CORNWALL
DEVELOPMENT COMPANY

SUSTAINABILITY APPRAISAL

On the Falmouth & Penryn Strategic Investment Framework Consultation Draft

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Introduction

This Environmental and Sustainability Appraisal has been produced on the Falmouth & Penryn SIF (draft consultation document) to ensure that sustainability is fully considered and embedded into this SIF from the outset. It is a requirement of Convergence funding that the SIF delivers on sustainability (including cross cutting themes), low carbon principles, and considers the implications of capital build developments on climate change, and its effects (positive and negative) on Cornwall.

For the purposes of this sustainability appraisal only information contained in this consultation draft has been considered. None of the sites have yet been visited by the appraiser, which is a limiting factor.

This sustainability appraisal has been carried out giving consideration to the guidance issued by the SWRDA, detailed in the bibliography at the end of this report.

To ensure continuity, the format used in this appraisal incorporates the objectives adopted in the Penzance and Isles of Scilly appraisal, which were derived initially from the Cornwall Local Development Framework Sustainability Appraisal Scoping Report (May 09). Recommendations for consideration are detailed through out this appraisal.

SIFs Themes and proposed Projects

It is proposed that the focus of Convergence investment for Falmouth and Penryn and will be on three themes which are detailed in the following table together with a list of proposed projects. Each proposed project is discussed further within the following sections of this report.

Theme	*Projects*
Infrastructure for knowledge based enterprises	Economic Masterplan Watson Marlow Other work space projects Kernick BID Commercial Road BID Bickland Water Road BID ESCO studies
Growing the Marine Sector	Port of Falmouth Masterplan Projects arising from Port of Falmouth Masterplan Falmouth Marine School
Improving connectivity and legibility	Truro-Falmouth Branch Line Treluswell Station Park and Ride[1] Falmouth Town Centre Development Options (key sites) Phase 2 Walking and Cycling Network Falmouth Town Pedestrian Links Falmouth and Penryn other transport projects

Table 1 – summary of proposed projects.

Sustainability Objectives

Throughout the document reference is made to the principles of sustainability including cross cutting themes (equality and diversity), which are to be fully embraced by all funded projects. Section 4.1.9 also details the requirement for climate change adaptation to be incorporated into each of the proposed developments. Whilst it is good to see that sustainability is embedded throughout this document, the information provided is brief and non-specific in parts, therefore a more detailed and comprehensive breakdown of each proposed development is required (once established). Recommendations for the further development of this SIF are included in the following sections to ensure that the required sustainability and low carbon principles can be appropriately considered in greater detail.

Section 3.1.1 specifically mentions the objectives of European Funding Operational Programme (OP) and the expectation that environmental awareness will be fully embedded into the design and development of the SIF and that environmental enhancement, protection and development will positively address OP environmental targets in relation to themes under Priority 4. There are however few targets as to how this can be measured and monitored. There is a statement on environmental sustainability monitoring and evaluation (Section 11), but again it lacks detail, it is however accepted that this SIF is in its early stages of development.

7.2.2 mentions the priorities for ERDF Convergence investments under Priority 4 are expected to achieve 60% Lisbon Agenda compliance (as defined in the OP), and to make a proportionate contribution to Priority 4 targets for which some good indicators of change are detailed. Further suggested targets and indicators can be found in Appendix A

The specific sustainability objectives used in this appraisal are derived from the Cornwall Local Development Framework Sustainability Appraisal Scoping Report. The objectives are:

Climatic Factors

To reduce our contribution to climate change through a reduction in greenhouse gas emissions.
To increase resilience to climate change, and reduce vulnerability

The SWOT analysis in section 5 includes climate change and rising sea levels as a significant threat. Potential climate change impacts on sea defences, harbours and low lying land and changing weather patterns, will require mitigation strategies which will need to be included as part of the SIF. 4.1.9 identifies the ongoing preparation of a Strategic Flood Assessment, which will be important in informing decisions regarding the towns. The potential impacts of climate change is likely to be one of the

greatest threats facing our region and its communities, for this reason it should appear at the top of the environmental threats in the SWOT analysis. Consideration should also be given to the effect of climate change on transport infrastructure and proposed development sites.

Waste

To minimise the generation of waste and encourage greater re-use and recycling of materials in accordance with the waste hierarchy

This document needs strengthening in this respect. There is no mention of waste and/or recycling initiatives other than the use of waste oil as a source for ESCo in the Docks area (6.8). Recommendations should be included in the document to support improved waste management practices. Development plans and project briefs should ensure that a waste minimisation strategy will be followed during construction phase of developments and require the incorporation of recycling facilities in the design of developments. This could be incorporated as part of BREEAM credits if relevant to the proposed development.

Mining and geodiversity

To minimise the consumption of mineral resources and ensure the sustainable management of these resources
To conserve, enhance and restore the condition of geodiversity in the county

The SIF does not specifically refer to geodiversity and needs to be strengthened in this respect. Where sites are of geodiversity or biodiversity importance, the aim should be to retain it and incorporate it into the development proposals. All development projects would be expected to undergo an Environmental Impact Assessment and geodiversity should be specifically considered in the EIA.

The implementation of sustainable construction materials can have a positive impact on this objective. Indeed, the use of recycled aggregates should be used where possible to reduce transport related carbon emissions and the unnecessary depletion of finite resources. This can form part of BREEAM credits if relevant to the development. Consideration also needs to be given to the use of local stone (rather than imported) to reduce transport related carbon emissions. Details of how this will be achieved needs to be considered as part of the SIF procurement process i.e. procurement policies, client briefs etc.

Soil

To minimise the use of undeveloped land and protect and enhance soil quality

A number of the sites in this SIF are on greenfield land. The Bickland Business Park proposed development of approximately 2ha of land requires further details as to the specific land designation to determine the impact of the proposed development on this objective, as does the Gap area between Falmouth & Penryn, which has been identified as a potential area suitable for development as part of this SIF. The gap area (which stands in an elevated position) is of particular concern as it is visible form Flushing and from the AONB.

Decisions on development proposals need to consider effective protection and enhancement of the environment and appropriate use of natural resources. The Government's objective is to discourage the development of greenfield land and where such land must be used to ensure it is not used wastefully. The presence of best and most versatile agricultural land (grades 1, 2 and 3a of the Agricultural Land Classification) should be taken into account in all development proposals. Once agricultural land is developed, even for 'soft' purposes its return to best quality agricultural use is seldom practicable. Sustainable Development is 'development that meets the needs of the present without comprising the ability of future generations to meet their own needs'. The use therefore of greenfield land for any purpose should be discouraged.

Air

To reduce air pollution and ensure air quality continues to improve

Air quality is mentioned briefly as part of LTP2 (footnote 3.1.3) but has not been specifically considered in any great depth throughout the Falmouth/Penryn SIF. However, actions taken to reduce traffic congestion and encourage greater use of more sustainable transport methods e.g. public transport, cycling and walking initiatives will have a positive effect on this objective, indeed the evidence base should identify the current air pollution hot spots. The implementations of measures to address air pollution often provide synergistic impacts and beneficial side effects. For example, reducing traffic in an area to improve air pollution may also improve road safety, reduce noise pollution, reduce the levels of pollutants in neighbouring buildings and reduce the amount of carbon dioxide emissions that contribute to global green house gas emissions. Indeed guidelines for LTP3 include a specific objective for greenhouse gas emissions reduction.

It should be noted that some traffic calming initiatives can however conflict with the aims of reducing air pollution as they are often cited as causing increased pollution levels from cars.

Water

To reduce and manage the risk of flooding and reduce vulnerability to flooding, sea level rise and coastal erosion

To maintain and enhance water quality and reduce consumption and increase efficiency of water use

Whilst 4.1.9 identifies the ongoing preparation of a Strategic Flood Assessment and SWOT analysis (section 5) includes climate change and rising sea levels as a significant environmental threat, the SIF needs to be stronger in this respect. Specific consideration needs to be given to proposed developments on potential or known flood plains, for example Perran Foundry (4.2.1) which has planning permission for 745m^2 of employment space (including 36 live/work units).

There is no specific mention in this SIF relating to ground and surface water. South West Water are a consultee for this SIF as it is essential to ensure that sufficient regard is taken and appropriate consideration is given to this objective all major development proposals.

The SIF requires that 80% of all developments should reach BREEAM excellent standard. This will ensure that water minimisation techniques are included in new developments where applicable. Development proposals should consider the use of water saving methodologies e.g. grey water recycling, energy efficient white goods, rain water collection systems, etc.

Biodiversity

To conserve, enhance and restore the condition and extent of biodiversity in the county and allow its adaptation to climate change

The importance of biodiversity does not appear to have been considered to any great extent within the Falmouth/Penryn SIF. The biodiversity value of proposed development sites need to be identified early in the design process. Where sites have a biodiversity or geodiversity importance, the aim should be to retain it and incorporate it into the development proposals. In addition it is important that opportunities to provide improved habitats for wildlife (including the provision of wildlife corridors and habitat linkages) are considered early in the site design process. Biodiversity should be considered equally on brownfield and greenfield sites. Brownfield sites can often be equally if not more biologically diverse, or can provide a niche habitat for rare species.

Where relevant, the evidence base could be strengthened by including a map showing designated sites.

The dredging of Falmouth Harbour is likely to present a number of challenges regarding this objective. Biodiversity and the integrity of the Fal and Helford Estuaries (special area of conservation) need to be carefully considered and the results of the EIA (completed in 2008) used as the basis of the decision making process regarding future works and the effects these will have on the existing biodiversity and its future adaptation to climate change. Bathing water quality and the effects on

biodiversity must be appropriately addressed including the potentially species rich maerl beds (calcareous coralline algae). Treatment requirements of the dredged material (which will include anti-fouling residues and possible pollutants from historic mining activity) will need to be identified and safe disposal sites for the dredged material identified. This proposed project has great economic development possibilities but could lead to significant negative environmental consequences if the issues are not fully and appropriately mitigated.

Landscape

To protect and enhance the quality of natural, historic and cultural landscape, including local distinctiveness, and seascape, and promote its positive contribution to Cornwall's present and future wellbeing

The importance of landscape although mentioned, has not been embedded to any great extent within the SIF, however it is expected that landscape impacts will be given consideration at the Master-planning stage and in individual development site briefs. The Gap area between Falmouth & Penryn is largely agricultural in use and needs careful consideration given its elevated position and its visibility from Flushing and the AONB. Evidence in the form of the landscape character maps developed by the AONB could be referred to or included in the baseline information.

Whilst 2.1.1 discusses the location of the two towns and historical development, historical and cultural landscape could be given greater reference throughout this document. The use of master plans will help to ensure that good design will be used to enhance quality and that local distinctiveness is integrated into all new development proposals, to protect and enhance the Cornish historic environment.

This objective is closely linked with the Land, Biodiversity and Geodiversity sections, and as such many of the considerations detailed previously will have an effect on this objective.

Falmouth is recognised as a principal seaside town and tourist resort and the requirement to protect coastal areas and improve access to the water frontage is embedded throughout this document.

The installation of offshore renewables could potentially have a negative impact on this objective.

Maritime

To encourage clean, healthy, productive and diverse waters; To protect coastal areas and ensure sustainable maritime environments

The Falmouth & Penryn SIF is particularly well served regarding this objective given the location of the two towns and the strong Marine and tourist sectors in the area. Maritime and seascape are closely linked and a number of the comments above are relevant here, for instance the recognition that Falmouth is a principal seaside town and tourist resort and the requirement to protect coastal areas and improve access to the water frontage is of paramount importance to the local community and as a result is embedded throughout this document.

With regard to this objective, one area of particular concern is the proposed dredging of Falmouth Harbour which is likely to present a number of significant challenges. The integrity of the Fal and Helford Estuaries (special area of conservation) need to be carefully considered and the results of the 2008 EIA used to inform the decision making process regarding future works and the effects these will have on the immediate maritime environment. Treatment requirements and safe disposal sites for the dredged material must be investigated to ensure that negative effects on water quality and biodiversity are appropriately considered and mitigated.

Historic Environments

To protect and enhance the quality and local distinctiveness of the historic environment, reinforcing and celebrating the distinctive character and culture of Cornwall

The SIF has had regard to the need for quality design and makes mention of Design of the Times (DotT) methodology (9.1.).

The use of master plans will help to ensure that good design which helps enhance quality and local distinctiveness and is integrated into all new development proposals, to protect, and where appropriate, enhance the Cornish historic environment. Greater detail of how this objective will be achieved is required during the development of this SIF.

Design

To promote and achieve high quality design in development, sustainable land use and sustainable built development, maintaining local distinctiveness and encouraging a good quality of life

Capital Build projects in the SIF need to achieve (where relevant) 80% BREEAM excellent standard. This should be considered to be a minimum standard and developments should exceed this where possible. This may prove to be more difficult when refurbishing existing historic buildings as some BREEAM credits may be more difficult to achieve. Whilst the SIF itself does not apply to housing developments, it should be recognised that often projects will be mixed use and therefore indicators for all housing on mixed use sites should be incorporated into monitoring

criteria. In addition the South West Sustainability Checklist needs to be used for developments in all (pre, during and post) stages of development.

4.1.9 of the SIF – Environmental designations states that locally sourced materials and labour can help to reduce the impact on the global environment and promote local employment opportunities. Details of how this will be achieved i.e procurement policies, client briefs etc. needs to be fully embraced and implemented throughout the proposed projects.

The master plan needs to advocate sustainable construction including procurement and supply chain management.

Social Inclusion

To reduce poverty and social exclusion and provide opportunities for all to participate fully in society

2.2 of the SIF gives details of the social and economic profile for the area. To ensure that this objective as appropriately considered and addressed, the Social Sustainability Toolkit and an Equality Impact Assessment will need to be carried out on all SIF projects prior to commencement.

Crime and Social Behaviour

To reduce crime, anti social behaviour and fear of crime

2.2.1 discusses community safety and the priorities for Falmouth and Penryn, which includes evidence-based priorities and those identified by residents. The location of buildings and developments including lighting can have a significant effect on this objective therefore careful consideration needs to be given here to ensure the feeling of safety is ensured and crime and anti-social behaviour and community safety priorities are addressed.

Housing

To meet the needs of the local community as a whole in terms of general market, affordable, adaptable and decent housing

Whilst housing falls outside the scope of the SIF, consideration is to be given to the requirements of sustainable communities with developments that include live/work space (6.2) within the context of a low carbon economy.

Health, Sport and Recreation

To improve health through the promotion of healthier lifestyles and improving access to open space and health, recreation and sports facilities

6.8 identifies the need to enhance, and increase access to open space for local communities in new developments including assessments of the potential impacts on the natural environment and wildlife habitats. Waterfront access has been determined as of paramount importance to local people and indeed tourism through the consultation process.

A number of initiatives that form part of this SIF and promote cycling and walking routes will undoubtedly have a positive impact on this requirement.

Economic Development, Regeneration and Tourism

To supply a balanced and low carbon economy that meets the needs of the area and promotes a diverse range of quality employment opportunities

4.5 Emerging sectors states that Falmouth & Penryn has the potential to grow business in some emerging sectors particularly associated with renewable energy. Some companies are already located mainly in the Bickland Water Road area. Also mentioned (4.1.4) is the possibility of a science park in the urban extension area near CUC, which could help with the development of this sector. 3.1.2 details the experimental wave hub on the north coast (off Hayle) and also provides information of the potential of the Port of Falmouth in supporting offshore renewables.

There are many initiatives and proposals in the SIF e.g. feasibility study for ESCo, renewables, building to BREEAM Excellent standards and travel plans etc that will assist with this objective.

Increasing carbon literacy and environmental resource efficiency should, where possible, be integrated into training and learning programmes. In the table under 6.9 (summary of issues, opportunities and options) the ESF workforce carbon literacy awareness project – clear about carbon is detailed, which should provide a positive contribution to this objective. 7.1.3 gives specific mention of the requirement to integrate environmental sustainability principles and investment in the drivers of a low carbon economy. The Docks potentially have a role in the fabrication and servicing of offshore renewables including wind. Consideration needs to be given to how this can be achieved in a correlated fashion, bearing in mind that Hayle and the Wave Hub Project (PRIMaRE) are also looking to capitalise on this emerging environmental sector. CUC as an education and research establishment, together with the hot rocks project will also contribute towards achieving this objective.

4.1.4 discusses the tourism sector given the fact that Falmouth is an established visitor destination. Cruise liners, marine leisure and events are viewed as cruicial for the continuing growth of the sector.

Education and Skills

To maximise accessibility for all to the necessary education, skills and knowledge to play a full role in society

The requirement to facilitate a knowledge economy and the resultant benefits will undoubtedly provide a positive contribution to achieving this objective. The higher education facilities are important driver for economic growth with CUC and the Falmouth Marine School being significantly important.

In the table under 6.9 (summary of issues, opportunities and options) the ESF workforce carbon literacy awareness project – clear about carbon is detailed, which should play an important role.

4.1.4 discusses the key sectors in this respect with the potential for a Science Park as part of future developments on the CUC Tremough Campus.

Transport and Accessibility

To improve access to key services and facilities by reducing the need to travel and by providing safe sustainable travel choices
To reduce the traffic congestion and minimise transport related greenhouse gas emissions

There is a need to ensure that the environmental impacts of transport, both public and private, are recognised and mitigated against particularly in terms of carbon emissions. This could be achieved through the promotion of sustainable transport modes. It is crucial that appropriate transport infrastructure (particularly that which encourages sustainable transport choices) is provided as an integral part of new developments to avoid exacerbating congestion and pressures on the network.
In several places the SIF mentions transport initiatives including the Truro-Falmouth branch line improvements including the passing loop at Penryn (4.2.4). 6.7.2/7.2.5 Treluswell public transport park and ride will provide significant benefits to both Truro and Penryn and will assist in delivering improved green transport infrastructure in the area. It will use the existing train network with the provision for a new station. This facility will have a positive impact on traffic levels between Treluswell and Truro resulting in a reduction of personal car travel and associate green house gas emissions and carbon reduction.
4.1.7 gives specific mention to the transport infrastructure and the proposed projects coming forward through the LTP2 (also detailed in 3.1.3) with the Falmouth & Penryn Transportation Strategy to inform LTP3. The development of an integrated land-use transport strategy for Falmouth & Penryn encompassing all modes of transport to provide future sustainable growth will have a positive impact on this objective. The proposed expansion of the current walking and cycling strategy for Falmouth (6.7.2) will also be a positive move and will provide linkages to residential areas and existing employment areas. 4.2.4 addresses the

intention to expand travel options, manage highway network and influence travel behaviour. This will also have a positive effect on reducing carbon emissions associated with personal car travel. 4.2.4 also proposes to enhance pedestrian way-marking to and from Falmouth Town and the implementation of the first stage of the Falmouth/Penryn walking and cycling strategy with an internal focus on safer routes to schools and linking the CUC Tremough campus as a key aim to improve the ongoing cycling culture.

Consideration as to how travel plans are implemented and sustained, and how a change in the reliance on personal vehicles will be achieved will be included in the forthcoming transportation strategy (Mott MacDonald are commissioned to carry out this work). Indeed, section 6.2 discusses the current issues with residents in the CUC area and the issues they currently face with parking. Improvements to CUCs green travel plan would be beneficial and would assist with retaining CUCs image as having a positive contribution in the local area.

Another positive note as regards reducing unnecessary travel journeys is the aspiration in the SIF to ensure green travel planning solutions are secured in development proposals, including the use of ICT as part of Next Generation Access project (NGA). This will also assist with the delivery of a knowledge-based economy. Improvements to the ICT Infrastructure as detailed in 4.1.8 and 4.2.5 detail the NGA project is currently being developed under priority 3 of the OP. It is anticipated that this project will act as a magnet for business innovation and trading, and reduce the need to travel. This project will result in significant sustainability benefits across a number of SIF areas.

Energy

To encourage the use of renewable energy, increase energy efficiency and security and reduce fuel poverty

The ambition in the SIF to develop a strategy for the formulation of an ESCo will certainly have a positive effect on this objective. ESCo offers a practical way to finance local energy projects as well as ensuring that jobs, economic benefits, knowledge and reinvestment of proceeds into other similar projects will stay in the local area. For the successful establishment of an ESCo it is important to have a large low-risk development project ready to go in order to attract loans and funding. The timing of the feasibility and implementation studies of ESCo will be crucial.

Wave hub, offshore renewables and other renewable energy projects throughout the county will also assist with this objective in terms of carbon emissions reductions, energy efficiency and energy security.

The SIF is expected to deliver energy efficient buildings with high design standards (80% BREEAM excellent), ensuring development is located in areas which reduce the need to travel by private car, and providing

training and education on energy efficiency will all be positive factors in achieving this objective.

Discussion & Conclusion

The Falmouth and Penryn SIF is particularly well served given the strong potential of both the marine sector and the continued development of the Combined Universities in Cornwall (CUC). This gives Falmouth & Penryn a distinct advantage over other parts of Cornwall in that there is the specialist marine sector providing a distinctive feature of its economy. The University is an exceptional asset providing significant employment in its own right. In addition the SIF has a number of transport initiatives, which include walking, cycling and public transport provision. Sustainable energy initiatives including ESCo will develop local distribution networks using renewable energy sources and decentralised energy solutions and are to be developed in conjunction with private sector partners and CUC. Specific time scales for ESCo feasibility and implementation needs to be identified.

This appraisal has been carried out on the Falmouth & Penryn consultation document, which is in its infancy, and therefore lacks specifics regarding the proposed developments. This provides a challenge regarding this appraisal and therefore recommendations for further consideration have been incorporated for potential inclusion in the SIF as it develops.

Specific and comprehensive Environmental Impact Assessments are required prior to progression of the SIF projects to enable full environmental and sustainability issues to be given the appropriate level of consideration. In addition an equality impact assessment needs to be carried out on each of the proposed projects together with the Social Sustainability Toolkit (currently being tested) will need to be used on the SIF projects.

Consideration needs to be given to the redevelopment of Falmouth's town centre public car parks (6.5.4), particularly Church Street car park due to it historical use as a gas works and the resultant land contamination and potential leaching. Cornwall Council has commissioned an assessment that sets out a mitigation strategy. The resultant development brief should be used to inform decisions regarding this development proposal. Significant ground pollution will be present in the form of a cocktail of polycyclic aromatic hydrocarbons, dioxins and furans and carcinogens, therefore remediation and end use must consider these significant factors.

Consideration also needs to be given to the dredging of Falmouth harbour and the results of the EIA used to inform the decision making process in this respect. The Port Masterplan will further review the need and indeed the scale of dredging required to facilitate new business for the docks & harbour. Historical pollution associated with mining activity and antifouling residues may well provide significant challenges regarding the treatment and disposal of dredged material. Water quality and any potential long-term effects also need to be considered, and will be detailed

in the EIA (completed in 2008). Biodiversity and the integrity of the Fal and Helford Estuaries (special area of conservation) need to be carefully considered and the results of the EIA used as the basis of the decision making process regarding proposed works and the effects these will have on the existing biodiversity and its future adaptation to climate change. This proposed project has great economic development possibilities but could lead to significant negative environmental consequences if the issues are not fully and appropriately mitigated.

7.2.3 – Falmouth & Penryn Economic Master plan section discusses proximity to existing and proposed residential areas with employment needs, training centres and transport linkages. This section should emphasise sustainable urban design. Finally, (3.1.1) mentions that through the master planning approach, the SIF aims to improve both land use and sustainable local transport systems. A spatial planning approach would be beneficial here.

Bibliography

- **Integrating Environmental Sustainability into EU Programmes and Projects, Alex Huke, SWRDA**
- **Strategic Investment Framework: Environmental Sustainability Integration, Alex Huke, SWRDA**
- **Convergence Operationa Programme 2007-13**
- **Sustainability Tool kit, Sensory Trust and Eden Project, August 2009**
- **Cornwall Local Development Framework Sustainability Appraisal Scoping Report (consultation Draft), Cornwall Council, May 2009**

Appendix A

Examples of potential targets and indicators

Ensure sustainable design and construction materials and methods.
Suggested Indicators:
Number of buildings or area constructed to BREEAM excellent rating (or equivalent);
the number of new homes or area built to Level 4 of the Code for Sustainable Homes, and the number or area built to Code Level 6.

Support a balanced economy that meets the needs of the area and promotes a diverse range of quality employment opportunities.
Suggested indicators:
Number of environmental social economy businesses assisted.
Training and volunteering placements created with an environmental theme.
Number of organisations supported in renewable/clean energy sector

Help realise the aspiration to become a low-carbon economy
Suggested Indicators
Number of initiatives which seek to deliver a low carbon economy
Number of SME's assisted to implement environmental action plans
Number of SME's developing environmental products

Reduce traffic congestion and minimise transport related greenhouse gas emissions
Suggested Indicators
Number of organisations with access to ICT/Video Conferencing facilities
Number of organisations with adopted and implemented travel plan

Ensure Cornwall has a more secure supply of energy to meet current and future needs and which minimises the county's contribution to global greenhouse gas emissions
Suggested indicators
Number of new buildings constructed which incorporate on site renewable energy generation and/or off site locally generated low carbon energy supply.

Minimise the need for energy and increase energy efficiency
Suggested indicators
Number of new products or services that improve energy efficiency.
Number of new buildings constructed which incorporate energy efficiency measures over and above minimum building regulation standards.
% of refurbished premises reaching a higher level of energy efficiency (over and above minimum building regulation standards)

Increase access to open space
Suggested indicators
Area of green space improved.
The number of urban areas that meet Natural England's Accessible Natural Green-space Standards.

Avoid the generation of water and encourage greater re-use and recycling of materials in accordance with the waste hierarchy
Suggest indicators
Percentage of the tonnage of household waste arisings which have been (a) recycled, (b) composted, (c) used to recover heat, power and other energy sources
Percentage of commercial/industrial waste recovered
Number of new developments with dedicated space for recycling
Number of companies which produce products from recyclates

Minimise the consumption of undeveloped land and protect and enhance soil quality
Suggested indicators
Acreage of any agricultural land class 1, 2, and 3a lost to development
Hectarage of contaminated land sites remediated
Brownfield: greenfield ratio of all land developed

Reduce air pollution and ensure air quality continues to improve.
Suggested indicator
Air Quality Monitoring Data - Concentrations of selected air pollutants, including dust

Prepare for climate change by reducing vulnerability to flooding, sea level rise and coastal erosion.
Number of properties affected by fluvial flood events
Number of properties affected by coastal flood events
Acreage of new development in flood risk areas
The proportion of surfaces in new development which are permeable

Keep water consumption within local carrying capacity limits and increase efficiency of water use.
Suggested indicators
Percentage of main rivers in good or fair quality
Ground water quality
Number of developments which incorporate water minimisation techniques e.g. rainwater collection systems, grey water recycling, etc.

Conserve, enhance and restore the condition of biodiversity in the county and allow its adaptation to climate change.
Suggested indicator
Proportion of green space in developments contributing to local biodiversity targets (green-space within a development should be planted with appropriate species, particularly those which take forward targets in the Local Biodiversity Action Plan (BAP)

Protect and enhance the quality of the natural, historic and cultural landscape and avoid undue light pollution.
Suggested indicator
Landscape change from AONB monitoring project level 1 e.g. – levels of tranquillity, levels of intrusion, extent of dark night skies, condition of SSSI's)

Protect and enhance the quality and local distinctiveness of the built environment.
Suggested indicators
Number of Master plans produced which incorporate design
Number of developments achieving CABE 'Creating Excellence' standard (or similar scheme e.g. DOtT)

Protect and where appropriate enhance the Cornish historic environment.
Suggested indicator
Area of historic buildings improved