

Three Rivers District Council

Three Rivers Core Strategy

Sustainability Appraisal/ Environmental Report

Post Publication version

October 2010

**Halcrow Group Limited *in* association with
Centre for Sustainability at TRL Limited**

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Abbreviations

AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
BAP	Biodiversity Action Plan
BVPI	Best Value Performance Indicator
CO	Carbon monoxide
CO ₂	Carbon dioxide
DEFRA	Department for the Environment, Food and Rural Affairs
DPD	Development Plan Document
EC	European Commission
EU	European Union
GIS	Geographical Information System
GHG	Greenhouse gas
LA	Local Authority
LDD	Local Development Document
LDF	Local Development Framework
LNR	Local Nature Reserve
LTP	Local Transport Plan
MPG	Minerals Planning Guidance
NNR	National Nature Reserve
NO _x	Nitrogen oxide
ODPM	Office of the Deputy Prime Minister
PDL	Previously Developed Land
PM ₁₀	Particulate matter at less than 10 microns diameter
PPG	Planning Policy Guidance
PPS	Planning Policy Statement
PSA	Public Service Agreement
RSS	Regional Spatial Strategy
SA	Sustainability Appraisal
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SO ₂	Sulphur dioxide
SPA	Special Protection Area
SPD	Supplementary Planning Document
SSSI	Site of Special Scientific Interest
VAT	Value Added Tax

0 Non-Technical Summary

The Planning and Compulsory Purchase Act (2004) requires Sustainability Appraisals (SAs) to be carried out on local Development Plan Documents (DPDs). In addition, the Environmental Assessment of Plans and Programmes Regulations (2004) (hereafter referred as The Regulation) require Strategic Environmental Assessments (SEA) for a wide range of plans and programmes, including Local Development Frameworks (LDFs).

SAs and SEAs aim to help make planning more sustainable and provide for a high level of protection of the environment. It is possible to satisfy the requirements of both pieces of legislation through a single appraisal process; an approach which is taken here. Three Rivers' emerging Core Strategy and its other development plan documents, forms part of its LDF and must be subject to both sustainability appraisal and strategic environmental assessment. The new LDF will provide a long-term vision for development in Three Rivers. Three Rivers District Council commissioned the Centre for Sustainability at TRL and Halcrow to progress the SEA/SA work in 2005.

During 2006 a scoping process was carried out to help ensure that the SA covered the key sustainability issues relevant to the Three Rivers Core Strategy. Relevant plans and programmes were reviewed to develop a wider understanding of the issues and priorities for Three Rivers, and information about the current and future social, environmental and economic characteristics of the District was compiled. A Sustainability Appraisal Framework was drawn up, setting out Sustainability Objectives that aim to resolve the issues and problems identified. The information compiled during the scoping process - SA Scoping Report- was sent to a statutory environment bodies and was also made available on the Three Rivers District Council website. The responses received helped improve the Appraisal Framework.

This Framework of objectives was then used to test the sustainability of the emerging Core Strategy- Issues and Options. This was undertaken at the Issues and Options Core Strategy Stage, and an Issues and Options SA Working Note was produced in June 2006. Further changes were made to the Issues and Options, and these alterations were again assessed to produce an Additional Issues and Options SA Working Note in July 2007. Recommendations were made where opportunities to enhance the sustainability of the emerging policies were identified. Further, there was an ongoing interaction between the planning and sustainability teams which has resulted in other recommendations being made as to how the Core Strategy could be improved from a sustainability point of view.

A number of these recommendations were taken forward to prepare the 'Core Strategy Preferred Options' Report which was placed on public consultation in February 2009. Based on stakeholder discussion, an addendum to this document was prepared which was again subject to a sustainability appraisal and refined with additions relating to strategic and non-strategic sites. The addendum to the Core Strategy was consulted on in November 2009, which was accompanied by an SA addendum. Following this stage of

the process, the strategic and non-strategic sites were removed from the Core Strategy, however for purposes of completeness and continuity we have included this addendum report in the Appendix submitted along with this Environmental Report.

Following these iterations, the Core Strategy DPD was refined and published for consultation in June 2010. As the new government has announced abolition of Regional Spatial Strategies, including the East of England Plan, references and targets relating to regional planning were revisited and certain sections of the Core Strategy have been reworded, since the June 2010 version. This SA Report captures the implications of these alterations with respect to explicit targets in the regional documents. There is no clarity at this stage on the importance and application of the documents and strategies prepared by EEDA and East of England Regional Assembly, such as the Regional Economic Strategy. For this reason, this report continues to treat the information and objectives contained in these strategies as valid guiding documents.

This Sustainability Appraisal/Environment Report is prepared to accompany the Proposed Submission Addendum version and the Submission version of the Core Strategy, and therefore compiles the SA process records since the Scoping Report Stage and makes recommendations for monitoring any adverse effects identified by the SA.

This chapter forms the Non-Technical Summary (NTS) of the SA Report and provides a summary, in non-technical language of the principal findings of the assessment of the Core Strategy Submission Draft.

Three Rivers Core Strategy Development Plan Document- Post Publication version

The Core Strategy Post Publication version sets out a Spatial Vision, Strategic Objectives a Spatial Strategy and a number of Policies. Other documents already produced within the LDF include the Sustainable Communities SPD and the Open Space, Amenity and Children's Play space SPD. The Core Strategy Vision and Spatial Strategy are elaborated for specific levels of towns, such as key centres, secondary centres and villages through four Place Shaping Policies. These strategies and policies are further supported by thirteen theme based Core Policies. This SA Report discusses the results of the sustainability assessment of these policies. It documents the SA process since the Scoping Stage and suggests mitigation measures for any uncertain or negative effect identified by the assessment

Key Sustainability Issues

The main sustainability issues that are considered to be relevant in Three Rivers are illustrated below.

Air Quality

Pollutant levels have decreased in the area but 5 AQMAs are declared.

Biodiversity	The District has five Sites of Special Scientific Interest (SSSIs), and nine Local Nature Reserves (LNRs)
Flood risk	Parts of the District fall under Flood Zone 2, 3a and 3b. River Chess Valley and River Colne Valley are considered flood plains. The regional SFRA produced in 2007 must be referred to identify actual flood risk areas.
Climatic Factors	Domestic CO ₂ emissions per capita are above the regional average
Conservation Areas	There are 3 Scheduled Ancient Monuments, 22 conservation areas and 351 Listed Buildings in the District
Landscape/Townscape	Three Rivers falls into three Landscape Character Areas, “Northern Thames Basin”, “Thames Valley” and “Chilterns”
Material Assets	The amount of household waste recycled has increased between 2001 and 2009 from 307.4 kg per household to 481.58 kg per household. In 2009/10, residents in Three Rivers recycled nearly 50% of their waste.
Population	Three Rivers population has grown from 82,840 in 2001 to 86,400 in 2008. Population projections indicate that the population as a whole will increase by 1.8% by 2021.
Water	While the Chemical quality of Rivers Chess, Colne and Ver are very good, Biological quality fluctuates between good and poor among the rivers (2008) Water resources are over abstracted in the region.
Housing	A relatively high percentage of Local Authority homes were recorded as unfit for living in (2003/04) ¹ . Some 90% of households say that their accommodation is adequate for their needs.

¹ In 2008, Local Authority housing stock was transferred to a Housing Association (Thrive Homes).

	Around 10% say that it is inadequate (Three Rivers Housing Needs Survey 2001)
Crime	In terms of violent crime per 1000 population Three Rivers is in a lower quartile compared to other Councils in England. Racial incidents were lower than the Hertfordshire average (Audit Commission, 2009)
Health Care & Education	74% of Three Rivers population state to be in generally good health (Census, 2001)
Economy & Employment	At January 2010, Three Rivers had a lower recorded figure of unemployment than for Hertfordshire, the East of England and the UK.

Sustainability Appraisal Framework

The Scoping Report, produced during early stages of the Sustainability Appraisal compiled a set of sustainability objectives, with criteria to assess future development options. This report was consulted on with key environmental authorities and the framework was finalised. This framework was later used in the Issues and Options Appraisal and for the Preferred Options Appraisal in order to assess development documents, and help resolve sustainability issues identified for the District. While the detailed SA Framework is set out in Table 4.1, of the main report the objectives are reiterated below:

1. To protect and enhance biodiversity
2. Maintain/enhance water quality and limit water consumption
3. Ensure new developments do not increase flood risk
4. Minimise the loss of valuable soils
5. Reduce the emissions of CO² and other greenhouse gases
6. Ensure development is 'climate change proof'
7. Achieve good air quality, especially in urban areas
8. Maximise the use of previously developed land
9. To use natural resources efficiently
10. To maintain and enhance historic and cultural assets
11. Conserve and enhance the landscape and townscape

12. Encourage healthy lifestyles
13. To deliver more sustainable patterns of development
14. Promote equity & address social exclusion
15. Ensure that everyone has access to good quality housing that meets their needs
16. Enhance community identity and participation
17. Reduce both crime and fear of crime
18. Achieve sustainable levels of prosperity and growth
19. Promote wider prosperity and fairer access to services
20. Revitalise town centres

Issues and Options Appraisal

Following an iterative process of analysis by the Council Officers and discussions with stakeholders, a set of initial options for the District were produced as the Core Strategy Issues and Options. In accordance with ODPM² Guidance and The Regulations, the Core Strategy Issues and Options were assessed against the SA Framework set at the Scoping Report stage. A Core Strategy Issues and Options SA Working note was produced in June 2006 and submitted for public consultation in June 2006. This was revised following an iterative process in July 2007 and the Core Strategy Supplemental Issues and Options paper and a Supplemental Issues and Options SA Paper were submitted for public consultation in 2007.

The Issues and Options and Supplemental Issues and Options SAs identified positive, negative and uncertain affects for all identified options and made recommendations, wherever appropriate to strengthen options to achieve a sustainable development.

Preferred Option Sustainability Appraisal

Based on the issues and options SAs, stakeholder responses, findings of local and regional studies and assimilation of further information on development issues and options, a first set of preferred options was developed and consulted upon in February 2009. Based on responses and further discussions with the stakeholders, an addendum to the Preferred Option was produced and consulted with members of the public and the stakeholders in November 2009. Both versions of the Preferred Options were subject to sustainability appraisal and the SA Reports were also sent out for consultation.

² ODPM's (now DCLG) Sustainability Appraisal of Regional Spatial Strategies and Local developments Documents Guidance, November 2005

Each of the plan elements of the Preferred Option, including the Vision, objectives and policies were evaluated against the sustainability objectives for:

Severity – significant positive or negative, mild positive or negative, uncertain or neutral impact.

The extent of the effects were also analysed in temporal (short, medium or long term) and geographic (national, regional or local) terms.

The Preferred Options and Further Preferred Options SAs identified positive, negative and uncertain affects for proposals and made recommendations, wherever appropriate to strengthen policies to achieve sustainable development.

Submission Draft Assessment Results

Following the issues and options and preferred options SAs, stakeholder responses, findings of local and regional studies and assimilation of further information on development issues and options, a submission draft of the Core Strategy has now been developed.

In general terms, all Core Strategy Policies are assessed to have positive effect against most sustainability objectives and only two mild negative effect have been predicted under improvements to air quality, and under the use of brownfield site. On their own all policies are likely to bring positive effects as well as some uncertain effects; however a key aspect to note is that the interface of CS policies will have a significant synergistic and cumulative positive impact on sustainable development in the District.

The Council's commitment to encouraging renewable energy usage and zero carbon development indicates its action towards achieving a sustainable future. This can be further strengthened by material efficiency requirements, such as using creative design that will minimise usage of construction material.

39 separate significant positive effects (on 20 of the SA objectives), 185 positive effects, 2 negative effects (mild) and 55 uncertain impacts have been observed. Significant positive effects are observed under the following policies and corresponding objectives:

Spatial Vision- CO₂ emissions, air quality, resource efficiency, health, accessibility and sustainable development patterns

Spatial strategy- use of PDL

PSP1, PSP2 and PSP3- use of PDL, cultural heritage, landscape, health, accessibility, social equity and sustainability development pattern

CP1- biodiversity, flood risk, soils, use of PDL, resource efficiency, landscape, health, sustainable development pattern, town centre revitalisation and social equity

CP2, CP3, CP5 CP8 and CP10- Sustainable development pattern

CP9- biodiversity

CP10- Accessibility

CP12- resource efficiency

The assessment indicates high number of mild positive scores, however uncertain scores also remain in the chart. The majority of uncertain effects relate to the community identity and participation objective and under biodiversity and resource efficiency SA objectives primarily due to the effects being context specific that cannot be determined at this strategic stage.

Mild negative effects against air quality under CP2 (Housing supply) and CP6 (Employment and Economic Development) are likely. The premise to this assessment is that increased housing and employment units will increase private vehicle use, however these significant negative effects may be mitigated with the public transport and other abatement options identified in the policies that may help reduce future emissions, to an extent. Table 0.1 presents summary of the assessment matrix.

Table 0.1 Assessment Summary Matrix

SA Objective	SA1 Biodiversity	SA2 Water	SA3 Flood risk	SA4 Soils	SA5 CO ₂	SA6 Climate change adaptation	SA7 Air quality	SA8 PDL usage	SA9 Resource efficiency	SA10 Cultural heritage	SA11 Landscape	SA12 Health	SA13 Sustainable development pattern& Accessibility	SA14 Social equity	SA15 Good quality house	SA16 Community participation	SA17 Crime prevention	SA18 Sustainable growth	SA19 Town Centre revitalisation
CS Policy																			
Vision	+	+	+	+	++	+	++	+	++	0	+	++	++	+	0	0	+	+	+
Spatial strategy	?	?	+	+	+/?	+	+/?	++	+	?	?	+/?	+	0	0	0	0	+	+
PSP1	+	+	+	+	+	+	+	++	+	++	+	+	++	++	+	?	?	+	++
PSP2	+	+	+	+	+	+	+	++	+	++	+	++	++	+	+	?	?	+	+
PSP3	+	+	+	+	+	+	+	++	+	++	+	++	++	++	+	?	+	+	+
PSP4	+	+	+	+	?	+	?	?	?	+	+	+	?	+	+	?	?	+	+
CP1	++	+	++	++	+	+	+	++	++	+	++	++	+	++	+	?	+	++	++
CP2	?	?	0	?	+	+	-	+	?	?	+	?	++	?	0	?	0	+	+
CP3	?	0	0	+	+	+	0	?	+	+	+	+	++	+	+	+	+	+	+
CP4	0	0	0	0	0	+	0	+	+	?	0	0	?	++	+	+	?	?	+
CP5	+	?	+	0	0	+	0	?	?	0	+	+	++	+	0	+	+	+	+
CP6	0	0	+	+	0	+	-	+	+	0	+	?	+	+	+	+	+	++	+
CP7	0	0	+	0	+	?	+	?	?	+	+	+	+	0	0	0	+	+	+
CP8	?	?	+	0	?	?	0	0	0	+	?	+	++	0	0	?	0	+	0

SA Objective	SA1 Biodiversity	SA2 Water	SA3 Flood risk	SA4 Soils	SA5 CO ₂	SA6 Climate change adaptation	SA7 Air quality	SA8 PDL usage	SA9 Resource efficiency	SA10 Cultural heritage	SA11 Landscape	SA12 Health	SA13 Sustainable development patterns & Accessibility	SA14 Social equity	SA15 Good quality house	SA16 Community participation	SA17 Crime prevention	SA18 Sustainable growth	SA19 Town Centre revitalisation
CP9	++	+	+	+	+	+	+	+	0	+	+	+	0	+	0	0	0	+	?
CP10	+	0	?	0	+	0	+	0	0	0	?	+	++	+	0	+	0	+	+
CP11	?	0	0	?	0	0	0	+	?	0	?	+	?	0	0	0	0	?	0
CP12	+	0	+	0	+	+	0	0	++	+	+	0	0	0	+	0	+	+	0
CP13	+	+	+	+	+	+	+	0	+	+	+	+	+	?	0	0	+	+	+

CP1 Sustainable development
 CP2 Housing supply
 CP3 Housing mix & density
 CP4 Affordable housing
 CP5 Gypsy & traveller provision

CP6 Employment & economic development
 CP7 Town centres
 CP8 Infrastructure & planning
 CP9 Green infrastructure

CP10 Transport
 CP11 Green belt
 CP12 Design of development
 CP13 Monitoring & delivery

Key

Symbol	Description
++	Very sustainable - Option is likely to contribute significantly to the SA/SEA objective
+	Sustainable - Option is likely to contribute in some way to the SA/SEA objective
0	Neutral – Option is unlikely to impact on the SA/SEA objective
?	Uncertain – It is uncertain how or if the Option impacts on the SA/SEA objective
-	Unsustainable – Option is likely to have minor adverse impacts on the SA/SEA objective
--	Very unsustainable – Option is likely to have significant adverse impacts on the SA/SEA objective

Cumulative, synergistic and secondary impacts

DCLG Guidance suggests, cumulative effects are those effects which on their own may have no or mild effect but may combine across a whole plan (or in association with other plans) to produce an overall effect which is more significant.

Cumulative positive effect was observed for many Core Policies, when combined with CP1 (Sustainable Development) and CP12 (Design of development).

Synergistic effects occur when policies interact to produce an effect greater than individual policies. The following describes synergistic effects between policies, organised under sustainability themes.

- Negative synergistic effect may affect *Biodiversity*- In order to fulfil housing demand CP2 (Housing Supply) indicates locating 30% housing supply at the edge of settlements. The biodiversity impact of this approach can be determined only on a case by case basis depending on the biodiversity value of each site that may be taken up in the future. As the Core Strategy does not deal with these details, the effect cannot be predicted at this stage. A slight revision of green belt to accommodate development needs, as indicated in CP11 (Green Belt), may support CP2 to fulfil housing

objectives however the above comment relating to uncertainty applies to sites subject to such revision.

- *Health*- Positive synergistic effect may occur due to interaction between CP9 (Green Infrastructure), that will encourage provision of accessible open spaces and with CP 10 (Transport) that promotes sustainable transport, including healthy options such as cycling and walking.
- *Economic growth*- CP3 (Housing Mix and Density) and CP7 (Town Centres and Shopping), in combination with attention to design (CP12) are likely to create attractive public realm spaces, therefore potentially attracting inward investment

Secondary effects are indirect effects that may not be a direct result of the policy but may occur through complex pathways. For example CP9 (Green Infrastructure) will protect biodiversity, which may bring indirect positive effect on water quality, by preventing development in areas sensitive to water pollution. Indirect, secondary effects identified in the assessment are described in the detailed assessment matrix, if applicable.

Mitigation Measures

Where negative or uncertain impacts are identified, appropriate mitigation measures to limit identified negative effect have been recommended. In addition, recommendations to address uncertain impacts are discussed for each policy, both in this report and in the detailed assessment matrix. This also includes suggestions to strengthen the sustainability quotient of the CS policies.

Monitoring

The requirement in the SEA Regulations relating to monitoring focuses specifically on significant environmental effects of the implementation of plans and programmes, with a view to identify unforeseen adverse effects at an early stage and be able to undertake appropriate remedial action.

Once the plan is implemented, its effects on the environment are to be monitored to allow action to be taken to reduce and/or offset any significant effects on the environment.

Where possible the monitoring will make use of existing monitoring arrangements and link with similar monitoring regimes of the TRDC. Appendix 7 of the Core Strategy Submission Draft sets out monitoring indicators, which are considered appropriate for a monitoring framework. Taking these indicators into consideration a bespoke draft monitoring framework is proposed. This framework should be refined and altered prior to the adoption stage.

Next Steps

The requirement in the SEA Regulations relating to monitoring focuses specifically on significant environmental effects of the implementation of plans and programmes, with a

view to identify unforeseen adverse effects at an early stage and be able to undertake appropriate remedial action.

Once the plan is implemented, its effects on the environment are to be monitored to allow action to be taken to reduce and/or offset any significant effects on the environment.

Where possible the monitoring will make use of existing monitoring arrangements and link with similar monitoring regimes where appropriate

Further Details

This Post Publication version of the Sustainability Report will accompany the Core Strategy Proposed Submission Addendum version and the Submission version of the Core Strategy Both the Core Strategy Addendum version and the SA Report will undergo public consultation which will take place in 2010.

Please return responses to:

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1 Introduction

1.1 *Background to Strategic Environmental Assessment/ Sustainability Appraisal*

New regulations require planning authorities to replace their Local Plans with Local Development Frameworks (LDF). Three Rivers' Core Strategy and its other development plan documents, form part of its LDF and must be subject to both Sustainability Appraisal and Strategic Environmental Assessment under the Planning and Compulsory Purchase Act (2004) and The Environmental Assessment of Plans and Programmes Regulations (2004) which implement European Directive 2001/42/EC, known as the Strategic Environmental Assessment (SEA) Directive.

Both the SA and the SEA processes help planning authorities to fulfil the objective of contributing to the achievement of sustainable development in preparing their plans through a structured assessment of the objectives and Core Strategies against key sustainability issues.

Although the requirement to carry out both an SA and SEA is mandatory, it is possible to satisfy the requirements of both pieces of legislation through a single appraisal process. Government guidance for undertaking SEA³ and for SA of Development Plan Documents⁴ in particular details how the SA and SEA should be integrated into one process. The final output of the process is a combined Sustainability Appraisal/Environmental Report which will be published alongside the plan. This report will be referred to as the SA/Environmental Report.

1.1.1 *Purpose of this Sustainability Report*

The SEA regulations require that the sustainability appraisal results of the Submission Draft shall be consulted with statutory bodies and with members of the public to obtain their views prior to adoption of the DPD Core Strategy. In addition to declaring results of the assessment, the Sustainability Report proposes mitigation measures/ recommendations to enhance sustainability features of the Core Strategy Policies, as well as proposing a monitoring framework for all significant sustainability issues identified during the assessment. Various versions of the SA Report were prepared at each stage of the Core Strategy preparation, and this Post Publication version of the SA report will accompany the Submission Draft version of the DPD and will be taken forward for submission to the Secretary of State after completing the statutory procedures of the regulation. The Appendices include details of the relevant previous versions of the report.

³ "A Practical Guide to the Strategy Environmental Assessment Directive" (ODPM, 2005)

⁴ Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents (ODPM, 2005)

1.1.2

Background to the Project

This SEA/SA is being carried out as part of a joint project commissioned by the four Hertfordshire local authorities situated in the south west of the county – Dacorum Borough Council, St Albans City and District Council, Three Rivers District Council, and Watford Borough Council. The Centre for Sustainability (C4S) at TRL Ltd and their project partners Halcrow Group Ltd have been appointed to undertake this project.

By joining together in this way the four authorities aim to make the project more efficient by utilising a common appraisal methodology; although authority specific issues will also be addressed.

Whilst this Sustainability Report is being produced specifically for Three Rivers' development plan documents, much of the data presented in this report also relates to all four authorities.

1.2

Three Rivers Local Development Framework- Core Strategy DPD

The LDF is the emerging development plan for Three Rivers. LDFs are the new form of spatial development plan introduced by the Government's planning reforms in the Planning and Compulsory Purchase Act (2004). The LDF will replace the existing local plan. The new LDF will set out the strategy for the way in which land is used and to guide new development in the District for the period up to 2026 and beyond.

The LDF will consist of a portfolio of documents. Central to this portfolio is the Core Strategy, which sets out the overall vision for future development in the District and is the basis for later LDDs, including the Site Allocations DPD and Development Management Policies DPD. In addition to these statutory DPDs there will be a number of non-statutory Supplementary Planning Documents (SPDs), setting out more detailed guidance at a more specific level.

The Core Strategy will be the Council's first DPD. In June 2006 the Council produced the first consultation document on the Issues and Options of the Core Strategy. More options were added and amended to this Issues and Options document and a Supplemental Issues and Options Core Strategy was produced in July 2007. These documents were subject to a sustainability assessment and a SA Working Note was produced in June 2006 and an Additional Issues and Options SA Working Note was produced in July 2007.

Subsequently, based on other stakeholder responses to consultations, recommendations from the SA Working Note and emerging information from other regional and national policies, a Preferred Options Core Strategy was produced in February 2009. This document was again subject to a sustainability appraisal and refined with additions relating to strategic and non-strategic sites. An addendum to the Core Strategy was consulted in November 2009, which was accompanied by a SA addendum.

Based on the stakeholder responses, and other information from national, and regional policies, the Core Strategy DPD was refined and is now finalised for publication. This SA Report is to accompany the Submission Draft version of the Core Strategy, and therefore compiles the SA process records since the Scoping Report Stage and makes recommendations for monitoring any adverse effect identified by the SA.

Following these iterations, the Core Strategy DPD was refined and published for consultation in June 2010. As the new government has announced abolishment of Regional Spatial Strategies, including the East of England Plan, references and targets relating to regional planning were revisited and certain sections of the Core Strategy have been reworded, since the June 2010 version. This SA Report captures the implications of these alterations with respect to explicit targets in the regional documents. There is no clarity at this stage on the importance and application of the documents and strategies prepared by EEDA and East of England Regional Assembly, such as the Regional Economic Strategy. For this reason, this report continues to treat the information and objectives contained in these strategies as valid guiding documents.

This Sustainability Appraisal/Environment Report is prepared to accompany the Proposed Submission Addendum version of the Core Strategy, and therefore compiles the SA process records since the Scoping Report Stage and makes recommendations for monitoring any adverse effects identified by the SA.

The Core Strategy- Submission Draft, sets out a Spatial Vision, Strategic Objectives and number of Policies. Other documents already produced within the LDF include the Sustainable Communities SPD and the Open Space, Amenity and Child's Play space SPD. The Spatial Vision for the Three Rivers Core Strategy is as below:

The priorities for the future are:

- *To provide growth required to support local communities and provide for their needs in the most sustainable way possible*
- *To locate growth in the most sustainable locations in terms of access to services and transport networks and impact on the environment*
- *To improve access to housing and affordable housing for communities across the whole District*
- *To provide opportunities for local employment and maintain the vitality and viability of existing centres across the District, reducing the need to travel*
- *To promote sustainable transport options to improve access for all communities and reduce dependence on the car*
- *To support growth with appropriate investment in infrastructure to ensure that new and existing communities can access services that they require*
- *To reduce inequalities across the District, in particular through regeneration of the South Oxhey area*

- *To recognise opportunities to make the best use of land whilst minimising adverse impacts on the character of the District and minimising harmful changes to the built, historic and natural environment*
- *To recognise opportunities to improve and enhance the built, historic and natural environment wherever possible*
- *To limit changes to the Green Belt that will be necessary to accommodate some growth required to locations which result in the least harm to Green Belt and sustainability objectives.*

All growth will need to be sustainable so that the present needs of residents and businesses in Three Rivers can be met without compromising the ability of future generations to meet their own needs. New development will need to mitigate its impact on the causes of climate change. Opportunities to reduce the impacts on the environment of existing built stock will be supported.

In essence future development must secure a balanced provision between homes and jobs that also safeguards and enhances the environment, maintains the Green Belt, secures good services and facilities for all and achieves a sustainable transport system. Growth required in the District will maintain or improve the quality of life of Three Rivers' communities.

The Spatial Vision is supported by set of 12 objectives. Following is an abridged version of these objectives:

Component parts of the CS Strategic objectives are:

1. Sustainable development patterns
2. Efficient use of land
3. To reduce environmental impact
4. Balancing homes and jobs
5. Increase affordable housing
6. Facilitate provision of services and infrastructure
7. Deliver improved/integrated transport and reduce the need to travel
8. Maintain shops and services in District centres
9. Conserve and enhance countryside and biodiversity
10. Conserve and enhance historic environment
11. Provide opportunities for leisure, arts, sport and recreation
12. Promote safety and security in new development

The CS objectives are reiterated in Chapter 4. The vision and objectives are supported by core policies and development policies. Reference must be made to the CS document for a detailed note on these policies. The following is an abridged version of the CS policies:

Place shaping policies:

PSP1: Development in the Principal Town (Rickmansworth)

PSP 2: Development in the Key Centres (South Oxhey, Croxley Green, Abbots Langley, Chorleywood, Leavesden and Garston and Mill End)

PSP 3 Development in Secondary Centres (Kings Langley, Carpenders Park, Eastbury, Maple Cross, Moor Park, Oxhey Hall)

PSP 4 Development in villages (Bedmond, Sarratt)

Core Policies

CP1 Overarching policy on sustainable development

CP2 Housing Supply

CP3 Housing Mix and Density

CP4 Affordable Housing

CP5 Gypsy and Traveller Provision

CP6 Employment and Economic Development

CP7 Town Centres and Shopping

CP8 Infrastructure and Planning Obligations

CP9 Green Infrastructure

CP10 Transport and Travel

CP11 Green Belt

CP12 Design of Development

CP 13 Monitoring and Delivery

1.3

SEA/SA Methodology

Figure 1 illustrates the relationship between the DPD plan making and the SA/SEA process.

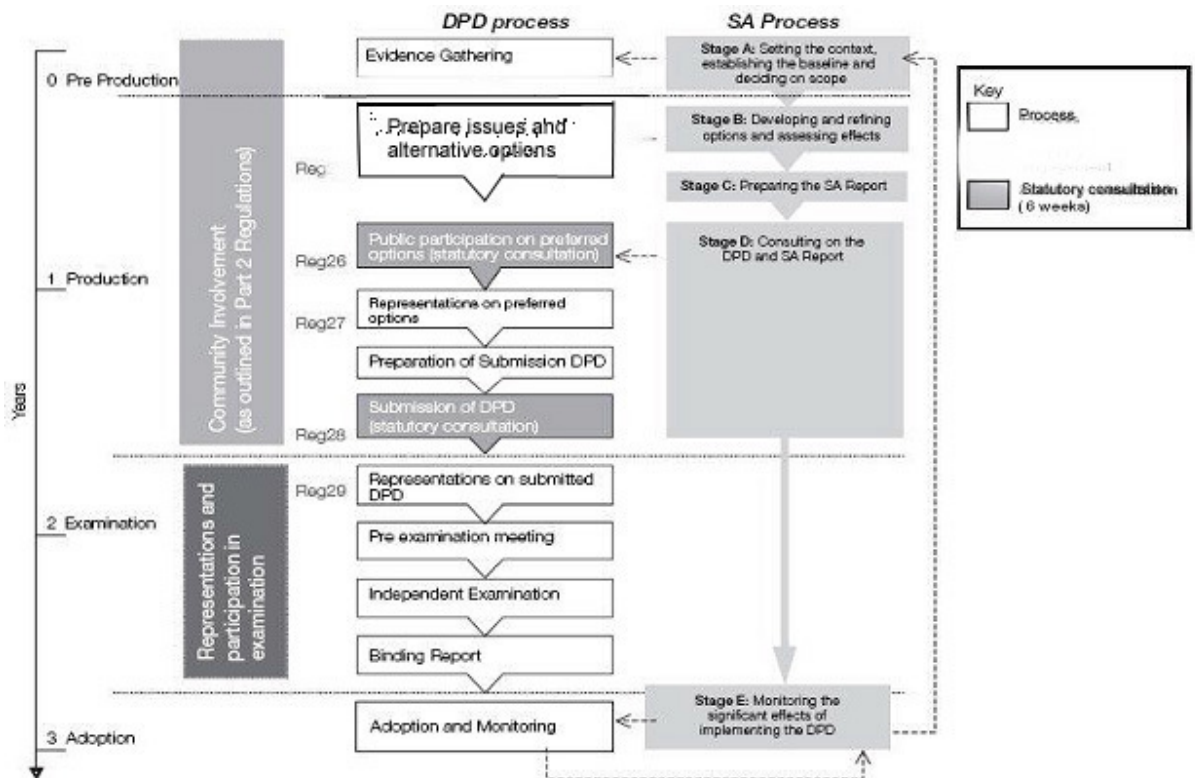


Figure 1: The DPD and SA/SEA process (Source: ODPM)

The key stages of the SA/SEA process are broadly presented in Table 1.1.

Table 1.1 Stages in the SA/SEA and Three Rivers Core Strategy DPD

Three Rivers Core Strategy DPD	SA/SEA Stages	Dates
Begin Document Preparation	Stage A: Setting the context, establishing the baseline and deciding on the scope <ul style="list-style-type: none"> • A1: identify other relevant policies, plans and document programmes, and sustainability objectives. • A2: collecting baseline information. • A3: Identifying sustainability issues and problems. • A4: Developing the SA framework. • A5: Consulting on the scope of the SA (Scoping Report). 	SA Scoping Report, prepared February 2006 Consultation on Scoping Report February 2006
Preparation of Issues and Options (I&O) paper and consultation Preparation of preferred options, including consultation on possible preferred option	Stage B: Developing and refining options and assessing of effects <ul style="list-style-type: none"> • B1: Testing the DPD objectives against the SA framework. • B2: Developing the DPD options. • B3: Predicting the effects of the DPD. • B4: Evaluating the effects of the DPD. • B5: Considering ways of mitigating adverse effects preferred and maximising beneficial effects. • B6: Proposing measures to monitor the significant effects of implementing the DPDs. 	Consultation on Issues & Options (I&O) paper June 2006 Preparation of SA Working Note on I&O ¹ June 2006 Supplemental Issues and Options (I&O) paper, including preparation of SA Working Note on Supplemental I&O in July 2007
Public consultation on Preferred options	Stage C: Preparing the Sustainability Appraisal Report. <ul style="list-style-type: none"> • C1 Preparing the SA Report. 	Formal consultation on Preferred Options for the CSDPD and SA Report February 2009
	Stage D: Consulting on the preferred options of the DPD and SA Report. <ul style="list-style-type: none"> • D1: Public participation on the preferred options of the DPD and the SA Report. • D2 (i) Appraising significant changes. • D2 (ii) Appraising significant changes resulting from representations. • D3: Making decisions and providing Information. 	Formal consultation on alterations to the Preferred Options for the CSDPD and SA Report Addendum November 2009 Publication of the Core Strategy Submission Draft and the draft SA Report May 2010 and the Core Strategy Proposed Submission Addendum and the Post Publication version SA October 2010.
Submission of DPD to Secretary of State	Stage E: Monitoring the significant effects of implementing the DPD <ul style="list-style-type: none"> • E1: Finalising aims and methods for monitoring. • E2: Responding to adverse effects. • Preparing the SEA Statement.² 	Submission: indicative timing February 2011 Final adoption of the Core Strategy DPD is scheduled for December 2011 SA Statement: indicative timing December 2011

¹This output is not required by the SEA Regulations but was produced to assist in selecting the preferred options.

²The SEA Statement is required by the SEA Regulations.

1.4

Report structure

The SEA Regulations require the Sustainability Report to clearly document findings of all stages of the SEA/SA process. The Report should show that the SEA Directive has been complied with and all components that meet these requirements should be easily identifiable. The reporting requirements and corresponding chapters contained in this report are shown below:

Chapter / Section	SEA Directive Requirement (abridged)
Chapter 2 Appendix 1	Outline of contents, main objectives of the plan, and relationship with other relevant plans and programmes
Chapters 2 & 3 Appendix 2	Environment, social and economic baseline and likely evolution of the current state without implementation of the plan/ programme; any existing environmental, social and economic problems which are relevant to the plan or programme Documenting environmental characteristics of areas likely to be significantly affected
Chapter 4 Appendix 1	Environmental protection objectives set out in national and regional policies, its relevance to the plan/ programme and the way these objectives are considered in the SA process
Chapters 5 & 6	The likely significant effects of the plan on the environment, including on issues such as biodiversity, water, soil, population, human health, material assets, cultural heritage, landscape and the inter-relationship between the above. These effects should include secondary, cumulative, synergistic, temporal and severity details
Chapter 6	Mitigation measures to offset any identified significant effect
Chapter 5 & 6	Outline of reasons (through SA) for selecting alternatives (Initial Options) and documentation of difficulties encountered in the assessment
Chapter 7	Description of monitoring arrangements proposed
Non-Technical Summary document	Non-technical summary of information under all the above headings
Appendix 3	Consultation – results of the consultation of the previous SA Report for the Core Strategy DPD

1.5

Consultation

SEA Directive requires consultation of documents at various stages of the SA process, as indicated in Table 1.1. To date a consultation was held at the end of the scoping stage; further at the end of the Core Strategy Preferred Option DPD in February 2009 and again to consult on the changes to the Preferred Option DPD in November 2009. The submission version SA was consulted on in June 2010.

The SEA Regulations and SA Guidance⁵ requires that the Scoping Report consultation and the Preferred Options Appraisal be carried out with stakeholders the Council finds appropriate to consult with, and four statutory environmental consultees i.e., Countryside Agency, English Nature (both now merged as Natural England), English Heritage and the Environment Agency. The aim of the scoping consultation was to ensure that all the relevant issues were identified and discussed at an early stage of the process so that they could be addressed during the SA and plan making. The list of those who were consulted, those who

⁵ ODPM's (now DCLG) Sustainability Appraisal of Regional Spatial Strategies and Local developments Documents, November 2005

responded, along with a summary of the comments received and how they have been addressed are included in Appendix 3.

No significant comments were received during the second and third round of consultation on the Preferred Options Report for the Core Strategy DPD and Preferred Options Report Addendum respectively. The consultees included statutory environmental consultees and a wide range of other stakeholders. The public were also invited to consult via inclusion of the documents on the Three Rivers District Council website, at the council offices and libraries.

1.6

How the SA influenced the Core Strategy

The advantage of running the SA process in parallel with the plan making process is that it ensures sustainability and environmental considerations are incorporated in the plan. At each stage of planning, the sustainability appraisal team made recommendations regarding measures to include in the plan, such as suggestions to mitigate any negative effect predicted, or to revise policies, options or objectives of the plan to improve its sustainability quotient. Table 1.2 indicates how the SA process influenced the Core Strategy development.

Table 1.2: SA influence in the Core Strategy development

Stage	Recommendations	Changes to Policies
1) Initial Issues and Options SA of the Core Strategy	<ul style="list-style-type: none"> • This SA made several recommendations with respect to sustainable development, particularly with respect to housing mix and density and employment. • Housing Mix and Density- Link highly accessible locations with high density • Some employment areas should be retained and be spread evenly across the district to reduce out-commuting • Adopting training of local workforce will help deliver skilled workforce 	<ul style="list-style-type: none"> • CP1 addresses most issues identified, however details have been discussed in relevant individual policies of the Core Strategy • CP3 explicitly takes recommendation into consideration • CP6 refers to focusing on employment in key centres and look for opportunities for residential and mixed-use, implicitly retaining employment land • CP6 recommends promotion of skills and learning of local workforce

Stage	Recommendations	Changes to Policies
	<ul style="list-style-type: none"> • Encouraging water efficiency in future buildings should to address potential water issues in the future • Policy can set up energy efficiency targets like EcoHomes and consider BREEAM/CEEQUAL 	<ul style="list-style-type: none"> • CP12 supports design and technical intervention to address the issue, including rain water harvesting • Targets set for Code for Sustainable Homes Level for future development, from 2016
2) Supplemental Issues and Options SA of the Core Strategy	<ul style="list-style-type: none"> • Mixed use developments tend to be more sustainable, though some uses may not be appropriate to mix with residential • Social and environmental benefits could be gained from including physical and policy measures to support the principles of sustainable freight distribution • Care should be taken when seeking to promote vitality and viability in town centres that the townscape character of the area is taken into account and that historic and cultural assets are preserved and enhanced • Encourage a policy requiring the use of sustainable construction techniques 	<ul style="list-style-type: none"> • CP6 supports mixed-use development of employment to reduce the need to travel while protecting residential amenity • CP10 supports transfer of freight to railways and canals subject to transport assessment and impacts on the environment and amenity • CP7 takes account of the appropriateness of the type and scale of development in relation to the centre and its role, function, character and catchment area • CP1 promotes sustainable building materials, and reduction in materials used
3) Preferred Options SA of the Core Strategy	<ul style="list-style-type: none"> • Spatial Strategy should include explicit reference to other Core Strategy policies and indication that these will support the Spatial Strategy • Place Shaping Policies should include need to increase public transport patronage as well as physical improvements to infrastructure • PSP4 should strengthen transport links between secondary and key centres • Policy can set up energy efficiency targets like 	<ul style="list-style-type: none"> • Core Strategy includes text at Spatial Strategy setting out that all development will need to be in accordance with policies in the Core Strategy and subsequent LDDs • Place Shaping Policies aim to ‘improve and enable’ use of public transport • PSP4 supports public transport between villages and Rickmansworth and other centres • CP1 sets requirements for

Stage	Recommendations	Changes to Policies
	<p>EcoHomes and consider BREEAM/CEEQUAL</p> <ul style="list-style-type: none"> • CP1 should consider avoiding prioritising PDL at sites with established wildlife habitats • CP2 should ensure application of sequential approach to housing after 2021 	<p>future residential and non-residential development to encourage renewable energy generation and to work towards a zero carbon target</p> <ul style="list-style-type: none"> • CP1 recognises that some PDL can have significant biodiversity value • Policy approach applies to all housing development to 2026
<p>4) Draft Submission Draft SA of Core Strategy (April 2010)</p>	<ul style="list-style-type: none"> • PSPs should discuss increasing public transport patronage in addition to physical improvements • PSP1 to consider extending preservation and enhancement to all areas of landscape value in principal town • Consider criteria based policy to identify potential development sites that may be at risk of flooding • Consider including policy wording that reflects need to promote ethnic and cultural diversity and respect multi-cultural faith • Consider explicit reference to interaction of the Core Policies to have a positive effect on any development 	<ul style="list-style-type: none"> • PSPs recognise need to increase patronage alongside improvements • PSP1 to conserve and enhance all landscape, biodiversity and habitat around principal town • Development site criteria added to Spatial Strategy • CP8 includes provision for faith facilities • Statement included in the policies section and in the spatial strategy section that all Core Policies will be referred to whilst considering any development

1.7

Geographic and Temporal Scope

The spatial scope for the assessment is largely local (Three Rivers District Council); however the assessment takes into account potential regional impacts (such as Watford, Hertsmere and St Albans) and national impacts, wherever appropriate. For example, the effect on CO₂ emissions is likely to have both local and national implications as any reduction will contribute to national targets, whereas effects on surface water quality may be most relevant to the regional water bodies as well as local water bodies, depending on presence of any such water features and on their existing quality.

The SA/SEA examines plans across three temporal scales:

- Short term effects: effects expected in the next 1-10 years;
- Medium term effects: effects expected in the next 10-20 years; and
- Long term effects: effects expected in the next 20+ years (after the life of the plan)

1.8

Habitat Regulations Assessment

In November 2007, a Screening Report was prepared to inform the Appropriate Assessment as part of Habitat Regulations Assessment (HRA). Screening is required where a plan, alone or 'in combination' with other plans, could affect Natura 2000 Sites (Special Protection Areas for birds – SPAs, Special Areas of Conservation for habitats - SACs) following Article 6(3) of the European Habitats Directive. These are sites which are designated by the EC Directive on the Conservation of Wild Birds 79/409/EEC and the EC Directive on the Conservation of Natural Habitats of Wild Fauna and Flora 92/43/EC.

The first phase of this screening involved an analysis of Three Rivers Issues and Options to ascertain any likely significant effects that may compromise the conservation objectives of nearby Natura 2000 sites. In agreement with Natural England, the statutory consultee for Appropriate Assessment screening, it was decided that although the Three Rivers Issues and Options may not pose a threat to any SACs themselves, they may do in combination with other plans and programmes that are relevant to the wider region. Therefore, Burnham Beeches SAC was the relevant site to this screening as it is the closest Natura 2000 site to Three Rivers.

After identifying the relevant Natura 2000 site for Three Rivers the next phase of the AA screening involved examining all other plans, programmes and projects that may affect the Burnham Beeches SAC in conjunction with Three Rivers Issues and Options. This included the Issues and Options papers of St Albans District Council, Dacorum Borough Council and Watford Borough Council.

The AA screening report concluded that Three Rivers Issues and Options are not likely to cause any adverse effects on any Natura 2000 site, either alone or in combination with other plans and programmes. This is primarily due to the distance between Three Rivers and Burnham Beeches SAC. It is therefore considered, in consultation with Natural England, the statutory consultee, that a full Appropriate Assessment is not necessary.

2 Environmental & Sustainability Planning Context

2.1 *Introduction*

The objective of the new planning system is to reform and speed up preparation of the local development documents (LDD) such that the process of preparation is inclusive, transparent and robust. Development Plan Documents and Supplementary Planning Documents form part of the LDF. The Planning and Compulsory Purchase Act Scheme requires sustainability appraisal of all DPDs.

The Core Strategy is a key local development document of the Local Development Framework that sets out broad vision, objectives and policies for the District. The Core Strategy comprises of various elements such as core policies to address development issues; core policies for towns and villages of the district; high level development management policies and a monitoring and implementation framework required to deliver the vision. It sets out broad locations to deliver the housing and other strategic development needs such as employment, retail, leisure, community, essential public services and transport development.

This Sustainability Report covers appraisal of the Core Strategy.

2.2 *Relationship of the Core Strategy with other Plans and Programmes*

The SEA Regulations state that an Environmental Report should outline:

- Relationship of the Development Plan (Core Strategy) with other relevant plans and programmes; and
- The environmental protection objectives- established at international, community or Member State level- relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.

To fulfil this requirement, a review of the relevant plans, policies and programmes (henceforth referred as PPP review) has been carried out to identify environmental objectives which may provide constraints or synergies with the plan being formulated. The PPP review has covered international conventions and EU policies through to local plans and strategies. A detailed PPP review was presented in the Scoping Report. Appendix 1 and 2 present updated PPP review and baseline information considering change in data or policies subsequent to

issue of the Scoping Report. A summary of the PPP review is presented in this chapter. This chapter also discusses current state of the environment within the Three Rivers District.

2.3

Summary of Review of other Plans and Programmes

Together, plans can be constraints (i.e. set formal limitations, policy contexts, requirements) or can be sources of useful background information as part of evidence gathering. These act together in a hierarchy where a sequence of precedence is established in a nesting, or tiering of plans. A review of other relevant policy documents is required to establish environmental, economic and social objectives that they contain, and it allows opportunities and synergies to be identified, as well as potential conflicts between aims, objectives or detailed policies. This review also highlighted sustainability drivers relevant to the DPD.

The Core Strategy has a direct or indirect relationship with number of national, regional and local policies, plans and programmes and is likely to support or interact with these policies. A detailed review of all relevant PPP documents was discussed in the Scoping Report. This review has been updated with additional policies adopted subsequent to issue of the Scoping Report and updated version is presented in Appendix 1.

At an international level various environmental policies such as Kyoto Protocol, EU Policies on greenhouse gas emissions, EU Second Climate Change Programme are for the Core Strategy to consider. Other supra-national conventions such as Ramsar Convention and the Habitats Directive should be considered in the DPD in relation to protection and enhancement of biodiversity. The Water Framework Directive is a major European policy that requires its Member states to achieve 'good ecological status' of all natural inland water bodies and protection/ enhancements to ground waters. As a result all Member states are required to prepare River Basin Management Plans. Although these plans are under production, the Core Strategy will need to consider implications of these plans.

The majority of the Planning Policy Guidance and Planning Policy Statements that guides national planning and development are relevant to the Core Strategy. These include those related to delivering sustainable development (PPS1), housing (PPS3), sustainable economic growth (PPS 4), biodiversity and geological conservation (PPS9), planning for sustainable waste management (PPS10), transport (PPG13), and renewable energy (PPS22).

This strategy has relation to number of regional and local plans and policies such as the East of England Plan (RSS), Hertfordshire Biodiversity Action Plan, Hertfordshire Local Transport Plan, Four Councils Level 1 Strategic Flood Risk Assessment, London Arc Employment Land Study, and various plans and strategies developed by Three Rivers District Council.

At the time of preparation of the Post Publication version of this report, the Government had announced abolition of Regional Spatial Strategies, the Regional Development Agencies and formation of Local Economic Partnerships; the introduction of a 'Localism Bill'. The details of these announcements are yet to be received, which may have some implications to the PPP review and the SA. When these details are made available, it is recommended that these implications are predicted for the appropriate document level of the LDF.

Table 2.1: List of reviewed relevant policies, plans and programmes

Reviewed other relevant policies, plans and programmes
International
Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971)
Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979)
Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)
The Convention on Biological Diversity, Rio de Janeiro (1992)
Kyoto Protocol on Climate Change (1997)
The UN Millennium Declaration and Millennium Development Goals (2002)
World Summit on Sustainable Development - Earth Summit (2002)
European
EU Directive on the Conservation of Wild Birds (79/409/EEC)
EU Nitrates Directive (91/676/EEC)
EU Habitats Directive (92/43/EEC)
EU Directive on Ambient Air Quality and Management (1996/62/EC)
European Spatial Development Perspective (1999)
EU Waste to Landfill Directive (99/31/EC)
EU Directive Establishing a Framework for the Community Action in the Field of Water Policy (2000/60/EC) – The Water Framework Directive
European Commission White Paper on the European Transport Policy (EC, 2001)
Åarhus Convention (2001)
EU Directive to promote Electricity from Renewable Energy (2001/77/EC)
Environment 2010: Our Future, Our Choice - EU Sixth Environment Action Programme (2001)
EU Directive for the Promotion of Bio-fuels for Transport (2003/30/EC)
EU Sustainable Development Strategy (2006)
EU Waste Framework Directive (2008/98/EC)
National
Draft PPS: Planning for a Natural and Healthy Environment (2010)
PPS1 - Delivering Sustainable Development (2005)
SPPS1 - Planning Policy Statement: Planning and Climate Change - Supplement to Planning Policy Statement 1 (2007)
SPPS1- Planning Policy Statement: Supplement on Eco-towns- Supplement to PPS1 (2009)
PPG 2 – Green Belts (1995)
PPS 3 – Housing (2006)
PPS 4 – Planning for Sustainable Economic Growth (2009)
PPS 5 – Planning for the Historic Environment (2010)
PPG 8 – Telecommunications (2001)
PPS 9 – Biodiversity and Geological Conservation (2005)
PPS 10 – Planning for Sustainable Waste Management (2005)
PPS 11 – Regional Spatial Strategies (2004)
PPS 12 –Local Spatial Planning (2008)
PPG 13 – Transport (2001)
PPG 14 – Development on Unstable Land (1990)
PPG 17 – Planning for Open Space, Sport, and Recreation (2002)
PPS 22 – Renewable Energy (2004)

PPS 23 – Planning and Pollution Control (2004)
 PPG 24 – Planning and Noise (1994)
 PPS 25 – Development and Flood Risk (2010)
 Good Practice Guide on Planning for Tourism (2006)
 Wildlife and Countryside Act 1981 (as amended)
 UK Biodiversity Action Plan - UK BAP (1994)
 England Forestry Strategy (2007)
 UK Air Quality Strategy (2007)
 Countryside and Rights of Way Act – CRoW (2000)
 Government Urban White Paper: Our Towns, Our Cities, the Future. Delivering an urban renaissance (2000)
 UK Waste Strategy (2007)
 Government Rural White Paper: Our Countryside, the Future – A Deal for Rural England (2000)
 Climate Change: The UK Programme (2006)
 The Historic Environment: A Force for Our Future (2001)
 UK Fuel Poverty Strategy (2001)
 ‘Working with the Grain of Nature’: A Biodiversity Strategy for England (2002)
 Our Energy Future - Creating a Low Carbon Economy' - UK white paper on energy (2003)
 The Future of Transport – UK white paper on transport (2004)
 UK Climate Change Programme Review: Consultation (2004)
 England Rural Strategy (2004)
 Choosing Health: Making Healthier Choices Easier - Health White Paper (2004)
 Securing the Future – UK Government Sustainable Development Strategy (2005)
 Sustainable Communities: Building for the Future - Communities Plan (2003)
 Climate Change Act 2008
 Planning for a Sustainable Future: White Paper, 2007
 Sustainable Communities: People Places and Prosperity ODPM 2005
 Water Act 2003
 Water for People and the Environment: Water Resources Strategy for England and Wales 2009
 Heritage Protection for the 21st Century: White Paper DCMS 2007
 Homes for the Future: More Affordable, More Sustainable – Housing Green Paper CLG 2007
 The First Soil Action Plan for England 2004-2006 DEFRA 2004
 Natural Environment and Rural Communities (NERC) Act 2006
 Towards a Sustainable Transport System: Supporting Economic Growth in a Low Carbon Worlds (DfT, 2007)
 Delivering a Sustainable Transport System (DfT, 2008)

Regional – East of England

Sustainable Development Framework for the East of England (2001)
 Our Environment, Our Future – The Regional Environmental Strategy for the East of England (2003)
 The London Plan (Draft Published for Consultation 2010)
 Sustainable Futures: The Integrated Regional Strategy for the East of England (2005)
 Towns and Cities – Strategy and Action Plan: Urban Renaissance in the East of England (2003)
 Chilterns AONB Management Strategy: The Framework for Action 2002-2007
 A Housing Strategy for the London Commuter Belt Sub-Region 2005-2008
 The East of England Regional Woodland Strategy – Woodland for Life 2003
 Regional Social Strategy: A strategy to achieve a fair and inclusive society in the East of England (launched in May 2004)
 A Shared Vision: The regional economic strategy of the East of England (formally released on 1 December 2004)
 River Basin Management Plan: Thames River Basin District (2009)

County - Hertfordshire

Hertfordshire Structure Plan 1991-2011
 A 50 Year Vision for the Wildlife and Natural Habitats of Hertfordshire (1998)
 Hertfordshire Waste Local Plan 1995-2005 (1999)
 Economic Development Strategy for Hertfordshire 2000-2005 (2000)
 The Hertfordshire Environmental Strategy (2001)

<p>Hertfordshire Minerals Local Plan Review (2001) Rural Hertfordshire – an agenda for action (2001) Enjoy! A Cultural Strategy for Hertfordshire (2002) Hertfordshire Town Renaissance Campaign Hertfordshire Waste Strategy 2002-2024 Hertfordshire Sustainability Guide (2003) The Hertfordshire Minerals and Waste Development Framework and Scheme (2005) Hertfordshire LTP 2006/07 – 2010/11 London Arc Employment Land Study, 2009 Hertfordshire Infrastructure Investment Strategy 2009</p>
<p>Local Authority – Three Rivers District Council</p> <p>Level 1 Strategic Flood Risk Assessment: Dacorum, St Albans, Three Rivers and Watford (2007) Three Rivers Local Plan 1996-2011 Strategic Plan Three Rivers District Council 2005-2008 (December 2004) Three Rivers Cultural Strategy 2002 – 2007 Three Rivers Housing Needs Survey Update (2003) Three Rivers Housing Stock Options Appraisal (2005) Planning for Gypsy and Traveller Sites (2005) Home Energy Conservation Act (H.E.C.A) Progress Report (June 2001) Three Rivers Biodiversity Action Plan (2003) Three Rivers Open Space, Sport and Recreation study (2005) Community Strategy for Three Rivers 2006 – 2012 (refreshed in 2008) Community Safety Strategy April 2005 – March 2008 Three Rivers Corporate Anti-Social Behaviour Policy (2005) Three Rivers Economic Development Strategy 2005 – 2007 Watford and Three Rivers Primary Care Trust Public Health Online Report (2005) Contaminated Land Inspection Strategy (March 2002) Three Rivers DC Urban Capacity Study (2005) South West Hertfordshire Employment Space Study 2005 Three Rivers District Council Parking Scheme Conservation Area Appraisals/town and local centre refurbishment. Grand Union Canal: - Abbots Langley to Rickmansworth Corridor Study (2001) Three Rivers Sustainable Communities SPD, 2007 Three Rivers Open Space, Amenity and Child’s Play space SPD, 2007 Three Rivers Strategic Housing Land Availability Assessment Update, 2010 Three Rivers District Council Playing Pitch Assessment Update 2010 Hertfordshire Economic Development Strategy 2009 – 2021 Veolia Water Central Water Resources Management Plan (2010) Thames Region Catchment Flood Management Plan (CFMP) (2007) The Colne Catchment Abstraction Management Strategy (2007) Water Cycle Study: Scoping Study (Dacorum Borough Council, St Albans City and District Council, Three Rivers District Council, Watford Borough Council, Welwyn Hatfield Borough Council 2010) Three Rivers District Council Playing Pitches Assessment Update, 2010 Hertfordshire Sustainable Communities Strategy – Hertfordshire 2021: A Brighter Future</p>

The Core Strategy and the sustainability appraisal process have considered review of these relevant plans, programmes and policies in preparation of the DPD. Detailed PPP review in the Scoping Report discusses how the SA has considered these policies in the DPD preparation.

A key step in the SA process is establishing current state of the environment and its likely evolution in the future without implementation of any plan.

A practical approach is generally taken to data collection bearing in mind data availability and trend analysis, following which the actual data and gaps in information to consider in the future are reported at the Scoping stage. This reporting also takes into account uncertainties in the data. The Scoping Report, issued in February 2006 reported baseline information under environmental, social and economic themes. The data was organised under the following headings – Air Quality, Biodiversity, Climatic Factors, Cultural Heritage, Landscape, Material Assets, Waste, Land use, Soil, Water, Flood risk, Social factor, Noise, Population, Housing, Crime, Accessibility, Social deprivation, Recreation, Sports and Leisure, Health, Education, Economic activity, Employment, Economic footprint, Enterprise and Innovation.

The baseline data provides an evidence base for identifying sustainability issues in Three Rivers, as well as a mechanism for identifying alternative ways of dealing with them. The information has helped the development of the SA Framework, and will provide a basis for predicting and monitoring the effects of the Plan. In order to assess how the CS will contribute to sustainable development, it is essential to understand the present economic, environmental and social baseline of the District, and to predict how they may progress without implementation of the Plan. Prediction of future trends can be highly uncertain but key trends identified from the available baseline data, and therefore potential sustainability issues were identified and discussed in the Scoping Report. Key issues and opportunities are discussed in Chapter 3. The Scoping Report is available for reference from www.threerivers.gov.uk

Baseline data collection is a continuous process that informs SA production. The Scoping Report information produced in February 2006 has now been updated based on implementation (or amendment) of national, regional and local policies and more up-to date data. Updated information on PPP review and on the baseline are presented in Appendices 1 and 2 respectively.

3 Environmental and Sustainability Issues, Opportunities and Priorities

3.1 *Issues and Opportunities*

The review of plans and programmes affecting the District, and the collation of the environmental baseline data informed the identification of a series of environmental problems or issues that could be addressed by, or affect the strategies and measures developed in the DPDs. Such issues, problems and opportunities have been confirmed through:

- Review of the baseline data;
- Tensions/ inconsistencies with other plans, programmes and sustainability objectives.
- Scoping Workshop held in February 2006
- Discussions with the Three Rivers District Council Officers; and
- Response to the Scoping Report consultation

3.2 *Key Sustainability Issues*

The sustainability issues were identified at the scoping stage, and have since been revised in light of updated baseline data. Whilst a detailed note of the issues and opportunities can be found in the Scoping Report, Table 3.1 presents a summary of key sustainability issues and inter-relationships between the issues, for example, between biodiversity (environment) and health (social) are discussed to provide an integrated understanding of the sustainability issues.

Table 3.1: Issues and Opportunities in Three Rivers

SEA Objective	Key Issues	Opportunities	Interrelationships
Biodiversity	<p>Three Rivers falls within Natural England’s natural areas “London Basin and Chilterns” and comprises of 5 Sites of Special Scientific Interest (SSSIs) and 9 Local Nature Reserves</p> <p>Although the SSSIs are considered to be within or close to Natural England PSA targets, they may be under pressure due to the high housing targets the district should fulfil.</p>	<p>Protect and improve existing habitats, Green Infrastructure</p> <p>Compensate features lost to development where loss is completely unavoidable.</p> <p>LDf to promote the use of management agreements for designated sites, where this can be linked to development.</p> <p>Minimise fragmentation of wildlife habitats as a result of development</p>	<p>A healthy natural environment improves quality of life. Provides economic benefits through attracting inward investment and increased revenue through tourism.</p> <p>The diversity of habitats and species enriches people’s lives.</p> <p>Economic growth if undertaken unsustainably could adversely impact upon these assets.</p>
Water	<p>Chemical water quality in R.Chess, R. Colne and R.Ver are very good, as of 2008 data</p> <p>Biological water quality declined between 1995 and 2008</p> <p>Phosphate concentrations have decreased between 1995 and 2004</p> <p>Water resources are over abstracted in the region</p>	<p>Improve river quality by e.g. using sustainable drainage schemes</p> <p>Consider overall siting of development schemes in order to minimise potential effects on water quality</p> <p>Encourage the use of Sustainable Urban Drainage in new developments.</p> <p>Ensure efficient use of water resources in development schemes, this includes the use of recycled water.</p> <p>Ensure new polluting processes are located in areas where groundwater is not vulnerable.</p>	<p>Climate change is resulting in more extreme weather conditions and will heighten flood risk and demands on water resources.</p> <p>Negative synergy likely for flora and fauna when water bodies with low water flow combined with poor quality water</p>
Soil	<p>Southwest Hertfordshire’s soils are mainly classified as grade 3 agricultural land, with some graded 2 soils. A significant proportion is covered by urban areas.</p>	<p>Protect best and most versatile land</p> <p>Promote good soil handling practice</p>	<p>Soil resources are key to sustaining the agricultural economy.</p>
Climatic	<p>Domestic CO2 emissions per capita are above the regional average</p>	<p>Ensure development proposals do not exacerbate flooding elsewhere in catchment by adopting the sequential approach to site</p>	<p>Climate change is likely to affect water resources (supply and demand), alter habitats, affect air quality and public health</p>

SEA Objective	Key Issues	Opportunities	Interrelationships
Factors	Greenhouse emissions in UK are increasing	<p>selection advocated in PPG25</p> <p>Promote the use and generation of renewable energy and promote energy efficiency</p> <p>Sustainable Urban Drainage – porous surfaces, greenspace, wetlands, flood storage areas, urban forestry.</p> <p>Opportunity to decrease greenhouse gas emissions through reduced reliance on the private car</p>	and increase flood risk. These could all adversely impact upon the borough's economy.
Air	<p>Pollutant levels decreased between 2001 and 2010.</p> <p>Levels of NO_x and NO₂ in both 2001 and 2005 can be seen to be above the levels for the East of England, but below the national target level of 40 µg/ m³</p> <p>Increased air pollution from growth traffic and congestion</p> <p>Consists of 5 Air Quality Management Areas</p>	<p>Ensure potentially polluting processes incorporate pollution minimisation measures</p> <p>Promote the development of Green Travel Plans</p> <p>Improve cycle and pedestrian routes and links</p> <p>Promote low emission vehicles (e.g. hybrids)</p>	<p>Air quality influences human health which affects quality of life and also economic activity.</p> <p>Greenhouse gas emissions could lead to significant climate changes which could have significant implications for other aspects of quality of life.</p> <p>Local residents and businesses experience air quality at the local level, which affects health and amenity.</p>
Material Assets	<p>The percentage of household waste recycled increased between 2001 and 2009</p> <p>Percentage of houses built on previously developed land is high</p>	<p>Support a reduction in the amount of waste deposited in landfill</p> <p>Support alternative methods of waste management, e.g. minimisation and recycling, both for general and construction waste</p> <p>Encourage re-use and recycling of construction waste in development schemes through the use of planning conditions.</p>	Material assets include resources such as land, building materials and other resources which are non-renewable. The topic is concerned with the efficient use of resources, including re-use of brownfield sites and sustainable waste management.
Cultural Heritage	<p>Historic assets include:</p> <p>Three scheduled monuments (Oxhey Hall Moated Site, Roman Villa on Moor Park Golf Course, The Manor of the More);</p>	Recognise the importance of cultural heritage and archaeological features and the importance of regenerating and re-using important buildings, particularly those listed as 'buildings at risk'	<p>Cultural heritage contributes to the overall diversity and value of the landscape.</p> <p>Also provides economic benefits and is a source of enjoyment and entertainment for</p>

SEA Objective	Key Issues	Opportunities	Interrelationships
	351 listed buildings; 22 Conservation areas	Encourage strong and robust design standards for new development that respects cultural heritage of the development area.	the population.
Landscape	Light pollution is rapidly increasing and tranquillity is rapidly decreasing in the East of England. Three Rivers falls into three Landscape Character Areas, “Northern Thames Basin”, “Thames Valley” and “Chilterns”	Recognise value of all landscapes, not just designated sites Monitor light pollution levels; new lighting should be selected which minimises light pollution	An attractive landscape improves quality of life which in turn could contribute to increase inward investment.
Population & Human Health	Three Rivers population is growing 74% of Three Rivers population state to be in generally good health	Ensure adequate housing, facilities and infrastructure whilst protecting and enhancing the local environment. Encourage mixed use. Promote the dual use of facilities, e.g. post office incorporated in community hall etc. Need to attract and retain people with the right skills. Ensure provision of a range of housing types to satisfy demand including affordable housing and mixed use developments and a range of housing types of varying sizes. Encourage sustainable transport modes Explore using planning obligations to help secure an appropriate range of facilities.	Benefits of improved human health include employment provision and contribution to the local economy, training, research opportunities, reduced burden on social services and public finances.
Social Factors	A relatively high percentage of homes in Three Rivers were recorded as unfit for living at 2003/2004. (7% above average, 34% of the areas Local Authority homes were classified as unfit.) Crime rates (violent) are comparatively lower than the rest of England whereas Race related crime at Three Rivers is in the top quartile of England. Additional growth is likely to increase the pressure on affordable housing in the borough	Provision of affordable housing in accessible locations Adopt ‘planning out crime’ design principles, e.g. encourage overlooking of space etc Ensure appropriate housing provision for the elderly, e.g. through Life-long homes located close to key amenities and public transport Consider using voluntary agreements in relation	Poor health and well-being will adversely impact upon economic growth in the borough. Increasing employment and quality education opportunities will contribute to economic prosperity

SEA Objective	Key Issues	Opportunities	Interrelationships
	<p>Three Rivers has recorded a high proportion of local authority buildings that are classified as suitable for and accessible by disabled people.</p> <p>Levels of deprivation in Three Rivers is not significant, however few super output areas in the District are considered close to top 20% most deprived in England. In 2004 the level of educational achievement in all areas from Key Stage 2 to average A/AS level points was above the rate for the East of England</p>	<p>to local recruitment and training.</p> <p>Ensure provision of a range of education facilities. Planning obligations used to enhance existing educational facilities</p> <p>Use planning obligations to secure improvements to public transport.</p> <p>Encourage healthy forms of travel and exercise, e.g. walking/cycling and access to leisure and recreational facilities.</p> <p>Provision of a range of employment opportunities in accessible locations</p>	
Economic Factors	<p>Economic activity rate has increased between 2000 and 2005</p> <p>Three Rivers has managed to achieve the lowest recorded figure of Unemployment in Hertfordshire, its claimant count has fallen to 6.1% of Hertfordshire's total, a 1.3 decline</p> <p>Employment in the district was expected to grow by ½% pa over 2003-2009</p> <p>GVA in the district was expected to underperform the county, with growth of 2¾% pa compared with around 3% pa over 2003-2009.</p> <p>The number of VAT registered businesses increased every year during 2005-2007</p>	<p>Provide a range of employment sites, including ones that will be attractive to inward investment.</p> <p>Provide incubator units and units with shared facilities, e.g. reception and meeting facilities etc. LDF to identify suitable locations.</p> <p>Planning obligations used to enhance existing educational facilities</p> <p>Provide a range of employment sites that will be attractive to knowledge based industries</p> <p>Support employment opportunities in higher value activities, e.g. knowledge based industries.</p>	<p>Social considerations and quality of life will impact on employment opportunities and ability to attract inward investment</p>

4 SEA/SA Objectives and Framework

4.1 *Introduction*

Current guidance on SA/SEA of land use and spatial plans advocates the use of objectives in the appraisal process. This section provides an outline of the objectives, criteria and indicators, organised under a SA Framework that was developed during the Scoping Stage and used in subsequent stages to appraise the DPD. This framework includes broad sustainability objectives, criteria explaining the broader objective in a more localised manner and indicators.

In order to facilitate legibility and ease of understanding and use, the sustainability objectives, criteria and indicators have been set out in the form of an Appraisal Framework, outlined in Table 4.1. This approach is recommended in government good practice on carrying out environmental and sustainability appraisals⁶. This Appraisal Framework was the basis for the appraisal of all the DPDs. An explanation of the methodology for formulating the Appraisal Framework is presented below.

4.2 *Three Rivers District Core Strategy SEA/SA Framework*

The sustainability objectives outlined in the Appraisal Framework have been arranged under SEA/SA topics. The topics that have been selected relate to the same topics listed in: Annex I of Directive 2001/42/EC of the European Parliament on ‘the assessment of the effects of certain plans and programmes’ (the SEA Directive); and Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents, ODPM, November 2005.

The topics used are set out in the first column (Biodiversity, Water, Soil, Climatic Factors, Air, Material Assets, Cultural Heritage, Landscape, Population & Human Health, Social Factors and Economic Factors).

4.2.1 *Sustainability Objectives (Column 1)*

As this SA is a joint commission by Three Rivers District Council, Dacorum Borough Council, St. Albans District Council and Watford Borough Council, a sub-regional perspective (West Hertfordshire) was adopted for this study. Therefore the SA objectives have focussed on those issues, which are directly relevant to South West Hertfordshire and the scope of the DPDs. They are based on the sustainability objectives presented in the “Sustainable Development Framework for the East of England”⁷.

⁶ A Practical Guide to the Strategic Environmental Assessment Directive. DCLG, August 2006

⁷ A Sustainable Development Framework For The East of England, The East of England Regional Assembly, October 2001

4.2.2

Criteria (Column 2)

Following on from the identification of objectives, a range of associated criteria and indicators were identified to provide further clarity in respect of future development directions as well as to assist in the appraisal process. The criteria were based on the key sustainability objectives outlined in the “Sustainable Development Framework for the East of England”. They focus specifically on the items which are of direct relevance to the DPDs.

4.2.3

Potential Assessment Indicators (Column 3)

Indicators are the means by which the environmental and sustainability performance of the LDF can be assessed.

The indicators outlined in the Appraisal Framework were primarily derived from the Sustainable Development Framework for the East of England supplemented with other relevant indicators already identified at the European, national, regional and local level.

Table 4.1 Core Strategy SA Framework

Objective	Criteria	Indicative Indicators
Biodiversity		
<p>1. To protect and enhance biodiversity at all levels, including the maintenance and enhancement of Biodiversity Action Plan habitats and species in line with local targets</p>	<p>Avoid damage to designated wildlife sites (international, national and local) and protected species and achieve favourable condition</p>	<p>Herts QoL WH6 Condition of SSSIs (contextual indicator) and HBRC number, area and condition of SSSIs</p>
	<p>To support farming and countryside practices that enhance biodiversity and landscape quality by economically and socially valuable activities (e.g. grazing, coppicing, nature reserves)</p>	<p>HBRC Change in areas designated for their intrinsic value HBRC Change in Priority Habitats</p>
	<p>To restore the full range of characteristic habitats and species, to achieve BAP targets, maintain or enhance other natural assets (e.g. reedbeds) and to secure the regional stock above viable levels.</p>	<p>Herts QoL WH3 Wildlife Sites and HBRC number and area of Wildlife Sites HBRC no. of Wildlife Sites lost or degraded by development or gained/secured by agreements</p>
	<p>To create or re-create habitats, to ensure sustainable and linked species populations.</p>	<p>Herts QoL WH1 Water voles Herts QoL WH2 Birds (contextual indicator) Herts QoL WH4 Pipistrelle bats Herts QoL WH5 Butterflies</p>
	<p>To manage sustainably all woodland and protect existing woodland against conversion to other uses</p>	<p>HBRC distribution/change of key species in Herts HBRC distribution/change of protected species in Herts COI 8 Changes in areas and populations of biodiversity importance % woodland cover in District</p>
	<p>To recognise the social/environmental value of woodlands/orchards and other habitats of value particularly near urban areas</p>	<p>Percentage of wildlife sites accessible by sustainable modes of travel</p>
	<p>To encourage people to come into contact with, understand, and enjoy nature</p>	<p>Number of visitors to wildlife sites</p>
Water		
<p>2. Maintain and enhance water quality and limit water consumption to levels supportable by natural processes and storage systems, taking into account the impact of climate change</p>	<p>To regulate water supply to be within reasonable limits, and manage demand To raise awareness and encourage higher water efficiency and conservation. To develop and promote local water recycling initiatives for developments and buildings</p>	<p>Levels of awareness of water issues and the need for water saving (contextual indicator) Average per capita water consumption in new and existing development. Commercial water consumption</p>

Objective	Criteria	Indicative Indicators
	To encourage rainwater harvesting, to reduce new development needs	Proportion of water needs met by local water recycling in urban and rural areas Proportion of housing (existing and new development) with installed water efficient devices/water metres which includes on-site provision for rainwater re-use
	To improve quality and flow of rivers and reduce nitrate levels in groundwater	
	To reduce pollution by managing supplied water and effluents in an integrated way	
	To maintain or restore the integrity of the many water dependent wildlife sites in the region.	
3. Ensure that new development does not increase flood risk and protects or enhances the capacity & integrity of flood storage areas Ensure that development is capable of withstanding the effects of climate change	To avoid development from being located in areas at risk from fluvial flooding or storm surges taking into account of climate change	Household water use and peak demand Low flows in river
	To promote sustainable urban drainage systems to reduce flood risk and water loss from natural systems No development in undefended floodplains	% of water lost to leakage Number and severity of pollution incidents to surface water
	To promote design for more extreme climatic events, incorporating robust and weather resistant built forms	Length of river of good or fair quality Herts QoL WR3 River quality objectives EA Biological and chemical river quality (contextual indicator) Number and severity of pollution incidents to surface and groundwater Proportion of new roads served by swales, basins or infiltration trenches vs. conventional kerbs Total extent/ capacity of flood storage area Number of properties at risk from flooding Proportion of runoff from new developments which is

⁸ Sustainable Urban Drainage Systems (SUDS) are management practices and physical structures designed to drain surface water in a more sustainable way than conventional systems.

Objective	Criteria	Indicative Indicators
		directed into Sustainable Urban Drainage Systems ⁸
Soil		
4. Minimise development of land with the most agricultural value, and minimise the loss of soils to new development	To safeguard high quality agricultural land (Grades 1-2) from development	Amount of high quality agricultural land lost to development
	To limit the loss of soils to development	Area/percentage of contaminated land remediated Number of development sites having a policy to safeguard soils Area of proposed new developments on greenfield sites
Climatic Factors		
5. Reduce the impacts of climate change, with a particular focus on reducing the consumption of fossil fuels and levels of CO2	To minimise greenhouse gas emissions (particularly CO2) for instance through more energy efficient design and reducing the need to travel	Output of greenhouse gases and particularly CO2 and SO2 per local authority and per capita
	To adopt lifestyle changes to cope with climate change, such as promoting water and energy efficiency (through e.g. higher levels of home insulation)	NAIE Emissions of greenhouse gases (particularly CO2) per capita grouped per type of source BV 63 Energy efficiency - average SAP rating of authority dwellings BV 80a (i) Actual/'Typical' energy consumption LA buildings - electricity
	To encourage technological development to provide clean and efficient use of resources	BV 80a (ii) Actual/'Typical' energy consumption LA buildings - fossil fuels Herts QoL EN1 Energy efficiency in homes - overall reduction in CO2 emissions % Herts QoL EN2 Energy efficiency in public buildings
	To raise awareness of the potential of renewable energy to attract more investment	Weather-related insurance claims
	To encourage positive attitudes towards renewable energy schemes (e.g. wind and biomass)	Energy use per household
	To encourage planning authorities to take a more positive attitude towards renewable energy schemes, home insulation, and local community renewable energy schemes	Energy Efficiency rating for new buildings
	To encourage ways of mitigating the region's impact upon the global environment, such as cleaner and more efficient use of transport, supporting local markets to reduce the unnecessary movement of raw materials and food stuffs	Proportion of electricity generated from renewable sources
Encourage carbon sequestration (e.g. tree planting)	Proportion of total travel which is by car	
To encourage more efficient uses of energy, including product design, manufacturing processes, transport, and behavioural changes	Transports share of region's CO2 emissions	
To develop, adopt and ensure the effective use of built development design guides		

Objective	Criteria	Indicative Indicators
6. Ensure that development is capable of withstanding the effects of climate change	<p>tackling energy use, to provide homes and businesses with self-sufficient energy</p> <p>To promote design for more extreme climatic events, incorporating robust and weather resistant built forms</p>	<p>Freight transport: tonne/miles and empty lorry miles</p> <p>Air quality improvements measured against related illnesses</p> <p>Number of specific measures included in the layout which will provide climatic protection</p> <p>% of surfaces designed for water re-absorption</p>
Air Quality		
7. Achieve good air quality, especially in urban areas	<p>To reduce the need to travel by car through a combination of high quality transport alternatives, particularly public transport, walking and cycling networks, but also light rail, taxi, and water</p> <p>To develop the East of England as Britain's premier cycling region, and promote safe routes to schools, greenways and quiet lanes</p> <p>To promote Green Transport Plans, including car pools, car sharing, choice of low fuel and non-fossil fuel powered vehicles</p> <p>To improve opportunities for tourists not to have to drive, such as public transport, green lanes, and cycling</p> <p>To support energy saving and clean fuel initiatives for all forms of powered transport.</p> <p>To encourage intelligent freight practices to transfer movements to rail and water, minimise empty lorry journeys, and promote local distribution of local food products.</p> <p>To plan for a pattern of settlement and economic activity that reduces dependence on the car and maintains access to work and essential services for non-car-owners</p> <p>To raise public awareness of the need for lifestyle changes (e.g. to reduce dependence on the car)</p> <p>To encourage use of information technology and e-commerce as an alternative communication link to travel.</p>	<p>NAIE Levels of key air pollutants (e.g. Benzene, 1,3-Butadiene, CO2, Lead, NO2, PM10, SO2) within the local authority area, and within the East of England</p> <p>Herts QoL QoL27 Air Pollution Herts QoL TR1 Volume of motor traffic Herts QoL TR2 Modal split</p> <p>Number of days when air pollution reported as moderate or higher within the local authority area</p> <p>Number of designated AQMAs</p> <p>Proportion of public transport vehicles with emissions compliant with Euro 3/ Euro 4 standards</p> <p>Average distance over which building materials are transported</p> <p>Proportion of essential trips possible by public transport</p> <p>Proportion of road network benefiting from public transport priority measures</p> <p>Public transport choice (in terms of routes and modes)</p>

Objective	Criteria	Indicative Indicators
	<p>To address radial (from London) dominance of routes and promote east-west links, including rail</p> <p>To make best use of and support adequate maintenance of existing strategic road and rail infrastructure, to overcome congestion</p>	
Material Assets		
8. Maximise the use of previously developed land and buildings, and the efficient use of land	<p>To concentrate development through the reuse of previously developed land and buildings and by urban extensions only where the development of greenfield land is unavoidable</p> <p>To encourage local authorities to prepare integrated strategies which identify and bring back into productive use contaminated, vacant, and derelict land and buildings, taking into account any nature conservation or historic interest that they might have developed</p> <p>To maximise the efficient use of land by such measures as higher density development, mixed use</p>	<p>COI 1(a) & (c) Amount of land developed for employment by type and percentage which is on previously developed land</p> <p>COI 1(b) Amount of land developed for employment by type, which is in development and/or regeneration areas defined in the LDF</p> <p>COI 2(b) Percentage of new and converted dwellings on previously developed land</p>
9. To use natural resources, both finite and renewable, as efficiently as possible, and re-use finite resources or recycled alternatives wherever possible	<p>To safeguard reserves of exploitable minerals from sterilisation by other development</p> <p>To encourage maximum efficiency and appropriate use of aggregate materials</p> <p>To manage aggregate outputs to meet regional needs in a sustainable manner</p> <p>To prevent mineral extraction where environmental/amenity impacts would be unacceptable (e.g. to communities, wildlife, semi-natural habitats, landscape, archaeology or groundwater)</p> <p>To restore to a high standard exhausted or abandoned mineral workings maximising opportunities to create new habitats, and ensure effective after-use management</p> <p>To promote the use of recycled materials particularly in the construction industry, to avoid wasteful use and transport of resources</p> <p>New development to incorporate renewable and recycled materials in buildings and infrastructure, or materials of lower environmental impact or locally sourced</p>	<p>COI 2(c) Percentage of new dwellings completed at: less than 30, between 30 and 50 and above 50 dwellings per hectare</p> <p>Herts QoL LU3 Residential development on previously developed land</p> <p>BV106 % of new homes built on previously developed land</p> <p>Amount and percentage of secondary and recycled materials (including minerals and aggregates) used in construction</p>

Objective	Criteria	Indicative Indicators
	materials where possible	BV82a Household waste - percentage recycled BV82b Household waste - percentage composted BV82c Household waste - percentage of heat, power and other energy recovered BV82d Household waste - percentage landfilled BV84 Kg of household waste collected per head Herts QoL WS1 Household waste per capita Herts QoL WS3 Percentage of waste recycled Proportion of developments which incorporates design measures to facilitate sustainable household waste management
	To minimise the production of waste, and then promote re-use, recycling, composting, alternative treatment options and energy recovery before resorting to landfill, taking into account the Best Practicable Environmental Option (BPEO)	
	To promote a shift from a culture of cheap landfill to public acceptance of well-sited well-run alternatives (e.g. recycling and composting facilities)	
	To encourage easily accessible recycling systems and develop markets for recyclable materials building upon the work of the Waste and Resources Action Programme, and promote and support local strategies and enterprises (e.g. Re-Made schemes)	
	To promote education and demonstration projects for Combined Heat & Power (CHP) and waste recovery and recycling	
To promote waste awareness education programmes in schools and the community		
Cultural Heritage		
10. To maintain and enhance historic and cultural assets	To safeguard and enhance the historic environment, and re-create important historic features	Number of Listed Buildings at Risk Number and condition of Scheduled Ancient Monuments (SAMs) Number and condition of Registered Parks and Gardens Number of Conservation Areas % of Conservation Areas with character appraisals Percentage of historic buildings and structures open to the public Numbers of historic assets taken from the 'at risk' category Number of historic assets restored/reused Number of locally important buildings to be demolished
	To promote local distinctiveness and pride in local identity by repairing historic buildings and areas, and by encouraging the re-use of valued buildings	
	To encourage thoughtful design, high density housing and mixed-use developments, which respects their context, reflecting local distinctiveness	
	To promote public education and enjoyment of the built heritage and archaeology	

Objective	Criteria	Indicative Indicators
		Changes inconsistent with historic landscape Quality in the built environment as measured by public perception surveys A measure of increased public access or interpretation of sites
Landscape		
11. Conserve and enhance the landscape and townscape, encouraging local distinctiveness	To protect and enhance the district's countryside	CQC Changes inconsistent with (local) landscape character
	To protect dark skies from light pollution, and promote low energy and less invasive lighting sources, considering the balance between safety and environmental impacts	Area of designated landscapes affected by/lost to development CPRE Light pollution and tranquillity mapping
Population and Human Health		
12. Encourage healthy lifestyles and reduce the health impacts of new developments	To reduce the need for travel by promoting mixed use development	Length and condition of cycle / footpath network
	To promote the health advantages of walking and cycling, and community based activities	Number and condition of sports facilities
	To include measures to reduce road traffic accidents	COI 4(c) Percentage of eligible open spaces managed to green flag award standards
	To improve the quality and quantity of publicly accessible open space.	Percentage of population with access to public open space
	To identify, protect and manage open space, such as rivers and canals, parks and gardens, allotments and playing fields, and the links between them, for the benefit of people and wildlife	Herts QoL NO1 Noise complaints received per 1000 population
	To narrow the income gap between the poorest and wealthiest parts of the region and to reduce health differential	Herts QoL NO2 Source of noise complaints
	To make greater use of IT links to specialists by GPs for initial consultations	
	To promote better public transport links to major hospitals	
13. To deliver more sustainable patterns of location of development, including employment and housing	To include specific design and amenity policies to minimise noise and odour pollution, particularly in residential areas	
	To use strategic environmental assessment and environment impact assessment techniques to minimise noise	
	To reduce the need to travel through closer integration of housing, jobs and services	
Social Factors		
14. Promote equity & address social	To include measures which will improve everyone's access to high quality health,	Index of Multiple Deprivation

Objective	Criteria	Indicative Indicators
exclusion by closing the gap between the poorest communities and the rest	education, recreation, community facilities and public transport	accessible by disabled people
	To ensure facilities and services are accessible by people with disabilities	BV170a Number of visits to/usage's of museums per 1,000 population
	To encourage development of sporting opportunities.	BV 117 Visits to libraries Number per capita
	To encourage businesses to access learning and skills for prosperity	Herts QoL SE3 Transport: access to public services
	To encourage people to access the learning and skills they need for high quality of life	COI 3(b) Percentage of new residential development within 30 minutes of a GP, hospital, primary & secondary school, employment and major health centre
	To increase promotion and use of online learning within the workplace	Herts QoL ED1 GCSE performance
	To give greater focus to learning and skills in regeneration areas	Herts QoL ED2 Adult education level 2*
To concentrate efforts on the provision of basic skills at community and family level	Herts QoL QoL9 Young people with Level 2 qualifications BV38 % of pupils achieving 5 or more GCSEs at grades A* - C or equivalent % pensioners in households with below average income % children in households with below have half average income	
15. Ensure that everyone has access to good quality housing that meets their needs	Promote a range housing types and tenure, including high quality affordable and key worker housing	COI 2(d) Affordable housing completions
16. Enhance community identity and participation	To improve the provision and condition of affordable housing	BV184a LA homes which were non-decent at start of year
	To make the political process relevant to all sectors of communities by reinforcing local government and improving participative democracy, through proactive dialogue and community strategies	BV184b Change in proportion on non-decent homes (negative means deterioration in stock)
	To acknowledge diversity, and to help communities, including ethnic minorities and others potentially excluded, to develop in their preferred way - if possible at street level	Herts QoL HS1 Affordable housing (house price/earnings affordability ratio) Herts QoL HS2 Statutorily unfit homes Herts QoL HS3 Homelessness
	To encourage local authorities and other partners to develop local cultural strategies which link to and support the Regional Cultural Strategy To recognise the value of the multi-cultural/faith diversity of the peoples in the	Number of community facilities per 10,000 population Town centre health checks

Objective	Criteria	Indicative Indicators
	<p>region</p> <p>To improve the quality of life in urban areas by making them more attractive places in which to live and work, and to visit</p> <p>To encourage high quality design in new development, including mixed uses, to create local identity and encourage a sense of community pride</p> <p>To make a concerted effort to clean up and discourage litter, graffiti, dog mess, and encourage community ownership over the issue through education and awareness</p>	<p>CABE design review of schemes with significant impacts (if conducted)</p>
17. Reduce both crime and fear of crime	<p>To tackle the root causes of crime, for example by increasing education and qualification levels of the workforce</p> <p>To reduce offending, particularly violent crime and burglary, year on year</p> <p>To reduce drug use and drug-related crime</p> <p>To support government-sponsored crime/safety initiatives, maximising the use of all tools available to police, local authorities and other agencies to tackle anti-social behaviour</p> <p>To improve attendance at school</p> <p>To prevent environmental crime</p> <p>To increase the use of community beat officers</p> <p>To plan new development to help reduce crime and fear of crime through the design of the physical environment, and by promoting well-used streets and public spaces</p> <p>To support citizenship awareness and anti-racism initiatives</p>	<p>BV126a Burglaries No. per 1,000 households</p> <p>BV127a Robberies per 1000 population and percentage detected</p> <p>BV127b violent offences committed in a public place per 1,000 population</p> <p>BV127c violent offences committed in connection with licensed premises per 1,000 population</p> <p>BV127d violent offences committed under the influence per 1,000 population</p> <p>BV128a Vehicle crimes No. per 1,000 population</p> <p>BV174 Number of recorded racial incidents per 100,000 population</p> <p>Fear of crime statistics</p>
Economic Factors		
18. Achieve sustainable levels of prosperity and economic growth	<p>To support the Regional Economic Strategy aim of making the East of England a world-class economy, renowned for its knowledge base, the creativity and enterprise of its people and the quality of life of all who live and work here</p> <p>To promote and support economic diversity and particularly green technology initiatives within the manufacturing sector</p> <p>To support and promote key industry sectors, small and medium sized enterprises, community-based enterprises, and leading edge infrastructure and high quality environment</p> <p>To support the development of micro-businesses, community economic development and local investment</p> <p>To encourage investment in rural tourism initiatives, including farm diversification</p> <p>To plan and manage tourism development and activities to encourage year-round</p>	<p>Herts QoL EC1 Percentage rise in GVA</p> <p>Herts QoL UN1 Long term unemployment</p> <p>Herts QoL QoL1 Proportion of people of working age in employment</p> <p>COI 1(f) Amount of employment land lost to residential development</p> <p>Annual average investment by manufacturing industry as % of GDP</p> <p>% of businesses recognised as Investors in People</p>

Objective	Criteria	Indicative Indicators
	tourism, and more sustainable destinations, products and businesses (e.g. through use of a 'green audit kit')	Adoption of Environmental Management Systems (ISO 14001. EMAS) and 'Green Accounting' by businesses
19. Achieve a more equitable sharing of the benefits of prosperity across all sectors of society and fairer access to services, focusing on deprived area in the region	To encourage local provision of, and access to, jobs and services	Number and survival of business start-ups and business start up failures
	To enhance local economies giving access to appropriate, rewarding paid work	
	To improve the competitiveness of rural businesses by promoting innovative means of service delivery (e.g. ICT, multi-purpose community centres)	Index of local deprivation Rate of growth of businesses (urban and rural)
	To promote the restructuring and diversification of agriculture such as establishing alternative rural businesses, including re-use of farm buildings as workspace to service the local area	Proportion of working age people in work, by area, age band, gender and ethnicity Dependency of working –age people in workless households Woman in public appointments and senior positions Herts QoL QoL5 The percentage increase/decrease in the number of local jobs
20. Revitalise town centres to promote a return to sustainable urban living	To complete telecommunications links where there are network gaps	In/out commuting balance
	To restore the role of market towns as centres for sustainable development providing services, housing and employment, drawing on the principles of urban renaissance. To encourage well-designed mixed-use developments in the heart of towns and cities, create viable and attractive town centres that have vitality and life, and discourage out-of-town developments	COI 4(b) Percentage of completed retail, office and leisure development in town centres Fuel poverty Proportion of new retail in town centres versus out-of-town Proportion of population living in town centres

4.3

Compatibility between SEA/SA Objectives and Strategic Plan Objectives

At the beginning of the LDF process, a broad set of Core Strategy objectives were developed. At the Scoping stage, these CS objectives were cross-referenced against the SA/SEA objectives to identify potential conflicts and compatibility between individual SA and CS objectives. As these CS objectives have now been refined and presented as Strategic objectives in the Preferred Options DPD, this matrix has now been updated in Table 4.2.

Component parts of the CS Strategic objectives are:

1. Sustainable development patterns
2. Efficient use of land
3. To reduce environmental impact
4. Balancing homes and jobs
5. Increase affordable housing
6. Facilitate provision of services and infrastructure
7. Deliver improved/integrated transport and reduce need to travel
8. Maintain shops and services in District centres
9. Conserve and enhance countryside and biodiversity
10. Conserve and enhance historic environment
11. Provide opportunities for leisure, arts, sport and recreation
12. Promote safety and security in new development

Table 4.2 DPD Strategic Objectives vs. Sustainability Objectives compatibility matrix

SA Objectives (Abridged)		Core Strategy objectives											
		1. Sustainable development	2. Efficient use of land	3. To reduce environmental impact	4. Balancing homes and jobs	5. Increase affordable housing	6. Facilitate provision of services, infrastructure	7. Deliver improved/integrated transport /reduce need to travel	8. Maintain shops and services in District centres & smaller settlements	9. Conserve & enhance the countryside and biodiversity	10. Conserve and enhance historic environment	11. Provide opportunities for leisure, sport and recreation	12. Promote safety and security in new development
SA objectives	1. Biodiversity												
	2. Water quality												
	3. Flood risk												
	4. Soils												
	5. CO ₂ emissions												
	6. 'Climate change proof'												
	7. Air quality												
	8. Use of brownfield land												
	9. Resource efficiency												
	10. Historic and cultural assets												
	11. Landscape, townscape												
	12. Health												
	13&19. Sustainable development patterns, accessibility												
	14. Equity and social exclusion												
	15. Good quality housing												
	16. Community identity and participation												
	17. Crime												
	18. Sustainable prosperity and growth												
	20. Revitalise town centres												

Potentially incompatible Compatible Uncertain No links

4.3.1

Summary and Conclusions

The Compatibility Matrix indicates that overall, the CS objectives are compatible with the SA/SEA objectives. The assessment indicates that there are no conflicts and some uncertainties over the compatibility between the SA/SEA and CS objectives. It is commendable that the CS objectives have taken into account key environmental, economic and social issues and the policies contained in the CS elaborate on ways to achieve these objectives.

The majority of uncertainties exist between the CS objectives, “Promote opportunities for leisure, sport and recreation” and “Deliver improved/integrated transport/reduce need to travel.” and a number of the SA/SEA objectives. Although the implementation of these CS objectives will have social and economic benefits the impacts on the environment may be neutral or negative, depending on the details within the CS. It should be noted that this compatibility matrix is drawn based on information discussed under the Strategic Objectives section, and is only an indicative of the compatibility aspects between the CS and SA objectives, to orient the reader towards potential compatibility and conflicts. Results of this matrix are likely to change based on details discussed under each CS policy that supports the strategic objectives. A detailed sustainability assessment of each policy contained in the CS is presented in Appendix 6, and results of this assessment discussed in Chapter 6.

5 Core Strategy Issues and Options

5.1 *Introduction*

Three Rivers District Council consulted members of the public, statutory authorities and other relevant stakeholders on the Core Strategy DPD - Initial Issues and Options Report in June 2006 and Supplemental Issues and Options Paper in July 2007. This report was accompanied by the Core Strategy Issues and Options SA working note, which documented results of the sustainability appraisal of the Initial Options and Additional Issues and Options paper. Key results of this appraisal are reiterated in this section in Table 5.1

5.2 *Initial Issues and Options Assessment Results*

The Issues and Options Paper performs well against many of the SEA/SA objectives. The commitment to energy efficiency and promotion of sustainable design is considered particularly significant as this will help meet objectives relating to climate change and natural resources.

The initial Issues and Options Report listed 14 Issues and contained alternative options for each Issue. Overall the initial Issues and Options Paper were found to perform well against many of the SEA/SA objectives. Its commitment to energy efficiency and promotion of sustainable design was considered particularly significant as they will help meet objectives relating to climate change and natural resources. Table 5.1 summarises the Issues and Options SA. See Appendix 4 for the I&O SA Report.

5.3 *Supplemental Issues and Options*

Following some revisions and additions to the Issues and Options Paper, a Supplemental Issues and Options Paper was produced in July 2007 and subject to consultation. The Supplemental Issues and Options paper was developed to take account of following gaps identified within the 2006 Core Strategy Issues and Options Paper:

- The Generic Development Control Policies
- The Implementation and Monitoring Strategy
- Strategic Transport Issues

In addition, three changes were made to the original 2006 Core Strategy Issues and Options Paper due to the publication of Planning Policy Statement 3 and the revision of the Regional Spatial Strategy, both in December 2006. These changes were:

- Additional housing development options
- Broad locations for employment
- Broad locations for retail development

These options were further subject to an assessment on sustainability and results produced as a Core Strategy Supplemental Issues and Options- SA Working Note in July 2007. Refer Appendix 5 for actual Supplemental Options SA Working Note.

Key to the Initial Options Assessment is as follows:

Figure 5.1 Assessment key

Symbol	Description
++	Very sustainable - Option is likely to contribute significantly to the SA/SEA objective
+	Sustainable - Option is likely to contribute in some way to the SA/SEA objective
0	Neutral – Option is unlikely to impact on the SA/SEA objective
?	Uncertain – It is uncertain how or if the Option impacts on the SA/SEA objective
-	Unsustainable – Option is likely to have minor adverse impacts on the SA/SEA objective
--	Very unsustainable – Option is likely to have significant adverse impacts on the SA/SEA objective

Table 5.1 Initial Issues and Options – Sustainability Appraisal Summary

Issues and Options (abridged)	1. Biodiversity	2. Water Quality	3. Flood risk	4. Soils	5. CO2 emissions	6. 'Climate Change proof	7. Air Quality	8. Use of brownfield land	9. Resource Efficiency	10. Historic & Cultural assets	11. Landscape & Townscape	12. Health	13. Sustainable Patterns & 19. Accessibility	14. Equity & Social Exclusion	15. Good Quality Housing	16. Community Identity & Participation	17. Crime	18. Sustainable Prosperity & Growth	20. Revitalise town centres
SEA Objective																			
KEY ISSUE 1: Overarching Spatial Strategy; balancing homes and jobs and protecting the green belt 1a) Provide required number of new homes within current policy framework.	++	-	?	++	++	?	++	++	-	+	?	++	+	+	+	+	+	+	++
1b) If required new homes cannot be delivered through option 1a) allocate sites on surplus employment land	++	-	?	++	?	?	?	++	0	+	?	+	?	?	?	0	+	+	++
1c) If required new homes cannot be achieved through Option 1a), promote mixed-used development on surplus employment land.	++	-	?	++	+	?	+	++	0	+	?	++	+	?	?	0	+	++	++
KEY ISSUE 2: Making efficient use of land whilst protecting character 2. Require housing development to: a) make full & effective use of land	+	+	?	+	?	?	?	-	0	++	++	+	-	+	?	+	?	+	++
2 b) meet specific density guidelines set on settlement by settlement basis	++	0	?	+	+	?	+	+	+	?	?	?	+	+	+	?	?	+	++
2c) meet specific density guidelines based on accessibility	++	0	?	?	++	?	++	+	+	?	?	?	+	++	++	?	?	+	++
KEY ISSUE 3: The mix of new housing types and sizes 3. Require a range in the type/size of dwellings to be provided: a) to meet identified needs.	0	?	0	0	+	?	?	0	0	?	?	0	?	+	+	0	+	+	+

Issues and Options (abridged)	1. Biodiversity	2. Water Quality	3. Flood risk	4. Soils	5. CO2 emissions	6. Climate Change proof	7. Air Quality	8. Use of brownfield land	9. Resource Efficiency	10. Historic & Cultural assets	11. Landscape & Townscape	12. Health	13. Sustainable Patterns & 19. Accessibility	14. Equity & Social Exclusion	15. Good Quality Housing	16. Community Identity & Participation	17. Crime	18. Sustainable Prosperity & Growth	20. Revitalise town centres
SEA Objective																			
3b) on housing dev'tments of a certain size to meet identified housing needs.	0	?	0	0	+	?	?	0	0	?	?	0	?	+	+	0	+	+	+
KEY ISSUE 4: Affordable Housing																			
4a) Seek the provision of affordable housing on all dev'tments of 10 dwellings.	?	?	?	?	?	?	?	?	0	?	?	?	?	+	+	?	+	++	++
4b) Seek the provision of affordable housing on all dev'tments of 10 dwellings and increase the element of affordable housing sought from 30% to 40%.	?	?	?	?	?	?	?	?	0	?	?	?	?	++	+	?	+	++	++
4c) Allocate some residential sites wholly or mostly for affordable housing.	?	?	?	?	?	?	?	?	0	?	?	?	?	+	+	?	+	++	++
4d) Permit small scale affordable housing schemes within the village core areas of Bedmond & Sarratt	?	?	?	?	?	?	+	?	0	?	?	?	?	+	+	?	+	++	++
4e) Permit the redev'tment of non-residential sites wholly or mostly for affordable housing.	0	?	?	?	?	?	?	?	0	?	?	?	?	+	+	?	+	++	++
Key Issue 5 : Gypsy and Travellers																			
5a) Make additional provision in the district for gypsy and traveller pitches (extension of existing sites and/or the development of new sites).	?	?	?	?	0	?	+	?	0	?	?	0	+	++	+	+	+	+	0
5b) Determine any application for gypsy sites on the basis of a meeting range of criteria relating to the site.	?	?	?	?	0	?	?	?	0	?	?	0	?	++	++	+	+	+	0
Key Issue 6: Town and Local Shopping Centres																			
6a) Guide retail development within	0	0	?	+	+	?	+	+	0	++	+	+	+	++	0	0	0	+	++

Issues and Options (abridged)	1. Biodiversity	2. Water Quality	3. Flood risk	4. Soils	5. CO2 emissions	6. Climate Change proof	7. Air Quality	8. Use of brownfield land	9. Resource Efficiency	10. Historic & Cultural assets	11. Landscape & Townscape	12. Health	13. Sustainable D'ment Patterns & 19. Accessibility	14. Equity & Social Exclusion	15. Good Quality Housing	16. Community Identity & Participation	17. Crime	18. Sustainable Prosperity & Growth	20. Revitalise town centres
SEA Objective																			
existing shopping areas subject to appropriateness in line with character & function																			
6b) Greater protection of town and local shopping centres.	0	0	?	+	+	?	+	+	0	?	+	+	+	++	0	0	0	+	++
6c) Let market forces determine the mix of uses in within the town and local shopping centres.	0	0	?	+	+	?	+	+	0	?	?	+	+	+	0	0	-	+	+
6d) Plan for any additional retail floor space that is identified to meet need.	?	?	?	?	?	?	?	?	0	?	?	?	?	?	0	0	0	+	?
Key Issue 7: Delivering improved and more integrated transport systems	+	+	0	0	++	?	++	?	0	+	?	?	+	+	0	+	0	+	++
7a) Maintain existing car parking standards for new development.	+	+	0	0	++	?	++	?	0	+	?	?	+	+	0	+	0	+	++
7b) Review parking standards for new development.	?	?	0	0	?	?	?	?	0	?	?	?	+	+	0	+	0	+	+
7c) Review the car parking zones which determine how much parking should be provided as part of new development.	+	+	-	-	+	?	+	?	-	+	?	?	+	+	0	+	0	+	+
7d) Effectively promote alternative modes of transport and integration of systems.	++	+	0	0	++	++	++	?	0	+	+	+	+	+	+	+	+	+	++
7e) Require all developments, regardless of size to be located in accessible locations.	+	+	0	?	?	?	?	?	0	?	?	?	?	+	+	+	+	+	+
Key Issue 8: Increasing opportunities for good health through improved sport, leisure and open space and better access to	++	+	0	0	0	0	+	0	0	+	+	++	0	+	0	+	+	++	+

Issues and Options (abridged)	1. Biodiversity	2. Water Quality	3. Flood risk	4. Soils	5. CO2 emissions	6. Climate Change proof	7. Air Quality	8. Use of brownfield land	9. Resource Efficiency	10. Historic & Cultural assets	11. Landscape & Townscape	12. Health	13. Sustainable Development Patterns & 19. Accessibility	14. Equity & Social Exclusion	15. Good Quality Housing	16. Community Identity & Participation	17. Crime	18. Sustainable Prosperity & Growth	20. Revitalise town centres
SEA Objective																			
facilities																			
8a) Seek to fully implement, the actions identified as part of the open space and recreation study/strategy.																			
8b) Require residential dev'tment to contribute towards the provision of sports facilities, amenity and children's play space.	++	+	0	0	0	0	+	0	0	+	+	++	0	+	0	+	+	++	+
Key Issue 9: Protecting and maintaining biodiversity and landscapes																			
9a) Protect important wildlife sites & species & maintain the distinctive landscape character of the district	++	+	0	+	0	0	+	0	+	+	+	++	++	0	0	0	+	++	+
Key Issue 10: Achieving a measurable reduction of pollution and greenhouse gas emissions																			
10a) Development will be required to be designed and built in a sustainable manner in order to ensure that greenhouse gas emissions are minimized.	+	?	0	0	++	++	++	-	++	+	+	+	?	0	0	0	0	++	++
10b) All new major dev'tments will be required to ensure that at least 20% of their energy requirements are met on site through renewable energy sources.	+	?	0	0	++	++	+	+	++	+	+	+	?	0	0	0	0	++	++
Key Issues 11: A holistic approach to waste management																			
11a) All new dev'tments will be required to use an element of recycled or reclaimed materials as part of	+	+	0	0	++	+	++	0	++	?	?	+	0	0	0	0	+	++	+

Issues and Options (abridged)	1. Biodiversity	2. Water Quality	3. Flood risk	4. Soils	5. CO2 emissions	6. Climate Change proof	7. Air Quality	8. Use of brownfield land	9. Resource Efficiency	10. Historic & Cultural assets	11. Landscape & Townscape	12. Health	13. Sustainable Patterns & 19. Accessibility	14. Equity & Social Exclusion	15. Good Quality Housing	16. Community Identity & Participation	17. Crime	18. Sustainable Prosperity & Growth	20. Revitalise town centres
construction.																			
11b) All new development will be required to provide facilities on site to allow the recovery and recycling of materials wherever possible.	+	0	0	0	++	+	++	+	++	?	?	+	0	0	0	0	+	++	+
Key Issue 12: Facilitating the provision of services and infrastructure to meet the needs of existing and new development No Options at the present time																			
Key Issue 13: Reduce crime rates and fear of crime through good design, and improved access to training facilities provided. 13a) Promote 'safer by design' development and seek contributions from development towards police infrastructure and services.	0	0-	0	0	0	0	0	0	0	0	0	+	0	0	0	++	++	++	+
13b) Seek local recruitment and training policies with major employers coming into the District.	0	0	?	?	?	0	0	0	0	0	?	+	0	+	0	+	++	++	++
13c) Seek the provision of youth facilities as part of new development.	0	0	?	?	?	0	?	0	0	0	?	+	?	+	0	+	++	++	++
Key Issue 14: Conservation and heritage 14a) Protect and enhance and maintain the historic environment by resisting the loss of important buildings.	0	0	0	0	0	0	0	0	0	++	++	+	0	0	0	++	0	++	+

6 Core Strategy Preferred Options Assessment

6.1 *Preferred Options appraisal*

Further to the consultation of the Issues and Options and Supplemental Issues and Options, a draft Core Strategy Preferred Option was developed taking into consideration the consultation responses and the Sustainability Appraisal recommendations. A draft Core Strategy Preferred Option was prepared and was consulted upon with the members of the public and other stakeholders in February 2009. This document elaborated on the Spatial Vision, the Spatial Strategy, Place Shaping Policies, all of which were supported by Core Policies and Development Control policies. These policies were subject to a Sustainability Appraisal and the draft SA Report accompanied the draft Core Strategy Preferred Options Report during the February 2009 consultation. Appendix 7 presents summary of the first Core Strategy Preferred Options SA and the Detailed Assessment Matrices.

Whilst most of the results are similar to those presented in this Submission Version, the major difference is that the February 2009 version contained Development Control Policies in addition to the Place Shaping Policies and Core Policies. The SA made recommendations to amend or enhance certain policies, all of which are documented in Table 1.2 SA influence in the Core Strategy Development.

6.2 *Further Preferred Options appraisal*

In November 2009, the Core Strategy Preferred Options were amended with additional information and proposals for Strategic and Non-strategic sites in the District and alterations to Core Policy, CP2 (Housing supply). Following these changes, a Sustainability Appraisal of the Further Preferred Options was conducted and consulted upon in November 2009. Appendices 8 and 9 present SA of the Further Preferred Options SA.

7 Core Strategy Submission Draft Assessment

7.1 *Post Publication Version*

A Core Strategy Proposed Submission Addendum has been prepared taking into consideration all the iterations to the Preferred Options and changes to the Proposed Submission Core Strategy as a result of the revocation of regional plans. The Proposed Submission Addendum has now been appraised to prepare this report which will accompany the Core Strategy Proposed Submission Addendum.

7.2 *Assessment methodology*

A key output of the assessment of the Core Strategy Proposed Submission Addendum involves prediction of the effect of each CS policy against every sustainability objective. The assessment is expressed using the significance criteria outlined below.

Figure 6.1 Assessment significance criteria

Symbol	Description
++	Very sustainable - Option is likely to contribute significantly to the SA/SEA objective
+	Sustainable - Option is likely to contribute in some way to the SA/SEA objective
0	Neutral – Option is unlikely to impact on the SA/SEA objective
?	Uncertain – It is uncertain how or if the Option impacts on the SA/SEA objective
-	Unsustainable – Option is likely to have minor adverse impacts on the SA/SEA objective
--	Very unsustainable – Option is likely to have significant adverse impacts on the SA/SEA objective

The effects are assessed in terms of geographic and temporal scale, permanence of effect and likelihood of occurrence.

Geographic scale relates to predicting effects that will have an effect at a national, regional or local level.

Temporal scale relates to effects that are likely to be in the short term (0-10 years); medium term (10 -20 years) and long term (over 20 years).

Permanence criteria- Temporary or Permanent

Likelihood of occurrence – high, medium or low

7.3 *Mitigation and recommendations*

SEA Regulations requires the SA process to identify suitable mitigation measures for any significant adverse effects predicted for the policies. This is also an important component of the SA Report. In addition, recommendations to

enhance sustainability measures within the policy document are documented as part of this report. For ease of reference the mitigation and recommendations are incorporated under each policy assessment result outlined in Section 7.4.

7.4 *Summary of the Post Publication Version appraisal results*

Based on the methodology described above all CS policies were assessed and the results presented as detailed assessment matrix in Appendix 6. Table 6.1 summarises the sustainability assessment of the Spatial Vision, Spatial Strategy, Strategic Objectives, Place-shaping Policies and Core Policies.

The following sub-sections summarises results of each policy and presents recommendation for mitigation, if any significant adverse effect was predicted in the assessment. Measures to improve the sustainability quotient of the policies are discussed, as appropriate.

Based on the findings of the SA, the Vision, Spatial Strategy and other policies are likely to have majorly positive, and in some cases uncertain contribution to the progression of sustainable development in the Three Rivers District Council. No significant negative effect has been observed by the assessment; however where a policy may have some negative effect in a particular locality within the district, but is likely to have significant positive result for the whole district, only a mild positive score is allocated. An explanation to such adjustments to the scoring is provided in the detailed assessment matrix.

The assessment acknowledges that the Overarching Sustainable Development Policy sets out an approach for future development to have regard to economic, social and environmental aspects. Although supportive of pollution prevention or environmental quality enhancement, some reference to elaborate on how the lower level documents will translate these pollution prevention or resource management (water quantity) commitments is recommended to strengthen the case for sustainable development.

7.4.1 *Spatial Vision and Strategic Objectives*

The spatial vision and objectives score very well against most of the environmental, social and some of the economic objectives. The objectives are likely to have a significant positive impact on addressing factors that contribute to climate change, such as transport emissions as well as addressing the effects of climate change (resilience). This will also have positive effects on air quality and health. The vision and objectives aim to maintain the Green Belt, prioritise use of previously developed land and enhance landscape and townscape and use of brownfield land will be progressed. The objectives support resource efficiency, which is likely to have wider positive benefits for the region, and they are likely to uphold national objectives on waste and climate change issues.

By advocating a balance between homes and jobs the vision aims to reduce the need for people to commute out of the district. This will help achieve- sustainable

development patterns; enhance the district's economy; revitalise town centres and help reduce private vehicle usage and its associated pollutant emissions.

The vision aims to achieve good services and facilities for all, which will improve prospects of equity and social inclusion in the district. Providing for a prosperous, safe and healthy place to work and live will also progress several of the SA objectives, including crime, health and sustainable prosperity and growth.

Table 7.1 Assessment summary table – Post Publication Version

SA Objective	SA1 Biodiversity	SA2 Water	SA3 Flood risk	SA4 Soils	SA5 CO ₂	SA6 Climate change adaptation	SA7 Air quality	SA8 PDL usage	SA9 Resource efficiency	SA10 Cultural heritage	SA11 Landscape	SA12 Health	SA13 Sustainable development patterns & Accessibility	SA14 Social equity	SA15 Good quality house	SA16 Community participation	SA17 Crime prevention	SA18 Sustainable growth	SA19 Town Centre revitalisation
CS Policy																			
Vision	+	+	+	+	++	+	++	+	++	0	+	++	++	+	0	0	+	+	+
Spatial strategy	?	?	+	+	+/?	+	+/?	++	+	?	?	+/?	+	0	0	0	0	+	+
PSP1	+	+	+	+	+	+	+	++	+	++	+	+	++	++	+	?	?	+	++
PSP2	+	+	+	+	+	+	+	++	+	++	+	++	++	+	+	?	?	+	+
PSP3	+	+	+	+	+	+	+	++	+	++	+	++	++	++	+	?	+	+	+
PSP4	+	+	+	+	?	+	?	?	?	+	+	+	?	+	+	?	?	+	+
CP1	++	+	++	++	+	+	+	++	++	+	++	++	+	++	+	?	+	++	++
CP2	?	?	0	?	+	+	-	+	?	?	+	?	++	?	0	?	0	+	+
CP3	?	0	0	+	+	+	0	?	+	+	+	+	++	+	+	+	+	+	+
CP4	0	0	0	0	0	+	0	+	+	?	0	0	?	++	+	+	?	?	+
CP5	+	?	+	0	0	+	0	?	?	0	+	+	++	+	0	+	+	+	+
CP6	0	0	+	+	0	+	-	+	+	0	+	?	+	+	+	+	+	++	+
CP7	0	0	+	0	+	?	+	?	?	+	+	+	+	0	0	0	+	+	+
CP8	?	?	+	0	?	?	0	0	0	+	?	+	++	0	0	?	0	+	0
CP9	++	+	+	+	+	+	+	+	0	+	+	+	0	+	0	0	0	+	?
CP10	+	0	?	0	+	0	+	0	0	0	?	+	++	+	0	+	0	+	+
CP11	?	0	0	?	0	0	0	+	?	0	?	+	?	0	0	0	0	?	0
CP12	+	0	+	0	+	+	0	0	++	+	+	0	0	0	+	0	+	+	0
CP13	+	+	+	+	+	+	+	0	+	+	+	+	+	?	0	0	+	+	+

CP1 Sustainable development
 CP2 Housing supply
 CP3 Housing mix & density
 CP4 Affordable housing
 CP5 Gypsy & traveller provision

CP6 Employment & economic development
 CP7 Town centres
 CP8 Infrastructure & planning
 CP9 Green infrastructure

CP10 Transport
 CP11 Green belt
 CP12 Design of development
 CP13 Monitoring & delivery

7.4.2

Spatial Strategy

The spatial strategy advocates for intensification of land use in the short to medium term to be followed by development at the most sustainable locations on the edge of existing settlements to accommodate future housing and employment land requirements. This will involve slight revision to the Green Belt.

Significant positive effect is observed for use of brownfield land as the policy advocates land intensification. Transport improvements (including public transport) combined with this intensification is likely to have positive effects on CO₂ emissions, Air Quality and Health in the short term. However in the medium to long term, with development of settlement edge, there may be increased traffic leading to negative effects against these objectives.

While the strategy performs well under economic objectives and some environmental objectives, uncertainties prevail over its effect on some environmental objectives. The appraisal will require further information, including context specific details, in order to undertake assessment of the effects of the Spatial Strategy policy under certain themes. As the Core Strategy is a high level document, it is acknowledged that information at this level may not be available at this stage. For this reason, the effect of the strategy on Historic assets, Landscape & Townscape, Biodiversity and Water resources objectives is unknown.

7.4.3

PSP1- Development in the Principal Town (Rickmansworth)

The policy is likely to make a positive contribution to economic growth and enhance viability of the town centre.

It safeguards existing employment floor area and retail floor space, and where required provides opportunity for moderate increase retail space. By promoting mixed use development in the Town Centres, the policy is likely to bring vitality and viability of the town.

By conserving and enhancing the landscape and its associated biodiversity there may also be secondary positive effects on water quality and soils, for example through reduced urban encroachment and associated pollution.

Various public transport and cycling improvements discussed in the policy should help reduce air pollution and CO₂ emissions and thereby have health benefits. However, these SA objectives are addressed in other policies, such as policies CP1 (Sustainable Development).

PSP1 scores positively against many environmental objectives such as biodiversity, soil, resource efficiency, landscape and townscape, cultural heritage, air quality and

CO₂ emissions. Additionally CP1 (the overarching sustainable development policy) will interact with all spatial policies that is likely to bring synergistic positive effect on many themes including addressing issues relating to flood risk .

The policy is likely to achieve sustainable patterns of growth through its focus on PDL, focus on enhancing community interaction and improvements to public transport. The diverse range of town centre services will also have positive implications for equity and social inclusion as a greater range of services will be available, particularly in more deprived areas such as Penn Ward.

7.4.4 *PSP2- Development in the Key Centres (South Oxhey, Croxley Green, Abbots Langley, Chorleywood, Leavesden and Garston and Mill End)*

PSP2 is likely to bring significant positive effect on number of environmental and social objectives such as biodiversity, soils (use of PDL), cultural heritage, landscape and health.

In addition to the positive benefits to biodiversity and soils, preservation or enhancement to the landscape and its associated biodiversity, such as, Chorleywood House Estate and Oxhey Woods Local Nature Reserve, may bring secondary positive effects on water quality and soils, for example through reduced urban encroachment and associated pollution. Similar cumulative positive effect is likely from CP1 relating to flood risk and to climate change proofing of development.

Public transport and cycling improvements should help limit the cause of air pollution and carbon dioxide emissions an optimistic approach to respond to issues relating to the Air Quality Management Areas. Encouraging mixed-use development to reduce over-supply at Leavesden Aerodrome may help supply required housing, a positive; however key aspects to consider for future development will be:

- potential site constraints that may affect viability of residential development
- revisiting employment land requirement that may still be supplied by Leavesden Aerodrome

The policy score uncertain on the following objective

- Community identity and participation.

Overall PSP2 is likely to help revitalise the key centres through its provision of housing at South Oxhey and Abbots Langley, through increased employment provision and with regeneration, particularly in some deprived wards. It will also help progress social factors, such as employment, reduce crime (actual and perceived). The wide range of accessibility and public transport improvements will also enable a greater proportion of the population to access services, and will therefore promote greater social equity.

The following measures are recommended to enhance PSP2:

- Discourage private vehicles, in addition to public transport improvements
- Access for disabled in community, public and commercial buildings
- Encourage provision of complementary services between key centres and secondary centres, to limit competing retail development
- Consider 'Secure by Design' option for future development designs

7.4.5

PSP3: Development in Secondary Centres (Kings Langley, Carpenders Park, Eastbury, Maple Cross, Moor Park, Oxhey Hall)

This policy performs well against many environment and social objectives such as biodiversity, use of brown field land, cultural heritage. PSP3 is likely to bring transport improvements and increased access to amenities and services, thus positively influencing air quality, health and social equality objectives.

Maintaining or enhancing employment provision and local shops in the secondary centres, together with improvements to public transport, should help to revitalise town centres and achieve sustainable prosperity and patterns of growth. Promoting development, infrastructure and services to help tackle deprivation that affects Maple Cross and Carpenders Park will also improve social equality and possibly reduce crime. The policy is likely to fulfil local community needs, address crime and deprivation issues, and thus contribute to sustainable prosperity and growth of Secondary Centres. A cumulative positive effect is likely with CP1 on flood risk objective and climate change proof objectives.

The following measures are recommended to enhance PSP3:

- Discourage private vehicles, in addition to public transport improvements
- Encourage provision of complementary services between key centres and secondary centres, to limit competing retail development
- Consider 'Secure by Design' option for future development designs

7.4.6

PSP4: Development in Villages (Bedmond, Sarratt)

PSP4 is likely to have mild positive impact on some environmental objectives such as biodiversity, soils, historic and cultural assets, as well as on some social objectives like health, equality and social exclusion and sustainable prosperity. In terms of economic benefits, the policy supports key local services provision, therefore likely to bring vitality and viability and overall create self-contained villages. All the above are likely to revitalise village centres and contribute to prosperity and growth. In addition to strengthening accessibility within a village, improving connectivity with secondary and key centres of Three Rivers is essential to ensure that potential retail and other revenues from villages are not lost to other accessible neighbouring authorities.

Controlling development in the villages should have beneficial, even if indirect, benefits for biodiversity, water quality and soil resources.

Using a Rural Exception Site Policy approach to affordable housing should help to achieve greater social equity. In order to apply this policy, the settlement must ensure regular access and operation of the public transport, in addition to provision of essential services. Provision of play areas and sports facilities will also have positive effects on social equity and also help to improve health in the villages.

Performance of PSP4 against number of environmental and social objectives cannot be determined at this stage for reasons outlined in the detailed assessment sheet. Recommendations in the box below should be referred to address few uncertainties identified by the assessment.

There are also uncertain impacts of the policy on air quality and carbon dioxide emissions despite improvements to bus services, the effects of increased commuting or shopping trips to larger centres are uncertain.

Mitigation measures/ Recommendations for PSP4:

- Ensure public transport improvements between town and villages is in proportion to proposed growth, for example in Bedmond and Sarrat, in order to limit increase of private vehicles

7.4.7

Core Policies- CP1: Overarching policy on Sustainable Development

This overarching policy has a progressive and positive environmental element that is likely to have significant positive impact on most environmental objectives and on some social and economic SA objectives. It scores very well under biodiversity, flood risk, soils, use of PDL, cultural heritage, landscape and townscape objectives. By upholding sustainable transport, promoting renewable energy systems, and increasing energy efficiency in buildings, this policy will have significant positive effect on resource efficiency, air quality and health and sustainable development patterns.

Renewable energy developments would need to take local distinctiveness into account in order to fully protect historic and cultural assets. Avoiding development in areas at risk of flooding will progress the SA objectives on flood risk and climate change proofing. However, other effects of climate change, such as extreme weather events should also influence development location and design.

The policy scores well under its commitment to promotion of zero carbon future, both in residential and non-residential buildings.

Using PDL, sustainable building materials and reducing land contamination and pollution will also have positive impact on biodiversity, soil resources, water quality and resource efficiency. The need to protect mineral resources and

promote the restoration of quarries should also be included to mitigate any negative impact on these resources.

Improving access to jobs, skills, services and facilities particularly within areas of deprivation in the district and providing housing across a range of tenures and types including affordable housing will help to reduce social inequity and may improve community identity and participation.

A combination of accessibility improvements, high quality design buildings and public spaces and promotion of renewable energy in the district is likely to have a significant positive impact on economic growth in Three Rivers and is likely to attract inward investments in the Town Centres.

Mitigation measures/ Recommendations for CP1:

- In addition to water efficiency through appliances, consider inducing behavioural change to minimise water consumption, such as using water meters, other economic (dis)incentives

7.4.8

Core Policies- CP2: Housing Supply

The assessment results are mixed for this policy, with some positive effects and many uncertain effects, however with no negative impact.

The policy is likely to have positive effects under sustainable development patterns and accessibility, air quality, soils, landscape and townscape and health objectives. Promoting development in areas that have good access to public transport should help reduce contribution to CO₂ emissions, and maintain air quality; however an increased housing supply is likely to increase private vehicle movement, i.e., deteriorate air quality at the same time. The assessment considers that the significant negative effect on air quality from increased housing supply may be marginally offset by the public transport, therefore CP2 is likely to have mild negative effect on air quality.

Prioritising PDL and existing urban areas for development will also help to revitalise the town centres of the district.

It scores uncertain under various objectives -

- Biodiversity- the impact of green belt revision on wildlife can be predicted on a case by case basis- the details of each revised site unavailable at this stage therefore the effect of the policy on biodiversity is unknown
- Water resources- increased housing supply will add pressure to existing water and sewage infrastructure. Despite including water efficiency measures in the CS, without quantitative information assessment of water demand-supply gap cannot be determined at this stage, therefore there is an uncertain score. Three Rivers DC has consulted Thames Water and Veolia Water regarding the implications of future housing growth on infrastructure. The outcome of the consultation indicates no significant effect is expected in the medium term. However, uncertainty in the long term remains.

- Although green field sites will be given last preference in the sequential approach, there may be loss of top soil. Intensifying development within existing urban area will help mitigate this impact.
- Effect on cultural heritage is unknown
- Community involvement or social inclusion are not explicitly discussed

Mitigation measures/ Recommendations for CP2:

- For future lower level documents, consider environmental capacity (including water resources) in parallel with the housing supply. Refer to the Thames River Basin Management Plan, for further information and action
- Consider explicitly stating community participation in the housing supply assessment process

7.4.9

Core Policies- CP3: Housing Mix and Density

CP3 is likely to have positive benefits against most environmental objectives - cultural heritage and landscape and townscape and soils, and no relation with some objectives i.e., biodiversity and water quality. As the policy is only likely to maintain air quality rather than enhance it, neutral score is allocated against air quality objective.

By encouraging new development locations situated conveniently for public transport accessibility, the policy will help reduce private vehicle emissions, maintain air quality and consequently have health benefits. By increasing housing density in locations accessible by public transport, the policy will help consolidate development pattern into a ‘compact form’, generally considered a positive, provided appropriate infrastructure is available for its operations.

Appropriate density levels in new development, when accessible is likely to attract inward investment, both residential and commercial, therefore positive for economic growth. The upcoming Design Guidance SPD, along with an approach to respect landscape and townscape, is likely to create a desirable public realm.

The policy scores well under all social objectives, except crime, where the effect is uncertain. The policy is supportive in terms of social equality and diversity and it is assumed that this can be achieved through a participatory process with the public. For this reason CP3 is assessed to score well under social themes.

Although increased development i.e., made ground, may increase risk of internal flooding, synergistic effect from CP1 negates this negative effect.

Mitigation measures/ Recommendations for CP3:

- Maximise opportunities to promote sustainable construction methods in the whole development, in addition to resource efficiency in individual buildings. For example if a project includes features such as public realm improvements or transport improvements in addition to a building construction, incorporate sustainable construction methods in the project in a holistic fashion rather than in just buildings

7.4.10

Core Policies- CP4: Affordable Housing

This policy is informed by various studies including the Development Economics Study, 2009⁹. The policy will uphold social objectives, as it aims for equality and social inclusion. With increased percentage of social rented in comparison to intermediate housing, it will ensure increased access to housing provision, thus positively contributing to economic growth. Considering the commitment the policy makes towards improving access to housing for all members of the society, CP4 is likely to have significant positive effect against Social Equity objectives.

As this CS and upcoming Site Allocations DPD and Affordable Housing SPD will be subject to public consultation and participation, it scores positive under community participation objective and will help revitalise town centres.

CP4 performs well against use of brownfield sites and resource efficiency objectives as it encourages release of non residential PDL. The policy does not have a direct relation to number of other environment objectives.

Despite all positive effects, the effect of decrease in site threshold is uncertain under number of objectives such as sustainable prosperity and growth. This is primarily due to current economic climate and potential attractive opportunities for developers in neighbouring councils, though the policy recognises that the assessment of requirements for affordable housing will take into account site circumstances, including financial viability. The upcoming SPD should analyse and discuss viability and realistic achievement of affordable housing objectives and targets. The effect is uncertain against cultural heritage and crime related SA objectives.

7.4.11

Core Policies- CP5: Gypsy and Traveller Provision

Barring few environmental objectives, CP5 will have mild positive effect on a number of sustainability objectives, particularly against sustainable growth, social

⁹ DES was a joint study joint study commissioned with neighbouring authorities, looking at the economic viability of providing affordable housing in the District.

inclusion and on economic growth. The policy is sensitive to gypsy settlements, particularly in terms of ensuring accessibility and spaces for their provision.

The policy aims to protect the openness of the Green Belt and areas of wildlife and landscape importance. It therefore scores well under the biodiversity and landscape objectives respectively. However the location of 10 Transit pitches, to be identified jointly with neighbouring local authorities is unknown. It is assumed that these pitches will also be assessed based on the criteria set out in the policy, and that protection of green belts will remain a priority area.

The policy indicates, areas of flood risk will also be avoided, which gives the policy a positive score for the flood risk and climate change proof objectives.

Locating gypsies and travellers in areas within or near to existing settlements and providing a wide range of services is likely to benefit the local economy and to contribute to revitalising town centres.

The policy also scores well in terms of its contribution to achieving social objectives such as equity and inclusivity. It is likely to encourage a participatory society.

The likely effect of CP5 on water resources, use of brown field land and on resource efficiency cannot be determined as the policy wording is not explicit about its approach to these issues although CP1 advocates use of PDL.

Mitigation measures/ Recommendations for CP5:

- Consider making reference to promoting use of PDL
- Ensure policy measures to prevent potential water contamination, for example from run-off from the settlements

7.4.12

Core Policies- CP6: Employment and Economic Development

Overall this policy incorporates aspects of economic growth i.e., location, job creation, encourage skills and learning, strengthen existing businesses as well as encourage new industry sectors. These measures will be supplemented with the promotion of mixed-use development and live-work units which is likely to reduce the need to travel therefore maintaining air quality, in places where this option is applicable. Although the assessment appreciates strengthening of public transport, measures to reduce out-commuting increased employment land provision is likely to result in some increase in use of private vehicles for work commute. Therefore the policy thus is likely to reduce the significant negative effect on air quality to mild negative.

The policy is likely to have mild positive impact on all economic and most of environmental objectives.

CP6 is likely to help achieve a sustainable growth in the district that increases town centre viability and has a significant positive effect in both town and village development. The policy position on promoting growth with respect to the scale and capacity of rural settlements is likely to help maintain the uniqueness of

villages whilst encouraging growth. Mixed use development in areas accessible to public transport will also help achieve a more equitable and participatory society, thus advancing social objectives.

Whilst encouraging live-work units is likely to limit travel, uncertainty about take-up of such units cannot be ruled out. Economic policy measures to identify such employment, appropriate training and incentives should also be considered, however they are beyond the remit of spatial planning.

In spatial terms land release at Leavesden Aerodrome and King's Langley should seek detailed information from developers to prove that housing requirement outweighs safeguard of employment use. Land release should occur in a phased manner, preserving the most desirable employment sites. This process should include a safety margin to provide flexibility on future land supply.

Mitigation measures/ Recommendations for CP6:

- Policy should ensure safeguard of small, local neighbourhood businesses

7.4.13

Core Policies- CP7:Town Centres and Shopping

By locating development centrally, resisting out of town retailing and generally resisting major convenience food floor space proposals, landscape and townscape should largely be protected from any adverse effects of new development. The policy will help protect the interests of small, local retail owners, a positive move towards promoting local economy. These aspects of the policy, together with choosing locally accessible locations should help to reduce the need to travel, hence reducing carbon dioxide emissions and improving air quality and health. It will also contribute to an overall pattern of sustainable development that particularly contributes to the viability of town centres. The policy should strengthen public transport services between the town centres, in addition to supporting public transport provision.

Comparison goods retail centres should be guided by appropriate urban design guidelines to attract inward investments.

Whilst resisting out of town retail is commendable, the strategy should consider addressing possible competition from other centres such as Watford. Provision of complementary services between Watford and Three Rivers Centres may be an option.

Mitigation measures/ Recommendations for CP7:

- In addition to protection and enhancement of retail centres, the policy could suggest linking urban design improvements with retail improvement. A combination of design and economic strategy improvements will increase chances of inward investments, thus increasing the vitality and viability of town centres.

7.4.14

Core Policies- CP8: Infrastructure and Planning Obligations

This policy is likely to have positive effects on some environment (flood risk), social (health), cultural heritage and economic growth objectives and significant positive effect on sustainable development pattern and accessibility as CP8 aims to safeguard or create sustainable, linked communities. However, the policy wording is too broad to assess effects on the majority of SA objectives therefore effects are uncertain under the following objectives:

- Biodiversity- compensatory provision of biodiversity may or may not affect habitats depending on conditions at the site;
- Water quality- although policy may indirectly address water provision (infrastructure), no particular reference is made regarding water quality maintenance or enhancement;
- Climate change adaptability – at this stage it is unclear if the climate change proofing characteristic of a ‘significant amenity or resource’ will be considered as a significant criteria to safeguard the amenity/resource. A public park, for example, may also serve as flood storage area (climate change proof);
- Landscape and Townscape- effect of any loss of amenity/ resource on this objective is unknown at this stage and policy position on its safeguard is unclear;

7.4.15

Core Policies- CP9: Green Infrastructure

The policy will bring ecological, biodiversity and social benefits to the district. CP9 advocates for protection and enhancement of specific sites of biodiversity and habitat value, as well as recognises the need to extend it to all natural greenspaces in the study area. The proposed Supplementary Planning Document, which is likely to follow the PPG 17 for Open spaces will bring social benefit by looking at residents’ accessibility to open spaces.

The positive effect on the natural habitats is likely to have secondary positive effect on water, addressing flood risk and air quality.

There is no direct relation between the policy and some objectives such as Climate Change proof, Resource efficiency, historic assets, housing and crime. However one observation is that the effect of CP7 in revitalising town centres is dependent on presence of green infrastructure and their influence in each centre. Therefore effects will be context specific and it is not possible to comment at this stage.

7.4.16

Core Policies- CP10: Transport

This policy ties together aspects of spatial development, integrated transport, and development requirements- all of which will be required to advance number of social, environmental and economic sustainability objectives.

The Transport Strategy Map indicates strengthening of public transport network between key centres and secondary centres, a positive way forward to achieve sustainability objectives.

Policy CP10 largely aims to mitigate the negative effects of private vehicle usage and encourages measures to improve opportunities for public transport, cycling and walking that will help limit air pollution and reduce or stabilise carbon dioxide emissions with health benefits due to more cycling and walking and less air pollution. Furthermore, the requirement for developers to prepare a Green Travel Plan will help to reduce air pollution associated with transport. For this reason the policy is likely to have positive impact on air quality objective and positive effect on biodiversity and CO₂ emissions.

A more sustainable transport system will help produce an overall sustainable development pattern that allows the district to prosper and helps town centres maintain or enhance their vitality. It will also allow a greater proportion of the population to access services and jobs. Public transport improvements between key centres and within key estates will improve accessibility to services. For this reason it will have positive effect on social and economic objectives such as health, social equality, sustainable pattern and economic growth.

Highways improvements and transport infrastructure improvements may affect landscape views or may directly or indirectly lead to the risk of flooding (by interfering with the drainage or inducing internal flooding), therefore effects are uncertain for flood risk and landscape objectives.

7.4.17

Core Policies- CP11: Green Belt

Although maintenance of the existing Metropolitan Green Belt may have positive effect on biodiversity, soil and other environmental objectives, the effect of minor revisions to the boundaries on some environmental objectives is unknown.

Without details on the extent of revision of the boundary, uncertain effect is predicted for the following objectives- Biodiversity, Soil, Resource efficiency, Landscape & Townscape, Sustainable development patterns and Sustainable Prosperity. Similarly a Green Belt may comprise of PDL or Green field land. The effect of boundary revision on Soil objectives will be dependent upon the type of land and this detail is site specific therefore the assessment allocates an uncertain score. It is acknowledged that the CS is a strategic document and will not include any detail.

Maintaining the general extent and openness of the Green Belt will allow the area to continue to be used for leisure purposes and may have health benefits, especially if inappropriate and potentially polluting development were to be disallowed from the Green Belt. However an expansion of the urban form may encourage car travel, unless major behavioural change occurs among transport users and a very strong operational public transport exists

7.4.18

Core Policies- CP12: Design of development

Various aspects of this policy score well under most environmental, social and economic SA objectives.

By promoting the incorporation of flood risk into design the SA objectives on flood risk and 'climate change proof' will be progressed. Similarly, by promoting the incorporation of passive solar light into design, and encouraging renewable energy use, the SA objective on reducing carbon emissions will be progressed. The retention or improvement of landscape, natural and cultural assets and taking into account the local context, character and distinctiveness will have positive effects on landscape and townscape, good quality housing, and biodiversity, as well as cultural heritage objectives. The policy is likely to have the biggest positive effect under environmental objectives through promotion of innovative design to reduce energy and waste.

CP12 is likely to help reduce crime (perceived and actual), a positive social effect.

Design improvements are likely to help improve the public realm and create places to live and work, thus attracting inward investments and progressing economic growth.

Together with specifying the efficient use of land there should be significant resource efficiency benefits. If climate 'resistance' were to be encouraged in new design there could be further benefits in improving climate 'proofing'.

Mitigation measures/ Recommendations for CP 12:

- Consider discussing accessibility for the elderly and the disabled in residential and public buildings (including community facilities).

7.4.19

Core Policies: CP13: Monitoring and Delivery

The preferred approach is likely to have an overall positive effect on most environmental objectives and score well under social objectives as well as economic objectives.

The policy promotes working with LSPs, environmental bodies and interest groups; this could help identify any potentially harmful environmental impacts and mitigate them if necessary. The Implementation Strategy also aims to take climate change into account and this will help progress the climate change proof SA objective.

Timely and appropriate implementation of infrastructure, services and facilities, and the Three Rivers Community Strategy and the Strategic Housing Land Availability Assessment will also help deliver sustainable growth in the region that will contribute to town centre vitality.

The policy is very positive for social inclusion and community participation objectives. Partnership with the LSP (including police) and Local Area Arrangements are likely to reduce crime (actual and perceived).

Mitigation measures/ Recommendations for CP13:

- Consider including young people as partners in the delivery process, particularly to deal with juvenile crime.

7.5

Cumulative, Synergistic and Secondary effects

7.5.1

Cumulative effect

DCLG Guidance suggests, cumulative effects are those effects which on its own may have no or mild effect but may combine across a whole plan (or in association with other plans) to produce an overall effect which is more significant.

The assessment indicates that cumulative positive effect is likely if the Place Shaping Policies (PSP) is considered in conjunction with relevant Core Policies (CP).

Assessment indicates CP1 (Sustainable Development Policy), on its own is likely to bring significant positive effect, but when this policy is combined with another CS policy they are likely to generate wider positive effects for- biodiversity, flood risk, soils, use of PDL, resource efficiency, cultural heritage, landscape, health, social equality, sustainable growth and town centre revitalisation themes. Similarly CP12 (Design of Development) helps bring cumulative positive effects when combined with many other CP policies, particularly under the themes of housing quality and crime prevention. CP1 and CP12 are likely to bring cumulative benefits and advance Climate change adaptation objectives and soil objectives in existing and future development. .

The following is an indicative list of policies that may interact to generate cumulative effects (positive and negative), organised under sustainability themes. The detailed matrix should be referred for information on potential cumulative effect against each objective.

- *Bio-diversity*- PSP1 (Development at Key Centres) is likely to be sensitive to biodiversity which will have a positive effect against this objective. PSP1 viewed in conjunction with CP9 (Green Infrastructure) and CP1 (Sustainable Development) is more likely to protect and enhance species and habitat
- *Flood risk*- CP1 will be an overarching policy that will be referred to for any development that comes forward in Three Rivers. This policy sets the approach to flood risk management, thus cumulative positive benefit is observed under this theme.

7.5.2

Synergistic effect

Synergistic effects occur when policies interact to produce an effect greater than individual policies.

For example, CP2 sets out policy approach to housing supply up to 2026 that prioritises PDL; however towards the end of the plan period the edge of existing settlements may be absorbed for development. This may have synergistic negative effect (mild) on biodiversity when combined with CP11 (Green Belt) i.e., Green Belt revision. The following describes synergistic effects between policies, organised under sustainability themes.

- Negative synergistic effect may affect *Biodiversity*- In order to fulfil housing demand CP2 (Housing Supply) indicates locating 25% housing supply along the edge of settlements, the biodiversity impact of this approach is unknown. A slight revision of green belt to accommodate development needs, as indicated in CP11 (Green Belt), may support CP2 to fulfil housing objectives, however these policies may interact to produce negative effect on species and habitats that reside in these Green Belt areas.
- *Health*- Positive synergistic effect may occur due to interaction between CP9 (Green Infrastructure), that will encourage provision of accessible open spaces and with CP 10 (Transport) that promotes sustainable transport, including healthy options such as cycling and walking.
- *Economic growth*- CP3 (Housing mix and density) and CP7 (Town Centres and Shopping), in combination with attention to design (CP12) are likely to create attractive public realm spaces, therefore potentially attracting inward investment

7.5.3

Secondary effect

Secondary effects are indirect effects that may not be a direct result of the policy but may occur through complex pathways. For example CP9 (Green Infrastructure) will protect biodiversity, which may bring indirect positive effect on water quality, by preventing development in areas sensitive to water pollution. Indirect, secondary effects identified in the assessment are described in the detailed assessment matrix, as appropriate.

7.5.4

Inter-relationships

SEA topics are generally observed to exhibit variety of inter-relationships and seldom are considered in isolation. For example, air quality cuts across most other SEA topics, with proven links between air quality and human health (respiratory problems). It can also have indirect effects on biodiversity, soil and water quality, and the condition of heritage assets, whilst there is a more direct link between traffic emission causing poor air quality and the emissions of CO₂.

The development of sites (residential, employment, shopping etc) may show inter-related effects on criteria such as biodiversity, air quality, greenhouse gas emissions, landscape and townscape depending on where they are located, how the development takes shape/is designed, and how it is accessed.

Positive effects can also occur from inter-relationships, for example, protecting landscape quality and/or soil, may lead to habitats and species being indirectly protected.

7.6 *Difficulties encountered*

Although number of local and regional information and studies were available to inform the assessment process, due to the strategic nature of the policies and insufficient information at a detailed level, some effects were recorded as uncertain. In addition, as it is possible to predict some effects only after a certain time, it has not been possible to comment on certain objectives at this stage. These uncertainties are likely to be reduced as more detail is provided to the Local Development Framework through future Site Allocation DPD, Design Guidance SPD and others.

8 Monitoring

8.1 *Monitoring of significant environmental effects*

The SEA Directive requires SA Report to identify monitoring measures for significant (adverse and positive) environmental effects of the plan. The SA of the Three Rivers Core Strategy SA has identified 39 separate significant positive effects (on 20 of the SA objectives), 185 positive effects, 2 negative effects (mild) and 55 uncertain impacts. Monitoring has been considered to cover these effects. Monitoring has also been proposed in relation to the mild negative effects that have been forecast in the assessment. There are likely to be several benefits in monitoring any environmental effects arising from the implementation of the Core Strategy policies, including:

- Identifying when action should be taken to reduce or offset any potential environmental effects of the plan;
- Enhancing understanding of how the environment is changing in the District;
- Tracking whether the plan has any unforeseen environmental effects; and
- Providing baseline data for future SAs/SEAs.

8.2 *Monitoring Measures*

The monitoring measures recommended in this report should be considered draft as this is based on assessment of the draft Core Strategy, which may be altered after the public examination or the baseline position may change at the time of adoption of this framework. Additionally the framework should be flexible to adapt to any changes in monitoring methods.

As number of uncertain effects has been identified in this assessment, there is a need to develop a monitoring strategy at a later stage when the likely impacts of these effects are further understood. Table 7.1 presents draft monitoring framework that should be seen in conjunction with Appendix 7 of the Core Strategy Submission Draft. The monitoring framework in Table 7.1 has been produced based on the Core Strategy Monitoring Framework, however cross-reference across each other frameworks is recommended in the future stages.

Table 8.1 Proposed Monitoring Framework

Effect or indicator to be monitored	Information required / Indicator	Information source	Information quality, gaps (& solution)
Biodiversity	BAP species monitoring	Natural England Specialist environmental groups i.e. RSPB, wetlands trusts etc	To be determined
	Change in areas and populations of biodiversity importance, includes: i) change in priority habitats and species (in type) and ii) change in area designated for their intrinsic environmental value including sites of international, regional, sub-regional or local significance.	Annual Monitoring report Biodiversity Monitoring Centre	Currently partially monitored (gaps in relation to species to be addressed with HBRC). Currently monitored
Maintain/Enhance Water Quality	Number of planning permissions granted contrary to the advice of the Environment Agency on either flood defence grounds or water quality	Environment Agency	Currently monitored
Flood Risk	Number of planning permissions granted contrary to the advice of the Environment Agency on either flood defence grounds or water quality	Three Rivers District Council (TDC)	Currently monitored
Greenhouse Gas Emissions	Renewable energy installed by type	Three Rivers District Council (TDC)	Currently partially monitored, gaps in relation to domestic installations.
Use of Brownfield Sites	Percentage of new dwellings On previously developed land	TDC	Currently monitored
Resource Efficiency	Renewable energy installed by type	TDC	Currently partially monitored, gaps in relation to domestic installations
Historic & Cultural Assets	No. of conservation areas, Historic Environment Character Zones, Listed Buildings, and locally listed buildings (local output indicator)	TDC English Heritage	Currently monitored
Landscape and Townscape	No. of conservation areas, Historic Environment Character Zones, Listed Buildings, and locally listed buildings (local output indicator) % Conservation Areas covered by Appraisals	English Heritage Local Indicator DP03	Currently monitored
Sustainable Locational Development	Walking to work levels (proportion of all journey to work trips) (local output indicator)	Hertfordshire Traffic & Transport Data Report	To be determined

Effect or indicator to be monitored	Information required / Indicator	Information source	Information quality, gaps (& solution)
Equality and Social Exclusion	Affordable Housing Completions	TDC	Currently monitored
Good Quality Housing	Renewable energy installed by type	TDC	Currently partially monitored, gaps in relation to domestic installations
	Dwelling completion	TDC	
Sustainable Prosperity and Growth	Business Development	NOMIS	Currently monitored
	No. residents unemployed (claimant count) (local output indicator)	Hertfordshire County Council Unemployment Bulletin; NOMIS	Currently monitored
Accessibility	Retail office, leisure and open space	National statistics	Currently monitored
Revitalise Town Centres	Job density representing the ratio of total jobs to working age population	Jobs Density (wew.nomis.co.uk)	To be determined
	Median earnings for employees living in the area (local output indicator)	Annual Survey of Hours and Earnings	To be determined

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