

Three Rivers District Council

Three Rivers Core Strategy Preferred Option

Draft Sustainability Report

Consultation Version

February 2009

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

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Preferred Option
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Contents Amendment Record

This report has been issued and amended as follows:

Issue	Revision	Description	Date	Signed	Verified
01	00	Core Strategy Preferred Options- Draft SA Report	05 Feb. 09	KD	RG (TRL)
02	01	Core Strategy Preferred Options- Draft SA Report	12 Feb. 09	KD	

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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 (DPD), and Supplementary Planning Documents (SPDs). 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 Framework (LDF).

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 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 also made available on the Three Rivers District Council website. The response received helped improve the Appraisal Framework.

This Framework of objectives was then used to test the sustainability of the emerging Core Strategy- Initial Options. This was undertaken at the Initial Options Core Strategy Stage, and an Initial Options SA Working Note was produced in June 2006. Following an iterative process, an Additional Issues and Options SA Working Note was produced by Halcrow in July 2007. Recommendations were made where opportunities to enhance the sustainability of the emerging policies was 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 have been progressed within the 'Core Strategy Preferred Options' Report (to be placed on public consultation February 2009), demonstrating the role the SA process has had in influencing the plan progression.

This document 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 Revised Preferred Options Report.

Three Rivers Core Strategy Development Plan Document- Preferred Option

The draft Core Strategy Preferred Option SPD comprises of Strategic Spatial Vision and Strategic Spatial Strategy that sets overall policy approach towards spatial planning and indicates specific plans for various towns in Three Rivers. This Vision and Spatial Strategy is 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 ten theme based Core Policies as well as fifteen issue specific Development Policies. This SA Report discusses results of sustainability assessment of these policies 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	Increased air pollution from traffic and congestion 5 AQMAs are declared.
Biodiversity	The Borough has five Sites of Special Scientific Interest (SSSIs), and seven 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 2008 must be refereed to identify actual flood risk areas.
Climatic Factors	Domestic CO ₂ emissions per capita are below the regional average
Cultural Heritage	There are 3 Scheduled Ancient Monuments and over 350 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 2006 from 307.4 kg to 403.2 kg.
Population	Three Rivers population has been growing
Water	Chemical water quality has improved, in contrast to biological water quality which decreased Water resources are over abstracted in the region.
Housing	A relatively high percentage of homes are unfit for living in
Crime	Domestic burglary rates has marginally reduced between 2003 and 2006 from 13.82 to 11.06
Health Care & Education	74% of Three Rivers population state to be in generally good health
Economy & Employment	Three Rivers has the lowest recorded figure of unemployment in Hertfordshire

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 with key environmental authorities and the framework was finalised. This framework was later used in the Initial Options Appraisal and now used for the Preferred Option 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

Initial Options Appraisal

Following an iterative process of analysis by the Council Officers and discussions with stakeholders, set of initial options were produced. In accordance with ODPM¹ Guidance and The Regulations, the Core Strategy Initial Options were assessed against the SA Framework set at the Scoping Report stage. A Core Strategy Initial Options SA Working note was produced in June 2006 and revised following an iterative process in July 2007. This note was submitted with the Core Strategy Initial Options Report and for a public consultation in 2007.

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

¹ ODPM's (now DCLG) Sustainability Appraisal of Regional Spatial Strategies and Local developments Documents Guidance, November 2005

Preferred Option Sustainability Appraisal

Based on initial options SA, stakeholder responses, and findings of local and regional studies and assimilation of further information on development issues and options, a set of preferred options is now developed with focussed approach to planning in Three Rivers. The Core Strategy Preferred Option, accompanying this report should be referred for detailed information on the preferred option.

Each of the plan elements including the Vision, objectives and policies have been evaluated against the sustainability objectives for:

- Severity – significant positive or negative, mild positive or negative, uncertain or neutral impact.
- Extent of the effect have also been analysed in temporal (short, medium or long term) and geographic (national, regional or local) terms.

The detailed assessment matrix in Appendix 1 must be referred for complete discussion on reason for each evaluation of all policies against each sustainability objective.

Assessment Results

In general terms, all Core Strategy Policies are assessed to have positive effect against most sustainability objectives and only one mild negative effect has been predicted under use of brownfield site objective. 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 interface of CS policies will have significant synergistic and cumulative positive impact on sustainable development in the District. Although implicit, the potential contribution of Core Strategy policies towards sustainability, it should be emphasised and stated under some policies in order to ensure sustainability objectives are understood and will be implemented.

52 significant positive effects (against twenty SA Objectives) have been identified, mostly with implication at a local level, in the medium term and with potential secondary positive effect on various sustainability objectives. Significant effect is observed under the following policies and corresponding objectives:

Spatial Vision- CO₂ emissions, Air Quality, Resource efficiency, Health, accessibility and sustainable development patterns

PSP1, PSP2 and PSP3- Biodiversity, use of PDL, Cultural heritage, Landscape, Health, accessibility, social equality, sustainability development pattern and Town Centre Revitalisation

CP1- Biodiversity, Flood risk, Soils, use of PDL, Resource efficiency, cultural heritage, Landscape, Health, Sustainable development pattern and Social equality

CP3 and CP5- Sustainable development pattern

CP8- Air Quality

CP9- Sustainable development pattern

DC2 – Biodiversity, Landscape and Townscape

DC3- Landscape and Townscape

DC4- Health, Sustainable Development Pattern, Accessibility and Social equality

- DC5 and DC6- Health
- DC7- Resource Efficiency
- DC9- Flood Risk
- DC10- CO₂ emissions
- DC11- Resource efficiency and Landscape & Townscape
- DC13- Cultural Heritage and Landscape & Townscape
- DC14- Water and Air Quality

The assessment indicates the number of uncertain scores is higher than significant positive scores. Majority uncertain effects relate to climate change adaptability and flood risk SA objectives. Although many CS policies address flood risk, explicit reference to this issue in identified policies (refer detailed assessment) are likely to reduce uncertainties predicted in this assessment.

Negative effect (not significant) against use of PDL is likely for DC1 (Greenbelt) due to potential use of green field land to accommodate future needs. Table 0.1 presents summary of the assessment matrix.

Table 0.1 Assessment Summary Matrix

SA Objective	SA1	SA2	SA3	SA4	SA5	SA6	SA7	SA8	SA9	SA10	SA11	SA12	SA13,19	SA14	SA15	SA16	SA17	CA10	
CS Policy																			
Vision	+	+	+	+	++	+	++	+	++	0	+	++	++	+	0	0	+	+	
Spatial strategy	?	?	?	+	+/?	?	+/?	++	0	?	?	+/?	+	0	0	0	0	+	
PSP1	+	+	?	+	+	?	+	++	+	++	+	+	++	++	?	?	?	+	
PSP2	+	+	?	+	+	?	+	++	+	++	+	++	++	+	?	?	?	+	
PSP3	+	+	?	+	+	?	+	++	+	++	+	++	++	++	?	?	+	+	
PSP4	+	?	?	+	?	?	?	?	?	+	+	+	?	+	?	?	?	+	
CP1	+	+	++	++	+	+	+	++	++	+	++	++	+	++	+	?	+	++	
CP2	?	?	0	?	+	?	+	+	?	?	+	+	++	?	0	?	0	+	
CP3	+	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	?	?	+	++	0	0	?	0	+	
CP10	+	+	+	+	+	+	+	0	+	+	+	+	+	?	0	0	+	+	
DC1	?	0	0	?	0	0	0	-	?	0	-	+	?	0	0	0	0	?	
DC2	+	+	+	+	0	+	+	0	+	0	++	+	+	0	0	+	0	0	
DC3	+	0	0	+	0	0	0	0	0	+	++	+	+	0	0	+	0	?	
DC4	+	0	?	0	0	0	0	?	?	0	++	++	++	+	0	+	0	+	
DC5	0	0	0	0	0	0	0	?	?	0	+	++	+	+	0	+	0	+	
DC6	0	0	0	0	+	0	+	0	0	0	0	++	+	+	0	++	0	+	
DC7	0	0	+	0	+	+	0	0	++	0	+	0	0	0	+	0	+	+	
DC8	+	0	?	?	?	?	0	0	0	0	+	0	0	0	+	0	0	0	

SA Objective	SA1	SA2	SA3	SA4	SA5	SA6	SA7	SA8	SA9	SA10	SA11	SA12	SA13,19	SA14	SA15	SA16	SA17	CA10
DC9	+	+	++	+	0	+	0	0	+	0	0	+	0	0	0	?	0	0
DC10	+	0	0	0	++	0	0	0	+	0	0	0	0	0	0	0	0	+
DC11	+	+	?	0	+	+	+	0	+	+	+	+	0	0	0	0	0	+
DC12	0	+	0	+	+	0	+	0	+	0	+	0	0	0	0	0	0	+
DC13	+	0	0	+	0	0	0	0	0	++	++	0	0	0	0	0	0	0
DC14	+	++	+	+	+	?	++	+	+	0	+	+	0	+	0	0	0	+
DC15	0	0	0	0	+	0	+	0	0	0	0	0	0	0	0	0	0	0

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

Mitigation Measures

Where appropriate mitigation measures to limit identified negative effect have been recommended. In addition, recommendation to address uncertain impacts is 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 where appropriate. The Core Strategy Preferred Options Appendix 5 sets out monitoring indicators, which are considered appropriate for a monitoring framework. Taking into consideration these indicators 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 draft Sustainability Report, output of the Core Strategy Preferred Options appraisal will accompany the draft core strategy. Both documents will undergo public consultation which will take place in Spring 2009.

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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 SEA² and for SA of Development Plan Documents³ 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 preferred options 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 to propose a monitoring framework for all significant sustainability issues identified during the assessment.

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

² "A Practical Guide to the Strategic Environmental Assessment Directive" (ODPM, 2005)

³ Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents (ODPM, 2005)

(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 2021.

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 Housing Allocations 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. Additions to these options were made and an Additional Options Core Strategy was produced in July 2007. This document was subject to a sustainability assessment and a SA Working Note produced in July 2007. Subsequently, based on other stakeholder responses, and emerging information from other regional and national policies, a Preferred Option Core Strategy has been produced. This Strategy, accompanying document to this report, sets out a Spatial Vision, Strategic Objectives and number of Policies. Other documents produced within the LDF include Sustainable Communities SPD and Open Space, Amenity and Child's Play space SPD. The Spatial Vision for the Three Rivers Core Strategy is as below:

Looking forward to 2021 and beyond, the District will remain a prosperous, safe and healthy place where people want and are able to live and work.

This means promoting development that is 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.

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.

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

Component parts of the CS Strategic objectives are:

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
9. Protect and improve countryside and biodiversity
10. Protect and enhance historic environment
11. Provide opportunities for leisure, 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. Following is abridged version of CS Preferred policies:

Place shaping policies:

PSP1: Development in the principal town

PSP 2: Development in the Key Centres (South Oxhey, Croxley Green, Abbots Langley, Chorleywood)

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

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 Transport

CP9 Infrastructure and planning obligations

CP 10 Monitoring and delivery

Development Control

DC1 Green Belt

DC2 Biodiversity, trees and woodlands

DC3 Landscape character

DC4 Open space, sport and recreation facilities

DC5 Children's play space

DC6 Community, leisure and cultural facilities

DC7 Design of Development

DC8 Residential design

DC9 Flood risk and water resources

DC10 Carbon dioxide emissions and on-site renewable energy

DC11 Renewable energy developments

DC12 Waste management

DC13 The historic built environment

DC14 Contamination and pollution control

DC15 Parking

1.3

SEA/SA Methodology

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

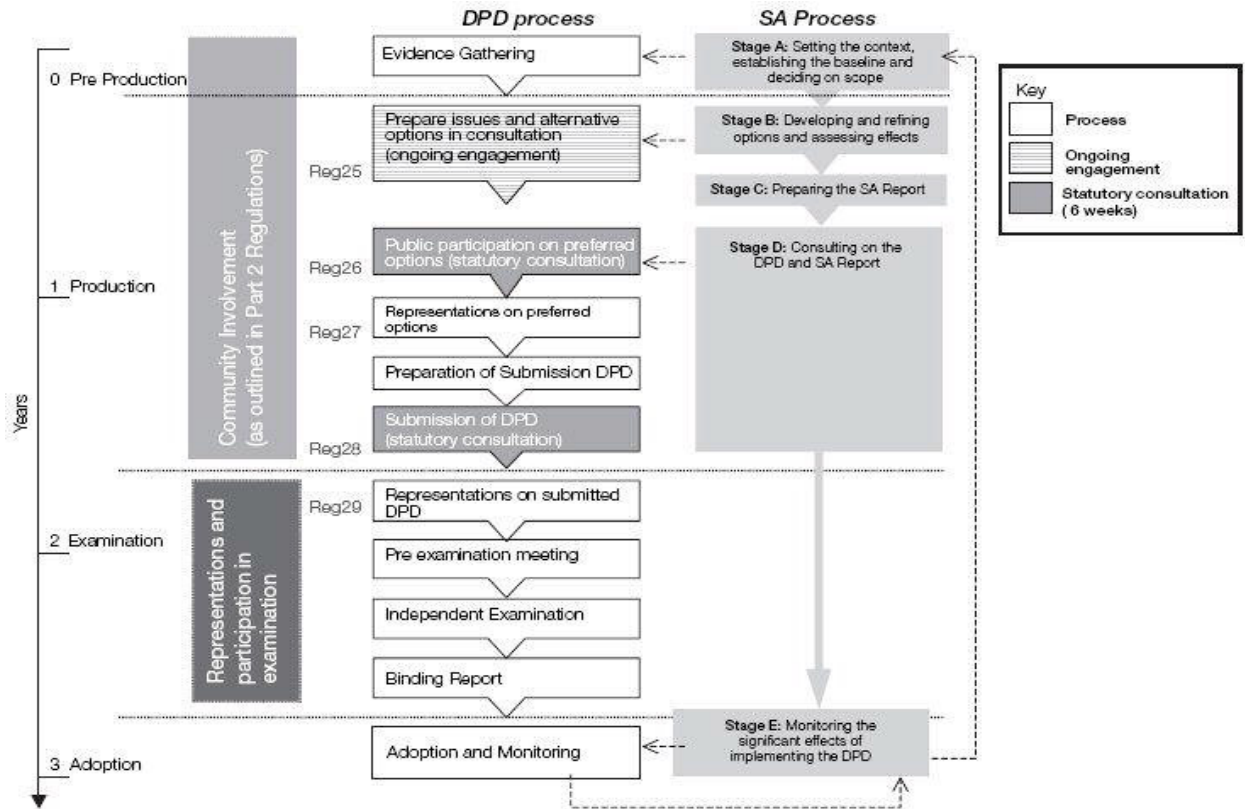


Figure 1: The DPD and SA/SEA process (Source: ODPM)

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	Stage B: Developing and refining options and assessing of effects <ul style="list-style-type: none"> • B1: Tenting 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. 	Consultation on Issues & Options (I&O) paper June 2006 Preparation of SA Working Note on I&O ¹ June 2006 Revised Issues and Options (I&O) paper, including preparation of SA Working

Three Rivers Core Strategy DPD	SA/SEA Stages	Dates
possible preferred option	<ul style="list-style-type: none"> • B6: Proposing measures to monitor the significant effects of implementing the DPDs. 	Note on Revised 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. 	
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 October 2009 Final adoption of the Core Strategy DPD is scheduled for October 2010 SA Statement: indicative timing October 2010

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 6	Outline of reasons for selecting alternatives and documentation of difficulties encountered in the assessment
Chapter 7	Description of monitoring arrangements proposed
Chapter 0	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. Till date a consultation was held at the end of the scoping stage and this report is produced for the second round of consultation (to accompany the Core Strategy Preferred Options DPD).

The SEA Regulations and SA Guidance⁴ requires that the Scoping Report consultation be carried out with stakeholders the Council finds appropriate to consult with, and four statutory environmental consultees i.e., Countryside Agency, English Nature (now 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 responded, along with a summary of the comments received and how they have been addressed are included in Appendix 3.

Consultation on this SA Report will take place alongside the consultation on the Preferred Options Report for the Core Strategy DPD and will be the second round of consultation. As with previous rounds the consultees will include the statutory environmental consultees and a wide range of other stakeholders. The public will also be invited to consult via inclusion of the documents on the Three Rivers District Council website and at certain 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 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.

⁴ ODPM's (now DCLG) Sustainability Appraisal of Regional Spatial Strategies and Local developments Documents, November 2005

Table 1.2: SA influence in the Core Strategy development

Stage	Recommendations	Changes to Policies
<p>1) Initial Issues and Options SA of the Core Strategy</p>	<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 • 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"> • 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 • DC9 supports design and technical intervention to address the issue, including rain water harvesting • DC10 sets Code for Sustainable Homes Level for future development, from 2016

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.

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 LDD. 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; development control 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.

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 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 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 and 2.

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.

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), town centres and retail developments (PPS6), biodiversity and geological conservation (PPS9), planning for sustainable waste management (PPS10), transport (PPG13), and renewable energy (PS22).

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.

Table 2.1 below lists all reviewed policies, plans and programmes.

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 Waste Framework Directive (91/156/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) EU Sustainable Development Strategy (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 (2002) EU Directive for the Promotion of Bio-fuels for Transport (2003/30/EC)
National
PPS1 - Delivering Sustainable Development SPPS1 - Planning Policy Statement: Planning and Climate Change - Supplement to Planning Policy Statement 1 PPG 2 – Green Belts PPG 3 – Housing PPG 4 – Industrial, Commercial Development and Small Firms PPS 6 – Town Centres and Retail Developments PPS 7 – Sustainable Development in Rural Areas PPG 8 - Telecommunications PPS 9 – Biodiversity and Geological Conservation PPS 10 – Sustainable Waste Management PPS 11 – Regional Spatial Strategies PPS 12 –Local Spatial Planning PPG 13 – Transport PPG 14 – Development on Unstable Land PPG 15 – Planning and the Historic Environment PPG 16 – Archaeology and Planning PPG 17 – Planning for Open Space, Sport, and Recreation PPG 21 – Tourism PPS 22 – Renewable Energy PPS 23 – Planning and Pollution Control PPG 24 – Planning and Noise PPS 25 – Development and Flood Risk

<p>Wildlife and Countryside Act 1981 (as amended) UK Biodiversity Action Plan - UK BAP (1994) England Forestry Strategy (1999) 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 (2001) 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) Habitat Regulations Assessment (HRA)</p>
<p>Regional – East of England</p> <p>Sustainable Development Framework for the East of England (2001) Sustainable Communities: Building for the Future - Communities Plan (2003) Our Environment, Our Future – The Regional Environmental Strategy for the East of England (2003) East of England Plan, 2008 Regional Transport Strategy for the East of England (draft published in 2004 as part of the East of England Plan) 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) The London Plan (2004) South East Plan (2005) Sustainable Futures: The Integrated Regional Strategy for the East of England (2005) Revised Regional Housing Strategy for the East of England 2005-2010 (2005) Creating Sustainable Communities in the East of England (2005) Towns and Cities – Strategy and Action Plan: Urban Renaissance in the East of England Chilterns AONB Management Strategy: The Framework for Action 2002-2007 A Housing Strategy for the London Commuter Belt Sub-Region 2005-2008</p>
<p>County - Hertfordshire</p> <p>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) 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 Draft Hertfordshire Infrastructure Investment Strategy Study, 2008 Four Councils Level 1 Strategic Flood Risk Assessment, Dacorum, St.Albans, Three Rivers and Watford,</p>

2007
Strategic Housing Market Assessment, London Commuter Belt (West), 2009
London Arc Employment Land Study, 2009
Local Authority – Three Rivers District Council
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
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
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

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.

2.4

Current and Future Baseline Review

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 collection is a continuous process that informs SA production. The Scoping Report produced in February 2006 has now been updated based on implementation (or amendment) of national, regional and local policies. Updated information is presented in Appendix 1.

3 Environmental and Sustainability Issues, Opportunities and Priorities

3.1 *Issues and Opportunities*

The review of plans and programmes affecting the borough, 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 English Nature’s natural areas “London Basin and Chilterns” and comprises of 5 Sites of Special Scientific Interest (SSSIs) and 7 Local Nature Reserves</p> <p>Although the SSSIs are considered to be within or close to English Nature 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>The percentage of rivers considered as having poor chemical quality has increased from 0% to 7%</p> <p>Biological water quality declined between 1995 and 2004</p> <p>Phosphate concentrations have decreased between 1995 and 2004</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>

SEA Objective	Key Issues	Opportunities	Interrelationships
Soil	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.	Protect best and most versatile land Promote good soil handling practice	Soil resources are key to sustaining the agricultural economy.
Climatic Factors	Domestic CO ₂ emissions per capita are below the regional average Greenhouse emissions in UK are increasing	Ensure development proposals do not exacerbate flooding elsewhere in catchment by adopting the sequential approach to site selection advocated in PPG25 Promote the use and generation of renewable energy and promote energy efficiency Sustainable Urban Drainage – porous surfaces, greenspace, wetlands, flood storage areas, urban forestry. Opportunity to decrease greenhouse gas emissions through reduced reliance on the private car	Climate change is likely to affect water resources (supply and demand), alter habitats, affect air quality and public health and increase flood risk. These could all adversely impact upon the borough's economy.
Air	Pollutant levels decreased between 2001 and 2010. Levels of NO _x and NO ₂ 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/ m ³ Increased air pollution from growth traffic and congestion Consists of 5 Air Quality Management Areas	Ensure potentially polluting processes incorporate pollution minimisation measures Promote the development of Green Travel Plans Improve cycle and pedestrian routes and links Promote low emission vehicles (e.g. hybrids)	Air quality influences human health which affects quality of life and also economic activity. Greenhouse gas emissions could lead to significant climate changes which could have significant implications for other aspects of quality of life. Local residents and businesses experience air quality at the local level, which affects health and

SEA Objective	Key Issues	Opportunities	Interrelationships
			amenity.
Material Assets	<p>The percentage of household waste recycled increased between 2001 and 2006</p> <p>Percentage of houses built on previously developed land is increasing</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>	<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.</p>
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> <p>350 listed buildings;</p> <p>22 Conservation areas</p>	<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> <p>Encourage strong and robust design standards for new development that respects cultural heritage of the development area.</p>	<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 the population.</p>
Landscape	<p>Light pollution is rapidly increasing and tranquillity is rapidly decreasing in the East of England.</p> <p>Three Rivers falls into three Landscape Character Areas, “Northern Thames Basin”, “Thames Valley” and “Chilterns”</p>	<p>Recognise value of all landscapes, not just designated sites</p> <p>Monitor light pollution levels; new lighting should be selected which minimises light pollution</p>	<p>An attractive landscape improves quality of life which in turn could contribute to increase inward investment.</p>
Population & Human	<p>Three Rivers population is growing</p>	<p>Ensure adequate housing, facilities and infrastructure whilst protecting and enhancing the local environment. Encourage mixed use.</p>	<p>Benefits of improved human health include employment provision and contribution to the local economy,</p>

SEA Objective	Key Issues	Opportunities	Interrelationships
Health	<p>74% of Three Rivers population state to be in generally good health</p>	<p>Promote the dual use of facilities, e.g. post office incorporated in community hall etc.</p> <p>Need to attract and retain people with the right skills.</p> <p>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.</p> <p>Encourage sustainable transport modes</p> <p>Explore using planning obligations to help secure an appropriate range of facilities.</p>	<p>training, research opportunities, reduced burden on social services and public finances.</p>
Social Factors	<p>A relatively high percentage of homes in Three Rivers that are unfit for living. (7% above average, 34% of the areas Local Authority homes were classified as unfit.)</p> <p>Crime rates have decreased in Three Rivers between 2003 and 2006.</p> <p>Additional growth is likely to increase the pressure on affordable housing in the borough</p> <p>Three Rivers has recorded an extremely low proportion of local authority buildings that are classified as suitable for and</p>	<p>Provision of affordable housing in accessible locations</p> <p>Adopt ‘planning out crime’ design principles, e.g. encourage overlooking of space etc</p> <p>Ensure appropriate housing provision for the elderly, e.g. through Life-long homes located close to key amenities and public transport</p> <p>Provision of a range of employment opportunities in accessible locations</p> <p>Consider using voluntary agreements in relation to local recruitment and training.</p>	<p>Poor health and well-being will adversely impact upon economic growth in the borough.</p> <p>Increasing employment and quality education opportunities will contribute to economic prosperity</p>

SEA Objective	Key Issues	Opportunities	Interrelationships
	<p>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.</p> <p>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>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>Ensure provision of a range of education facilities. Planning obligations used to enhance existing educational facilities</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 is expected to grow by ½% pa over 2003-2009</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 employments sites that will be attractive to knowledge based industries</p> <p>Support employment opportunities in higher value activities, e.g. knowledge based industries.</p>	Social considerations and quality of life will impact on employment opportunities and ability to attract inward investment

SEA Objective	Key Issues	Opportunities	Interrelationships
	<p>Three Rivers is an area in which the proportion of people of working age are in employment has fallen over the time period between 2004 and 2006 from 78% to 75.4%</p> <p>GVA in the district is expected to underperform the county, with growth of 2³/₄% pa compared with around 3% pa</p> <p>The number of VAT registered businesses increased every year during 2005-2007</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 4.21. This approach is recommended in government good practice on carrying out environmental and sustainability appraisals⁵. 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)

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 England⁶”.

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

⁵ The Strategic Environmental Assessment Directive: Guidance for Planning Authorities. ODPM, October 2003

⁶ A Sustainable Development Framework For The East of England, The East of England Regional Assembly, October 2001

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		
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	Avoid damage to designated wildlife sites (international, national and local) and protected species and achieve favourable condition	Populations of wild birds Area of semi-natural habitat lost to development
	To support farming and countryside practices that enhance biodiversity and landscape quality by economically and socially valuable activities (e.g. grazing, coppicing, nature reserves)	Area of new semi-natural habitat created Wildlife sites affected by water abstraction
	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.	Loss/damage to Sites of Special Scientific Interest (SSSIs)
	To create or re-create habitats, to ensure sustainable and linked species populations.	Numbers of species at risk
	To manage sustainably all woodland and protect existing woodland against conversion to other uses	Area of ancient semi-natural woodland Areas of different habitats designated as LNRs and CWS
	To recognise the social/environmental value of woodlands/orchards and other habitats of value particularly near urban areas	Condition of designated sites
	To encourage people to come into contact with, understand, and enjoy nature	
Water		
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	To regulate water supply to be within reasonable limits, and manage demand	Levels of awareness of water issues and the need for water saving
	To raise awareness and encourage higher water efficiency and conservation.	Average per capita water consumption in new and existing development.
	To develop and promote local water recycling initiatives for developments and buildings	Proportion of water needs met by local water recycling in urban and rural areas
	To encourage rainwater harvesting, to reduce new development needs	
	To improve quality and flow of rivers and reduce nitrate levels in groundwater	Proportion of housing (existing and new development)

⁷ 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
	<p>To reduce pollution by managing supplied water and effluents in an integrated way</p> <p>To maintain or restore the integrity of the many water dependent wildlife sites in the region.</p>	<p>which includes on-site provision for rainwater re-use</p> <p>Household water use and peak demand</p> <p>Low flows in river</p>
<p>3. Ensure that new development does not increase flood risk and protects or enhances the capacity & integrity of flood storage areas</p> <p>Ensure that development is capable of withstanding the effects of climate change</p>	<p>To avoid development from being located in areas at risk from fluvial flooding or storm surges taking into account of climate change</p> <p>To promote sustainable urban drainage systems to reduce flood risk and water loss from natural systems</p> <p>No development in undefended floodplains</p> <p>To promote design for more extreme climatic events, incorporating robust and weather resistant built forms</p>	<p>Margin between water supply and projected demand</p> <p>% of water lost to leakage</p> <p>Number and severity of pollution incidents to surface water</p> <p>Length of river of good or fair quality</p> <p>Number and severity of pollution incidents to groundwater</p> <p>Proportion of new roads served by swales, basins or infiltration trenches vs conventional kerbs</p> <p>River flows during dry summer periods.</p> <p>Total extent/ capacity of flood storage area</p> <p>Number of properties at risk from flooding</p> <p>Proportion of runoff from new developments which is directed into Sustainable Urban Drainage Systems⁷</p>
Soil		
<p>4. Minimise development of land with the most agricultural value, and minimise the loss of soils to new development</p>	<p>To safeguard high quality agricultural land (Grades 1-2) from development</p> <p>To limit the loss of soils to development</p>	<p>Amount of high quality agricultural land lost to development</p> <p>Net loss of soils in development</p> <p>Concentration of organic matter in top soil</p>
Climatic Factors		

Objective	Criteria	Indicative Indicators
5. Reduce the impacts of climate change, with a particular focus on reducing the consumption of fossil fuels and levels of CO2	To minimise CO2 emissions	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)	Weather-related insurance claims
	To encourage technological development to provide clean and efficient use of resources	Regional energy consumption compared with population and GDP
	To raise awareness of the potential of renewable energy to attract more investment	Energy use per household
	To encourage positive attitudes towards renewable energy schemes (e.g. wind and biomass)	Energy Efficiency rating for new buildings
	To encourage planning authorities to take a more positive attitude towards renewable energy schemes, home insulation, and local community renewable energy schemes	Proportion of electricity generated from renewable sources
	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	Economic health and prospects of energy industry, including off-shore
	Encourage carbon sequestration (e.g. tree planting)	Proportion of total travel which is by car
6. Ensure that development is capable of withstanding the effects of climate change	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 tackling energy use, to provide homes and businesses with self-sufficient energy	Freight transport: tonne/miles and empty lorry miles
Air Quality	To promote design for more extreme climatic events, incorporating robust and weather resistant built forms	Air quality improvements measured against related illnesses
		Design solutions which work with the environment, including: working with topography, wind direction and solar shade to reduce impacts on/of climate change & microclimatic impacts
7. Achieve good air quality, especially in urban areas	To reduce the need to travel by car through a combination of high quality transport alternatives, particularly public transport, walking and cycling networks,	Number of specific measures included in the layout which will provide climatic protection % of surfaces designed for water re-absorption
		Levels of key air pollutants within the local authority area, and within the East of England

Objective	Criteria	Indicative Indicators
	but also light rail, taxi, and water	
	To develop the East of England as Britain's premier cycling region, and promote safe routes to schools, greenways and quiet lanes	Number of days when air pollution reported as moderate or higher within the local authority area
	To promote Green Transport Plans, including car pools, car sharing, choice of low fuel and non-fossil fuel powered vehicles	Proportion of trips made by public transport/ foot/ cycle
	To improve opportunities for tourists not to have to drive, such as public transport, green lanes, and cycling	Pollutant levels for Benzene, 1,3-Butadiene, CO2, Lead, NO2, PM10, SO2
	To support energy saving and clean fuel initiatives for all forms of powered transport.	Journey times on strategic links Time lost to congestion
	To encourage intelligent freight practices to transfer movements to rail and water, minimise empty lorry journeys, and promote local distribution of local food products.	Amount of traffic on strategic links Emissions from public and private transport
	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	Proportion of public transport vehicles with emissions compliant with Euro 3/ Euro 4 standards
	To raise public awareness of the need for lifestyle changes (e.g. to reduce dependence on the car)	Proportion of materials specified which can be derived from local sources
	To encourage use of information technology and e-commerce as an alternative communication link to travel.	Average distance over which building materials are transported
	To address radial (from London) dominance of routes and promote east-west links, including rail	Proportion of essential trips possible by public transport
	To make best use of and support adequate maintenance of existing strategic road and rail infrastructure, to overcome congestion	Quality of strategic pedestrian routes including safety, interest and amenity Investment in public transport as a proportion of total transport investment Proportion of road network benefiting from public transport priority measures Public transport choice (in terms of routes and modes)

Objective	Criteria	Indicative Indicators
Material Assets		
8. Maximise the use of previously developed land and buildings, and the efficient use of land	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	New homes built on previously developed land Number of vacant properties
	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	Average density of development Densities along main transport corridors
	To maximise the efficient use of land by such measures as higher density development, mixed use	Densities in the town centre Area under agri-environment schemes
9. To use natural resources, both finite and renewable, as efficiently as possible, and re-use finite resources or recycled alternatives wherever possible	To safeguard reserves of exploitable minerals from sterilisation by other development	Area converted to organic production
	To encourage maximum efficiency and appropriate use of aggregate materials	Volumes of minerals produced in the region
	To manage aggregate outputs to meet regional needs in a sustainable manner	Level of minerals and aggregate use replaced by recycled or substitute materials
	To prevent mineral extraction where environmental/amenity impacts would be unacceptable (e.g. to communities, wildlife, semi-natural habitats, landscape, archaeology or groundwater)	Number of exhausted mineral sites returned to suitable use
	To restore to a high standard exhausted or abandoned mineral workings maximising opportunities to create new habitats, and ensure effective after-use management	Construction and demolition waste going to landfill Imported mineral tonnage
	To promote the use of recycled materials particularly in the construction industry, to avoid wasteful use and transport of resources	Numbers of dwellings created by re-use of existing buildings
	New development to incorporate renewable and recycled materials in buildings and infrastructure, or materials of lower environmental impact or locally sourced materials where possible	Number of buildings designed to sustainability principals Levels of wastes and emissions (nutrients, pesticides, herbicides)
	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)	Household waste and recycling rates

Objective	Criteria	Indicative Indicators
	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)	Waste production per head of population
	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)	Concentrations of persistent organic pollutants
	To promote education and demonstration projects for Combined Heat & Power (CHP) and waste recovery and recycling	% of the total tonnage of household waste that has been reduced, re-used or recycled
	To promote waste awareness education programmes in schools and the community	Initiatives to promote sustainable waste management Proportion of development which incorporates design measures to facilitate sustainable household waste management
Cultural Heritage		
10. To maintain and enhance historic and cultural assets	To safeguard and enhance the historic environment, and re-create important historic features	Buildings of Grade 1 and II* at risk of decay
	To promote local distinctiveness and pride in local identity by repairing historic buildings and areas, and by encouraging the re-use of valued buildings	Number of historic assets restored/reused
	To encourage thoughtful design, high density housing and mixed-use developments, which respects their context, reflecting local distinctiveness	Measures to enhance the local architectural heritage
	To promote public education and enjoyment of the built heritage and archaeology	Condition of Ancient Monuments Awareness about built heritage and archaeology
Landscape		
11. Conserve and enhance the landscape and townscape, encouraging local distinctiveness	To protect and enhance the district's countryside	Development in areas designated as Countryside and Sensitive 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	Loss of Greenfield land Area of landscape designation affected by/lost to development Changes in landscape features –woodland, hedges, stone walls and ponds
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	Number and length of journeys by environmentally damaging modes: car, lorry, plane
	To promote the health advantages of walking and cycling, and community based activities	
	To include measures to reduce road traffic accidents	Proportion of journeys by 'green' modes: walking,

Objective	Criteria	Indicative Indicators
	<p>To improve the quality and quantity of publicly accessible open space.</p> <p>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</p> <p>To narrow the income gap between the poorest and wealthiest parts of the region and to reduce health differential</p> <p>To make greater use of IT links to specialists by GPs for initial consultations</p> <p>To promote better public transport links to major hospitals</p> <p>To include specific design and amenity policies to minimise noise and odour pollution, particularly in residential areas</p> <p>To use strategic environmental assessment and environment impact assessment techniques to minimise noise</p>	<p>cycle, bus passenger rail, rail freight</p> <p>Access to local green space</p> <p>Traffic congestion</p> <p>Average journey distances</p> <p>Modal share of private car</p> <p>Modal shift to cycling and walking</p> <p>Length of cycle / footpath network</p>
<p>13. To deliver more sustainable patterns of location of development, including employment and housing</p>	<p>To reduce the need to travel through closer integration of housing, jobs and services</p>	<p>Perceived safety of cycle ways and footpaths</p> <p>Lighting levels (in Lux) of footpaths & cycle ways & levels of exposure to vehicular traffic</p> <p>Proportion of office developments & schools for which Green Travel Plans have been prepared and monitored</p> <p>Number of road casualties</p> <p>% of residents surveyed who are concerned about different types of noise in their area</p> <p>Number of residential units created above shops</p> <p>Distance travelled to work and mode of travel</p>
Social Factors		
<p>14. Promote equity & address social exclusion by closing the gap between the poorest communities and the rest</p>	<p>To include measures which will improve everyone's access to high quality health, education, recreation, community facilities and public transport</p> <p>To ensure facilities and services are accessible by people with disabilities</p> <p>To encourage development of sporting opportunities.</p> <p>To encourage businesses to access learning and skills for prosperity</p>	<p>% of residents finding it easy to access key local services & community facilities</p> <p>Qualifications at age 19</p> <p>Proportion of housing unfit or lacking appropriate insulation, by area</p>

Objective	Criteria	Indicative Indicators
	<p>To encourage people to access the learning and skills they need for high quality of life</p> <p>To increase promotion and use of online learning within the workplace</p> <p>To give greater focus to learning and skills in regeneration areas</p> <p>To concentrate efforts on the provision of basic skills at community and family level</p>	<p>% of public & community buildings accessible to disabled people</p> <p>% of community buildings that are in multiple use e.g. schools that also allow community access</p> <p>Measures to ensure that public transport is accessible to the mobility impaired – including dropped kerbs, low floor busses, etc.</p>
15. Ensure that everyone has access to good quality housing that meets their needs	<p>Promote a range housing types and tenure, including high quality affordable and key worker housing</p> <p>To improve the provision and condition of affordable housing</p>	<p>Proportion of public transport which is accessible to the mobility impaired</p>
16. Enhance community identity and participation	<p>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</p> <p>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</p> <p>To encourage local authorities and other partners to develop local cultural strategies which link to and support the Regional Cultural Strategy</p> <p>To recognise the value of the multi-cultural/faith diversity of the peoples in the 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>Public transport affordable by the poorest</p> <p>Library floor space per 1,000 population</p> <p>Primary school places provided</p> <p>Secondary schools places provided</p> <p>% of affordable housing provided</p> <p>% of housing units will be accessible to disabled people</p> <p>% households stating their neighbourhood has 'community spirit'</p> <p>% of citizens satisfied with the overall services provided</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</p>	<p>Recorded crime (by type) per 100,000 population</p> <p>Rates of fear of crime</p> <p>Proportion of public spaces and streets which are overlooked by development.</p> <p>Proportion of public facilities which are multi-functional, catering for a range of uses over different</p>

Objective	Criteria	Indicative Indicators
	behaviour	periods of the day.
	To improve attendance at school	
	To prevent environmental crime	Proportion of development (particularly in the town centre) which is dormant/ unused after hours
	To increase the use of community beat officers	
	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	% of public places that have security lighting and cameras
	To support citizenship awareness and anti-racism initiatives	
Economic Factors		
18. Achieve sustainable levels of prosperity and economic growth	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	GDP per head
	To promote and support economic diversity and particularly green technology initiatives within the manufacturing sector	Annual average investment by manufacturing industry as % of GDP
	To support and promote key industry sectors, small and medium sized enterprises, community-based enterprises, and leading edge infrastructure and high quality environment	% of businesses recognised as Investors in People
	To support the development of micro-businesses, community economic development and local investment	Adoption of Environmental Management Systems (ISO 14001. EMAS) and 'Green Accounting' by businesses
	To encourage investment in rural tourism initiatives, including farm diversification	Proportion of working age people in employment
	To plan and manage tourism development and activities to encourage year-round tourism, and more sustainable destinations, products and businesses (e.g. through use of a 'green audit kit')	Number and survival of business start-ups
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	Rate of growth of rural businesses
	To enhance local economies giving access to appropriate, rewarding paid work	Index of local deprivation
	To improve the competitiveness of rural businesses by promoting innovative means of service delivery (e.g. ICT, multi-purpose community centres)	Proportion of working age people in work, by area, age band, gender and ethnicity
	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	Woman in public appointments and senior positions
	To complete telecommunications links where there are network gaps	Dependency of working –age people in workless households
20. Revitalise town centres to promote a return to sustainable urban living	To restore the role of market towns as centres for sustainable development providing services, housing and employment, drawing on the principles of urban renaissance.	Fuel poverty
	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	

Objective	Criteria	Indicative Indicators
		<p>Increase in number of illness-free years</p> <p>% children in households with below half average income</p> <p>Proportion of new retail in town centres versus out-of-town</p> <p>Proportion of population living in town centres</p>

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
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
9. Protect and improve countryside and biodiversity
10. Protect and enhance historic environment
11. Provide opportunities for leisure, sport and recreation
12. Promote safety and security in new development

Table 4.2 DPD Strategic Objectives vs. Sustainability Objectives compatibility matrix

Core Strategy objectives												
SA Objectives (Abridged)	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	9. Protect and improve countryside and biodiversity	10. Protect 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 has taken into account key environmental, economic and social issues and the policies contained in the CS elaborate on ways to achieve these objectives.

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 is to note 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 Additional 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.

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 Initial Options SA. Refer Appendix 5 for I&O SA Report.

Following some revisions and additions to the Initial Options Paper, an Additional Options Paper was produced in July 2007 and subject to consultation. The additional 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 Additional Options- SA Working Note in July 2007. Refer Appendix 6 for actual Additional Options SA Working Note.

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. C02 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. Sust'able D'ment Patterns & 19. Accessibility	14. Equity & Social Exclusion	15. Good Quality Housing	16. Community Identity & Participation	17. Crime	18. Sust'ble Prosperity & Growth	20. Revitalise town centres
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	✓	✗	?	✓✓	✓	?	✓	✓✓	-	✓	?	✓✓	✓	?	?	-	✓	✓	✓✓
1c) If required new homes cannot be achieved through Option 1a), promote mixed-used development on surplus employment land.	✓	✗	?	✓✓	✓	?	✓	✓✓	-	✓	?	✓✓	✓	?	?	-	✓	✓✓	✓✓
KEY ISSUE 2: Making efficient use of land whilst protecting character	✓	✓	?	✓	?	?	?	✗	-	✓✓	✓✓	✓	✗	✓	?	✓	?	✓	✓✓
2. Require housing development to: a) make full & effective use of land	✓	✓	?	✓	✓	?	✓	✓	✓	?	?	?	✓	✓	✓	?	?	✓	✓✓
2 b) meet specific density guidelines set on settlement by settlement basis	✓	-	?	✓	✓	?	✓	✓	✓	?	?	?	✓	✓	✓	?	?	✓	✓✓
2c) meet specific density guidelines based on accessibility	✓	-	?	?	✓✓	?	✓✓	✓	✓	?	?	?	✓	✓✓	✓✓	?	?	✓	✓✓
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.	-	?	-	-	✓	?	?	-	-	?	?	-	?	✓	✓	-	✓	✓	✓

Issues and Options (abridged)																			
SEA Objective	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 & Accessibility	14. Equity & Social Exclusion	15. Good Quality Housing	16. Community Identity & Participation	17. Crime	18. Sustainable Prosperity & Growth	20. Revitalise town centres
3b) on housing developments of a certain size to meet identified housing needs.	-	?	-	-	✓	?	?	-	-	?	?	-	✓	✓	-	✓	✓	✓	✓
KEY ISSUE 4: Affordable Housing																			
4a) Seek the provision of affordable housing on all developments of 10 dwellings.	?	?	?	?	?	?	?	?	-	?	?	?	✓	✓	?	✓	✓✓	✓✓	✓✓
4b) Seek the provision of affordable housing on all developments of 10 dwellings and increase the element of affordable housing sought from 30% to 40%.	?	?	?	?	?	?	?	?	-	?	?	?	✓✓	✓	?	✓	✓✓	✓✓	✓✓
4c) Allocate some residential sites wholly or mostly for affordable housing.	?	?	?	?	?	?	?	?	-	?	?	?	✓	✓	?	✓	✓✓	✓✓	✓✓
4d) Permit small scale affordable housing schemes within the village core areas of Bedmond & Sarratt	?	?	?	?	?	?	✓	?	-	?	?	?	✓	✓	?	✓	✓✓	✓✓	✓✓
4e) Permit the redevelopment of non-residential sites wholly or mostly for affordable housing.	-	?	?	?	?	?	?	?	-	?	?	?	✓	✓	?	✓	✓✓	✓✓	✓✓
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).	?	?	?	?	-	?	✓	?	-	?	?	-	✓✓	✓	✓	✓	✓	✓	-
5b) Determine any application for gypsy sites on the basis of a meeting range of criteria relating to the site.	?	?	?	?	-	?	?	?	-	?	?	-	✓✓	✓✓	✓	✓	✓	✓	-
Key Issue 6: Town and Local Shopping Centres																			
6a) Guide retail development within	-	-	?	✓	✓	?	✓	✓	-	✓✓	✓	✓	✓✓	-	-	-	-	✓	✓✓

Issues and Options (abridged)																			
SEA Objective	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 & Accessibility	14. Equity & Social Exclusion	15. Good Quality Housing	16. Community Identity & Participation	17. Crime	18. Sustainable Prosperity & Growth	20. Revitalise town centres
existing shopping areas subject to appropriateness in line with character & function																			
6b) Greater protection of town and local shopping centres.	-	-	?	✓	✓	?	✓	✓	-	?	✓	✓	✓	✓	-	-	-	✓	✓
6c) Let market forces determine the mix of uses in within the town and local shopping centres.	-	-	?	✓	✓	?	✓	✓	-	?	?	✓	✓	-	-	-	x	✓	✓
6d) Plan for any additional retail floor space that is identified to meet need.	?	?	?	?	?	?	?	?	-	?	?	?	?	-	-	-	-	✓	?
Key Issue 7: Delivering improved and more integrated transport systems	✓	✓	-	-	✓	?	✓	?	-	✓	?	?	✓	✓	-	✓	-	✓	✓
7a) Maintain existing car parking standards for new development.	✓	✓	-	-	✓	?	✓	?	-	✓	?	?	✓	✓	-	✓	-	✓	✓
7b) Review parking standards for new development.	?	?	-	-	?	?	?	?	-	?	?	?	✓	✓	-	✓	-	✓	✓
7c) Review the car parking zones which determine how much parking should be provided as part of new development.	✓	✓	-	-	✓	?	✓	?	-	✓	?	?	✓	✓	-	✓	-	✓	✓
7d) Effectively promote alternative modes of transport and integration of systems.	✓	✓	-	-	✓	✓	✓	?	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7e) Require all developments, regardless of size to be located in accessible locations.	✓	✓	-	?	?	?	?	?	-	?	?	?	?	✓	✓	✓	✓	✓	✓
Key Issue 8: Increasing opportunities for good health through improved sport, leisure and open space and better access to	✓	✓	-	-	-	-	✓	-	-	✓	✓	✓	✓	-	✓	✓	✓	✓	✓

Issues and Options (abridged)																			
SEA Objective	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 & Accessibility	14. Equity & Social Exclusion	15. Good Quality Housing	16. Community Identity & Participation	17. Crime	18. Sustainable Prosperity & Growth	20. Revitalise town centres
facilities 8a) Seek to fully implement, the actions identified as part of the open space and recreation study/strategy.																			
8b) Require residential development to contribute towards the provision of sports facilities, amenity and children's play space.	✓ ✓	✓	-	-	-	-	✓	-	-	✓	✓	✓ ✓	-	✓	-	✓	✓	✓ ✓	✓
Key Issue 9: Protecting and maintaining biodiversity and landscapes 9a) Protect important wildlife sites & species & maintain the distinctive landscape character of the district	✓ ✓	✓	-	✓	-	-	✓	-	✓	✓	✓	✓ ✓	-	-	-	-	✓	✓ ✓	✓
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.	✓	?	-	-	✓ ✓	✓ ✓	✓ ✓	-	✓ ✓	✓	✓	✓	?	-	-	-	-	✓ ✓	✓ ✓
10b) All new major developments will be required to ensure that at least 20% of their energy requirements are met on site through renewable energy sources.	✓	?	-	-	✓ ✓	✓ ✓	✓	✓	✓ ✓	✓	✓	✓	?	-	-	-	-	✓ ✓	✓ ✓
Key Issues 11: A holistic approach to waste management 11a) All new developments will be required to use an element of recycled or reclaimed materials as part of	✓	✓	-	-	✓ ✓	✓	✓ ✓	-	✓ ✓	?	?	✓	-	-	-	-	✓	✓ ✓	✓

Issues and Options (abridged)																				
SEA Objective	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 & 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.	✓	·	·	·	✓✓	✓	✓✓	✓	✓✓	·	·	✓	·	·	·	·	·	✓	✓✓	✓
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.	·	·	·	·	·	·	·	·	·	·	·	✓	·	·	·	✓✓	✓✓	✓✓	✓	
13b) Seek local recruitment and training policies with major employers coming into the District.	·	·	?	?	?	·	·	·	·	·	?	✓	✓	·	✓	✓✓	✓✓	✓✓	✓✓	
13c) Seek the provision of youth facilities as part of new development.	·	·	?	?	?	·	?	·	·	·	?	✓	?	✓	✓	✓✓	✓✓	✓✓	✓✓	
Key Issue 14: Conservation and heritage 14a) Protect and enhance and maintain the historic environment by resisting the loss of important buildings.	·	·	·	·	·	·	·	·	·	✓✓	✓✓	✓	·	·	·	✓✓	·	✓✓	✓	

6 Core Strategy Preferred Options Assessment

6.1 Assessment methodology

Assessment of the preferred options, a key output of this stage, involves prediction of 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

6.2 Mitigation and recommendations

SEA Regulations requires 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 6.3.

6.3 *Summary of the Preferred options appraisal results*

Based on the above methodology 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, Core Policies and Development Policies.

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 also discussed, as appropriate.

Based on 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 adverse, or significantly 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 explanatory to such adjustments to the scoring is provided in the detailed assessment matrix, as appropriate.

6.3.1 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. 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 it is likely to uphold national objectives on waste and climate change issues.

By advocating a balance between homes and jobs the vision reduces 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. There are no adverse environmental, economic or social effects anticipated for the vision.

Table 6.1 Assessment summary table – Preferred option

SA Objective	SA1	SA2	SA3	SA4	SA5	SA6	SA7	SA8	SA9	SA10	SA11	SA12	SA13,19	SA14	SA15	SA16	SA17	SA18	SA20
CS Policy																			
Vision	+	+	+	+	++	+	++	+	++	0	+	++	++	+	0	0	+	+	+
Spatial strategy	?	?	?	+	+/-	?	+/-	++	0	?	?	?	+	0	0	0	0	+	+
PSP1	+	+	?	+	+	?	+	++	+	++	+	+	++	++	?	?	?	+	++
PSP2	+	+	?	+	+	?	+	++	+	++	+	++	++	+	?	?	?	+	+
PSP3	+	+	?	+	+	?	+	++	+	++	+	++	++	++	?	?	+	+	+
PSP4	+	?	?	+	?	?	?	?	?	+	+	+	?	+	?	?	?	+	+
CP1	++	+	++	++	+	+	+	++	++	+	++	++	+	++	+	?	+	++	++
CP2	?	?	0	?	+	?	+	+	?	?	+	+	++	?	0	?	0	+	+
CP3	+	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	?	?	+	++	0	0	?	0	+	0
CP10	+	+	+	+	+	+	+	0	+	+	+	+	+	?	0	0	+	+	+
DC1	?	0	0	?	0	0	0	-	?	0	-	+	?	0	0	0	0	?	0
DC2	++	+	+	+	0	+	+	0	+	0	++	+	+	0	0	+	0	0	0
DC3	+	0	0	+	0	0	0	0	0	+	++	+	+	0	0	+	0	?	0
DC4	+	0	?	0	0	0	0	?	?	0	++	++	++	+	0	+	0	+	+
DC5	0	0	0	0	0	0	0	?	?	0	+	++	+	+	0	+	0	+	0
DC6	0	0	0	0	+	0	+	0	0	0	0	++	+	+	0	++	0	+	0
DC7	0	0	+	0	+	+	0	0	++	0	+	0	0	0	+	0	+	+	0
DC8	+	0	?	?	?	?	0	0	0	0	+	0	0	0	+	0	0	0	0
DC9	+	+	++	+	0	+	0	0	+	0	0	+	0	0	0	?	0	0	0
DC10	+	0	0	0	++	0	0	0	+	0	0	0	0	0	0	0	0	+	0
DC11	+	+	?	0	+	+	+	0	+	+	+	+	0	0	0	0	0	+	0
DC12	0	+	0	+	+	0	+	0	+	0	?	0	0	0	0	0	0	+	0
DC13	+	0	0	+	0	0	0	0	0	++	++	0	0	0	0	0	0	0	+
DC14	+	++	+	+	+	?	++	+	+	0	+	+	0	+	0	0	0	+	0
DC15	0	0	0	0	+	0	+	0	0	0	0	0	0	0	0	0	0	+	+

For purposes of this assessment, the Spatial Strategy option on Map 3 is referred in conjunction with the Transport Strategy on Map 7 of the CS Preferred Option document. The strategy advocates for intensification of land use in the short to medium term and proposes edge of settlement in the long term to accommodate future housing and employment land requirement. This also includes slight revision to the green belt.

While the strategy performs well under economic objectives and some environmental objectives, uncertainties prevail over its effect on many environmental objectives. It is acknowledged that the strategy is high level, however appropriate linking with core policies and development control policies may reduce these uncertainties. It is also acknowledged that other CS policies discusses details such as Transport, Housing Mix, Affordability and, Economic development. Explicit reference to other CS strategies and indication that these policies will support the Spatial Strategy is recommended.

One significant positive effect is observed for use of brownfield land as policy advocates land intensification. Transport improvements (including public transport) combined with this intensification is likely to have positive effects to 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. Additionally, the transport strategy does not indicate inter-connection between settlement edges and key transport nodes, for example, between south of Abbots Langley and Watford Junction. This gap may increase dependency on private transport, therefore impact is uncertain for the long term against CO₂ emissions, Air Quality and Health objectives.

Owing to detailed information requirement effect of the strategy on Historic assets, Landscape & Townscape, Biodiversity, Water resources, Flood risk and Climate Change adaptability objectives is unknown. However the core policies and development control policies are likely to provide sufficient information at a level required for this stage. Linking the Spatial Strategy with appropriate Core Policies and Development Control policies is therefore recommended, which may reduce these uncertainties.

Mitigation measures & Recommendations for Spatial Strategy

- Consider making explicit reference to Core policies and Development policies for biodiversity, water, flood risk, landscape, historic assets and climate change adaptability.

6.3.3

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 preserving or 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 and DC9.

PSP1 scores positive against many environmental objectives such as biodiversity, soil, resource efficiency, landscape and townscape, cultural heritage, air quality and CO₂ emissions. Although covered by development policy within the CS, no specific reference to approach towards development on flood risk zones is found in PSP1. This is particularly important to discuss given parts of Rickmansworth lie outside flood zone 1. SFRA recommendations must be referred for further action.

Nevertheless, 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 deprived areas such as Penn Ward.

Mitigation measures & Recommendations for PSP1:

PSP1 could discuss need to increase public transport patronage, in addition to physical improvements to the transport infrastructure.

6.3.4

PSP2- Development in the Key Centres (South Oxley, Croxley Green, Abbots Langley, Chorleywood)

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 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.

Public transport and cycling improvements should limit 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 Park 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 Park

The policy score uncertain on the following objectives

- Flood Risk- implications of residential or retail development in areas identified outside flood zone 1, particularly in Croxley Green;
- Climate change adaptability;
- Housing quality and
- Community identity and participation.

Overall PSP2 is likely to help revitalise the secondary 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:

- Consume all available PDL to preserve Greenfield sites
- Discourage private vehicles, in addition to public transport improvements
- Relate PSP2 to resource efficiency policies of the CS
- 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

6.3.5

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

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. Policy is likely to fulfil local community needs, address crime and deprivation issues, and thus contribute to sustainable prosperity and growth of Secondary Centres.

The policy does not include specific information to determine whether it is climate change proof. However it is acknowledged that DC9 (Water resource and Flood risk) is likely to have a positive influence. Explicit reference to approach towards sites at risk of flooding is recommended.

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
- Consider criteria-based policy to identify potential development sites that may be at risk of flooding

6.3.6

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 Boroughs.

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 to 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. For example, from the policy wording, it is unclear whether the Green Belt itself or just the openness of the Green Belt is being protected.

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.

Policy approach towards use of PDL and Green field safeguard is unknown.

Mitigation measures/ Recommendations for PSP4:

- Strengthen transport links between villages and secondary or key centres.
- Prioritise PDL over Green field sites for future development
- Consider explicitly making reference to protection of water resources
- 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
- Consider opportunities to link green infrastructure networks with sustainable transport routes, without jeopardising species diversity

6.3.7

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 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 push forward sustainable growth and 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.

Using PDL, sustainable building materials and reducing land contamination and pollution will also have positive impacts 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 impacts 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:

- Consider avoiding prioritising PDL at sites with established wildlife habitats
- In addition to water efficiency through appliances, consider inducing behavioural change to minimise water consumption, such as using water meters, other economic (dis)incentives
- Consider policy wording with emphasis on ‘sustainable travel’ modes, or car pooling options, as alternative to car travel.
- Consider including policy wording that reflects need to promote ethnic and cultural diversity and respect multi-cultural faith

6.3.8

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. Developing in areas that have good access to public transport should help reduce CO₂ emissions, improve air quality and health and achieve an overarching pattern of sustainable development.

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 -

- Bio diversity- the impact of green belt revision on wildlife and 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 uncertain score. Three Rivers DC has consulted Thames Water and Three Valleys Water regarding implication of future housing growth on infrastructure. 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. All options such as increased density, where appropriate, should be included as a criteria to protect green field sites. 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, and the type of mix, weightage to diversity/ social status in the housing supply process is unknown

Mitigation measures/ Recommendations for CP2:

- Ensure application of all measures in using PDL, including intensification of existing sites prior to considering green field sites
- Consider environmental capacity in parallel with housing supply. Refer to the Thames River Basin Management Plan, when available, for further action
- Ensure application of the sequential approach to housing sites after 2021
- Consider explicitly stating community participation in the housing supply assessment process

6.3.9

Core Policies- CP3: Housing Mix and Density

CP3 is likely to have positive benefits against most environmental objectives (air quality, CO₂ emissions, cultural heritage and landscape and townscape, and no relation with some objectives i.e., biodiversity, water quality and soils.

By encouraging new development locations situated conveniently for public transport accessibility, the policy will help reduce private vehicle emissions, improve 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 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 PSP3 is assessed to score well under social themes.

Although no negative impacts have been identified, there are uncertain impacts on flood risk and climate change proofing.

Mitigation measures/ Recommendations for CP3:

- Maximise opportunities to promote sustainable construction methods in the whole development, in addition to resource efficiency in individual buildings
- CP4 should make reference to flood risk policies of the CS

6.3.10

Core Policies- CP4: Affordable Housing

This policy is informed by various studies including the Development Economics Study, 2008⁸. Policy will uphold social objectives, as it aims for equality and social inclusion. With increased percentage of social renting in comparison to intermediate housing, it will ensure increased housing provision, thus positively contributing to economic growth.

As this CS and upcoming Site Allocation/ Affordable Housing DPD 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 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. 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.

Mitigation measures/ Recommendations for CP4:

- Ensure affordable housing provision does not compromise with character of historic buildings or with that of character areas
- Clarity over role of affordable housing in addressing effects of climate change- such as CC adaptable development is recommended

6.3.11

Core Policies- CP5: Gypsy and Traveller Provision

Barring few environmental objectives, CP5 will have mild positive effect on number of sustainability objectives, particularly against sustainable growth, social 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. Areas of flood risk will also be avoided, which gives the policy a positive score for the flood risk and climate change proof objectives.

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

⁸ DES was a joint study joint study commissioned with neighbouring authorities, looking at the economic viability of providing affordable housing in the District.

The policy also scores well in terms of its contribution to achieve 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

6.3.12

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 to reduce need to travel, which will have a secondary positive effect on transport emissions, air quality and health. CP6 will 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. The mixed use development in areas accessible to public transport will also help achieve a more equitable and participatory society, thus advancing social objectives.

Although positive on many aspects, the effects were uncertain under flood risk and climate change adaptability. The policy position in relation to addressing effects of climate change through adaptation strategies for commercial and public buildings is unknown. Results of the Outline Sequential Test, as an addendum to the Level 1 SFRA, should be referred to address few identified uncertainties. Environmental impacts of each site should be assessed at the detailed development stage.

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 remit of spatial planning.

In spatial terms land release at Leavesden Park 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:

- Clarity over position of the policy in relation to sites identified for development that may be at risk of flooding is required. For example, reference to appropriate procedures or DC policies within the CS may suffice at this stage.
- Policy should ensure safeguard of small, local neighbourhood businesses

6.3.13

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. 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. 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.

In addition to protection and enhancement of retail centres, policy should suggest link up with urban design improvements and townscape enhancements. A combination of design and economic strategy improvements will increase chances of inward investments, thus increasing the vitality and viability of town centres.

While policy CP7 will limit large convenience shops and encourage small retailers, it should consider options to bring forward any surplus convenience shops area for comparison goods shops, provided they are viable.

6.3.14

Core Policies- CP8: 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 CP8 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 to reduce 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 a significant 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 improvement 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 uncertain for flood risk and landscape objectives.

Mitigation measures/ Recommendations for CP8:

- In addition to inter-town connectivity improvements, strengthen public transport within villages and secondary centres

6.3.15

Core Policies- CP9: Infrastructure and Planning Obligations

This policy is likely to have positive effects on some environment (flood risk), social (health) and economic growth objectives and significant positive effect on sustainable development pattern and accessibility as CP9 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 effect uncertain under the following objectives:

- Biodiversity- compensatory provision of biodiversity to allocate significant amenity should be avoided as far as possible. Clarity over definition of ‘significant amenity’ is recommended;
- 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;
- Cultural Heritage- similar to above

6.3.16

Core Policies- CP10: 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, 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.

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 CP10:

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

6.3.17

Development Policies- DC1- Green Belt

Although maintenance of 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. However DC1 is not considered to have any relation to many social and economic objectives.

Assessment indicates negative effect under use of brownfield land objective.

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. It is acknowledged that CS is a strategic document not to indicate 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. Alternatively, an expansion of the urban form may encourage car travel, which is already very high in the District.

6.3.18

Development Policies- DC 2- Biodiversity, Trees and Woodland

By protecting and enhancing wildlife sites, woodlands and geological and physiographical features most of the SA objectives will be progressed. The policy is likely to have significant positive impact on the biodiversity and landscape objectives as these resources are central to the successful implementation of this policy. Likely secondary or indirect positive impacts on air quality, health and other resources, such as soils and water may occur under this policy. Flood risk will also be reduced as a result of this policy, thereby making the policy more 'climate change proof.' Policy prioritises avoidance (e.g. not allowing development in certain circumstances) rather than compensatory mitigation, especially for well established habitats such as ancient woodland or individual trees and hedgerows.

No direct relation was predicted for most social objectives, except secondary effect on health and supporting sustainable growth (economic objective).

Mitigation measures/ Recommendations for DC2:

- Reference could also be made to regional threats to biodiversity.
- Trans-boundary impacts such as development impacts on water resources and recreational impacts (e.g. increasing numbers of visitors to protected sites) and the direct and indirect impacts of roads and vehicles should be taken into account. This will help protect sites of biodiversity value beyond Three Rivers borders, such as Burnham Beeches SAC.
- Any anticipated adverse effects of lower tier development plans on European protected sites may be required to undergo Habitats Regulations Assessment.

6.3.19

Development Policies- DC 3- Landscape Character

Significant positive impact of this policy is likely against landscape and townscape enhancement objective. However, indirect positive impacts may occur against soils and biodiversity objectives as a result of the protection of the landscape. DC 3 will help progress historic & cultural assets SA objectives, as it is sensitive towards these features.

By protecting natural landscapes, local distinctiveness and pride of place will be encouraged. Urban areas will also be more attractive places to live, work and visit. Overall, protecting natural areas will contribute to the overall sustainable pattern of development in the district.

Although generally positive against environmental and some social (health and community identity) objectives, a likely conflict with DC1 (Green belt alteration) is likely. Under a potential conflict scenario, an unsympathetic intrusion of new development in the altered green belt area may interfere with the landscape character, therefore effect on sustainable prosperity is unknown at this stage.

Mitigation measures/ Recommendations for DC3:

- This policy should be referred in conjunction with the upcoming Urban Design Strategy SPD in order to create visually sensitive urban realm within the district.
- Thorough criteria based analysis that takes into account effects of green belt alteration on landscape features must be considered during urban expansion in the future.

6.3.20

Development Policies- DC 4- Open Space, Sports and Recreation Facilities

Policy DC4 will have significant positive impact on social objectives, such as equality, health and likely positive effects under some economic and environmental objectives such as economic prosperity and biodiversity. All the above are likely to contribute towards a sustainable development pattern.

This policy is aligned with and is supportive of the Council's Open Space, Amenity and Children's Play space SPD. Implementation of the policy should prioritise PDL for new areas of open space, sport and recreational facilities. Policy DC4 when executed in conjunction with Policy DC7 and Council's Design Guidance SPD, they are likely to create visually appealing, yet functional civic spaces – potentially attracting inward investments.

6.3.21

Development Policies- DC 5- Children's Play Space

DC5 has direct relevance to most of the social SA objectives, potentially with positive effect on health, equality and sustainable development patterns, but the policy has no direct relation to some environmental objectives such as air emissions and climate change proof.

Overall, DC5 is likely to encourage provision of easily accessible play space in all neighbourhood, an important aspect leading to sustainable growth and development patterns.

The policy has scope to specify minimum travel distances from neighbourhood to strengthen accessibility to services. It will also ensure provision of play equipment, thus addressing a common issue relating to equipments

As the policy is not explicit about usage of PDL for child play space, therefore effects uncertain under brown field and resource efficiency objectives.

Mitigation measures/ Recommendations for DC5:

- Implementation of the policy should prioritise PDL while searching for new children's play spaces.

6.3.22

Development Policies- DC 6- Community, Leisure and Cultural Facilities

This policy will have a significant positive impact particularly under health and community identity objectives. It is likely to bring positive social and economic benefits, but no direct relation was observed against many environmental objectives. By acknowledgement of the importance of sustainable modes of transport there is a likely reduction in vehicle emissions from private vehicles therefore improved air quality.

Good provision of health facilities will help improve overall public health. Provision of a wide range of facilities with good access by public transport will also help to improve social equity and reduce social exclusion.

Leisure and cultural facilities may attract local and other visitors, a positive contribution to economic growth.

Mitigation measures/ Recommendations for DC6:

- Consider discussing improvements to accessibility of existing community, leisure and cultural facilities, in addition to its protection.
- Synergistic positive effects may be observed if this policy DC6 is considered in conjunction with DC7 (Design of development) and with the upcoming Design Guidance SPD

6.3.23

Development Policies- DC 7- Design of Development

Various aspects of this policy score well under most environment, social and economics 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, SA objective on reducing carbon emissions will be progressed. The retention or improvement of landscape and taking into account local context, character and distinctiveness will have positive effects on landscape and townscape and good quality housing. The policy is likely to have the biggest positive effect under environmental objectives through promotion of innovative design to reduce energy and waste.

DC 7 is likely to help reduce crime (perceived and actual), positive social effect.

Design improvements are likely to help improve public realm and create places to live and work, thus attracting inward investments and progress 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 DC 7:

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

6.3.24

Development Policies- DC 8- Residential Design

This policy will have positive effect against landscape and townscape (environmental) and good quality housing (social) objective.

Although DC8 does not have direct relation to most SA objectives, its position towards flood risk issues, air quality and climate change adaptability are uncertain.

Mitigation measures/ Recommendations for DC8:

- Consider addressing flood risk adaptability in residential design apart from SUDS.
- Policy wording should refer to encouraging renewable energy in residential design, for example district CHP for new development
- Policy does not refer to adaptability of building design for climate change impact in both new and existing residential units

Policy DC 8 should be linked to policy DC 7 (Design of development) as it upholds various environmental benefits, such as resource efficiency, optimisation of site features (such as for solar energy).

6.3.25

Development Policies- DC 9- Flood Risk and Water Resources

By promoting the avoidance or mitigation of development in high flood risk areas, the use of Sustainable Drainage Systems and Drainage Impact Assessments there should be a significant reduction in flood risk. This will also have positive impacts on various other environmental parameters. For example, a reduced flood risk would also reduce the risk of spreading water-borne contaminants, which could affect biodiversity, soil resources, water quality and health. Minimising flood risk is also an important factor in using land resources efficiently and safeguarding the district against the effects of climate change.

In addition to development control, the policy encourages partnerships between stakeholders for emergency planning, an important aspect in integrated management approach. Awareness should include local residents to ensure successful implementation of any flood risk management plan, in the event of flood occurrence.

Overall DC9 will have mild positive effect against most environmental objectives and is likely to have significant impact against the flood risk objective.

Although indirect benefits may occur under social and economic objectives, this assessment observes no direct relation.

Position of the policy towards community participation in emergency planning and river corridor improvements is unclear, although this process will involve appropriate stakeholders from various authorities. For this reason, impact against community identity and participation objective is uncertain.

Mitigation measures/ Recommendations for DC 9:

- Consider improving quality of existing water resources, in addition to prevention of deterioration from future development.
- Consider ground water contamination as a result of inappropriate construction methods used on contaminated soil.

6.3.26

Development Policies- DC 10- Carbon- di- oxide Emissions and On-site Renewable Energy

By setting detailed targets for carbon emission reduction; promoting renewable energy and requiring developments to have a C-Plan energy statement there should be significant reductions in local and regional carbon emissions, which should help

to counter the effects of an increased population in the district. This will significantly progress the environmental SA objective on carbon dioxide emissions, resource efficiency and contribute to sustainable prosperity of the District.

Mitigation measures/ Recommendations for DC 9:

- Consider including commercial and public buildings in the policy, in addition to residences
- Renewable energy generation obligation and adoption of energy efficiency, carbon effective methods, from the short-term should be considered as these buildings can set an exemplar for future development.
- In addition to insitu power generation, many small developments (over 1 dwelling, but less than 10) may be linked to a district heating grid (especially in urban extensions, where spatial opportunities may not be limited

6.3.27

Development Policies- DC 11-Renewable Energy Developments

DC11 scores positive against most environmental objectives, both at local and regional level and is likely to be positive for economic growth.

Policy supports national and regional targets in reducing CO₂ emissions and has potential to create job opportunities. DC11 is likely to have significant positive effect on resource efficiency and landscape and townscape. It also has sufficient caveats included to guard against adverse effects on the environment; it therefore progresses various environmental SA objectives.

6.3.28

Development Policies- DC 12-Waste Management

Recycling and re-use objectives will create less demand for new landfill site opening or expansion of existing facilities. This will have positive, if indirect, impacts on water quality, air quality and landscape and advance many environmental objectives. DC 12 is likely to have direct benefits in terms of resource efficiency, reducing CO₂ emissions and reducing emissions of other greenhouse gases associated with landfill sites, such as methane.

The policy is likely to have indirect impact on resource efficiency and job creation, thus making a positive contribution to economic prosperity, both at a local and regional level.

Policy takes residential and work space amenity and requires integration of waste facilities with design, however waste facilities should have consideration towards landscape and townscape features.

Mitigation measures/ Recommendations for DC 12:

- In addition to construction waste the policy should consider demolition waste.

6.3.29

Development Policies- DC 13-The Historic Built Environment

This policy approach aims to preserve various features of the historic environment, either directly or indirectly. By protecting landscape features there may be indirect positive impacts on soils and biodiversity.

Respecting cultural heritage and vernacular architecture will help preserve the overall vitality of town centres, thus advance economic growth.

6.3.30

Development Policies- DC 14-Contamination and Pollution Control

By emphasising the need to reduce or treat any run-off of pollutants from new development there should be significant positive impacts on water quality. The policy approach also directly addresses air pollution and contaminated land, thus progressing air and soil objectives. The policy is likely to have other indirect benefits-by advocating the need for remedial action on contaminated land, brownfield land will likely be used; this will help use PDL and utilise land resources efficiently. Positive social inclusion impacts are envisaged as a result of contamination remediation requirement. There may also be a reduction in flood risk as a result of this policy due to developers examining any potential pollutant run-off issues and considering their impact on water resources as a whole.

Mitigation measures/ Recommendations for DC 14:

- Consider discussing water resource efficiency and improvement to water quality from existing developments, in addition to new buildings

6.3.31

Development Policies- DC 15-Parking

Although there may be indirect negative impacts on reducing carbon dioxide emissions by providing minimum cycle parking standards, it was not possible to score this policy approach against most of the SA objectives. This is because guidance on the design and layout of parking areas is not included as is likely to be provided in the Council's upcoming Design Supplementary Planning Document. The parking standards indicated in Appendix 6 of the CS appear to give more weightage to businesses and considers disabled users. Although indirect negative impacts on air quality is possible, the policy is likely to support businesses through provision of adequate parking spaces. The Design SPD may consider ways to balance environmental and economic factors with respect to parking.

6.4 Cumulative, Synergistic and Secondary effects

Cumulative effect

ODPM 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) and Development Policies (DC).

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.

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 DC2 (Biodiversity) and DC3 (Landscape Character) is more likely to protect and enhance species and habitat
- *Water*-CP 9 (Infrastructure and Planning Obligations) does not explicitly discuss water quality and resource development therefore effect was assessed to be uncertain. However CP9 in conjunction with DC9 (Flood Risk & Water Resources) is likely to bring cumulative positive effect
- *Flood risk*- With no explicit reference to approach towards flood risk management, all place shaping policies, CP2 (Housing Supply) and CP9 (Infrastructure and Planning) assessment allocated an uncertain score. However these policies are likely to bring positive effect when implemented in conjunction with DC9. For example new developments in flood zones outside zone 1 may be required to make developer contributions. This aspect is relevant to CP9 and linking it with DC9 will provide clarity over Council's approach to flood risk issues
- *Soils and Use of PDL*- All place shaping policies (PSP) focus on development on PDL, a positive under use of PDL objective. When combined with DC14 (Contamination and Pollution Control) there may be significant benefit for soil resources (through contamination remediation of PDL, for example).
- *Sustainable growth and prosperity*-_Development policies DC4, DC5, DC6 and DC7 , on their own will generate positive effect against this objective; however they are likely to bring significant positive benefit on sustainable growth and prosperity objective.

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 2021 that prioritises PDL; however post 2021 edge of existing settlements may be absorbed for development. This may have synergistic negative effect (not significant) on biodiversity when combined with DC1 (Green Belt) i.e., green belt revision. 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 along edge of settlements, the biodiversity impact of this approach is unknown. A slight revision of green belt to accommodate development needs, as indicated in DC1 (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 DC4 (Open Space and Recreation Facilities), that will encourage provision of accessible open spaces and with CP 8 (Transport) that promotes sustainable transport, including healthy options such as cycling and walking.
- *Economic growth*- Accessibility to services (DC4, DC5 and DC6) is an important criteria to build a desirable neighbourhood. These policies, in combination with attention to design (DC7 and DC8) are likely to create attractive public realm spaces, therefore potentially attracting inward investment

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 DC2 (Biodiversity) 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.

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.

6.5 *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.

7 Monitoring

7.1 *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 Preferred Options has identified xx separate significant positive effects (on 20 of the SA objectives), one negative effect (mild) and xx uncertain impacts. Monitoring has been considered to cover these effects. Monitoring has also been proposed in relation to the minor 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.

7.2 *Monitoring Measures*

The monitoring measures recommended in this report should be considered provisional as this is based on assessment of the draft Core Strategy, which may be altered after the public consultation or the baseline position may change at the time of adoption of this framework.

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 5 of the Core Strategy Preferred Options DPD.

Effect or indicator to be monitored	Information required / Indicator	Information source	Information quality, gaps (& solution)	When to take remedial action	Remedial action to take
Biodiversity	BAP species monitoring	English Nature Specialist environmental groups i.e. RSPB, wetlands trusts etc	To be determined	To be determined	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	To be determined	To be determined
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	To be determined	To be determined
Flood Risk	Number of planning permissions granted contrary to the advice of the Environment Agency on either flood defence grounds or water quality	TDC	Currently monitored	To be determined	To be determined
Greenhouse Gas Emissions	Renewable energy installed by type	Three Rivers District Council (TDC)	Currently partially monitored, gaps in relation to domestic installations.	To be determined	To be determined
Use of Brownfield Sites	Percentage of new dwellings On previously developed land	TDC	Currently monitored	To be determined	To be determined

Effect or indicator to be monitored	Information required / Indicator	Information source	Information quality, gaps (& solution)	When to take remedial action	Remedial action to take
Resource Efficiency	Renewable energy installed by type	TDC	Currently partially monitored, gaps in relation to domestic installations	To be determined	To be determined
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	To be determined	To be determined
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 BVPI 219	Currently monitored	To be determined	To be determined
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	To be determined	To be determined
Equality and Social Exclusion	Affordable Housing Completions	TDC	Currently monitored	To be determined	To be determined
Good Quality Housing	Renewable energy installed by type	TDC	Currently partially monitored, gaps in relation to domestic installations	To be determined	To be determined
	Dwelling completion	TDC			
Sustainable Prosperity and Growth	Business Development	NOMIS	Currently monitored	To be determined	To be determined
	No. residents unemployed (claimant count) (local output indicator)	Hertfordshire Country Council Unemployment Bulletin; NOMIS	Currently monitored	To be determined	To be determined
Accessibility	Retail office, leisure and open space	National statistics	Currently monitored	To be determined	To be determined
Revitalise Town Centres	Job density representing the ratio of total jobs to working age population	Jobs Density (www.nomis.co.uk)	To be determined	To be determined	To be determined
	Median earnings for employees living in the area (local output indicator)	Annual Survey of Hours and Earnings	To be determined	To be determined	To be determined

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