overall Sustainability score of 85% of the total credits available for the Sherford Framework, and receives an 'Exemplar' performance rating. This assessment is based upon the information provided to the assessors at the outline planning application stage.

Sherford has achieved a high standard, performing well across all seven sections of the Sustainability Framework. It has attained 50 'Best Practice' credits out of a possible 76, and a further 18 'Good Practice' credits. Figure 1 below provides a full breakdown of the section scores and credits awarded for each.

If the developer addresses the issues highlighted under 'Recommendations' as presented at the end of this report, the overall Sustainability score for the Sherford development would increase from 85% to 90%.

Sustainability Framework Summary

Site: **Sherford, South Hams**

Assessor: **Stuart Blofeld**

Date: **09/03/2007**

Sections		Number of Credits Achieved				Maximum possible score	Actual score achieved	%
		Best	Good	Minimum	Not Met			
1	CLIMATE CHANGE AND ENERGY	10	4	1	1	14.05	11.44	81%
2	SUSTAINABLE CONSTRUCTION	5	5	3	1	11.30	7.68	68%
3	COMMUNITY & SUSTAINABLE LIFESTYLES	6	0	0	1	6.40	5.40	84%
4	PLACEMAKING	10	4	1	0	13.20	11.54	87%
5	TRANSPORT	11	2	0	0	11.35	10.89	96%
6	ECOLOGY	6	1	0	0	5.65	5.44	96%
7	BUSINESS	2	2	0	0	3.85	3.30	86%
TOTAL SCORE		50	18	5	3	65.80	55.67	85%

Overall Performance Rating: Exemplar

Figure 1: Sustainability Framework Summary

BACKGROUND

The move towards sustainable developments is unstoppable. The Government's Sustainable Communities Agenda is challenging local authorities, developers and designers to ensure that all new developments and regeneration schemes are designed and built sustainably, creating places where people want to live and work in ways which address environmental issues.

The Sustainability Framework is a tool designed to facilitate this process, and assist developers and local authorities during the design and planning stages of a development to understand and deliver sustainable developments. It measures the potential of the design to create a sustainable community in the context of its site.

This tool has evolved from what was originally the National Sustainability Checklist for Developments, led by the Building Research Establishment (BRE) as part of a Department for Trade & Industry/National Partners in Technology funded programme in 2001. BRE were then commissioned by South-East of England Development Agency (SEEDA) to produce a tailored version for the South-East in 2002. This was endorsed by the Egan Review and the Sustainable Buildings Task Group as being good practice.

As part of their One Million Sustainable Homes campaign, the World Wildlife Fund secured match funding from the Department for Communities & Local Government to roll out and tailor the Checklist for the other English regions, including the South-West.

This Sustainability Framework for Sherford has been developed by BRE in collaboration with Red Tree and a wide range of stakeholders. It is based on the regional checklists approach, and has been tailored to take into full consideration local planning policy and sustainability guidance, as well as other issues relevant to the Sherford site. The Framework is in line with PPS1, Sustainable Communities and Building Regulations.

INTRODUCTION

The Sherford Sustainability Framework comprises seven sections, covering a range of social, economic and environmental issues:

1. *Climate change - adaptation, mitigation and energy*
2. *Sustainable Construction and Procurement*
3. *Community and Sustainable Lifestyles*
4. *Placemaking*
5. *Transport*
6. *Ecology*
7. *Business*

Each section is underpinned by a series of quantitative indicators, against which the Sherford development was assessed. For each indicator, BRE assessed materials provided by the Developer team to establish whether the Sherford development meets the “minimum”, “good” or “best” practice performance ratings. The score for each indicator is dependent upon the level of practice achieved and the weighting given to the indicator .

The weightings for each indicator were established after consultation with a core stakeholder group (see Methodology section below for explanation of the weightings process)

Stakeholder group:

Jon Selman, Plymouth City Council

Paul Tyler, South Hams District Council

Gareth Bradford, Devon County Council

Gareth Walton, Devon Sustainable Building Initiative

Red Tree (2004) LLP

Cherry Herbert, Environment Agency

Tony Norton, Exeter University

Matthew Spencer, RegenSW

Jane Lavick, South West Regional Assembly

Ian Lake, South West Water

Simon Dunsford, Natural England

Richard Ormerod, Government Office for the South West

Following the calculation of the weighted score for each indicator, these were combined to provide a percentage score for each section. The section scores are totalled to provide a total Sustainability score for the Sherford development.

An overall performance rating for the development is awarded based upon the final percentage score, which are categorised as follows:

No grade:	<50%
Good:	50% – 64%
Very Good:	65% – 74%
Excellent:	75% – 84%
Exemplar:	>84%

Note: a bespoke Sustainability Framework is created for each development BRE are asked to assess. Therefore the score shown is the percentage of the total score available within the Framework developed for the site.

METHODOLOGY

Scoring explained

There are two factors contributing to the total score for each indicator, firstly the performance rating achieved and, secondly, the weighting allocated.

Performance Ratings:

Each indicator has a sliding scale of three performance ratings attached to it – “Minimum”, “Good Practice”, and “Best Practice”. Materials provided by the Developer are used to assess which performance rating the proposal meets.

Each “Minimum” rating achieved gains a raw score of 0.3, each “Good Practice” rating achieves a raw score of 0.7 and each “Best Practice” rating achieves a raw score of 1.

Weightings:

Each indicator has a priority weighting assigned to show its relative importance to the success of the development taking into account regional strategies, and in consultation with key stakeholder groups (as defined in the Introduction):

Priority Group 1 (P1) has the highest weighting (x1),

Priority Group 2 (P2) is the medium (x0.85)

Priority Group 3 (P3) is the lowest (x0.7)

Total indicator score:

The total score for each indicator is calculated by the raw score awarded for the performance rating achieved, multiplied by the weighting.

Example: Indicator 2.5(3) is grouped in Priority Group 3. The developer achieves the Best Practice as 60% percentage of construction waste materials are diverted from landfill. Thus the score for this indicator is:

1	x	0.7	= 0.7
Raw score	x	Weighting for P3	= total score for this indicator

Figure 2 below summarises the above scoring methodology in a calculations table:

		Performance rating:		
		Best Practice	Good Practice	Minimum
Raw score:		1	0.7	0.3
Indicator weighting group:	Weighting multiplier:			
P1	1	1	0.7	0.3
P2	0.85	0.85	0.595	0.255
P3	0.7	0.7	0.49	0.21

Figure 2: Sustainability framework calculation table:

SHERFORD SUSTAINABILITY FRAMEWORK ASSESSMENT

The following independent assessment covers each of the seven sections as described below. Each section is dealt with in turn. For each, a summary page details the number of credits available, priority weighting for each indicator, and the maximum and actual scores achieved by the development.

Each indicator is then explained in turn and its priority weighting indicated. The evidence required by the assessors is described with the 'Minimum', 'Good Practice' and 'Best Practice' ratings outlined. The actual rating awarded is stated, alongside detail of the evidence gathered through the assessment with the original source clearly stated.

1. *Climate change - adaptation, mitigation and energy*
2. *Sustainable Construction and Procurement*
3. *Community and Sustainable Lifestyles*
4. *Placemaking*
5. *Transport*
6. *Ecology*
7. *Business*

CLIMATE CHANGE - ADAPTATION, MITIGATION AND ENERGY

Objective

To ensure that new developments are appropriately adapted to the potential future impacts of climate change and to minimise their own impact on greenhouse gases, flooding, heat gain and water resources.

Total number of indicators: 16

Allocation of indicators to weighting groups:

Weighting group	Climate Change Indicators
P1	1.1(1), 1.1(2), 1.2, 1.5(1), 1.5(2), 1.6, 1.7(1), 1.8
P2	1.1(3), 1.3(3), 1.5(3)
P3	1.3(1), 1.3(2), 1.3(4), 1.4, 1.7(2)

Maximum score available for section: 14.05

Actual score achieved for section: 11.44

Percentage score achieved: 81%

Performance ratings achieved	
Not met	1
Minimum	1
Good Practice	4
Best Practice	10

1.1 (1) Reducing the risk of flooding

Weighting: Priority 1

A comprehensive Flood Risk Assessment would be expected to be undertaken for the site, and a design strategy developed to contain a certain level of rainfall event depending on the site topography and risks posed by flooding.

Minimum	Site is demonstrated to be able to contain rainfall from 1:100 year rain events, plus 20% for Climate Change (Environment Agency requirement).
Good Practice	Site is demonstrated to be able to contain rainfall from 1:250 year rain events.
Best Practice	Site is demonstrated to be able to contain rainfall from at least 1:500 year events.

'Minimum' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Infrastructure and Utilities Section - *'1 in 100 year events will be managed using Sustainable Urban Drainage Systems (SUDS) features in conjunction with small existing watercourses to handle overflow expected in a 1 in 100 year event'*.

Sherford Masterplan Book: Infrastructure and Utilities Section – *'SUDS features, such as basins or infiltration trenches, will be located where possible close to small watercourses which could be used for overflow during extreme events (a rainfall event greater than 1 in 100 years)'*. (p.211).

Sherford Flood Risk Assessment: This assessment in line with the recommendations set out in PPG25 has modelled flood risk and flow rates taking into account an additional 20% rainfall over the next 50 years up to 2050, to allow for the effects of climate change. This 20% additional factor is inline with Environmental Agency requirements (p.9).

1.1 (2) Reducing the impact if flooding occurs

Weighting: Priority 1

It is expected that where the site has been identified as being at moderate or significant risk of flooding that mitigation measures such as sleeved and valved utilities, safe entrance and egress routes, non habited ground floors, flood resistant materials etc would be utilised.

Minimum	See relevant local planning authority standard for minimum required.
Good Practice	Measures such as sleeved and valved utilities, safe entrance and egress routes, non habited ground floors, flood resistant materials, utilities to first floor levels, valved sewage pipes and sewers, buildings designed not to impede flow of water incorporated into scheme design.
Best Practice	Development is not in an area defined as being at moderate or significant risk of flooding.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Environmental Statement:

Paragraph 17.59: *'the majority of the development site is located in Flood Zone 1, outside of the EA's indicative floodplain (therefore has an annual risk of flooding of less than 0.1% or is at risk from a flood event greater than the 1 in 1000 year flood).'*

Paragraph 17.62: *'The sensitivity of the development site to flood risk is considered to be low to medium'*.

1.1 (3) Extreme weather events

Weighting: Priority 2

With extreme weather events seemingly more prevalent as a result of the impacts of climate change it is expected that new developments will need to be designed to survive the impacts increased wind speeds and stronger rain events during the expected lifetime of the building.

Minimum	Building standards
Good Practice	Exterior fittings (i.e. roof finishes, guttering, fencing etc) designed to withstand maximum predicted wind speeds. Rainwater goods designed to cope with anticipated increased flows.
Best Practice	Good Practice PLUS development designed to minimise overall impact on air flow through the site through wind breaks, orientation and aerodynamic design.

'Good Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'Non residential building exterior fittings should be designed and specified to withstand any forecast increases in wind and rainfall over the expected lifetime of the building'*. (p.301).

1.2 Sustainable urban drainage systems (SUDS)

Weighting: Priority 1

It is becoming increasingly apparent that new developments need to incorporate mitigation measures that reduce the impacts of flash flooding which could be caused by the development. Design measures would include Sustainable Urban Drainage Systems (SUDS) incorporating swales, reed beds, detention ponds and infiltration basins, the use of Green and Brown roofs to slow water run-off, and use of permeable surfaces for car parks, roads etc.

Minimum	Incorporation of ponds and wetlands, and use of permeable surfaces in car parks, amenity areas, pavements, cycle routes, bridleways.
Good Practice	Minimum PLUS incorporation of SUDS, and Green and Brown roofs.
Best Practice	Good Practice PLUS implementation of other demonstrable measures to reduce flash flooding.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book:

Infrastructure and Utilities Strategy section - *'SUDS will be used throughout the community in order to minimise and cleanse the surface water runoff'*. (p.208).

Infrastructure and Utilities Strategy section - *'Source treatment will be introduced for external paved areas such as parking courts and driveways and this is to be provided by using permeable surfaces'*. (p.211).

Infrastructure and Utilities Strategy section - *'Multi level rain water harvesting techniques that can be applied at the building, block and community levels. This could range from individual water butts, to block scale holding tanks'*. (p.208).

Resource Efficiency of the Built Form section - *'Green and brown roofs will be utilised on non-residential buildings as part of Sherford's overall SUDS strategy subject to compliance with the town Code'*. (p.301).

Landscape, Biodiversity and Cultural Heritage & Public Space, Sports and Recreation section - *'Detailed design schemes for specific urban blocks will include garden designs to include ponds and wetlands...'* (p246).

1.3 (1) Mechanical ventilation and cooling

Weighting: Priority 3

Consideration for the energy efficiency of mechanical ventilation and cooling technologies must be taken into consideration to reduce the overall impact of the development and commercial premises.

Minimum	Energy efficient electrically powered system but waste heat not discharged where it will affect neighbours or ecology PLUS user information concerning efficient operation.
Good Practice	Energy efficient electrically powered and waste heat recovered and reused.
Best Practice	Powered by renewable energy or ground water heat exchanger.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section:

Table 1: Carbon Footprint and Reduction Measures – provide details of two 1.8MW wind turbines which together with other onsite renewable technologies will provide 51% of on site electricity demand.

For non residential buildings *'passive cooling, ventilation and heating techniques will be utilised throughout Sherford. These systems should make use of the latest energy efficient technologies'*. (p.301).

Furthermore, an independent examination of the Draft Sherford Area Action Plan was undertaken by Mr Nigel Payne BSc (Hons) DipTP MRTPI MCMI (as appointed by the First Secretary of State), which took place between 23rd January 2007-2nd February 2007. In respect to Sherford being a carbon neutral development, the examination concluded that the Sherford AAP is in general conformity with the RSS - Policy G: Sustainable Construction of the Draft Regional Spatial Strategy, which sets out the requirements of carbon neutrality. The assessors therefore conclude that the above commitments to large scale renewables, and conformity to RSS Policy G, is sufficient to award Best Practice for this indicator.

1.3 (2) Passive ventilation and cooling

Weighting: Priority 3

There are a number of passive ventilation and cooling techniques that can be incorporated into the design at the early stages of a development to reduce the dependence for mechanical ventilation and/or cooling. These design techniques include:

- a) External adjustable blinds/shutters/sunscreens
- b) Passive ventilation within buildings e.g. temperature/humidity controlled roof vents
- c) High thermal performance glass in accordance with Energy Efficiency Partnership Best Practice Standards
- d) PV shading (external)
- e) Brise - soleil (most appropriate for office buildings)
- f) High thermal mass wall, ceiling, and floor materials
- g) "Buffer zones" - external enclosed glass spaces which provide additional insulation on the south side of a building
- h) External shaded space available to shade each building
- i) Use of water / ponds to act as heat sinks
- j) Green roofs to improve thermal insulation .

Minimum	Local authority standard.
Good Practice	Five from the above list.
Best Practice	Seven from the above list.

'Good Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section -

'Passive cooling, ventilation and heating techniques will be utilised throughout Sherford. These systems should make use of the latest energy efficient technologies'. (p301).

'High thermal performance glass in accordance with energy efficiency partnership best practice standards should be utilised. Where their fitting does not create a conflict with the town Code, brise soleil will be utilitised on buildings to assist cooling'. (p301).

'High thermal mass wall materials should be utilised'. (p301).

'Green and brown roofs will be utilised on non-residential buildings'. (p301).

The above commitments made by the developer cover (b), (c), (e), (f), (j) from the list.

1.3 (3) Energy efficiency in dwellings

Weighting: Priority 2

It is highly recommended that the following energy efficiency measures should be installed in all dwellings:

- a) A rated energy efficient lamps (100%) OR all lamps to be Compact Fluorescents Lamps (CFL's)
- b) Zoned switching (e.g. one switch per light, rather than one switch to many lights)
- c) Energy efficient fridge/freezer (A rated)
- d) Energy efficient washing machine/dryer (A rated)
- e) Energy efficient dishwasher (A rated)
- f) Energy efficient oven (A rated).

Minimum	Measure (a), plus any three others from (b) to (f).
Good Practice	Measure (a), plus any four others from (b) to (f).
Best Practice	All of the above energy efficiency measures.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section -

'In regards to energy efficiency, all lighting will be fitted with Compact fluorescent lamps when installed'. (p299).

'Where the developer supplies appliances as part of the construction and sales process, these will be A rated for energy use. Those appliances will be fridge freezer, washing machine and dryer, dishwasher and oven'. (p299).

'Zoned lighting will be installed in all dwellings which utilise one switch per light'. (p300).

1.3 (4) Provision of energy efficient street lighting

Weighting: Priority 3

Street lighting raises two environmental issues, energy efficiency and 'light pollution' considerations. Light pollution occurs when a light illuminates more than it should, and affects

the environment. This can affect animal species and causes nuisance to road users and neighbours.

Street lighting should therefore be designed to be as energy efficient as possible and to minimise upward light transmission.

Minimum	70-80% of street lighting will be energy efficient (low energy or powered by renewables) with limited upward light transmission.
Good Practice	>80% of street lighting will be energy efficient (low energy or powered by renewables) with limited upward light transmission.
Best Practice	100% of street lighting will be energy efficient (low energy or powered by renewables) with zero upward transmission.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section -

'All street lighting will use low energy lamps'. (p302).

'All lanterns to be fitted with flat glass protectors / bowls or low profile bowls to enable the lighting scheme to comply with an E2 environment zone lighting system. The design of all lighting will seek to zero the amount of upward light transmission'. (p302).

'Lanterns must be capable of being fitted with internal shields and or baffles to prevent light trespass into neighbouring residential windows'. (p302).

1.4 Planting schemes and climate change

Weighting: Priority 3

With the predicted impacts of climate change leading to higher quantities of Ultra Violet light, less rainfall, more extreme temperatures and other unpredictable weather events the planting scheme should be designed to be robust enough to survive throughout its life span.

Minimum	Designed by ecologist or landscape architect.
Good Practice	Designed by ecologist and landscape architect and use of indigenous species.
Best Practice	Good Practice PLUS information on appropriate planting provided to residents.

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Landscape, Biodiversity and Cultural Heritage & Public Space, Sports and Recreation section - *‘Consideration should be given to the planting of native species across the whole site that are sensitive to the predicted climate change impacts through their lifespan. This could include species which are resilient to an increase in UV light and are able to cope with extremes of weather conditions. Planting schemes will be designed by an appropriately qualified landscape architect and ecologist’.* (p.236).

Sherford Masterplan Book: Resource Efficiency of the Built Form section – [resident welcome pack will feature] *‘wildlife gardening advice and advice on appropriate planting for private gardens’.* (p.301).

1.5 (1) Water efficiency measures in buildings

Weighting: Priority 1

With projections of annual rainfall in the South West to decrease by 15% by 2050, with a reduction in summer rainfall of 15-30%, it is imperative that water efficiency measures are designed into all buildings. It is highly recommended that the following water efficiency measures should be installed in all buildings:

- a) water efficient low flush toilet (i.e. 6/4 litre dual flush or less)
- b) water efficient spray / aerated taps in all sinks
- c) water efficient shower
- d) water efficient washing machine (energy A rated)
- e) water efficient dishwasher (energy A rated)
- f) minimised pipe runs to hot taps.

Minimum	Any four water efficiency measures from (a) to (f).
Good Practice	Any five water efficiency measures from (a) to (f).
Best Practice	All of the above water efficiency measures.

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section – *‘The developer will install low flush toilets, water efficient showers and aerated taps to all sinks. When considering the location of water tanks and plumbing layouts, consideration should be given*

to minimising pipe runs to high use hot water taps. In addition, where the developer supplies appliances as part of the construction and sales process, these will be 'A' rated (dishwasher & washing machine)'. (p.299).

1.5 (2) Rainwater harvesting

Weighting: Priority 1

As highlighted above predicted decreases in precipitation in the South West will put greater strain on water use. Hose pipe bans are already common place. Rainwater collection provides a straight-forward way to capture and use this valuable resource.

Minimum	100% of all communal building roofs used for rainwater harvesting.
Good Practice	>50% of the roof area of the whole development used for rainwater harvesting.
Best Practice	80% of the roof area of the whole development used for rainwater harvesting. Additionally the water collected must be capable of being used for internal use including flushing one or more toilets within the premises.

'Good Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section -

'Residential Building Standards: Rainwater harvesting to be used for 80% of roofs' [and] *'Rainwater harvesting to be used for 80% of non residential buildings'*.(p.300-301).

Good Practice has been awarded, because whilst a commitment to 80% of roof areas has been made there is no commitment at this stage to provide an integrated system that will allow for internal use.

1.5 (3) Grey water recycling

Weighting: Priority 2

Water is a finite resource and as such solutions should be sort to reduce the need for the use of clean drinking water for non-potable uses in dwellings. Grey water recycling is still a relatively young technology, and not yet proven on a large scale, however where the opportunity arises, developers should think about trialling such technologies.

Minimum	Grey water pilot demonstration project undertaken within phase one of the development. A minimum of 2% of dwellings to have grey water systems installed and monitored over the first phase of the development.
Good Practice	>10% in phase one.
Best Practice	>20% in phase one.

No Rating achieved

Sherford Masterplan Book: Infrastructure and Utilities section – As part of the outline Energy Strategy Red Tree will ‘offer an on-site research and development (R&D) Centre to test new methods/technologies and to stimulate their development’. However at this stage no specific commitment has been made to undertake a demonstration grey water pilot project across 2% of dwellings within the first phase (as per the minimum practice). This percentage target is felt appropriate to the scale of the proposed development. Furthermore previous pilot projects including a collaboration between Thames Water and Cranfield university that evaluated a low-tech, “light”-greywater recycling system installed in five new-build homes, acknowledged that house size is a influencing factor in the reliability of grey water recycling system and their ability to cope with the quantity of grey water being disposed of, which ranged from 43 to 181 litres per person per day.

1.6 Carbon Neutral developments

Weighting: Priority 1

To encourage the development of highly energy-efficient carbon neutral developments through use of on site renewables and carbon offset schemes in line with South West regional planning guidance.

The developers should set out to deliver a percentage reduction in net carbon emissions of the development from energy use on site of no less than 10%. Onsite renewable energy generation must deliver a net reduction in CO2 emissions that is at least equal to any net reduction delivered through a carbon off set scheme.

On site renewable technologies:

- § Solar thermal
- § PV
- § Wind
- § Micro hydro
- § Biomass / CHP

Phase(s) at which renewables technologies will be introduced should be agreed at the planning stage. All technologies should be installed prior to completion of the whole development. Any delay of installation of renewable technologies to the final phase should be avoided.

Where the site location provides the ideal opportunity to plant woodland for the sole purpose of CO2 sequestration this can be used as a carbon off-set to reduce the net carbon emissions of the development. General tree planting as part of the overall landscaping scheme e.g. planting in open green areas, parks and gardens does not count towards CO2 sequestration. The sequestration scheme must be independently verified and certified by a suitable body. Such verification would be expected to include an assessment of the project’s management capability and infrastructure, to determine its ability to accomplish the CO2 sequestration targets proposed and an assessment of the scientific methodology focusing particularly on data availability and quality.

Minimum	10% - 50% net carbon emission reduction.
Good Practice	>50% net carbon emission reduction.
	A low carbon development is one that achieves a reduction in net carbon emissions of 50% or more from energy use on site, on an annual basis.
Best Practice	100% net carbon emission reduction
	A carbon neutral development is one that achieves zero net carbon emissions from energy use on site, on an annual basis.

‘Good Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Infrastructure and Utilities section - *‘Two 1.8mW community wind turbines (total height to blade tip of up to 120m), within the Community park, will provide 32-41% of Sherford’s electrical and domestic hot water demand Community Trust’ [and] ‘In total, buildings (residential and non-residential) are targeted to generate 12% (and will generate no less than 8%) of electrical and domestic hot water demand from small and micro scale renewables...’* (p.207).

Sherford Masterplan Book: Landscape, Biodiversity and Cultural Heritage & Public Space, Sports and Recreation section - *‘There are available approximately 70ha of the Community park/green space to plant with native broadleaf trees to provide a carbon sink, that will sequester carbon dioxide, effectively offsetting the balance of Sherford’s carbon dioxide emissions for approximately 16 years. Timber thinnings should not be utilised for combustion*

purposes but processed for construction use. Woodland planted will be maintained [by the Community Trust] in perpetuity to maintain the carbon sink'. (p.237).

Sherford Masterplan Book: Resource Efficiency of the Built Form section - Table 1 details the carbon sink capable of absorbing 1778 tonnes/CO2 per hectare. (p.305).

The CLA methodology adopted by the developer (called CALM) is detailed in the report 'Climate Change and the European Countryside: Impacts on Land Management and Response Strategies. Scientific Report of the CLIO Project 2006' produced by the Climatic Research Unit, University of East Anglia. There are many other methodologies applied as detailed in various carbon sequestration reports including those produced by the Edinburgh Centre for Carbon Management. As yet there appears to be no consensus within the scientific community over a common methodology for calculating carbon sequestration. Carbon sequestration figures presented by various institutes range from 500 t/CO2/ha/yr to over 5000 t/CO2/ha/yr. For these reasons the assessors do not feel able to verify the figures quoted in the proposed carbon sink scheme. The assessors however, fully recognise the part a carbon sink can play in an overall carbon neutrality strategy and it is suggested that this is kept under review pending the establishment of consensus from within the scientific community, government, or further academic study.

1.7 (1) Integration of solar thermal / PV technologies

Weighting: Priority 1

The integration of micro renewable technologies into buildings is a very efficient way of providing hot water and/or power to buildings.

Minimum	5% - 25% of buildings are equipped with solar thermal and/or photovoltaics
Good Practice	25% - 50% of buildings are equipped with solar thermal and/or photovoltaics
Best Practice	>50% of buildings are equipped with solar thermal and/or photovoltaics

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Infrastructure and Utilities section - '*75% of buildings will be equipped with solar thermal systems and / or photovoltaic devices*'. (p.207).

1.7 (2) Future proofing for use of active solar technologies

Weighting: Priority 3

Where micro-technologies have not been initially installed buildings should be designed to allow retrospective installation of active solar devices such as photovoltaic and solar thermal heating panels. This would include the need to install ducting and dual coil boilers (if hot water is produced within the house).

Minimum	>80% of development is designed to allow retrospective installation of active solar devices.
Good Practice	80 – 90% of development is designed to allow retrospective installation of active solar devices.
Best Practice	100% of development is designed to allow retrospective installation of active solar devices.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Infrastructure and Utilities section - '*100% of all roofs will be built to be capable of accommodating renewable energy devices*'. (p.207).

1.8 Provision of sustainable heating techniques

Weighting: Priority 1

The hierarchy of feasible heating systems should be fully considered when looking at the provision of heating for both commercial and residential buildings on a development:

- a) Solar Water heating
- b) Tri-generation or co-generation, preferably powered by renewable
- c) Community Heating
- d) Heat pumps
- e) Gas condensing boilers
- f) Gas central heating

Minimum	Gas condensing boilers with central heating system
Good Practice	Community heating system / Heat pumps

Best Practice

Solar Water heating / Tri-generation or co-generation, preferably powered by renewable energy.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Infrastructure and Utilities section –

'75% of buildings will be equipped with solar thermal systems and / or photovoltaic devices'. (p.207).

'Two 1.8mW community wind turbines (total height to blade tip of up to 120m), within the Community park, will provide 32-41% of Sherford's electrical and domestic hot water demand Community Trust'. (p.207).

'In total, buildings (residential and non-residential) are targeted to generate 12% (and will generate no less than 8%) of electrical and domestic hot water demand from small and micro scale renewables...'. (p.207).

SUSTAINABLE CONSTRUCTION AND PROCUREMENT

Objective

To encourage the selection of environmentally friendly processes and materials for development in a sustainable manner that supports the local economy with minimal impact upon the surrounding environment and community.

Total number of indicators: 14

Allocation of indicators to weighting groups:

Weighting group	Sustainable Construction and Procurement Indicators
P1	2.1(1), 2.1(2), 2.3, 2.4(2)
P2	2.4(1), 2.7(1)
P3	2.2(1), 2.2(2), 2.5(1), 2.5(2), 2.5(3), 2.6(1), 2.6(2), 2.7(2)

Maximum score available for section: 11.30

Actual score achieved for section: 7.68

Percentage score achieved: 68%

Performance ratings achieved	
Not met	1
Minimum	3
Good Practice	5
Best Practice	5

2.1 (1) EcoHomes standard

Weighting: Priority 1

To ensure individual dwellings underpin the sustainability of the development the developer is encouraged to strive for an EcoHomes 'Excellent' rating for all dwellings. In future phases of the development the equivalent rating should be sought under the Code for Sustainable Homes.

Minimum	n/a
Good Practice	EcoHomes 'Very Good' rating for ALL dwellings.
Best Practice	EcoHomes 'Excellent' rating for ALL dwellings.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - '*All dwellings to be built to ecohomes 'Excellent' standards*'. (p.300).

2.1 (2) BREEAM standard

Weighting: Priority 1

The developer is encouraged to strive for a BREEAM (BRE Environmental Assessment Method) 'Excellent' rating across of non residential buildings, including Schools, Offices, Retail and Leisure buildings.

Minimum	BREEAM 'Excellent' rating for all Schools.
Good Practice	Minimum PLUS BREEAM 'Excellent' rating for all Offices and Retail buildings.
Best Practice	Good Practice PLUS BREEAM 'Excellent' rating for all Leisure buildings.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - '*All non residential buildings to be built to BREEAM 'excellent' standards*'. (p.301).

2.2 (1) Low impact building materials

Weighting: Priority 3

To reduce the environmental impact of materials used in the development, the developer should strive to deliver a percentage target of basic building elements (by element) specified as having low environmental impact. The term 'basic building elements' refer to all high-mass, and some medium-mass elements as specified by the Green Guide to Specification, 2002 (BRE). Basic building elements are:

- § Walls (external and internal walls and partitions)
- § Floors (upper and suspended ground floors)
- § Roofs
- § Ceilings (suspended ceilings and ceiling finishes).

Minimum	<ul style="list-style-type: none"> • No less than 40% of basic building elements to be Green Guide 'A' rated. • All of the remaining basic building elements to be Green Guide 'B' rated.
Good Practice	<ul style="list-style-type: none"> • No less than 60% of basic building elements to be Green Guide 'A' rated. • All of the remaining basic building elements to be Green Guide 'B' rated.
Best Practice	<ul style="list-style-type: none"> • No less than 80% of basic building elements to be Green Guide 'A' rated. • All of the remaining basic building elements to be Green Guide 'B' rated.

No rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'Sherford will aim to utilise materials in the construction of dwellings that have been proven to have a low embodied energy and low environmental impact, for example, the selection process for materials should be informed by BRE Green Guide or equivalent'*. (p.299).

Whilst there is a commitment from the developer to use low embodied materials in the development no percentage targets have, as yet, been defined at this stage and therefore a credit can not be awarded.

2.2 (2) Use of timber for building materials

Weighting: Priority 3

This indicator relates to the use of timber for basic building elements (by type) from independently verified sustainable sources. The term ‘basic building elements’ extends to include all elements listed in the EcoHomes 2005 Guidance document under the credit for *Timber: Basic Building Elements* (Mat1). This approach has been adopted to ensure that it remains consistent with those elements assessed at building level by EcoHomes, but the ratings exceed Ecohomes standards.

These elements are:

- § Timber frame (walls)
- § Floor joists
- § Roof timbers
- § Wall studding (interior and exterior)
- § Window sub-frames
- § Door sub-frames
- § Upper/suspended ground floors
- § Loft boarding
- § Facias (soft boards, bargeboards, gutter boards, others)
- § External cladding/weatherboarding
- § Staircases (excluding balustrades, etc)
- § Other major items

This framework recognises the same 5 certification schemes for ‘independently verified sustainable sources’ as EcoHomes, based on the UK Government’s CEPT (Central Point of Excellence on Timber):

- § CSA (Canada Standards Association) – www.csa-international.org/
- § FSC (Forest Stewardship Council Certification Scheme) – www.fsc-uk.info
- § MTCC (Malaysian Timber Certification Council) – www.mtcc.com.my
- § PEFC (Programme for the Endorsement of Forestry Certification) – www.pefc.org
- § SFI (Sustainable Forestry Initiative) – www.aboutsfi.org

Minimum	>60% from independently verified sustainable sources and balance from temperate sources.
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Good Practice	>80% from independently verified sustainable sources and balance from temperate sources.
Best Practice	100% of timber from independently verified sustainable sources.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'100% of construction timber will be Forest Stewardship Council certified or equivalent and preference shall be given to renewable locally sourced and milled timber from within the Devon or South West area'*. (p.299).

2.3 Use of locally sourced bulk construction materials

Weighting: Priority 1

This indicator relates to the use of bulk construction materials sourced within 50 miles (by road) of the development. Bulk construction materials refers to the main building components used for core infrastructure (including basic building elements as defined in 2.2(1) above).

Minimum	> 35% of bulk construction materials by mass
Good Practice	> 50% of bulk construction materials by mass
Best Practice	> 65% of bulk construction materials by mass

'Minimum' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'Sherford will seek to localise the sourcing of bulk materials with an aspiration to acquire 65% (with a minimum requirement of 35%) by mass from within 50 miles (by road) of the development'*. (p.298).

The assessors are unable to award Best Practice on the basis of an 'aspiration' to meet 65%, and therefore award minimum practice based upon the commitment to source 35% of materials.

2.4 (1) Use of reclaimed and recycled materials in bulk building materials

Weighting: Priority 2

This indicator refers specifically to the use of reclaimed and recycled materials in bulk building materials for the whole development (as a percentage of the value of materials used). It is currently considered most appropriate to specify recycled content as a percentage of the value of materials used, as it encourages the use of higher quality recycled materials in the build process.

The 'whole development' refers to all buildings, communal infrastructure (including transport infrastructure), external hard surfaces, landscaping (hard and soft) and earthworks.

The assessors acknowledge that can sometimes be a trade-off between the use of local virgin materials, and the sourcing of reclaimed and recycled materials, which could be transported a greater distance to site, and thus have a bigger impact. The developer should strive to deliver a strategy which strikes a balance between supports local industry, whilst considering the embodied energy of the materials purchased and transport impacts to site.

Minimum	15% of materials to be purchased.
Good Practice	20% of materials to be purchased.
Best Practice	25% of materials to be purchased.

'Minimum' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - '*Bulk building materials will include 15% (as a percentage of the value of materials used) recycled content*'. (p.300).

2.4 (2) Locally reclaimed or recycled materials in external hard surfaces construction

Weighting: Priority 1

To increase the proportion of locally (50 miles) reclaimed or recycled materials (by mass) used by the developer in the construction of external hard surfaces a percentage target should be set by the developer that addresses this issue. 'External hard surfaces' include the following components of the development:

- Roads
- Paving – pavements and paved surfaces
- Car Parks
- Hard surfaces in communal areas (e.g. playgrounds and play areas)
- Sub-bases for all of the above

Minimum	<25%
Good Practice	25-30%
Best Practice	>30%

‘Good Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *‘Materials used in the construction of road and external hard surfaces will utilise a 30% recycled content from local (within 50 miles) reclaimed or recycled sources’*. (p.299).

2.5 (1) Site Waste Management Plan

Weighting: Priority 3

The DTI’s voluntary code of practice, “Guidance for Construction Contractors and Clients on Site Waste Management Plans (SWMPs)”, was published in July 2004. Its purpose was to resolve the shortage of landfill space and the declining number of waste management sites by minimising waste at source on construction sites through the accurate assessment of the use of materials and the potential for their re-use and recycling both on and off site.

Tools such as SMARTWaste can assist in this process. Information on the SMARTWaste tool can be found at www.smartwaste.co.uk .

Minimum	Compliance with 'Construction Environmental Management Plan'.
Good Practice	Minimum PLUS Site Waste Management Plan (SWMP) which exceeds 'Construction Environmental Management Plan'. Periodic reporting over the entire development phase addressing ongoing waste management issues including performance on waste minimisation, segregation, recovery and disposal, and use of recycled and secondary materials, and cost savings identified.

Best Practice	Good Practice PLUS use of benchmarking and measuring tools (e.g. SMARTWaste), with provision of training and awareness raising for onsite waste management. Utilise the nearest and most suitable waste management site for waste streams, possibly with the use of a location mapping tool such as BREMAP, or similar.
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‘Good Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - 'A Site Waste Management Plan (SWMP) will be an integral part of the 'Construction environmental management plan'. This plan will seek to reduce the amount of waste produced on the site and ensure that the percentage of this waste disposed of via land-fill is kept to a minimum through waste segregation, recycling, and packaging reduction initiatives'. (p.299).

2.5 (2) Waste removed per dwelling

Weighting: Priority 3

This indicator relates specifically to the average number of 7 yard waste skips (or equivalent) removed per dwelling. The ability to cut the number of skips used during construction is an effective measurement of the success of on-site waste minimisation. Reducing waste produced onsite can lead to significant cost savings to the developer, in addition to the environmental benefits, and therefore specific targets to address this issue should be set.

Minimum	< five skips
Good Practice	< three skips
Best Practice	< one skip

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - 'A target of one 7 yard skip of waste per dwelling will be set'. (p.300).

2.5 (3) Construction waste diverted from landfill

Weighting: Priority 3

This indicator seeks to maximise diversion of construction waste from landfill by setting targets for the developer to meet. It links to indicator 2.5(1) on Site Waste Management Plans, and thus the two should be considered by the developer together.

Minimum	> 40% of construction waste materials (by mass) diverted from landfill.
Good Practice	> 50% of construction waste materials (by mass) diverted from landfill.
Best Practice	> 60% of construction waste materials (by mass) diverted from landfill.

‘Good Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'50% of all construction waste (by mass), will be recycled. This will ensure that no more than 50% of construction waste will be disposed of via landfill'*. (p.300).

2.6 (1) Reducing energy use during construction

Weighting: Priority 3

This indicator relates to the Constructing Excellence KPI Benchmark for energy use in the construction process. The Energy Use KPI is measured by the amount of kg CO₂/£100,000 of project value.

Minimum	30% benchmark score
Good Practice	>50% benchmark score
Best Practice	>70% benchmark score

‘Good Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'Sherford will achieve a 50% benchmark score in regards to the 'Constructing excellence' KPI for energy and mains water use within the construction process'*. (p.300).

2.6 (2) Reducing water use during construction

Weighting: Priority 3

This indicator relates to the Constructing Excellence KPI Benchmark for water use in the construction process. The water use KPI is measured by the amount of m³/£100,000 of project value.

Minimum	30% benchmark score
Good Practice	>50% benchmark score
Best Practice	>70% benchmark score

'Good Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'Sherford will achieve a 50% benchmark score in regards to the 'Constructing excellence' KPI for energy and mains water use within the construction process'*. (p.300).

2.7 (1) Improving the local construction industry skills base

Weighting: Priority 2

It is important for a development of this size to generate opportunities for young people, particularly school leavers, to enter the construction industry as apprentices or trainees, and thus improve the local construction industry skills base.

Minimum	Opportunities for construction skills training identified in line with 'Employment, Retail and Commercial Strategy'.
Good Practice	On-site training opportunities created for local residents and school-leavers (i.e. within 20 mile radius), and strategy in place to provide structured skills training and apprenticeships.
Best Practice	Good Practice PLUS opportunities created for training and apprenticeships in specialist construction areas.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'On-site training opportunities will be created at Sherford for local residents (within 20 miles) and school leavers within the construction process. Much of this training will be in the form of structure skills training and apprenticeships'*. (p.300).

Red Tree letter, 28th February 2007 outlining additional commitments against the credits set out in the Sustainability Appraisal Framework – *'Red Tree commits to providing opportunities for training and apprenticeships in specialist construction areas'*.

The assessors are happy to accept this additional commitment by the developers in respect to delivering against the Best Practice standard, and therefore award Best Practice for this indicator.

2.7 (2) Environmental impacts from construction operatives during construction

Weighting: Priority 3

It is important to provide alternative transport options for workers to limit the amount of private vehicles travelling to site, and the associated emissions.

Minimum	Shared transport provided by developer to bring operatives to and from site, with limited on site car parking provided and, Secure storage facilities provided on site to store contractor tools and equipment.
Good Practice	Monitoring programme established to measure average distance travelled by private vehicle to site, with measures put in place to reduce this to below 20 miles.
Best Practice	Existing public transport routes provide good regular access to and from site and are actively promoted to operatives, with limited on site car parking provided. or New planned public transport routes to the site are to be completed in the first phase of the development and actively promoted to operatives, with limited on site car parking provided. and Secure storage facilities provided on site to store contractor tools and equipment.

'Minimum' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section –

'Shared transport will be provided by developers at Sherford to move operatives to and from the site. On site parking will be limited in order to ensure modal shift'. (p.300).

Sherford Masterplan Book: Outline Construction Environmental Management Plan section –
commitment made to the provision of secure storage on site for tools and equipment. (p.274).

COMMUNITY AND SUSTAINABLE LIFESTYLES

Objective

To ensure that the development supports a vibrant, diverse and inclusive community which integrates with surrounding communities.

Total number of indicators: 7

Allocation of indicators to weighting groups:

Weighting group	Community and Sustainable Lifestyle Indicators
P1	3.1(1), 3.1(2), 3.1(3), 3.2(2), 3.3
P2	none
P3	3.2(1), 3.4

Maximum score available for section: 6.40

Actual score achieved for section: 5.40

Percentage score achieved: 84%

Performance ratings achieved	
Not met	1
Minimum	0
Good Practice	0
Best Practice	6

3.1 (1) Carrying out a social impact assessment

Weighting: Priority 1

A Social Impact Assessment (SIA) should be carried out to examine what impact the proposed development will have on the surrounding community.

Minimum	Social Impact Assessment carried out.
Good Practice	Social Impact Assessment carried out, with supplementary evidence showing how results were taken into account.
Best Practice	Good Practice PLUS evidence showing how the outcome of the study and measures taken were communicated back to residents in the surrounding communities.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Environmental Statement: Chapter 15 Socio-Economic and Community provides an assessment of the socio-economic and community impacts of the proposed development, for future residents, as well as people living in and around the surrounding communities, and wider sub-region. This chapter details how the results of the assessment have been taken onboard.

Sherford Masterplan Book: Evolution of the plan – This chapter described the 'Enquiry by Design' (EbD) process that started in 2003 (p.108). The EbD was led by The Prince's Foundation (TPF) and involved full and active participation from a wide range of stakeholders across the local and wider community to *'respond to the issues of [the] site through an intensive design process'* (p.108). This section goes on to describe *the 'establishment of the Sherford Community steering Group (CsG)'*, which is a part of the larger Sherford Coordination Structure (see Figure 8 - p.116). It is clear from reading the 'Evolution of the Plan' that both residents, and surrounding communities have been involved from the beginning of the development process and continue to be involved through the ongoing stakeholder events, exhibitions, and quarterly CsG meetings where the outcomes are communicated back to residents in the surrounding communities.

3.1 (2) Community involvement

Weighting: Priority 1

Community and stakeholder engagement is key to ensure the needs, ideas and knowledge of stakeholders are taken into account to improve the quality and acceptability of the development. For a full and comprehensive stakeholder engagement process the following actions are deemed to be appropriate:

- a) Stakeholder analysis carried out (listing the types of groups it is proposed to involve and how each will be identified/approached/communicated with)
- b) Consultation with the community as to the needs and aspirations of their locality at the conception stage
- c) Communication campaign providing information to the community about the impact and implications of the proposed development been carried out at an early stage
- d) Information to be provided for the community informing them about how they can get involved and influence the development
- e) Opportunity for the community to have continued involvement in the development of the project
- f) Feedback provided to those taking part in the consultation exercises as to how their views have had a tangible impact on the final outcomes.

Minimum	Statement of Community Involvement submitted.
Good Practice	Minimum PLUS (a) through to (d).
Best Practice	Good Practice PLUS (e) and (f).

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Chapter 3 – Evolution of the Plan describes the process of extensive stakeholder dialogue that took since 2003, including the 'Enquiry by Design' (EbD) led by The Prince's Foundation. The Enquiry by Design process took place in 2004 over three separate events from July – October 2004. This process involved full and active participation from a wide range of stakeholders across the local and wider community to '*respond to the issues of [the] site through an intensive design process*'. (p.108).

It is felt that the EbD process fully encompasses the actions listed above. The Prince’s Foundation has published a summary report of the EbD which includes a full list of participants. The report can be found online at: www.redtreellp.com.

3.1 (3) Long term support and management of community development

Weighting: Priority 1

In order to ensure that communities assets, facilities, service provision and open space are maintained and developed over time it is crucial that the developers puts in place the necessary provision to manage these.

Minimum	Appropriate body proposed to manage community assets.
Good Practice	Minimum PLUS Community Trust actively marketed to potential occupiers / owners.
Best Practice	Good practice PLUS support sources identified to help in initial stages (local authority, community group, charity etc); AND demonstration that sufficient sustainable sources of funding available / able to be generated for the long term management of community assets.

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Community Trust Section. This section provides a comprehensive explanation of the role that the Sherford Community Trust will undertake.

This section includes the following description of the Community Trust’s remit - *‘The Sherford Community Trust will be an integral part of community life in Sherford. It will own property and infrastructure, have management responsibility over the delivery of a range of services, be the promoter and protector of design and civic codes and the sustainability agenda for the community and most importantly deeply involve community members in its management. It will have forged strong relationships with statutory, public sector bodies, service providers, special interest groups and neighbouring community associations and will be instrumental in maintaining and enhancing Sherford as the exemplar sustainable community that it aims to be’.* (p.276).

3.2 (1) Resident pack

Weighting: Priority 3

This indicator is designed to encourage the developer to provide a Residents Handbook to ensure that they understand the sustainability features provided as part of the development, and know how to access, use (and where relevant maintain) them. The Residents’ Handbook should include all of the relevant information in one package in a form that a non-technical person would find attractive and understand.

As this is a post-occupancy indicator the developer should, at the design stages, express a formal commitment to providing a handbook that covers the following elements under the control or influence of the developer.

- 1) local transport services
- 2) active travel information and sustainable travel advice
- 3) utility suppliers
- 4) energy efficiency - including measures incorporated into the development and/or dwelling
- 5) local amenities
- 6) refuse collection
- 7) recycling facilities
- 8) local organisations and community groups
- 9) environmental technologies installed in the development and dwelling
- 10) water efficiency information pack
- 11) wildlife gardening advice including appropriate species for planting in private gardens.

Minimum	See relevant local planning authority standard for minimum required.
Good Practice	Pack provided covering elements under developer control PLUS additional information on services provided by other organisations.
Best Practice	Good Practice PLUS Community Development / Arrivals Officers to visit new residents upon arrival.

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'In order to promote sustainable lifestyles, a welcome pack will be provided to all residents with the following information...'*. This section then listed all eleven elements as described above.

Red Tree letter, 28th February 2007 outlining additional commitments against the credits set out in the Sustainability Appraisal Framework – *'Red Tree commits to the Community Development / Arrivals Officers to visit new residents upon arrival'*.

The assessors are happy to accept this additional commitment by the developers in respect to delivering against the Best Practice standard, and therefore award Best Practice for this indicator.

3.2 (2) Provision of waste and recycling solutions

Weighting: Priority 1

Britain's waste production has grown dramatically in volume and complexity over the last 50 years. Priority is now being given to the reduction of waste at source, its re-use, and its recovery by recycling. This indicator aims to reduce the overall amount of domestic waste produced, whilst maximising the recovery of waste materials through reuse, recycling and composting by asking the developer to consider provision of specific waste solutions.

Minimum	A Local Authority collection scheme for recyclable material.
Good Practice	<p>Ecohomes 2005 – MAT 3 Recycling Facility requirements – 6 credits which requires the following:</p> <p>Three internal recycling waste storage bins with:</p> <ul style="list-style-type: none"> • minimum total capacity of 30 litres • no individual bin smaller than 7 litres • all bins in a dedicated location. <p>AND</p> <p>Three external bins with:</p> <ul style="list-style-type: none"> • minimum total capacity of 180 litres • no individual bin smaller than 40 litres • All bins in a dedicated position (within 10m of the external door) incorporating easy access for waste operatives and service vehicles. <p>(For flats only) - external storage bins large enough to cater for all dwellings allocated to the bins, with written agreement from the Local Authority or other company to maintain and empty the bins on a regular basis. It should be insured that bins are located for easy access by service vehicles.</p>
Best Practice	Good Practice PLUS composters provided for all dwellings with gardens including an information leaflet on how to compost.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section –

'All dwellings to be built to ecohomes 'Excellent' standards'. (p.300).

'Every household will be provided with the maximum opportunities to recycle their waste via internal and external storage facilities. The developer will work with the local planning authorities and Community Trust to establish an integrated waste strategy that is designed to achieve maximum credits from the waste section of BRE, Ecohomes'. (p.301).

'Blocks will be designed to include 'waste storage pavilions' with easy access for drop off and collection of household waste and recycling. This will make the process of waste collection more efficient'. (p.302).

'A re-use/repair centre will be provided on land close to the park & ride facility'. (p.302).

'Convenient waste deposit areas will be provided for street recycling bins and wheelie bins within each block'. (p.302).

'Areas will be made available for home composting where appropriate. block scale composting will also be encouraged where block typologies allow. (p.301).

3.3 Lifetime homes

Weighting: Priority 1

It was announced in February 2004 in the London Plan that all new homes in the capital must be built to Lifetime Home standards. Following this announcement many London boroughs have included this requirement as part of their supplementary planning guidance. English Partnerships have followed suite by including the requirement for all new homes to be built to Lifetime Homes standards as part of their design and quality standards for all new build homes.

Furthermore recent research undertaken by The Chartered Institute of Housing in Northern Ireland & the Joseph Rowntree Foundation identified that the actual costs of achieving all of the criteria within the Lifetime Homes standard ranged from £165 to a maximum of only £545 per dwelling, depending on the size, layout and specification of the property¹.

¹ www.lifetimehomes.org.uk – Lifetime Homes: Quality, flexibility and choice 21st Century Living

This indicator encourages the developer to set a percentage target for dwellings that meet the Lifetime Homes standard. The minimum practice requirement has been set at 20%, which has been set in line with draft guidance issued by South Hams District Council, as stated in the *Local Development Framework: Sherford Area Action Plan - Schedule of Possible Changes arising from debate at the Examination*. See link below for this document:

http://www.southhams.gov.uk/schedule_of_changes_arising_at_the_examination-2.pdf

Minimum	20% of dwellings built to 'Lifetime Homes' standards.
Good Practice	50% of dwellings built to 'Lifetime Homes' standards.
Best Practice	100% of dwellings built to 'Lifetime Homes' standards PLUS 10% of dwellings built to meet Wheelchair housing standards.

No Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Housing section - *'Red tree proposes that 75% of the 16 standards of lifetime homes will be applied to all dwellings throughout the development and that 10% of all dwellings will be designed to 100% lifetime homes standards'*. (p.150).

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'Lifetime homes' standards will be applied to 10% of the dwellings at Sherford'*.

3.4 Health and well-being

Weighting: Priority 3

This indicator examines what measures have been taken/committed to by the developer to promote/facilitate the production of home-grown food by residents or locally produced food.

Minimum	For dwellings with private gardens: designated spaces for crop growing and provision of appropriate topsoil PLUS information on most appropriate vegetables for the site, considering soil conditions.
Good Practice	Minimum PLUS access for all residents to plots at communal gardens.
Best Practice	Good Practice PLUS promotion of local food through Organic Community Farm and farmers market.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Landscape, Biodiversity, Cultural Heritage, Public Space, Sports And Recreation section –

'Policy SNC9 identifies that an organic farm be incorporated into plans for the Community Park, subject to a viability assessment'. (p.250).

'The community gardens and allotments distribution is shown on figure 2 [p.240]. These provide the main allocated areas although it is acknowledged that smaller areas within the urban blocks associated with 'pocket parks' could also be used for allotment / community garden areas. The principal aim is to encourage growing local vegetables and fruit to reduce dependency on trips to shops but also for healthier living and education purposes'. (p.250).

'The Community trust will encourage a 'Gardening Club' with advice, free seed offers and/or the potential inclusion of a small nursery/garden centre attached to the maintenance area next to east Sherford farm'. (p.250).

Sherford Town Code: Part I: Town Wide Regulations, Allotments and Community Gardens section (p.31) provides significant detail on the provision of allotments areas and communities gardens in Sherford.

PLACEMAKING

Objective

To ensure that the most sustainable sites are used for development and that the design process, layout structure and form provide a development that is appropriate to the local context and supports a sustainable community.

Total number of indicators: 15

Allocation of indicators to weighting groups:

Weighting group	Placemaking Indicators
P1	4.2, 4.4 (1), 4.4 (2), 4.6 (1), 4.8
P2	4.3, 4.5 (1), 4.5 (2), 4.5 (3), 4.6 (2), 4.7, 4.9 (2), 4.10
P3	4.1, 4.9 (1)

Maximum score available for section: 13.2

Actual score achieved for section: 11.54

Percentage score achieved: 87%

Performance ratings achieved	
Not met	0
Minimum	1
Good Practice	4
Best Practice	10

4.1 Protection and enhancement of heritage and archaeologically important features

Weighting: Priority 3

Any development needs to respect its surroundings and where relevant look to incorporate key heritage and archaeologically important features into the development to enhance its overall design. Direct and indirect impacts of the proposed development on sites of known potential archaeological or historic landscape importance should be identified, as well as conservation areas and listed buildings.

Minimum	Important features identified by the Landscape, Biodiversity and Cultural Heritage Strategy and protected (or no important features identified).
Good Practice	Minimum PLUS both protected and enhanced either physically or through public access/interpretation.
Best Practice	Good Practice PLUS important features recognised in 'The Vision' and used as key focal points for open spaces within the development.

'Best Practice' Rating achieved

Evidence In Support Of Rating:

Sherford Masterplan Book: Landscape, Biodiversity, Cultural Heritage, Public Space, Sports And Recreation section: *'The aim of the landscape, biodiversity and Cultural heritage strategy is to inform and subsequently incorporate as many of the existing natural and cultural features into the urban form and to enhance those elements to create a more diverse and rich setting which sits comfortably within the wider landscape'*. (p.232).

'Protection of listed buildings and settings and integration of existing buildings to help establish character areas'. (p.236).

Sherford Environmental Statement – Section 9 Cultural Heritage: Paragraph 9.75 indicates that an archaeological field survey was undertaken as part of the Environmental Impact Assessment (EIA) which recorded the probable sites of two Neolithic (Bronze Age) barrows indicated by surviving earthworks which have archaeological importance. The Landscape, Biodiversity, Cultural Heritage, Public Space, Sports And Recreation section of the Masterplan states in relation to the above sites that they *'may require further detail assessment at the reserved matters stage and where possible, retention in the scheme'*.

At this stage in the development a decision to enhance the two probable sites of two Neolithic barrows either physically or through public access/interpretation or to use them as key focal

points for open spaces within the development has not been made, and will be addressed at the reserved matters stage.

Sherford Masterplan Book: ‘The Vision’ describes and illustrates (see Figures 37-41 p.34) how the design plan intends to make key features of the existing farms and quarries on the site, integrating them either within the body of the town, or destinations on the edge of town. The four farmsteads are Butlas, Vealehome, West Sherford and East Sherford. Whilst Sherford Quarry and West Sherford Wood will be integrated into a linear green system to the south of the site with Urban space formed around them (p.34).

4.2 The design process

Weighting: Priority 1

A high quality well thought out development could never emerge unless a clear Design Strategy has been established. The Design Strategy which should encompass and communicate a clear set of emerging design principles for the development should be informed by studies of the proposed site and its surroundings, and requires a collaborative approach working with appropriate parties, and stakeholders.

Minimum	Design Strategy prepared in conjunction with Local Authority.
Good Practice	Minimum PLUS Town Design Code prepared.
Best Practice	Good Practice PLUS recognised design champion / design body involved in Town Design Code (the design champion or body should be from an independent group).

‘Best Practice’ Rating achieved

Evidence in support of rating

The developers have fully embraced the above requirement involving a wide range of stakeholders from the conception of the project through the Enquiry by Design process, which was led by The Prince’s Foundation. From this process and subsequent work the Sherford Town Code has been established which lay down the foundations for the ‘look and feel’ of the proposed development. See evidence set out in 3.1(1) and 3.1(2) for further detail on The Prince’s Foundation and EbD process.

4.3 Neighbourhood height and massing

Weighting: Priority 2

Neighbourhood scale and the use of height and massing are crucial elements in defining the relationship buildings have on the surrounding landscape and people at the street level. Accommodating a range of different building uses can be achieved though different scales and appropriate use of different building heights and widths to define key elements of street design, such as street corners, principle routes and around parks.

The English Partnerships Urban Design Compendium sets out recommended height:width ratios as part of scale and massing, which are considered to reflect Best Practice, and therefore form part of the credit awarded for this indicator.

Minimum	Design Strategy prepared in conjunction with Local Authority.
Good Practice	Town Design Code making recommendations for scale and massing.
Best Practice	Good Practice PLUS scale and massing proposed within recommended height:width ratios of the Urban Design Compendium.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Town Code: Part I: Town wide Regulation, Massing section - *'Sherford shall accommodate a range of different building types of differing sizes and heights, to provide for a diverse range of households and uses. The town wide massing strategy aims to create a logical hierarchy of places, to maximise day lighting opportunities, and to provide appropriate building heights for key locations, streets and public spaces'*.

Sherford Masterplan Book: 'The Vision' *'The mass of buildings should be appropriate to their location within the plan. allied to the varying street widths, the massing of the buildings is also specified to ensure the appropriate height and width of the streets and squares'*. (p.46).

Figure 3 below illustrates the Height-To-Width ratios that will be applied to the proposed Sherford Development, as illustrated in 'The Vision' (p.47). These meet the recommended ratios as defined in The Urban Design Compendium.

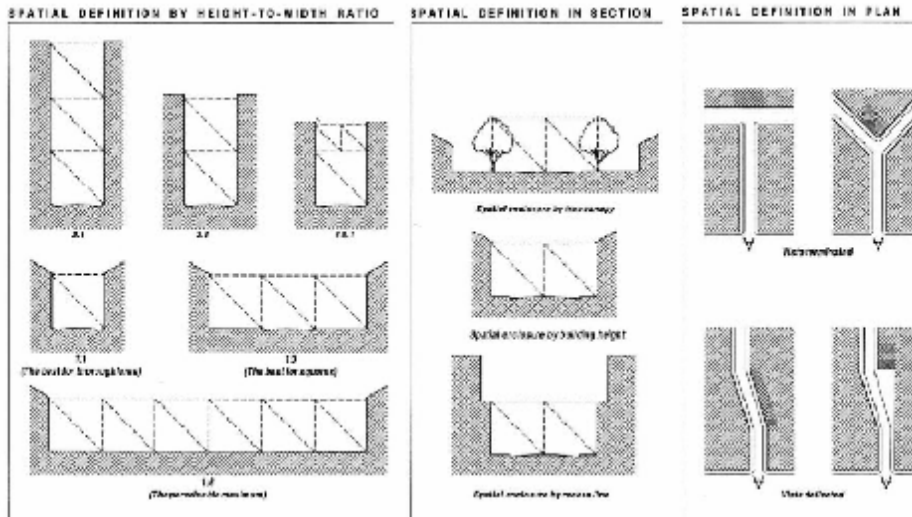


Figure 3: Proposed Height-To-Width Ratios as illustrated in the Sherford Masterplan (p.47 'The Vision')

4.4 (1) Ease of movement

Weighting: Priority 1

Ease of movement around a development can be aided though addressing the following areas within the design strategy and street layout:

- 1) Ensure that new routes into the site provide continuation of existing access points from the surrounding area
- 2) Ensure sight lines of existing neighbourhood streets continue through the site
- 3) Ensure main routes within the site connect directly to main routes in the wider area without feeding through existing routes with less capacity or with a primarily residential function.

Minimum	See relevant local planning authority standard for minimum required.
Good Practice	A design strategy addressing issue (3) above.
Best Practice	A design strategy addressing all three issues outlined above.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: 'The Vision' –

'To the southeast of the Main Street the streets have been aligned so that at regular intervals views can be glimpsed out into the southern slope of the valley thereby giving a connection to the surrounding landscape'. (p.30).

‘There is one logical and crucial place for this to happen in Sherford. The South Hams District Council (SHDC) Sherford new Community area action plan (AAP) clearly shows the logic of the need for a strategic link allowing people to move along a clear desire line from deep lane junction to Elburton and then onto the heart of Plymouth via the a37’. (p.24).

This is illustrated below in figure 4.

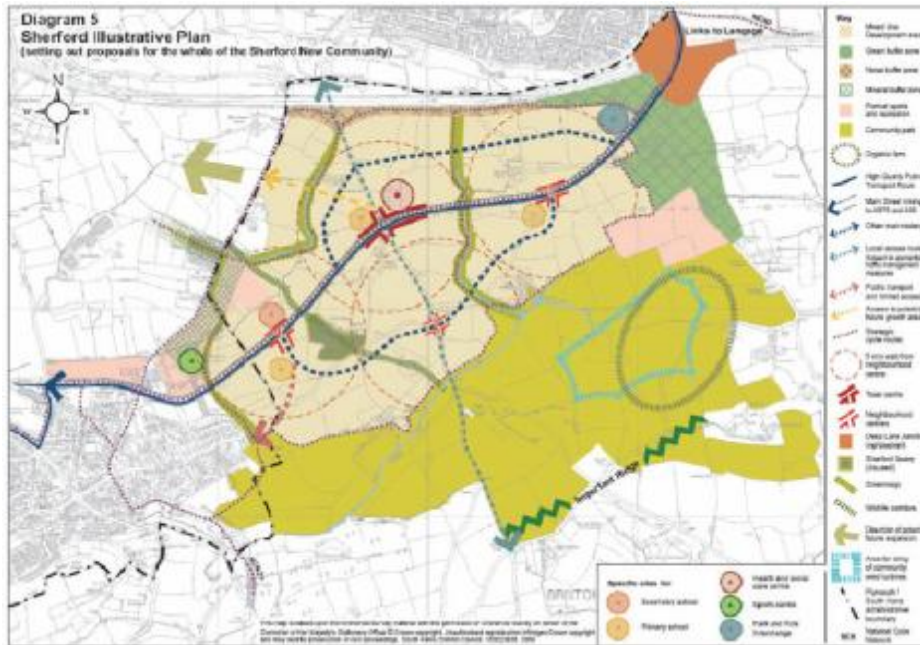


Figure 4: Illustration of links to existing routes (p.25 - 'The Vision')

Whilst there are no existing neighbourhood streets in close proximity of the new site that would be considered necessary to influence the site street layout, the developers have still taken this issue onboard and ensured that surrounding routes in, such as those from Elburton do create sight lines that continue through the site.

4.4 (2) Providing a high quality public realm

Weighting: Priority 1

Creating a high quality public realm will need to address a whole host of different issues including pedestrian safety and crime, transport patterns and active frontages of buildings facing onto the street. The following principles represent four areas that should be considered by the developer to make pedestrian movement attractive and safe, reducing reliance upon private cars for local journeys:

- 1) Clear network of pedestrian routes that follow pedestrian desire lines to key services and facilities.

- 2) Pedestrian routes are direct with safe crossings at points where pedestrians want to cross.
- 3) Movement Strategy and Town Design Code offer guidelines to ensure that pedestrian routes are attractive, well-lit and safe.
- 4) Overall street design used to calm traffic as part of the Integrated Movement and Transport Strategy.

Minimum	< 2 points addressed.
Good Practice	Yes to 2.
Best Practice	Yes to 3 or more.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Movement and Transport section -

'The physical layout of the town is a gridded network of streets which minimise walking distances between home, workplace, schools shops and other daily needs'. (p.183).

'All streets will be laid out and designed such that speed limits are self-enforcing, for example using building deflections, limiting visibility and changes to materials'. (p.183).

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'All lighting levels to conform to the BS EN 134201 and BS 5489-1:2003 Codes of practice for design of roads lighting and public amenity areas, and it's successors'. (p.302).*

4.5 (1) Neighbourhood identity and legibility

Weighting: Priority 2

Neighbourhood identity is central to creating a place that is exciting and vibrant, where people will want to live and work. Creating a neighbourhood which does not have uniform buildings that are bland and boring, but buildings which create an environment that is legible through variation in street design and detail, and promotes a neighbourhood identity that residents are proud of.

The following five principles can help to deliver this:

- 1) Design entrances to the development and its different areas as gateways
- 2) Use landmarks, including memorable buildings, to help users orientate themselves
- 3) Create clear and deflected views of landmarks
- 4) Heighten corner buildings and alter the building line to act as landmarks

5) Emphasised different nodes through surface treatment.

Minimum	Design Strategy prepared in conjunction with Local Authority.
Good Practice	Issues 1-5 to be addressed in Town Design Code.
Best Practice	Commitment to delivery of Detailed Design Codes that address all legibility issues within the neighbourhood context.

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Town Code: Part I: Town wide Regulation, Massing section - *‘The northern entrance, where the Main Street evolves into a tree-lined boulevard, is where buildings are expected to be greater in height, framing this important gateway’.* (p.45).

Sherford Town Code: Legibility Plan -

‘Locating civic or distinctive buildings in a position which will aid the legibility of the streets and spaces, such as squares, at the termination of street vistas and as corner buildings at key crossroads, which will serve as landmarks’. (p.5).

‘The highest point in the development will be celebrated with a proposed circus where the streets radiate into the surrounding structure’. (p.5).

Sherford Masterplan Book: Transport and movement section - *‘All streets will be laid out and designed such that speed limits are self-enforcing, for example using building de-flections, limiting visibility and changes to materials’.* (p.183).

Sherford Town Code: Purpose and Intent - *‘Detailed design codes will be produced ahead of each development phase. A key component of each detailed design code will be a detailed regulating Plan which will be produced by applying the rules and components or ‘kit of parts’ expressed in the Town code to each area proposed for development. Lessons learnt from the town’s evolutionary process will be incorporated into the existing Town code’.* (p.V.).

A Sherford Review Panel, which includes CABE and The Prince’s Foundation will be tasked with ensuring that the Detailed Design Code meets the Town Code.

4.5 (2) Active frontages

Weighting: Priority 2

Building design and how they fit within the surrounding place and make a positive contribution to the overall public realm can be partly delivered by addressing the ‘active frontages’ of those buildings that face the street.

The English Partnerships Urban Design Compendium addresses this subject by providing a series of 'Active Frontage Guidelines', which are adapted from Gehl, 1994. The Compendium comments that *‘making frontages ‘active’ adds interest, life and vitality to the public realm’*. Active frontages includes the following as detailed in the Compendium:

- § frequent doors and windows, with few blank walls;
- § narrow frontage buildings, giving vertical rhythm to the street scene;
- § articulation of facades, with projections such as bays and porches incorporated, providing a welcoming feeling; and, on occasion,
- § lively internal uses visible from the outside, or spilling onto the street.

The Compendium grades ‘Active Frontages’ on an ‘A’ to ‘E’ rating (‘A’ being the best).

Minimum	Design Strategy prepared in conjunction with Local Authority.
Good Practice	100% of frontages achieve at least Grade C frontage, 25% Grade A.
Best Practice	100% of frontages achieves at least Grade C frontage, 50% Grade A.

‘Minimum’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Phasing Principles And Programme section lists a series of key principles one of which is to *‘establish active frontage to open space in order to enhance surveillance and secure by design principles’*. (p.291).

Furthermore in order to deliver the density requirements for Sherford ‘Active Frontages’ will become a prerequisite. However, no firm commitment to delivering a design strategy that meets the above 'Active Frontage Guidelines' described within Good or Best Practice has been provided. Minimum Practice is therefore awarded

4.5 (3) Local character and identity

Weighting: Priority 2

Local distinctiveness and identity of a development should be appropriate, taking into consideration local character studies, by for example using local materials to complement local character, whilst simultaneously creating and maintaining a strong identity for Sherford.

The following seven principles can help to deliver this:

- 1) Use of local building materials and colour to reinforce local character
- 2) Continuity of local building details such as windows and doors
- 3) Local building scale, proportions and massing reflected in new development
- 4) Existing positive site features and views and historic associations retained or enhanced
- 5) Residential component of the development fostering a potential for personalisation by prospective residents
- 6) Contemporary approach to reflecting the local vernacular
- 7) Design allows for reinforcement of sense of place through integrated artworks and craftworks into buildings and spaces.

Minimum	Design Strategy prepared in conjunction with Local Authority.
Good Practice	Town Design Code provides evidence of achieving 5 of the above.
Best Practice	Town Design Code provides evidence of achieving all 7 of the above.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: The Vision - *'Wherever possible traces of the site are celebrated in the Town Plan. Traces include paths, roads, ponds, woods, slopes, streams, and wetlands. The incorporation of the significant existing natural and cultural features into the urban form and the enhancement of those elements to create a more diverse and rich setting can only add value to Sherford in every sense of the word'*. (p.27).

Sherford Masterplan Book: The Vision - *'A Pattern book of Urban and Architectural Form has been produced for Sherford. It used the whole of South Devon as its resource selecting towns that most people regard as still having local distinctiveness'*. (p.91).

Sherford Section 106 Agreement Draft Head of Terms: *'Public Art - The owner of the covenant with the District Council [will] provide a fund of £[xx] to be directly invested in the provision of public art on site provided that 50 per cent of the fund is made available within period of the first five years of build on site'*. (p.17).

Sherford Town Code: Part I: Town Wide Regulations, Massing section – *'A maximum of five storeys will be permitted, with the possible exception being key civic buildings or landmarks. This will be in accordance with the regulating Plans. The massing of the buildings should create a logical hierarchy of places, while maximising day lighting opportunities and minimising overshadowing of neighbouring buildings. Greater heights of buildings are specified for key locations, particularly around key streets, framing major public spaces and at the edges of the Park'*. (p.45).

Sherford Town Code: Part I: Town wide Regulation, Building Materials section addresses many issues relating to the local vernacular and building detailing -

'Developers should utilise materials and designs that are in keeping with the character of the South Hams'. (p.57).

'The South Hams Vernacular - Individual buildings tend to display a varied palette of materials, primarily painted render and stucco, with some slate-hanging and occasional use of stone (both rubble masonry and cut ashlar) and brick for grander buildings'. (p.58).

'Approved window types for use at Sherford are shown in the diagram. Square or canted bay windows, particularly rising from the first and second floor and overhanging the ground floor, are a strongly characteristic local feature'. (p.59).

'Exterior Doors should be simple 4 or 6 panelled painted wood doors to the majority of dwellings, painted in a range of sympathetic colours. Varnished hardwood doors, doors with pressed mouldings, uPVC & metal doors are not permitted'. (p.60).

With regard to the potential for personalisation by prospective residents, this issue has not been specifically addressed within the Town Code or Masterplan documents. However the Town Code does describe in some detail the types of materials and detailing that is acceptable, which offers residents some potential for personalisation within the boundaries set.

The assessors are satisfied that sufficient commitments have been evidenced as highlighted above, with further detail provided in the Town Code Massing and Building Materials sections, as well as the Sherford Masterplan Vision section, to award Best Practice for this indicator.

4.6 (1) Access to open green space

Weighting: Priority 1

People enjoy being able to see green space, and usable open space provides the opportunity for relaxation and recreation for people of all ages, contributing to their physical and mental well-being. Research by CABI Space indicates that houses located adjacent or close to parks and open spaces attract a higher price than those further away. (see “The Value of Public Space - How high quality parks and public spaces create economic, social and environmental value” <http://www.cabespace.org.uk/policy/reports.html>).

Access to green space meaning that it must be “walkable” in the sense that the distance can be travelled on foot, using dedicated footpaths or pavements, including safe crossing points where any major roads are to be crossed.

The green space must also be “Useable” in this context means a space which will be maintained (this can include in a semi-natural state), clearly intended for public enjoyment, has clear access points and is part of the design strategy for the site.

Minimum	Every home within 300 metres of an accessible natural green space of at least 2 Hectares.
Good Practice	75% of dwellings are within 200m.
Best Practice	100% of dwellings are within 200m.

‘Good Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Landscape, Biodiversity, Cultural Heritage, Public Space, Sports And Recreation section - Figure 3 Landscape Masterplan (p.240-241). From assessing the Landscape Masterplan map, and identifying all dwellings within 200m of usable green space, it has been calculated that less than 25% of all dwelling fall outside 200m. Those that do are within the yellow perimeter in the centre of Sherford as illustrated in figures 5 and 6 below.



Figures 5 & 6: 75% of dwellings within 200m of open green space.

4.6 (2) Access to play space and outdoor social spaces

Weighting: Priority 2

'Outdoor play has developmental and therapeutic benefits for all children. It is fun, helps to keep children healthy, develop an awareness of risk and danger and is important for building social, emotional and life skills' - Developing Accessible Play Space: A Good Practice Guide; ODPM, 2003.

Provision of outdoor play space is therefore vital for families living in any new development. As above access to this space is also important and the following standard therefore place an emphasis both upon the quality of the play spaces provided and their accessibility from homes across the development.

Best Practice for this indicator relates to the good practice guidance set out in Chapter 5 'Moving Forward' of the guide - Developing Accessible Play Space: A Good Practice Guide; ODPM, 2003. This provides a framework for developing accessible play space which covers:

- making connections
- setting a policy context
- establishing responsibility for play
- promoting partnership working
- involving the community

This guide is available at:

http://www.communities.gov.uk/pub/763/DevelopingaccessibleplayspaceagoodpracticeguideP/DF766Kb_id1127763.pdf

To receive the Best Practice credit for this indicator the developer is expected to clearly evidence that they have consulted the guide and followed the framework set out, as described above.

Minimum	National Playing Fields Association standards met.
Good Practice	<p>Each dwelling:</p> <ul style="list-style-type: none"> • 400 metres from Equipped Play Space, 0.3 Hectare per 1000. • 100 metres from Informal Play Space, 0.4 Hectare per 1000.
Best Practice	<p>Meet ODPM good practice "Developing accessible play space: a good practice guide, 2003" which provides a framework for developing accessible play space covering:</p> <ul style="list-style-type: none"> • making connections • setting a policy context • establishing responsibility for play • promoting partnership working • involving the community

‘Good Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Landscape, Biodiversity and Cultural Heritage & Public Space, Sports and Recreation section – *‘Local Areas of Play (LAPS) - These provide informal areas which could be accommodated within pocket parks, urban blocks and green corridors. The NPFA guidance and South Hams policy SNC9 requires them to be nominally 100m from home although both South Hams District Council and Plymouth City Council acknowledge that there should not be a plethora of small green spaces. The location, size and content of these areas will be subject to the detail application packages. locally equipped areas of play (LEAP) These are located within a 400m walking distance and are 400m.sq minimum in size’.*

Sherford Town Code: Part I: Town wide Regulation, Play: Local Area of Play (LAP) characteristics: *‘As a general guide they are within a 100m walking distance of a home’.*
 Locally Equipped Areas of Play characteristics: *‘They are within a 400m walking distance of a home’.*

No specific reference to use of the ‘Developing accessible play space: a good practice guide’ has been evidenced within the documentation assessed.

4.7 Energy efficient lighting design

Weighting: Priority 2

A development’s lighting scheme must meet a number of criteria for it to fulfil its purpose. Over and above all above factors street lighting must provide a safe and secure environment at night where residents can easily make their way around. Too much light though, in the form of light pollution can spoil an environment.

Minimum	Lighting Strategy submitted in-line with Local Planning Authority requirements.
Good Practice	Lighting columns, timers, duration, illumination patterns varied according to the different lighting requirements of different locations within the site, with energy efficient bulbs used in each type. See CPRE 'Dark Skies Campaign' for guidance
Best Practice	Good practice PLUS lighting elements powered by renewable power sources with zero upwards transmission.

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'All lighting levels to conform to the BS EN 134201 and BS 5489-1:2003 Codes of practice for design of roads lighting and public amenity areas, and its successors'* [and] *'The design of all lighting will seek to zero the amount of upward light transmission'*. (p.302).

Sherford Masterplan Book: Infrastructure and Utilities Strategy section - *'50% of the new community's overall energy requirement will come from on site renewable energy sources by the completion of phase 4'*. (p.206).

4.8 Density

Weighting: Priority 1

The following excerpt from the Sherford Master Plan clearly demonstrates the importance of density in the context of every development - *"The density of housing is always a fundamental decision in design. It sets the framework for all the other features and has far reaching implications... Density in all its various forms is a complex but substantial issue, which has many connections with the value of a settlement. Plagued by numerous myths, it nevertheless*

has very real impacts on the performance dimensions, which must be traced out in any given situation” — Kevin Lynch, ‘Theory of Good City form’ p265.

Density is intrinsically linked to sustainable land use, and increased densities are arguably delivering more sustainable developments. It is now widely accepted that higher densities than were seen in the 20th century are required in light of the Government’s house building targets and guidance provided. This guidance feeds into Local Authority density targets for Sherford which must be met. These are reflected in the Minimum standard set out below of 35-40 Dwellings Per Hectare (dph) as an average across the site. It is noted that the Local Authority target could change to 40-50dph, as specified in the document ‘South Hams Local Development Framework: Sherford Area Action Plan - Schedule of Suggested Possible Change and Minor Amendments, January 2007’. At the time of this assessment however, the target remains 35-40 dph, and will be assessed on this basis.

Density will of course vary considerably from the centre as you walk out towards other parts of Sherford. It will be expected that the Town Centre will have densities approaching 50-75 dph, as captured in the Sherford Vision, whereas, areas such as those along the Community park edge and other green spaces will deliver 40-55 dph.

High density areas must also have very good transport links to ensure that residents do not resort to using their cars to travel.

Minimum	35-40 dph average across site.
Good Practice	41-50 dph average across site.
Best Practice	Densities any higher than 50 dph located within 400 metres of facilities and transport facilities.

‘Good Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: The Vision section describes in great detail how the developers intend to meet the Planning Authority density target of 35-40 dph. The Vision goes on to state that - *‘An average of 40-50 dwellings per hectare is the target’.* (p.87).

All densities above 50dph as illustrated on page 88 of ‘The Vision’ are located within 400 metres of facilities and transport facilities, except for a small percentage of dwellings along the Community park edge and other green spaces. The density of these dwellings is between 40-55dph and a small percentage of these dwellings will not be located within 400 metres of facilities and transport facilities, as illustrated in figure 88 on p.52 of ‘The Vision’.

Whilst the assessors fully appreciate the reasoning behind the density levels at the Community Park edge, and why these areas do not fall within the 400m rule, it can not award Best Practice as the proposed plan does not meet the criteria.

4.9 (1) Adaptability in design of commercial units

Weighting: Priority 3

Flexibility needs to be designed into commercial units to provide adaptability to changing market needs and meet the needs of new uses over time. The English Partnership Urban Design Compendium (2000), has addressed this by publishing the following principles which the design of commercial units should seek to meet:

- 1) Optimum adaptability to future use changes in terms of building depth (9-13m - English Partnership Urban Design Compendium figures which will be to be assessed and applied in line with the Sherford Town Code)
- 2) Optimum adaptability to future uses in terms of building width (5-7m frontages or multiples of - English Partnership Urban Design Compendium figures which will be to be assessed and applied in line with the Sherford Town Code)
- 3) Building height allowing for vertical segregation of mixed uses (with height and design of ground floors allowing adaptability between uses)
- 4) Design of building fabric and layout, positioning of stairs and services to allow internal changes between accommodation types
- 5) Design of building fabric and layout, positioning of stairs and services to allow future extension of building (vertically or to the rear of the property).

Minimum	See relevant local planning authority standard for minimum required.
Good Practice	A design strategy which addresses points 1 - 5 for commercial units.
Best Practice	Good practice PLUS points 1-5 addressed for all buildings.

'Good Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: 'The Vision' – '*Building Adaptability - ...there will be demand for commercial premises to change as well as evolving locations. These changes will be reflected in the use of buildings which will also have to be able to evolve... commercial buildings of Sherford, and possibly residential buildings too, will need to be capable of adaptation to a variety of different uses*'. (p.74).

Sherford Masterplan Book: Employment, retail and commercial section - '*Other key themes that run throughout the strategy for Sherford include the need to allow for flexibility in planning use for retail and commercial units. This will allow space to evolve to meet the changing*

needs of occupiers. The adaptability of buildings will also have a large part to play in this. attention will be paid to creating lifetime, sustainable business premises as well as durable, sustainable housing. Commercial units that can be adapted through a series of economic cycles will be provided for different users; meeting the changing needs and requirements of their occupiers over time'. (p.181).

Sherford Masterplan Book: Resource Efficiency of the Built Form section - '[for residential buildings] design and construction methods will allow for flexibility in both the workspace and living areas. This will ensure that properties can be adapted to different uses in the future'. (p.300).

Whilst the strategy and evidence provided within the Masterplan and Town Code do not address each principle in turn, the assessors are confident from the strategy presented in 'The Vision', that adaptability and flexibility of buildings will be adequately addressed for commercial premises, inline with the Good Practice credit. There is not enough evidence which demonstrates that the above criteria will be applied to both commercial and residential buildings in line with the Best Practice credit.

4.9 (2) Meeting current and future housing needs

Weighting: Priority 2

The South Hams District Council Area Action Plan specifies in paragraph 7.54 that *'the Council will seek to achieve 50% of the dwellings at Sherford to be provided as affordable homes to meet local needs'*. Paragraph 7.56 goes on to state however that *'Sherford is intended to be a mixed and balanced community and levels of affordable housing should not be so great or so little as to create an imbalance in the socio-economic groupings within the settlement when compared to other settlements in the area. Considerations of the impact of affordable housing levels on, firstly social sustainability and, secondly viability will determine whether 50% affordable housing can be met onsite'*. Thus, they recognise that the target of 50% affordable housing will not be deliverable in every situation, and therefore it should not be treated as a 'requirement' that must be met at all costs. There are many other considerations too that must be taken to integrate affordable housing into a development to make it work and create a real sense of community. The following issues should be addressed by the developer to deliver against an affordable housing target.

- 1) Does the affordable housing meet or exceed LA standard?
- 2) Does the development include a mix of accommodation types to meet current and future needs?
- 3) Does the development include a mix of accommodation tenures to meet current and future needs?

- 4) Is there good integration of accommodation types and affordable housing throughout development?
- 5) Is the affordable housing indistinguishable from the rest of development in terms of quality?

Minimum	Local Authority Minimum requirements for affordable housing are met.
Good Practice	Minimum PLUS issues 1- 3 addressed.
Best Practice	Good Practice PLUS issues 4 and 5 addressed.

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Housing Strategy – *‘of the total number of dwellings a minimum of 40% (approx 2,200) will be affordable housing. It is intended that this affordable housing will be split between 12.5% social rented (approx 700) and 27.5% (approx 1,500) intermediate tenure housing.* (p.145).

Dwelling Tenure	Percentage range of total housing		Range by number of dwellings	
	Min	Max	Min	Max
Social rented	12.5%	15.0%	688	825
Intermediate Shared Ownership	12.5%	15.0%	688	825
Intermediate - Other Tenures *	15.0%	20.0%	825	n/a
Total Affordable Housing	40.0%	50.0%	2200	n/a
Market Sale	60.0%	n/a	3300	n/a
Grand Total	100.0%	100%	5,500	5,500

Please note that the proposed mix is expressed in the ‘Min’ percentage column. This may climb to the ‘Max’ percentages should funding become available either through Social Housing Grant or the Fund Pool (see Funding).

* Intermediate Other will not have specific financial discounting mechanisms applied directly but will comprise housing that is by value and covenant affordable for key areas of localised demand not otherwise satisfied in the open market. The covenant status will have a suppressing impact on the market value, which are projected to match the ‘market values’ of Intermediate Shared Ownership properties.

Figure 7: Proposed housing mix by tenure (p.146 - Housing Strategy)

Figure 7 above detailed in the Housing Strategy illustrates a minimum Affordable Housing target of 40% with a maximum of 50%. It explains that the 50% maximum Affordable Housing target could be met *‘should funding become available either through social housing Grant or the fund pool’*. Within the Housing Strategy section it also states *that ‘Red Tree is confident that the scale of the pool funding, which may be further enhanced by Housing Grant, will comfortably deliver the additional provision, from 40% to 50% [target], required’*. (p.147).

Sherford Masterplan Book: Housing Strategy section - Table 2: Indicative housing mix by type and tenure. This details a good mix of accommodation types and tenures. It is also stated that

'Market and affordable housing will not be isolated from each other or zoned but may be clustered for management efficiency. [Furthermore] Affordable Housing will not be separated from market housing by the quality of their design. It will be 'tenure-blind'. (p.147).

4.10 'Secure By Design' principles

Weighting: Priority 2

Design strategies can greatly reduce opportunities for crime events and enhance quality of life for residents and users of the public realm. 'Secure by Design' targets up to 50% reductions in car crime and up to 25% reductions in criminal damage. The initiative offers advice on physical protection of property, and sets out broader approaches to designing out crime in the built environment that go beyond physical preventative measures.

[http:// www.securedbydesign.com/](http://www.securedbydesign.com/)

Police Architectural Liaison Officers and/or Crime Reduction Design Officers who are specialist crime prevention officers and trained at the Home Office Crime Reduction College can be used to help design out crime in the built environment. In addition to physical security measures these officers will also consider issues such as defensible space, access, crime and movement generators all of which can contribute to a reduction in crime and disorder.

Minimum	Evidence that Secure By Design principles have been incorporated.
Good Practice	Secure By Design plus involvement of a Police Architectural Liaison Officer (ALO) or Crime Reduction Design Officer (CRDO).
Best Practice	Good Practice PLUS use of Community Trust knowledge database (or equivalent) to monitor and set targets for crime reduction.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section – *'Each phase at Sherford will be designed to 'secure by design' standards (or equivalent) following consultation with a Police Architectural Liaison Officer or a Crime reduction Design Officer'.* (p.301).

Sherford Masterplan Book: Community Trust Chapter – *'The town hall will house employees from a combination of Community trust, local planning authorities, NGOs, voluntary services, service providers and associated services provided by private enterprise'.* [this will include a Police 'shop front' for crime prevention]. (p.283).

Sherford Section 106 Agreement Draft Head of Terms: Schedule 9 details a clause, whereby if the Sherford crime rates exceed a predefined percentage, then the developer must provide land to the District Council for a Type 2 Police Station. This land has been set aside for this purpose should the Community Trust Police ‘shop front’ not meet crime reduction targets.

The assessors are satisfied that the above evidence meets the criteria set out in Best Practice.

TRANSPORT

Objective

To ensure people can reach facilities they need by appropriate transport modes, encouraging walking and public transport use and reducing the use of private cars for shorter journeys.

Total number of indicators: 13

Allocation of indicators to weighting groups:

Weighting group	Transport Indicators
P1	5.1(1), 5.2(1), 5.3(1), 5.4(1), 5.4(2)
P2	5.1(2), 5.4(3), 5.5, 5.6(2), 5.7
P3	5.2(2), 5.3(2), 5.6(1)

Maximum score available for section: 11.35

Actual score achieved for section: 10.89

Percentage score achieved: 96%

Performance ratings achieved	
Not met	0
Minimum	0
Good Practice	2
Best Practice	11

5.1 (1) Facilitating a modal shift in transport patterns

Weighting: Priority 1

To encourage and enable the use of public transport the development should be within an existing or proposed public transport corridor that can facilitate a modal shift in transport patterns.

Minimum	Yes - spare capacity unknown or required.
Good Practice	Yes, sufficient capacity to accommodate users of development can be brought on-stream during the build process.
Best Practice	Yes, excess capacity already exists which can accommodate users of the development.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Movement and Transport section – *'A fundamental element of the sustainable movement strategy is the implementation of a High Quality Public Transport (HQPT) service linking the proposed park and ride facility at Deep Lane to Plymouth City Centre. The HQPT is a bus based system which allows high quality, high capacity vehicles to run at short intervals (up to one per five minutes at peak times) on regular basis. The associated infrastructure and technology will ensure that the service timetable will be extremely reliable'*.

Sherford Transport Assessment: High Quality Public Transport section – *'7.2.3 Both operators [Citybus and First Devon & Cornwall] foresee that the provision by Sherford of a Park and Ride site will succeed in diverting westbound vehicles from the A38'* (p.70).

5.1 (2) Virtual communications

Weighting: Priority 2

Providing facilities to further reduce the need to travel should also be considered. Installing telecommunications infrastructure in homes and commercial / industrial buildings allowing for the use of virtual communications is fast becoming a real alternative to transport.

Minimum	See relevant local planning authority standard for minimum required.
Good Practice	Ducting in place to allow self-installation.

Best Practice	Fibre Network throughout.
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‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Infrastructure and Utilities section –

‘British Telecom and Telewest have fibre optic infrastructure in the vicinity of Sherford and connections into the settlement are available. New infrastructure in the form of ducts and fibre optic cables will be provided throughout the development and every property will have cabling for high bandwidth connections’. (p.222).

‘It is also intended to provide the infrastructure to deliver a community based interactive public and private services using high bandwidth information and communication technology’. (p.222).

5.2 (1) Public transport links

Weighting: Priority 1

The frequency and convenience of using public transport is the key factor if residents are to opt out of their cars. The EcoHomes standard defines some precise parameters specifying the furthest distance that any occupier will have to travel to get to a bus stop (new or existing), that provides a ‘regular’ bus service to a local centre. ‘Regular’ as defined by EcoHomes: half hourly during peak rush hours (08:00-10:00 and 17:00-19:00) Monday to Friday. At all other times between 07:00 and 22:00, Monday to Saturday, the service must be hourly.)

Minimum	Meets requirements for Full EcoHomes credits with a regular service within 500metres of all dwellings.
Good Practice	Minimum PLUS 80% of all dwellings within 400 metres of a bus stop providing a regular service to a local centre.
Best Practice	Minimum PLUS 100% of dwellings within 400 metres of a bus stop providing a regular service to a local centre.

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: ‘The Vision’ - *‘A bus stop can be up to 400 metres away from some homes’. (p.51).*

Sherford Masterplan Book: Resource Efficiency of the Built Form section - *'All dwellings to be built to EcoHomes 'Excellent'. (p.300).*

5.2 (2) Provision of safe and comfortable waiting areas

Weighting: Priority 3

Transport habits are formed very quickly and it is therefore crucial that an environment to wait which is comfortable, dry and safe is provided to encourage up take of public transport.

Minimum	See relevant local planning authority standard for minimum required.
Good Practice	Bus shelters provided.
Best Practice	Comfortable, lit waiting areas in key locations with access to real time information.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Movement and Transport section - *'Public transport stops will be sheltered, secure, well maintained and will carry real time bus information displays'. (p.183).*

Sherford Transport Assessment: High Quality Public Transport section – Section 7.4 provides a 13 point list of the requirements for every bus shelter, which includes: adequate lighting, real-time bus information system, and fixed and regularly updated display of timetables.

5.3 (1) Car parking requirements

Weighting: Priority 1

Managing car parking to get the balance of parking and provision for other modes right is crucial to incentivise the use of public transport and other methods of mobility and communication. Reductions in car ownership and therefore car journeys can be achieved by carefully managing the number of parking spaces available. The lack of space encourages people not to own a car, or at least additional cars, and to take maximum advantage of public transport and other modes of travel.

However without proper alternatives to car travel the development will simply export its parking demand and associated problems to surrounding areas. The requirement for car parking can not therefore be dealt with in isolation and must be part of a much larger strategy

incorporating all the issues addressed in this section, which would then support a strategy on reduced car parking spaces.

Minimum	Between local authority minimum and maximum standards with car parking strategy for Sherford that discourages car use.
Good Practice	<LA Max with parking restraint measures (limited on-site spaces, limited garage space, cycle parking space in dwellings and on-street) and a development travel plan that focuses restraint measures when dwellings are located within 400 metres of transport nodes.
Best Practice	Good Practice PLUS tailored advice provided to each dwelling to help them create individual travel plans and provision of sustainable transport alternatives, including community buses, car share/ car club or pool (with associated infrastructure and dedicated spaces for these).

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Movement and Transport section -

'PPG13 requires 1.5 spaces per residential unit. This has been applied taking into account the size of dwellings and their location relative to public transport. In line with current thinking, the make-up of the residential parking stock will be a mix of on- and off-street (mostly provided within the block) parking'. (p.204).

'It is recognised, from experience elsewhere, that restricting parking spaces does not reduce car ownership, instead it creates parking problems. Car ownership is more likely to be affected in the long term by the reduced need to use the car due to the use of more sustainable modes of travel. The fundamental aim of reducing car usage will, in time, lead to reduced car parking requirement. Surplus spaces could then be found alternative uses'. (p.204).

'Incentives to Reduce Car Use - A cross section of the initiatives that will be considered and introduced includes the following: marketing and promotional campaigns aimed at raising awareness and understanding of sustainable modes and the impact of car travel, a Sherford travel web site providing information on transport options and benefits for all journeys, Workplace and residential travel plans , working with the relevant operators to establish travel plans for other attractors such as schools, community and leisure facilities and the health Centre, service delivery plans for retail outlets, a car club to promote shared use and hire, a car share network'. (p.184).

Sherford Masterplan Book: Resource Efficiency of the Built Form section –

'All dwellings to be built to Ecohomes 'Excellent' [including <400m to nearest bus stop]'. (p.300).

'A welcome pack will be provided to all residents including information on local travel services'. (p.301).

5.3 (2) Use of flexible car park space

Weighting: Priority 3

One way to reduce the number of parking spaces available outside of peak times is to designate them for flexible use. This reduces the dominance of motor traffic, and also makes more efficient use of land. Alternative uses may include community or farmers' markets, play space or amenity space. Surface treatments need to be such that it is clear that cars are being allowed to use the space at specific times, but that they are the "visitor" rather than the "owner" of the space. Some enforcement is also likely to be required, and encouragement for the land to be used for alternative purposes.

Minimum	<10% car parks have been designed to be for flexible use.
Good Practice	10-20% car parks have been designed to be for flexible use.
Best Practice	>20% car parks have been designed to be for flexible use.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Movement and Transport section - *'Twenty percent of all car parks will be designed to allow for flexible or dual use. The design will allow the areas to overlap different uses at different times'*. (p.204).

5.4 (1) Prioritised pedestrian networks

Weighting: Priority 1

A network of safe pedestrian routes around the site and to local facilities should be a high priority for any development, and designed in to give pedestrians priority throughout the site ahead of other motorised forms of transport.

Minimum	Masterplan clearly prioritises the requirements of pedestrians.
Good Practice	Minimum PLUS Masterplan clearly provides a highly permeable pedestrian network that links to local facilities, which is well overlooked, direct, convenient, safe and secure with a good standard of energy-efficient lighting.

Best Practice

Good Practice PLUS Traffic dispersed across site with pedestrian priority throughout (i.e. use of shared surfaces and design measures to slow traffic speeds).

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Movement and Transport section:

'The design of the town elevates walking and cycling to become the principle modes of short and medium distance travel within the town'. (p.182).

'The physical layout of the town is a gridded network of streets which minimise walking distances between home, workplace, schools shops and other daily needs'. (p.183).

'All streets will be laid out and designed such that speed limits are self-enforcing, for example using building deflections, limiting visibility and changes to materials'. (p.183).

Sherford Transport Assessment: Walking and Cycling section - *'The design of Sherford will afford pedestrians the highest priority of all modes. A safe, secure and pleasant pedestrian environment will be provided to cater for all possible internal movements'. (p.61).*

5.4 (2) Cycle networks

Weighting: Priority 1

In conjunction with 5.4 (1) the next consideration within the transport hierarchy should be for the safe movement of cyclists providing a network of cycle routes to local facilities near to and overlooked by, roads and pavements.

It is recommended that the Highways department is consulted at an early stage of the development of a cycle route network. One of the major deterrents to cycling is fear of accidents. Many cyclists choose to cycle on the pavement rather than the road, with consequent actual and perceived risk to pedestrians.

Whilst segregated cycle routes on primary and major public transport routes is one solution to the problem, properly integrated cycle routes is an even better solution, as noted in this comment:

"Generally streets which are designed for low traffic speeds are safe for walking and cycling (ideally 20mph or less), especially when the detailed layout design (of junctions, crossings and surfacing) has their needs in mind. People feel safer on streets where there is activity, where they can be seen by drivers, residents and other users. Segregated pedestrian or cycle

routes are not necessarily the answer, except when they can provide a more direct route from one place to another than the road”. (“Streets and better places to live”: ODPM)

Minimum	Routes provided on road side.
Good Practice	Key facilities served by cycle routes.
Best Practice	Site wide network with direct links to neighbouring routes.

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Movement and Transport section:

‘All streets within the community are suitable for cycling. This approach is reinforced by using the layout, in terms of buildings, car parking and landscape, to keep traffic at speeds of 20 mph or less, encouraging cyclists to share the road space with vehicular traffic because of reduced speeds’. (p.184).

‘The town plan is designed as a permeable network of streets in a deformed grid formation provides a choice of routes to every destination. This form of more permeable network encourages cycling by providing the cyclist with a series of alternative routes which they choose to navigate depending upon traffic conditions, topography and cycling ability’ (p.184).

Sherford Transport Assessment: Walking and Cycling section provides greater detail on the cycling strategy in the design and development of Sherford.

5.4 (3) Bicycle storage

Weighting: Priority 2

In order to support and encourage cycling dedicated spaces should be provided for the storage of cycles at local facilities, transport nodes, and places of employment.

Minimum	Integrated Movement and Transport Strategy prepared in conjunction with Local Authority, Highways Authorities and the Highways Agency.
Good Practice	Studies carried out on likely facility requirements and conclusions implemented (such as changing facilities, showers, and lockers at places of employment).

Best Practice

Good Practice PLUS Community Trust funds available for facility adjustment according to actual use once development is completed.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Movement and Transport section -

'Interchange with public transport will be encouraged, particularly at HQPT stops, by the provision of secure, covered cycle parking facilities'. (p.184).

'Workplaces will have secure bike storage and changing and showering facilities'. (p.185).

5.5 Proximity of local amenities

Weighting: Priority 2

The developer should strive to ensure that the following local amenities will be available within the stated distance of all dwellings, located on key pedestrian routes, and focused around public transport nodes. These distances have been taken from EcoHomes standards.

- a) Shop selling food and fresh groceries (500m)
- b) Post box (400m)
- c) Childrens' Playground/ amenity area (500m)
- d) Postal facility (500m)
- e) Bank or cash point machine (500m)
- f) Pharmacy (1000m)
- g) Primary School (400m)
- h) Secondary School (1000m)
- i) Youth Centre (1000m)
- j) Health and Social Care / Medical Centre (1000m)
- k) Leisure / Entertainment facility (1000m)
- l) Police Station (1000m)
- m) Local meeting place/ community centre or Library (1000m)
- n) Public House (1000m)
- o) Public park or village green (300m)
- p) Childcare facilities (nursery/ crèche) (1000m)

Minimum

Community Services and Infrastructure Strategy for deliver of facilities is prepared by developer.

Good Practice	a,b and c.
Best Practice	a, b and c, plus any 10 of the remaining facilities.

‘Good Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: ‘The Vision’ - Neighbourhoods: ‘From Home To Everything You Need’ details how the developer intends to apply the 400 metre ‘rule of thumb’ within the layout and design of Sherford. It highlights that access to ‘daily needs’ is essential. It states that ‘Ideally, daily needs should at least cover shopping for food, news and general household goods, schools, healthcare and community meeting space, open space, potential workspace, a post office, public transport and a pub or other forms of daytime and evening entertainment’.

(p.53).

These amenities will be located within the town centre, three neighbourhood sub-centres, and surrounding areas with at least 80% of all dwellings located within a 5 minute walk of one of these centres.

Figure 90 on page 54 of ‘The Vision’ illustrates the distance that some of the above local amenities are from dwellings in Sherford, as show below in figure 8:

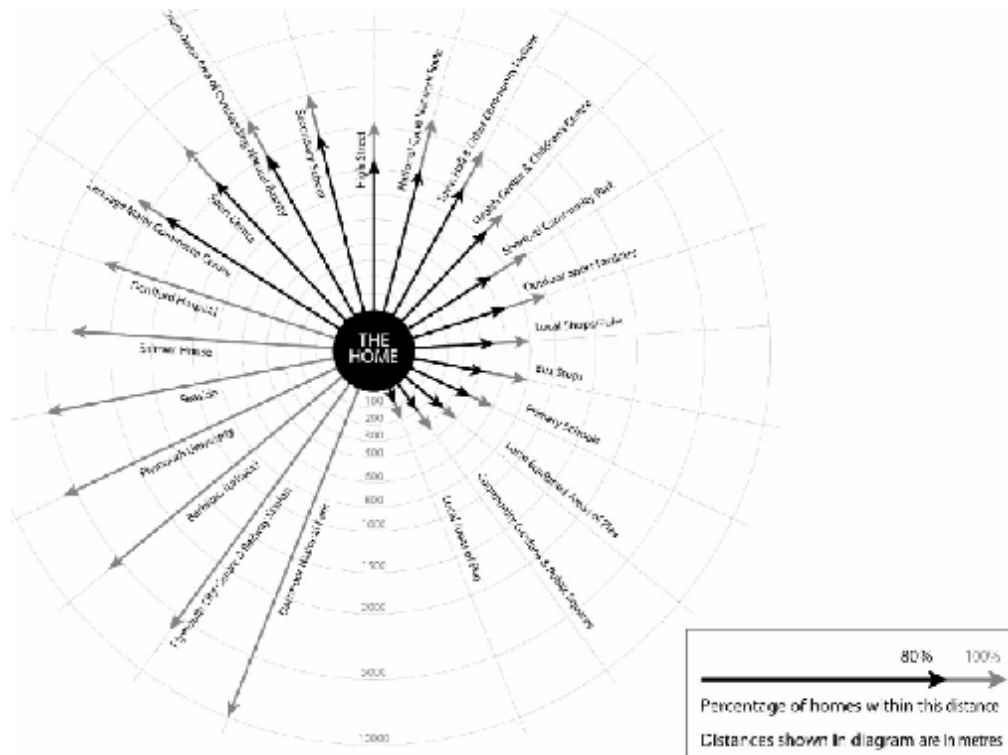


Figure 8: Distance from dwellings to local amenities in Sherford

From assessing the distances and amenities included in figure 8 the assessors award Good Practice for this indicator.

5.6 (1) Traffic management plan

Weighting: Priority 3

A traffic management plan should be put in place which encourages the safe passage of vehicles through the development, at an appropriate speed. Such traffic management plans often achieve this by applying physical measures such as humps, chicanes and signage. However these are expensive, to a degree unpopular, and stand accused of despoiling the street scene.

Instead more effective use of passive design measures such as shared surfaces, road narrowing, unclear user hierarchy, and surface treatments have all been shown to achieve speed reduction, and should be considered by the developer (see “Psychological” traffic calming; TRL Ltd, 2005 -

http://www.trl.co.uk/store/report_detail.asp?srid=2776&pid=108).

Minimum	Integrated Movement and Transport Strategy prepared in conjunction with Local Authority, Highways Authorities and the Highways Agency.
Good Practice	Design strategies for major routes, and a design speed of 20mph on residential streets.
Best Practice	Design strategies for entire site, and a site wide design speed of 20mph.

'Good Practice' Rating achieved

Evidence in support of rating

Sherford Town Code: Part I: Town wide Regulation: Street Design (p.10).

Design Speed = 30mph: A1.1, A1.2 street types (inc. main high street)

Design Speed = 20mph: A1.3, A2-A3,A5,A6.1street types

Design Speed = 10mph: A4, A6.2, A6.3, A7, A8 street types

5.6 (2) Residential / mixed use streets

Weighting: Priority 2

Residential / mixed use streets are those where the living environment clearly predominates over provision for traffic. Spaces between homes and the carriageway are shared to provide more facilities such as areas for children to play, larger gardens, planting and seats etc, to engender a community feel. Traffic and car parking are not excluded but designed so that vehicles only travel a little faster than walking pace and parked cars are not intrusive.

Such areas are created to:

- § achieve a feeling of safety, because traffic is going slower and there are more people about
- § promote greater use of public space, diversity of activities and benefit children, the elderly and the less mobile
- § produce streets which are visually more attractive with more space for landscaping and trees
- § encourage modes of travel other than the car; because fast moving traffic is removed
- § encourage greater care of the street by residents
- § and improve the quality of the environment and increase the attractiveness of urban living.

Minimum	Town Design Code and Movement and Transport Strategy propose shared surface and shared use streets.
Good Practice	60 – 80% of residential / mixed use area.
Best Practice	>80% of residential / mixed use area.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: 'The Vision' - *'Mixed use has been and remains, fundamental to the design and development of Sherford'*. (p.66).

Sherford Masterplan Book: Movement and Transport section - *'by using the layout, in terms of buildings, car parking and landscape..., [this] keeps traffic at speeds of 20 mph or less, encouraging cyclists to share the road space with vehicular traffic because of reduced speeds'*. (p.184).

Whilst the percentage of residential/ mix-use area could not be easily determined and is not specified in the documentation being assessed, there is a clear thread that runs throughout 'The Vision' and Transport and Movement section of the Masterplan which talks about 'mixed use' and addresses the issues highlighted above for this indicator. The Town Design is such that all residential areas will be designed to meet the aspirations of this indicator, through low design speeds, flexible use of space and surfaces, extensive street tree planting and landscaping. The assessors therefore award Best Practice against this indicator.

5.7 Car club

Weighting: Priority 2

Car Club facilities can offer a real alternative to private car ownership. Car clubs encourage people to choose the best modal option for each journey, in the knowledge that a car will be available for those journeys where car travel is the most appropriate. 31% of Bristol and London CityCarClub users have given up one or more of their privately owned vehicles or deferred the purchase of a vehicle. Each Bristol CityCarClub vehicle replaces at least 4.5 private vehicles on the streets of Bristol. (Smart Moves, Nov 2003).

Minimum	Commitment to a Community Car Club in Movement and Transport Strategy.
Good Practice	Minimum PLUS central office facility with storage parking and customer collection / return. Also ability for car club members to book using the telephone or internet and for a wide range of vehicles to be available to attract a diverse range of users.
Best Practice	Good Practice PLUS Car Club spaces across the development with smart card access system (such as the system used by CityCarClub).

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Movement and Transport section – The developers have committed to '*a car club to promote shared use and hire*' [and] '*a car share network*'. (p.184).

Red Tree letter, 28th February 2007 outlining additional commitments against the credits set out in the Sustainability Appraisal Framework – '*Red Tree commits to providing a central office facility with storage parking and customer collection / return. Also ability for car club members to book using the telephone or internet and for a wide range of vehicles to be available. Also, Car Club spaces will be available across the development with smart card access system*'.

The assessors are happy to accept this additional commitment by the developers in respect to delivering against the Best Practice standard, and therefore award Best Practice for this indicator.

ECOLOGY

Objective

To ensure that the ecological value of the site is conserved and enhanced maintaining biodiversity and protecting existing natural habitats which can contribute to and enhance the amenity of the area.

Total number of indicators: 7

Allocation of indicators to weighting groups:

Weighting group	Ecology Indicators
P1	5.1(1)
P2	5.1(2), 5.2(1), 5.2(3)
P3	5.2(2), 5.3(1), 5.3(2)

Maximum score available for section: 5.65

Actual score achieved for section: 5.44

Percentage score achieved: 96%

Performance ratings achieved	
Not met	0
Minimum	0
Good Practice	1
Best Practice	6

6.1 (1) Ecological survey

Weighting: Priority 1

It is imperative that the ecological value of any land being developed is not only protected but, where possible, enhanced as part of the new development. An ecological survey, carried out by a qualified ecologist, which examines the habitats in and around the development site and migration routes across the site is a prerequisite. Strategies should be put in place, and made a part of the Town Plan to mitigate against any effects the development will have.

Minimum	Landscape, Biodiversity and Cultural Heritage Strategy with comprehensive survey of existing landscape and biodiversity.
Good Practice	Survey and mitigations/ harm avoidance strategy.
Best Practice	Good practice PLUS strategy for enhancements.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Environmental Statement: A comprehensive Environmental Impact Assessment has been undertaken by the appropriately qualified individuals. Chapter 10 - Ecology and Nature Conservation of the EIA report provides an comprehensive evaluation on the impact of the proposed development. This included a walkover survey of the site undertaken by a Scott Wilson ecologist, as well as in-depth on site habitat surveys informed by desk study data. Table 10.17 of the Ecology section summarises the impacts and effects pre and post mitigation of the development. (p.64-66).

In respect to mitigation and enhancements to the site the Masterplan contains the following statements:

Sherford Masterplan Book: 'The Vision' - *'To make Sherford, some hedgerows and their associated trees will have to be removed. However, the removal of hedgerow trees from the development areas will be mitigated by the replacement of street trees and trees within the green corridors. The Town Plan will involve the replacement of more trees than currently exists. The overall biodiversity of this Sherford land will improve markedly'*. (p.30).

Sherford Masterplan Book: Landscape, Biodiversity and Cultural Heritage section - *'Protection of bat roosts and foraging areas, particularly the Sherford kilns in Sherford Quarry Wood and various farm buildings (such as West and east Sherford)'*. (p.236).

'The Sherford hedgerow network has been accorded medium (county) value as a botanical resource, in addition to its value for nesting birds and commuting bats. Existing trees should be retained where possible in order to create a sense of maturity to the development'. (p.236).

'Local Wildlife sites should be retained, protected and enhanced'. (p.236).

6.1 (2) Protection of sensitive habitats

Weighting: Priority 2

This indicator relates to the percentage of important or sensitive habitats (identified in the ecological survey) that will be protected. For this indicator no mark can be awarded if any habitats prioritised in the Biodiversity Action Plan or protected habitats are damaged.

Minimum	<60% habitats protected
Good Practice	60-90% habitats protected
Best Practice	>90% habitats or no important or sensitive habitats identified.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Environmental Statement: Chapter 10 - Ecology and Nature Conservation section -

'Extensive measures detailed in 'Mitigation and Monitoring' [including] the strategic retention and expansion of 'key corridors' within and around the development to ensure that roost connectivity, coupled with the creation of 70 ha of new woodland and lakes, double planting of hedgerows, sympathetic management and the placement of artificial summer and hibernation roosts within the Community Park, it is considered that any adverse effects will not be ecologically significant'. (p.63).

All 'Residual Effects' of the development following pre and post mitigation (Table 10.17: Ecology section) across all Habitats and Faunal species are stated as 'not significant'. (p.64-66).

6.2 (1) Increasing the value of surrounding habitats

Weighting: Priority 2

Linked with 5.1(1) this indicator asks if there will there be any increase in the valued habitats either by area or increased ecological value across the development site, as assessed by an ecologist.

Minimum	Landscape, Biodiversity and Cultural Heritage Strategy with detailed measures for enhancement to increase ecological value.
Good Practice	Minimum PLUS increase in one habitat.
Best Practice	Minimum PLUS increase in more than one habitat (or no valued habitats identified).

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Landscape, Biodiversity and Cultural Heritage & Public Space, Sports and Recreation section - details the key aims and features of the 207 ha Community Park, which include:

'Habitat protection and where necessary translocation', 'Enhancement of biodiversity value through habitat creation' and 'Protection, enhancement and the creation of habitats within the park, including the local Wildlife site close to Sherford Cottages, to encourage diversity, reinforce the local flora and fauna and mitigate for loss of habitat in the development area'. (p.237).

Sherford Environmental Statement: Chapter 10 - Ecology and Nature Conservation section – *'The extensive landscaping and Community Park will result in key beneficial impacts that can be summarised as:*

- § *an increase in aquatic and marginal habitat resulting in an improvement in the value of the area as a general ecological receptor and as bat foraging habitat; and*
- § *an improvement in the quality of terrestrial habitat on site through planting of woodland and scrub and appropriate management, providing benefits for bats, nesting and foraging birds, badger and invertebrates, in addition to a general improvement in botanical quality'.* (p.63).

6.2 (2) Creating additional ecological features

Weighting: Priority 3

Whilst a comprehensive landscaping strategy will figure for any development, one of any significant size should be complimented with more natural ecological features like woodland, grassland and/or wetlands for example.

Minimum	Landscape, Biodiversity and Cultural Heritage Strategy with detailed measures for enhancement.
Good Practice	One additional feature.
Best Practice	More than one additional feature.

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Landscape, Biodiversity and Cultural Heritage & Public Space, Sports and Recreation section details key features of the 207 ha Community Park, which include:

‘Protection and enhancement of the more sensitive landscape character of the south west Sherford Valley’. (p.237).

‘Habitats that will be enhanced by the creation of the Community Park include, native woodland, wetland areas in the valley floor, existing hedgerows and grasslands’. (p.237).

‘This would also include additional identification and mapping of existing features and the creation of additional areas of: Native woodland and woodland edge planting (mixed age planting), including planting of ground flora; New wetland areas in the valley (incorporating open water, aquatic, marginal and marsh habitats.); Reinforcement of existing hedgerows (through the creation of a second hedge parallel to the first (double planting) less intensive hedgerow management regimes and new hedgerow planting’. (p.237).

6.2 (3) Wildlife corridors

Weighting: Priority 2

Wildlife corridors are a means of physically linking habitats, which allow species to move between otherwise isolated areas. Such corridors can provide shelter, food and possibly

breeding sites and enable species to cross hostile areas, expand their range and colonise new sites.

This indicator therefore relates to the creation of new wildlife corridors to improve the ecological value of the site and support the viability of species by linking populations and habitats within the site or link to habitats outside the development.

Minimum	Wildlife corridors internal to site only.
Good Practice	Link to 2 habitats.
Best Practice	Links to more than 2 habitats with 1 habit external of the development site.

‘Best Practice’ Rating achieved

Evidence in support of rating

Sherford Masterplan Book: ‘The Vision’ - *‘Provide wildlife corridors through the town from the west to the east and north to the south, and enable these to link to the wider network for example Saltram House’*. (p.32).

Sherford Masterplan Book: Landscape, Biodiversity and Cultural Heritage & Public Space, Sports and Recreation section - *‘Wildlife Corridors: These are primarily designed to provide potential linkages to off-site areas including Saltram house for wildlife movement and use and not for public access... Key aims and features [of these corridors are]:*

- § *to create specific bat/wildlife corridors within Urban blocks that connect existing roosts and foraging areas.*
- § *lighting will be minimised*
- § *The width of these corridors shall be predominantly no less than 20m within the blocks*
- § *tree and shrub species shall be 100% native.* (p.242).

Sherford Town Code: Part I: Town wide Regulation: Green Structure:

‘The neighbourhoods will be moulded to allow the existing tributary valleys and green systems to run between them. wherever possible, stands of trees will be retained and strengthened. This green network will also cater for wildlife movement...’ (p.19).

‘Greenways & wildlife corridors : Provide access through and around the development whilst also retaining important existing landscape features.’ (p.21).

6.3 (1) Planting

Weighting: Priority 3

Improvements to wildlife, amenity and pollution control can be provided by planting trees on a development. The developer should strive to increase the net number of trees on the site after deducting any destroyed by the construction phase. Of course minimising the destruction of existing trees should be the priority, as planting new trees can not replace the ecological value lost.

Minimum	5% increase in net trees on site.
Good Practice	5-20% increase in net trees on site.
Best Practice	>20% increase in net trees on site.

'Best Practice' Rating achieved

Evidence in support of rating

The entire scheme will result in a net increase in the number of native trees within Sherford and it has been stated by the Landscape Architect that he believes the overall biodiversity of the site will improve markedly after the completion of the development.

Red Tree have stated that approximately 3.4ha of woody planting (hedgerows) will be lost due to the development, 10% of which includes standard trees. Within the Community Park 70 ha of new planting is expected to be planted with native broadleaved trees which will deliver a net increase in the number of trees on the site. There is therefore an approximate net increase in trees of site of 66.3ha, which is more than 20% of trees currently on site.

6.3 (2) Use of native deciduous and evergreen trees

Weighting: Priority 3

The use of locally occurring native deciduous and evergreen and shrubs should be specified as part of the overall landscaping strategy, especially across a development of this scale and magnitude. Such a strategy should seek to quantify a percentage that meets this criteria.

Minimum	<60% native
Good Practice	60-90% native

Best Practice

>90% native

'Good Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Landscape, Biodiversity and Cultural Heritage & Public Space, Sports and Recreation section - *'Consideration should be given to the planting of native species across the whole site'*. (p.236).

'Street tree planting: - key aims and features: to utilise tree species that are predominantly native or varieties of native species but not to exclude the use of non native species within the urban area'. (p.245).

Sherford Town Code: Part I: Town wide Regulation: Green Structure contains the following commitment regarding 'Street Trees' - *'At least 80% of the mix chosen shall be of a native species for the Town Plan as a whole'*. (p.24).

Sherford Town Code: Part I: Town wide Regulation: Green Structure contains the following commitment regarding 'Greenways' - *'Tree and shrub schedules will contain 75% native species'*. (p.33).

BUSINESS

Objective

To ensure that the development contributes to the sustainable economic vitality of the local area and region.

Total number of indicators: 4

Allocation of indicators to weighting groups:

Weighting group	Business Indicators
P1	7.1(1), 7.2, 7.3
P2	7.4
P3	none

Maximum score available for section: 3.85

Actual score achieved for section: 3.30

Percentage score achieved: 86%

Performance ratings achieved	
Not met	0
Minimum	0
Good Practice	2
Best Practice	2

7.1 Competitive business

Weighting: Priority 1

Business premises need to cater for a range of different business sizes and sectors, whilst developing priority business sectors appropriate to the region and actively encouraging new inward investment. Incubator units can play an important role in the development of local businesses in the crucial early stages of growth. Provision of low-cost incubator units is therefore important to the growth of the local economy.

Minimum	Economic study carried out shows that business premises will meet the needs of existing businesses in the area.
Good Practice	Minimum PLUS a range and choice of appropriate premises for business needs, including incubator units for business starts ups, and units for micro, small and medium sized enterprises, to cater for organic growth and active encouragement of new inward investment.
Best Practice	Good Practice PLUS identification and development of priority business sectors for the area, including clusters of related activity, and other key business sectors of importance sub-regionally as identified in the RES.

'Best Practice' Rating achieved

Evidence in support of rating

In the development of the Employment, Retail and Commercial Strategy for Sherford an economic study was carried out assessing the existing and future needs of the area. This was created using the Regional Spatial Strategy, the Local Development Framework for Plymouth and Plymouth's Core Strategy among other documents. The results of this research were taken on board in the provision of commercial and business space within the development. The development of a variety of commercial space forms a key element of the strategy for Sherford including the development of appropriate units for start-up businesses.

Sherford Masterplan Book: Employment, Retail and Commercial section - *'The development of appropriate commercial space for start-up businesses forms a key element of the strategy for Sherford'*. (p.163).

7.2 Employment opportunities

Weighting: Priority 1

A development of this size requires a well thought-out employment strategy that will deliver upon the core strengths of the local region, and draw upon the potential for the development to create additional permanent jobs either through new business or for maintenance of the development.

Minimum	Net % increase in jobs in local area (Sherford and surrounding towns).
Good Practice	Increase in jobs and local skills base.
Best Practice	Good Practice PLUS training opportunities to be provided by site facilities that will help local workers improve skills.

'Best Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Employment, Retail & Commercial section - *'Based on evidence derived from the comparator town study, we estimate that the number of jobs that will derive from the resident population could total up to 2,000'.*

Red Tree letter, 28th February 2007 outlining additional commitments against the credits set out in the Sustainability Appraisal Framework – *'Red Tree commits to training opportunities to be provided by site facilities that will help local workers improve skills'.*

The assessors are happy to accept this additional commitment by the developers in respect to delivering against the Best Practice standard, and therefore award Best Practice for this indicator.

7.3 Home office

Weighting: Priority 1

To reduce dependency on private car use for commuting live-work premises provide an ideal alternative to the need to travel to the office five days per week. This credit adopts the specification of a 'Home Office' premise as detailed in EcoHomes.

Minimum	<p>Commitment for all dwellings to meet criteria for EcoHomes Credit Tra 4 'Home Office'</p> <ul style="list-style-type: none"> - minimum wall size of 1.8m - 2 double mains sockets - 2 phone points - window and adequate ventilation <p>(in dwellings with two bedrooms or more this must be in a room other than the kitchen, living room, master bedroom or bathroom. One-bedroom / studios the work space may be in the living room or bedroom)</p>
Good Practice	<p>Minimum PLUS provision for 1-5% of all buildings to be used for commercial premises and located within a walkable neighbourhood (with priority to purchase / rent given to residents).</p>
Best Practice	<p>Minimum PLUS provision for >5% of all buildings to be used for commercial premises and located within a walkable neighbourhood (with priority to purchase / rent given to residents).</p>

'Good Practice' Rating achieved

Evidence in support of rating

Sherford Masterplan Book: Resource Efficiency of the Built Form section – *'all dwellings will meet the criteria for EcoHomes credit tra 4 relating to home office provision'*. (p.301).

Sherford Masterplan Book: Employment, Retail and Commercial section – Table 1 on page 172 indicates plans to allow 90% of offices (other than those permitted in class a2), research and development, and light industry, with premises less than 235 sqm to be located within residential areas (where nuisance will not be caused). Thus these units will be located within walkable neighbourhoods and well accessed by nearby residents without the need to travel by car.

The priority to purchase or rent these units by residents has not been specified within the documentation assessed, and no firm commitment at this stage has been made by the developers to do so. However this element of the indicator is not seen as significant within the overall aspiration of the question. The assessors therefore award Good Practice based on the evidence presented.

7.4 Lifelong learning

Weighting: Priority 2

Distance for residents to travel to a facility offering job, general career training and business advice. This facility could include the following:

- A job centre
- A further-education institution (e.g. college) with a careers centre
- Adult-learning or education centre
- A higher-education institution with a careers centre.

Minimum	All residents within a 10km radius of the above facilities.
Good Practice	All residents within a 5km radius of the above facilities.
Best Practice	All residents within a 1km radius of the above facilities.

'Good Practice Rating' achieved

Evidence in support of rating

Sherford Masterplan Book: 'The Vision' (p.89) illustrates the concept of the 'Extended School' which amongst other services includes 'lifelong learning', as shown below in figure 9:

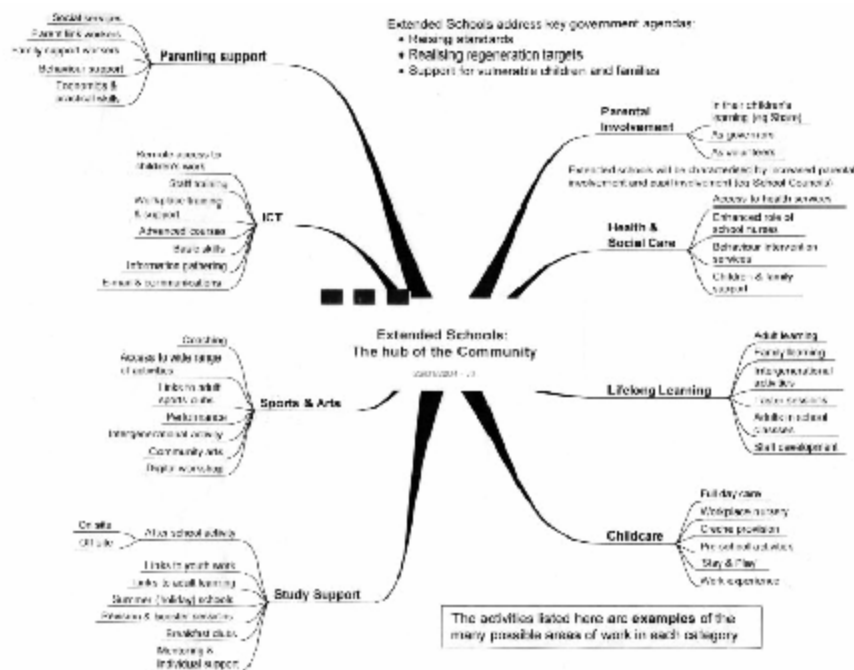


Figure 9: Extended Schools – provision of lifelong learning

Provision of this service is to be provided by either the Community Trust or Local Planning Authority, as detailed in Table 1: Proposed Community Trust roles in the early stages, on page 281 of the Masterplan. It states under education that involvement could include *‘a seat on the Board of Trustees for the federated schools, as well as involvement with extended education initiatives (lifelong learning)’*.

Provision of a Job Centre Plus is also detailed on page 284 of the Masterplan as an additional group, which may form part of a wider network of users of the Town Hall. Other groups could also include a Citizens advice bureau, Credit Union, Learn Direct, Age Concern, Business Link, Connexions, Chamber of Commerce, and Youth services.

The above provision of services are to be located within the Secondary School, Town Hall and other Community Trust facilities which are located within 2km of all residents (see figure 8 above for distance to local amenities). The assessors therefore award Good Practice.

SUSTAINABILITY FRAMEWORK SUMMARY

Site: **Sherford, South Hams**

Assessor: **Stuart Blofeld**

Date: **09/03/2007**

Sections	Number of Credits Achieved				Maximum possible score	Actual score achieved	%	
	Best	Good	Minimum	Not Met				
1	CLIMATE CHANGE AND ENERGY	10	4	1	1	14.05	11.44	81%
2	SUSTAINABLE CONSTRUCTION	5	5	3	1	11.30	7.68	68%
3	COMMUNITY & SUSTAINABLE LIFESTYLES	6	0	0	1	6.40	5.40	84%
4	PLACEMAKING	10	4	1	0	13.20	11.54	87%
5	TRANSPORT	11	2	0	0	11.35	10.89	96%
6	ECOLOGY	6	1	0	0	5.65	5.44	96%
7	BUSINESS	2	2	0	0	3.85	3.30	86%
TOTAL SCORE		50	18	5	3	65.80	55.67	85%

Overall Performance Rating: Exemplar

Figure 10: Sustainability Framework Summary

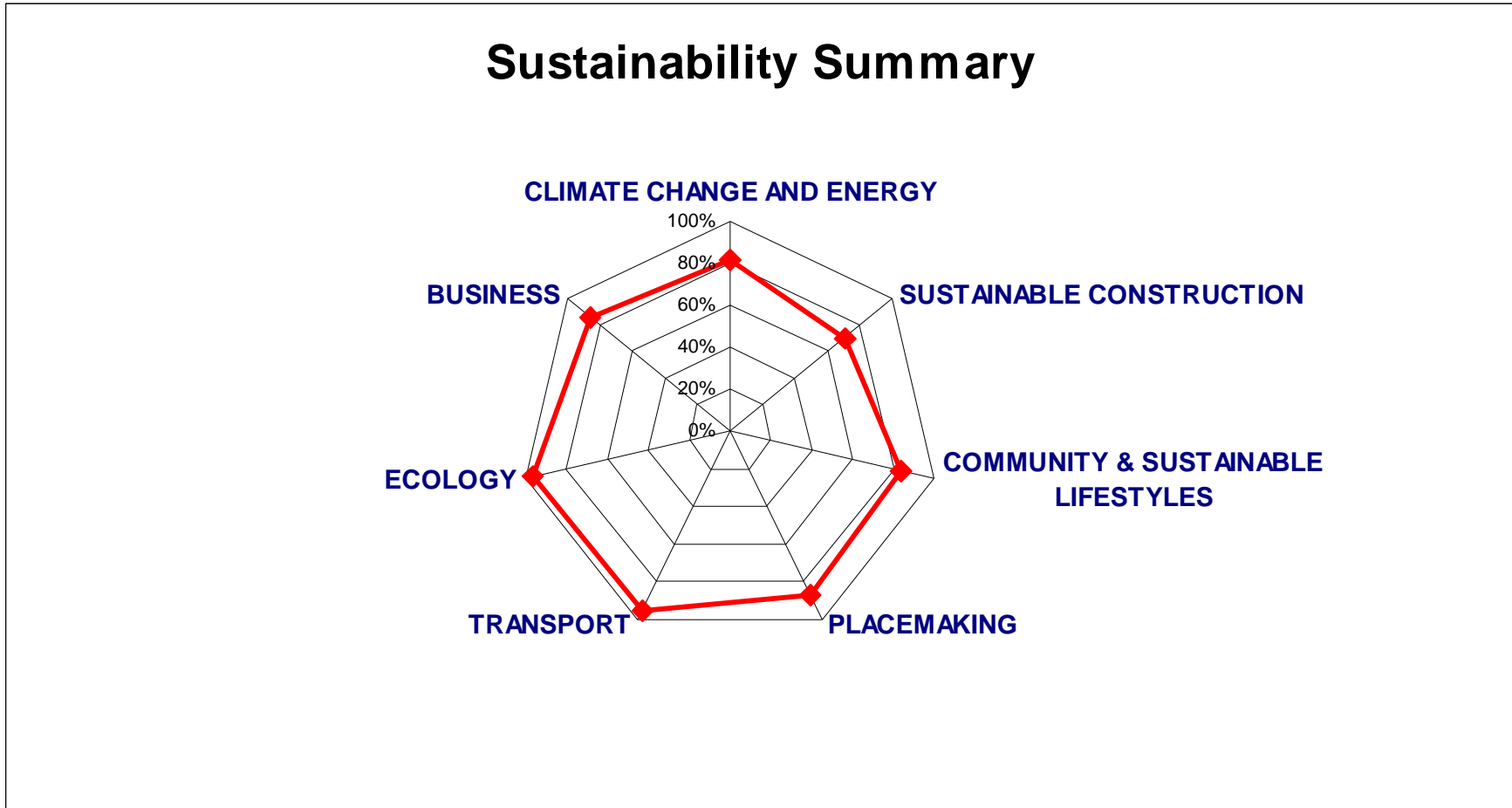


Figure 11: Sustainability Spider Summary

BEST PRACTICE IN SHERFORD

This section highlights some areas of the Sherford development that have achieved Best Practice as part of the assessment.

Climate change - adaptation, mitigation and energy

- § Development has been designed to reduce the contribution to flash flooding through incorporation of Sustainable Urban Drainage systems, green roofs, ponds and wetlands, and the use of permeable surfaces.
- § Two wind turbines within the Community park providing 50% of the development's electricity requirements.
- § 80% of the roof area of the whole development used for rainwater harvesting.
- § 75% of buildings will be equipped with solar thermal systems and/or photovoltaic devices.
- § Provision of 'A rated' energy and water savings appliances in all dwellings.

Sustainable Construction and Procurement

- § All dwellings to be built to EcoHomes 'excellent' standards.
- § All non residential buildings to be built to BREEAM 'excellent' standards.
- § All timber sourced from independently verified sustainable sources as recognised by the Environment Agency.
- § One 7 yard skip of waste per dwelling target to be set.

Community and Sustainable Lifestyles

- § Set-up of the Sherford Community Trust.
- § Development of a sustainable lifestyles pack for all residents covering issues including sustainable travel advice, energy and water efficiency, recycling and environmental technologies installed in the development and dwelling.
- § Measures to promote and facilitate the production of home-grown food by residents, and an Organic Community Farm and farmers market.

Placemaking

- § Transport and movement strategy which places the pedestrian and cyclist at the heart of the development, minimising walking distances between home, workplace,

schools shops and other daily needs, whilst designing streets, such that speed limits are self-enforcing.

- § Delivering 'affordable' homes and a mix of accommodation types and tenures to meet current and future needs, with good integration of accommodation types and affordable housing throughout development that are 'tenure blind'.

Transport

- § High Quality Public Transport service at the heart of the transport and movement strategy which will run down the main street linking the three neighborhood centres and proposed park and ride facility at deep lane to Plymouth City Centre.
- § Provision of a fibre optic network throughout the site as well as a community based interactive public and private services
- § 20 mph design speed across much of the development.
- § Provision of a Car Club with central office facility with storage parking and customer collection / return, and smart card access system.

Ecology

- § The Town Plan involves the replacement of more trees than currently exists, including 70 ha of new woodland as part of the 207 ha Community park, as well as lakes and double planting of hedgerows. The overall biodiversity of the site will be enhanced.
- § Provision of wildlife corridors through the town from the west to the east and north to the south.
- § Extensive planting across the development of locally occurring native deciduous and evergreen trees and shrubs.

Business

- § Identification and development of priority business sectors, including clusters of related activity, and other key business sectors of sub-regional importance.
- § Deliver an increase in jobs and local skills base, and training opportunities to help local workers upskill.

RECOMMENDATIONS

The following recommendations, if addressed would increase the current Sustainability score for the proposed Sherford development from 85 to 90%.

Climate change - adaptation, mitigation and energy

- § Undertake a grey water recycling pilot project within phase one of the development, installing and monitoring system performance within 2% of dwellings.
- § Utilise rain water for internal use in the home, rather than purely for irrigation.

Sustainable Construction and Procurement

- § Specify a target of 80% of basic building materials used to be 'A' rated low impact, as specified in the Green Guide for Specification (2002), or equivalent.
- § Increase use of local bulk construction materials sourced in line with Best Practice requirements from 35% to 65% (by mass).
- § Increase the use of bulk building materials with recycled/reclaimed content from 15% to 25% (as a percentage of the value of materials used).

Placemaking

- § Consider adoption of the 'Active Frontage Guidelines' as specified in the English Partnerships Urban Design Compendium (2000) in line with the Best Practice requirement for 100% of frontages to achieve at least Grade C frontage, and 50% to achieve Grade A.

Business

- § Look to provide residents with priority purchasing or rental for commercial units located within residential areas.

Alterations to credits awarded

Subsequent to the issue of the Sherford Sustainability Framework – Interim Report (issued 6th December 2006) the following changes to the ratings awarded were made following this reassessment, and submission of extra evidence by the developer.

1.3 (1) Mechanical ventilation and cooling - Good Practice upgraded to Best Practice

Extra evidence provided by the developers relating to the outcomes of the independent examination of the Draft Sherford Area Action which took place between 23rd January 2007- 2nd February 2007. See Question 1.3 (1) for further details.

1.5 (2) Rainwater harvesting - Best Practice downgraded to Good Practice

No commitment at this stage to provide an integrated system that will allow for internal use as specified in Best Practice.

2.2 (1) Low impact building materials - Minimum downgraded to Not met

Whilst there is a commitment from the developer to use low embodied materials no percentages have been defined at this stage and therefore a credit can not be awarded.

2.7 (1) Improving the local construction industry skills base - Good Practice upgraded to Best Practice

Red Tree letter, 28th February 2007 outlining additional commitments against the credits set out in the Sustainability Appraisal Framework – *'Red Tree commits to providing opportunities for training and apprenticeships in specialist construction areas'*.

3.1 (1) Carrying out a social impact assessment - Good Practice upgraded to Best Practice

Reassessment of the evidence provided by the developers in the Final Sherford Masterplan. See Question 3.1 (1) for further details.

4.1 Protection and enhancement of heritage and archaeologically important features - Minimum upgraded to Best Practice

Reassessment of the evidence provided by the developers in the Final Sherford Masterplan. See Question 4.1 for further details.

4.3 Neighbourhood height and massing - Good Practice upgraded to Best Practice

Reassessment of new evidence provided by the developers in the Final Sherford Masterplan. See Question 4.3 for further details.

4.5 (3) Local character and identity - Good Practice upgraded to Best Practice

Extra evidence provided by the developers relating to Sherford Section 106 Agreement Draft Head of Terms. See Question 4.5 (3) for further details.

4.6 (1) Access to open green space - Minimum Practice upgraded to Good Practice

Reassessment of new evidence provided by the developers in the Final Sherford Masterplan. See Question 4.6 (1) for further details.

4.10 Secure By Design' principles - Good Practice upgraded to Best Practice

Extra evidence provided by the developers relating to Sherford Section 106 Agreement Draft Head of Terms: Schedule 9. See Question 4.10 for further details.

5.7 Car club - Minimum upgraded to Best Practice

Red Tree letter, 28th February 2007 outlining additional commitments against the credits set out in the Sustainability Appraisal Framework – *'Red Tree commits to providing a central office facility with storage parking and customer collection / return. Also ability for car club members to book using the telephone or internet and for a wide range of vehicles to be available. Also, Car Club spaces will be available across the development with smart card access system'*.

7.2 Employment opportunities - Good Practice upgraded to Best Practice

Red Tree letter, 28th February 2007 outlining additional commitments against the credits set out in the Sustainability Appraisal Framework – *'Red Tree commits to training opportunities to be provided by site facilities that will help local workers improve skills'*.

7.3 Home office - Minimum upgraded to Good Practice

Reassessment of new evidence provided by the developers in the Final Sherford Masterplan. See Question 7.3 for further details.

Appendix A - Glossary of Terms

Active Solar Technologies: Technologies that can be employed to convert solar energy into usable heat, to cause air-movement for ventilation or cooling, or to store the heat for future use. Use electrical or mechanical equipment, such as pumps and fans, to facilitate this. Solar energy collection and utilisation systems that do not use external energy are classified as passive solar technologies.

Aerated Taps: Use considerably less water than standard taps, by simply supplying less water (although appear not to do so).

Biomass Energy: Burning of natural resources such as wood chippings, short rotation coppice such as willow, and agricultural waste to produce heat and/or electricity through combined heat and power

Brise-soleil: a variety of permanent architectural sun-shading techniques that are used to cool buildings.

Brown Roofs: Can be used to partly mitigate this loss of habitat by covering the flat roofs of new developments with a thin layer of crushed rubble and gravel, ideally obtained at minimal cost from the redevelopment site itself. They are intended to be gradually colonised by spiders and insects and provide a feeding site for insectivorous birds.

Carbon Neutral: A carbon neutral development is one that achieves zero net carbon emissions from energy use on site, on an annual basis. This can be achieved through reduction (e.g. energy efficiency), displacement (e.g. micro and large scale renewables), or replacement (e.g. off-setting).

Carbon Sink: a carbon reservoir that increases in size and reduces the amount of carbon in the atmosphere. The main natural sinks are the oceans and plants and other organisms that use photosynthesis to remove carbon from the atmosphere by incorporating it into biomass.

CHP: Combined Heat and Power is the process of producing heat and electricity at the same time.

CO2 Sequestration: Term describing processes that remove carbon from the atmosphere.

Co-Generation: Co-generation is the concept of producing two forms of energy from one fuel. One of the forms of energy must always be heat and the other may be electricity or mechanical energy.

CFL's: Compact Fluorescents Lamps, also know as energy saving light bulbs. Can go into a standard Edison screw or bayonet fitting.

Detention ponds: An artificial flow control structure that is used to contain flood water for a limited period of a time. A detention pond provides protection for areas below it by containing flood water for a short period of time. This is opposed to a retention basin that holds water for an extended period of time. These ponds are generally a part of a larger engineered flood water management system.

EbD (Enquiry By Design): An approach that invites the stakeholders in a proposed development, such as the local authority, residents, developers, landowners, voluntary groups, representatives of employers and retailers to collaborate in producing a Masterplan. This intensive process can offer significant advantages. New opportunities and synergies emerge which add value and quality to developments and consensus can be forged amongst previously implacable opponents.

EIA (Environmental Impact Assessment): A process by which the consequences of planned development projects are evaluated as an integral part of planning the project. The analysis of biological, physical, social and economic factors to determine the environmental and social consequences of a proposed development action. The goal of the EIA is to provide policy makers with the best available information in order to minimize economic costs and maximize benefits associated with a proposed development

Gas Condensing Boilers: A kind of hydronic boiler which achieves enhanced efficiency by incorporating an additional heat exchanger. This uses the heat in the exhaust gases from the boiler to preheat the water as it enters the boiler, and so recapturing energy that would otherwise be lost. When a condensing boiler is working at peak efficiency the water vapour produced by the consumption of gas or oil in the boiler condenses back into water - hence the name "condensing boiler".

Green Guide to Specification: The Green Guide to Specification is a BRE publication, providing guidance for specifiers, designers and their clients on the relative environmental impacts of over 250 elemental specifications for roofs, walls, floors etc. Environmental ratings of these specifications are based on Life Cycle Assessment using the Environmental Profiles methodology. A new edition of the Green Guide is expected in June 2007.

Green Roof: Roofs where, instead of having tiling or felt as the outside layer, a mat consisting of either sedum or other succulents, grasses or moss is the visible layer. Underneath the living mat, a drainage system is installed.

Grey Water recycling: The collection of water from baths/showers/washing, which is then filtered and re-used in the home, commonly for toilet flushing.

Heat Gain: An increase in the amount of heat contained in a space, resulting from direct solar radiation, heat flow through walls, windows, roof, and other building surfaces, and the heat given off by people, lights, equipment, and other sources.

Heat Pump: A heat pump is a device that acts as an air conditioner in the summer and as an electric furnace in the winter. Heat pumps look and function exactly like an air conditioner in the summer, and is one unit used for both heating and cooling. The cost to cool a home with a heat pump is the same as with an air conditioner of the same efficiency rating. In the winter heat pumps heat the home by "reversing" themselves and "pumping" warm air into the home.

Heat Sink: An environment or object that absorbs and dissipates heat from another object using thermal contact (in either direct or radiant contact).

High Thermal Performance Glass: Glass that has higher heat retention properties so as to reduce the amount of heat lost in a building, and whilst reducing heat gain from the sun.

High Thermal Wall Mass Materials: Materials that are inserted into wall cavities to increase the thermal retention of a building, thus improving its energy efficiency.

HQPT: High Quality Public Transport system.

Infiltration basins: The holding of runoff water in a basin without release except by means of evaporation, infiltration, or emergency bypass.

Low Flush Toilet: A toilet that uses less water than a standard one during flushing, for the purpose of conserving water resources. Savings are typically 20% over traditional toilet systems.

Micro Renewable Energy: small scale renewable energy technologies, such as small wind turbines, solar water heating and photovoltaica that are capable of being incorporated into the building fabric.

Non-Potable Water: Water that has not been examined, properly treated, and approved by appropriate authorities as being safe for consumption.

Passive Cooling: Passive cooling techniques can be used to reduce, and in some cases eliminate, mechanical air conditioning requirements in areas where cooling is a dominant

problem. It does this by utilising methods such as the use of high thermal mass such as masonry walls and floors, to act as "heat sponges", absorbing heat and slowing internal temperature rise on hot days, which and can be cooled down by night time natural ventilation.

Photo Voltaic: Converting light into electricity. Photo means "light" voltaic means "electric". Often referred to as "PV" for short. PV is also commonly referred to as "solar electric".

PV Shading: the process by which Photo Voltaic energy devices output capacities are reduced by the shading of the devices by natural or man made causes (such as shading from trees or new development).

Rain Water Harvesting: The collection of water that would otherwise have gone down the drainage system or into the ground. Large surfaces such as roofs or driveways are ideal for rainwater harvesting which can then be used for toilet flushing, watering gardens and even fuel the washing machine.

Reed beds: Specially constructed beds which contain reeds (frequently the Phragmites Australis reed) to biologically treat sewage and other effluents, which can reduce the burden on the sewage system and reduce sewage costs. Different types of reed-bed exist including Horizontal flow reed-beds, Vertical flow reed-beds, and in more recent years, Combination vertical and horizontal flow reed beds. Combination Multi-stage reed-bed systems, incorporate one or two stages of vertical flow followed by one or more stages of horizontal flow. When properly designed can provide full treatment of domestic sewage - black and grey water - and, sludge.

Safe Entrance and Egress Routes: Safe entrance refers to the use of a ground floor entrance to a building that can be used in an emergency. Egress routes is a term that is used within the building industry in reference to the safest routes out a building when in an emergency.

Secure By Design: An initiative that offers advice on physical protection of property and broader approaches to designing out crime in the built environment, that go beyond physical preventative measure.

Sleeved Utilities: process of protecting utilities from flood damage.

Solar Hot Water Heating: occurs through collection tubes or panels inside an insulated box, typically mounted on the roof. The tubes absorb the sun's heat and transfer that heat to water or another liquid flowing through the tubes to heat the water used in the home.

Solar cell (Photovoltaic Panels): A solar cell, or photovoltaic cell, is a semiconductor device consisting of a large-area p-n junction diode, which, in the presence of sunlight is capable of generating usable electrical energy. This conversion is called the photovoltaic effect.

South Facing Roofs: Through good urban design the orientation of buildings can maximise the access to potential solar energy resources. To optimise this solar potential, any solar technology systems to be installed should be prioritised for south facing roofs where they will be more efficient. For the purpose of assessment south facing will include roofs within 15-20° of due south.

SUDS (Sustainable Urban Drainage System): Surface water drainage methods that take account of quantity, quality and amenity issues. SUDS can manage runoff flowrates, reduce the impact of urbanisation on flooding, protect or enhance water quality, and can provide a habitat for wildlife in urban watercourses.

Swales: Grassed depressions which lead surface water overland from the drained surface to a storage or discharge system, typically using the green space of a roadside margin. They may be used to replace conventional roadside kerbs, saving construction and maintenance costs. Compared to a conventional ditch, a swale is shallow and relatively wide, providing temporary storage, conveyance, treatment and the possibility of infiltration under suitable conditions.

Timber Thinnings: Small scale woodland products as a result of woodland management, can be used for a range of uses depending on variety and form, garden use, fencing, burning or construction etc.

Tri-Generation: The combined production of electricity, heat and cooling. This is suitable mainly from the point of view of the operation of cogeneration units, because it allows the use of heat even in summer, outside the heating season, and thus extends the annual running of the units.

Valved Utilities: Process of protecting utilities from flood damage.