

Three Rivers District Council

Core Strategies Additional Issues and Options Paper

Planning Your Future

Sustainability Appraisal & Strategic Environmental Assessment

July 2007



*Sustaining and improving
the quality of people's
lives...*





Centre for Sustainability at TRL Ltd



Halcrow Group Ltd

Three Rivers District Council

Core Strategies Additional Issues and Options Paper Planning Your Future

Sustainability Appraisal & Strategic Environmental Assessment Working Note

July 2007

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1 Introduction

1.1 Background

This Working Note sets out the results of the appraisal of the Three Rivers Core Strategies Additional Issues and Options Paper (Planning Your Future, May 2007). This Working Note does not form part of the formal Sustainability Appraisal (SA) / Strategic Environmental Assessment (SEA) reporting process. It has been produced to contribute to the plan making process, by providing independent appraisal of the issues discussed, with a view to guiding the production of the preferred options towards contributing to sustainable development principles. Sustainability appraisal is a decision aiding tool rather than a decision making one and the contents of this report should therefore be considered in this light.

The proposed additional issues and options have not previously been subject to sustainability appraisal as they represent much progressed versions of the issues and options previously appraised in June 2006, as well as some which are supplementary.

1.2 Additional Issues and Options Report - Planning Your Future

The additional issues and options paper has been developed in order to take account of gaps previously identified within the 2006 Core Strategy Issues and Options Paper. These include:

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

In addition, three changes have been 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 include:

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

The Sustainability Appraisal has considered the document at three distinct levels.

Firstly, the areas put forward as potential new housing and employment sites in Sections 4 and 5, have been assessed at a level, which whilst aiming to remain strategic, examines the main sustainability constraints specific to the individual locations.

Secondly, the elements of the Additional Issues and Options paper which have been tackled in a more strategic sense (i.e. sections 1, 6, 7 and 9) have been appraised at a level appropriate to the level of detail contained in each section and to provide responses from a sustainability perspective to the 'option' questions posed within these sections of the Issues and Options paper. For ease of reference, these questions have been reproduced within this SA Working Note and are illustrated throughout within grey question boxes similar to the one shown directly below:

Example 'option' question box as taken from the Three Rivers Additional Issues and Options Paper (June 2007)

Thirdly, the 'Generic Development Control Topic Areas' and associated criteria will be assessed for conflict with the SA Framework of objectives developed and refined in the SA Scoping Report and stakeholder consultation workshop held in February 2006.

1.3 Appraisal Approach

Whilst the Sustainability Appraisal for the original Core Strategies' Issues and Options Papers utilised the framework of objectives that had been developed for the Sustainability Appraisal Scoping Report, this approach is not as appropriate for the Three Rivers Additional Issues and Options document (except for the appraisal of the Development Control Policies). This is due to specific options not being defined in enough detail for an effective and informed appraisal to take place, and in these cases a commentary is provided in terms of the likely sustainability implications of taking forward the different proposals relating to the issues discussed . For those sections (namely the broad housing location and employment area chapters) where more specific information is provided, a constraints led approach is used (more appropriate for the appraisal of sites).

2 Appraisal of Potential Broad Locations for Additional Housing and Employment Areas

2.1 The Need for Additional Housing Development

Given the publication of Planning Policy Statement 3 and the revision of the Regional Spatial Strategy, the regional housing allocation has risen from 3,600 dwellings (as a maximum ceiling) to 4,000 dwellings (as a minimum). The updated housing trajectory for Three Rivers to 2021 shows an increase of 919 dwellings from the identified housing capacity of the District and the new regional housing allocation. This shortfall in provision is scheduled to occur between 2014 to 2021. The Additional Issues and Options Report identifies two options for addressing this long-term shortfall:

- 1. To increase the capacity of sites within the urban area.**
- 2. To identify new housing sites.**

At first sight, Option 1, increasing the capacity of existing sites within the urban area would seem the most sustainable option in terms of not compromising the integrity of any further sensitive environmental or heritage features. Option 2, suggests the potential for allowing development on previously undeveloped sites and therefore impacting upon the biodiversity and landscape features which are often characteristic of these sites.

The required increase of capacity at existing sites within the urban area, however, would be significant (more than doubled) to address the housing shortfall. This doubling of density may have impacts on the existing natural areas and built heritage within these urban areas (e.g. changing the character of conservation areas and impinging upon open space). More significantly than this, Three Rivers District Council has calculated that this increase in capacity will compromise the ability to achieve current residential standards for new housing (e.g. adequate garden space, privacy distances, parking and open space provision). It is likely that in some locations the existing infrastructure would also be inadequate, and that it may be more problematic to upgrade than installing new infrastructure at new housing sites.

Brownfield sites and sites with existing planning permission would be given priority when selecting new sites for additional housing, as per option 2. It is however likely that some green field sites (situated in the Greenbelt) would also be considered, although these would be subject to a rigorous selection process (of which this SA is part) that would assess the impact on the Greenbelt (including all associated environmental aspects) and accessibility to existing services.

For these reasons, Three Rivers District Council has progressed Option 2 as the most sustainable way of meeting future housing needs. It is from this starting option that the Additional Issues and Options Report has been developed.

2.2 Methodology

Eight additional housing sites and three employment areas have been proposed by Three Rivers District Council. Geographical Information Systems (GIS) have been used to assess the sites in terms of potential constraints and opportunities. The GIS layers used to compare environmental designations, accessibility and key services and land use attributes are shown in Tables 1 and 2. In the majority of cases, it was identified whether an attribute conflicted with the proposed site area (yes or no). Alternatively, distance buffers were used to the edge of the proposed site. This

enabled the appraisal to determine access to key facilities within a certain distance from the proposed site, for example, schools within 600m (in some cases, both the presence of a key service or attribute within the site, and within a distance from a site were assessed – both criteria are listed in Tables 1 and 2).

Table 1: GIS Layers Used in Additional Housing Site Appraisal

GIS Layer	Query Criteria
<i>Environmental Designations</i>	
Area of Archaeological Importance	Yes/No
Area of Outstanding Natural Beauty	Yes/No
Area subject to local preservation	Yes/No
Groundwater Protection Zone	Yes/No
Conservation area	Yes/No
Flood zone 2	Yes/No
Flood zone 3	Yes/No
Regionally Important Geological / Geomorphological Site	Yes/No
Registered Parks and Gardens	Yes/No
Scheduled Monuments	Yes/No
Wildlife sites	Yes/No
Sites of Special Scientific Interest / Local Nature Reserves	Yes/No
Listed Buildings	Yes/No
<i>Accessibility / Key Services</i>	
Employment Area	Yes/No
	Within 2000m
School	Yes/No
	Within 600m
Local Centre	Within 800m
Railway Station	Within 1000m
Bus Service	Within 500m
Doctor's Surgery	Yes/No
	Within 800m
<i>Land Uses</i>	
Public open space	Yes/No
Common Land	Yes/No
Agricultural Land (Grade 2)	Yes/No
Reservoirs	Yes/No
Rivers	Yes/No
Railway Line	Yes/No
Sand / Gravel Belt	Yes/No
Hazardous Substances	Yes/No
Greenbelt	Yes/No

Table 2: GIS Layers Used in Employment Area Site Appraisal

GIS Layer	Query Criteria
<i>Environmental Designations</i>	
Area of Archaeological Importance	Yes/No
Area of Outstanding Natural Beauty	Yes/No
Area subject to local preservation	Yes/No
Groundwater Protection Zone	Yes/No
Conservation area	Yes/No
Flood zone 2	Yes/No
Flood zone 3	Yes/No
Regionally Important Geological / Geomorphological Site	Yes/No
Registered Parks and Gardens	Yes/No
Scheduled Monuments	Yes/No
Wildlife sites	Yes/No
Sites of Special Scientific Interest / Local Nature Reserves	Yes/No
Listed Buildings	Yes/No
<i>Accessibility / Key Services</i>	
Residential Area	Within 500m
	Within 2000m
Local Centre	Within 800m
Railway Station	Within 1000m
Bus Service	Within 500m
<i>Land Uses</i>	
Public open space	Yes/No
Common Land	Yes/No
Agricultural Land (Grade 2)	Yes/No
Reservoirs	Yes/No
Rivers	Yes/No
Railway Line	Yes/No
Sand / Gravel Belt	Yes/No
Hazardous Substances	Yes/No
Greenbelt	Yes/No

The results of the GIS appraisal are shown in the following tables. Each table provides an overview of the constraints and opportunities, followed by an indication of whether the site should be considered further to accommodate growth at Three Rivers.

The information relevant to Flood Zones has been taken from the Dacorum Borough Council, St Albans City and District Council, Three Rivers District Council and Watford Borough Council, Strategic Flood Risk Assessment (June 2007). Mapping showing the additional broad housing allocation areas relative to Flood Zones is contained within Appendix C of this document.

2.3 Appraisal of Potential Broad Locations for Additional Housing and Employment Areas

An overview of the site appraisal is presented in Table 3. The full appraisal can be viewed in Appendix A. The key for this table is as follows:

Key to Sites Appraisal Tables	
P	Present at the proposed site (or within distance stated)
A	Absent at the proposed site (or within distance stated)
	Positive attribute of proposed site (no constraint to urban expansion)
	Negative attribute of proposed site (constraint to urban expansion)

An example of the site appraisal and interpretation of tables is provided below:

P	E.g. a school is located within 600m of a proposed site – it is therefore easily accessible to the proposed site and is not a constraint for urban expansion.
A	E.g. there are no schools located within 600m of a proposed site – it is therefore not easily accessible to the proposed site and poses a constraint for urban expansion.
P	E.g. a Site of Special Scientific Interest is located within/partly within a proposed site – it therefore poses a constraint for urban expansion.
A	E.g. a Site of Special Scientific Interest is not located within or partly within a proposed site – therefore no constraints for urban expansion are present.

Table 3: Overview of Constraints and Opportunities – Proposed Sites for Urban Extension

Site ID	Constraints and Opportunities: Environmental Designations												Constraints and Opportunities: Key Services and Accessibility								Land Uses																
	Area of Archaeological Importance	Area of Outstanding Natural Beauty	Subject to Local Preservation	Groundwater Protection Zone	Conservation Area	Flood zone 2	Flood zone 3	RIGGS	Registered Parks or Gardens	Scheduled Monument	Wildlife site	Site of Special Scientific Interest / LNR	Listed Buildings	Employment Area	Within 2000m of Employment Area	Within 500m of Residential Area	Within 2000m of Residential Area	School	Within 600m of School	Within 800m of a Local Centre	Within 500m of bus	Within 1000m of Railway Station	Doctors Surgery	Within 800m of Doctor's Surgery	Public Open Space	Common Land	Agricultural Land Grade 2	Railway Line	Sand/Gravel Belt	Reservoirs	Rivers	Hazardous Substances	Greenbelt				
Residential																																					
1	A	A	A	P	A	A	A	A	A	A	A	A	A	P	P			P	A	P	P	A	P	A	A	A	A	A	A	A	A	A	A	A	A	P	
2	A	A	A	P	A	A	A	A	A	P	P	A	A	A	A			P	P	P	P	P	P	P	P	P	A	A	A	A	A	A	A	A	A	P	
3	A	A	A	P	A	P	P	A	A	A	P	P	A	P	P			P	A	A	A	A	P	A	P	P	A	A	A	A	A	A	P	A	A	P	
4	P	A	A	P	A	P	P	A	A	A	P	A	P	P	P			P	A	A	P	P	P	P	A	A	A	A	A	A	A	A	A	A	A	P	
5	A	A	A	P	A	P	P	A	A	A	P	P	P	P	P			P	A	P	P	A	P	A	A	A	A	A	A	A	A	P	P	A	A	P	
6	A	A	A	P	P	A	A	A	A	A	A	A	P	A	A			P	P	P	A	A	P	P	A	A	A	A	A	A	A	A	A	A	A	P	
7	A	A	A	A	A	P	A	A	P	P	P	A	A	A	A			P	P	A	A	P	P	A	P	A	A	A	A	A	A	A	P	A	A	P	
8	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			P	A	P	P	A	P	P	A	A	A	A	A	A	A	A	A	A	A	P	
Employment																																					
2	A	A	A	P	A	P	P	A	A	A	A	A	A			P	P			P	P	A				A	A	A	A	A	A	A	P	A	P		
3	A	A	A	A	A	P	P	A	A	A	A	A	A			P	P			P	P	P				A	A	A	A	A	A	A	A	A	A	P	
4	P	A	A	P	A	A	A	A	P	A	A	A	A			P	P			P	P	P				A	A	A	P	A	A	A	P	A	P		

*Where sites are listed as recommended for further consideration (Y), the site comments/constraints should be referred to.

An overview of the Appraisals of each of the potential additional housing sites follows:

Broad Housing Location 1: South East Abbots Langley

Overview

Environment:

This broad housing location site presents no significant conflicts with any environmental designations apart from being located over groundwater protection zone (outer zone). The aquifer below the site is classified 'at risk from point source pollution'. This could be an issue in terms of development (although given existing development has not impacted upon groundwater, further development should not be an issue - assuming construction techniques mitigate this risk).

Key Services and Accessibility:

The nearest school to the proposed location is 800m away. There are six schools within 2km, however, only one is not currently oversubscribed (1.6km away). Further housing in the area is likely to exacerbate this problem. The location is well served by GP surgeries, however, none of these lie within 800m and additional dwellings will result in need for additional GPs to be appointed. The nearest railway station is in excess of 1000m, which may pose accessibility or sustainable transport problems.

Land Uses:

The land to be developed is in the Greenbelt. It was designated in the Three Rivers Local Plan 1996-2011 as a 'Major Developed Site', permitting a certain amount of redevelopment onsite. Development on Greenbelt land, in general should not be encouraged (see PPG2 and the Planning White Paper: Planning for a Sustainable Future, May 2007), however, this option involves few conflicts with other land uses and planning permission (for office space) has already been granted. The presence of the employment land around the site (some already developed) leads to the opportunity for developing a mixed use area.

This option is located on Greenbelt land which conflicts with PPG2, however, planning permission for an office development on the site has already been granted and as such there is already some inherent traffic in the surrounds of the site (any future mixed use scheme needs to be viewed in that context). The site suffers from some accessibility issues being over 1km from the nearest railway station and serviced by a limited bus service. Public transport links and the surrounding road network may need to be upgraded as part of any planning obligations (especially as the future development will be mixed use - and there is likely to be additional daytime employment generated transport).

Broad Housing Location 2: West of South Oxhey

Overview

Environment:

This broad housing location site potentially conflicts with the Oxhey Woods LNR, and ancient semi-natural woodland, which surrounds the site on three sides. The woodland supports a complex range of habitats and is one of the most important woodlands in Hertfordshire (including heathland and Bluebell area). The development during construction and once built might affect the 'setting' of this natural area for recreational users. However, any increase in additional users as a result of the development might also impact upon the different biodiversity aspects of the LNR (particularly the heathland and Bluebell areas).

Construction and operational noise / vibration (bearing in mind the site is currently abandoned) may impact on the wildlife areas in the vicinity. The site is also directly over a groundwater protection zone (inner zone).

Key Services and Accessibility:

The site appears to be well served by primary level schools (despite being on the site of an old school itself). The primary schools have surplus capacity, however, there is a lack of secondary school places. It is likely that there will have to be some improvement in provision of the latter with any new development. The site has adequate provision of healthcare and shops. The site is within 1km of Carpenters Park train station and has a good bus service nearby.

Land Uses:

The land to be developed is in the Greenbelt, however two thirds of the proposed site will simply overlie the footprint of the existing development. The setting of the public open space (Oxhey Woods) which surround the site, might be affected by the development, even though it does not directly encroach upon it.

The most significant environmental conflict involved with the consideration of this site is with the Oxhey Woods LNR which surrounds it, however, taking into account the existing buildings and the proposal to maintain an open area as a buffer, impacts upon setting and wildlife should be minimised. Any increase of pressure on biodiversity aspects of the LNR resulting from rising recreational use of the area derived from the increase in population, should be carefully managed. The site is also on Greenbelt land, and given its location (surrounded by Oxhey Woods) there could be opportunity to reinforce the integrity of the Greenbelt in this area by re-establishing the site as an open area.

Broad Housing Location 3: South East Croxley Green

Overview

Environment:

The south west section of the proposed site is infringed by a Flood Zone 3b (functional floodplain) whilst the north section of the site lies within a Flood Zone 3a. As such, the location is at high risk of flooding (see SFRA).

If the development was confined to the existing built up area and created no additional impermeable surface area, there should be no increase in runoff. (any potential impact of this nature could be minimised with the incorporation of SUDS into the redevelopment).

The site is located over an inner groundwater source protection zone and therefore any construction work must be sensitive to this receptor. Croxley Common Moor LNR (also a SSSI) is found approximately 300 metres from the proposed site and due to the nature of its biodiversity interest (it contains wetland habitats and waterbodies likely to be used by migratory birds) it may be particularly susceptible to light pollution and construction noise. Due to the existence of offices and industry already on site, operational impacts are unlikely to increase. This having been said, any increase in additional users as a result of the development might also impact upon the different biodiversity aspects of the LNR, particularly as a county rarity 'Fen Bedstraw' is found on this site and might be susceptible to trampling.

The Withey Bed LNR (ancient river valley floodplain, wet woodland important for birds and invertebrates) and Tree Preservation Orders are found in the general area and construction of the site may have impacts upon these sites (although the latter is approximately 1km from the proposed housing location).

Key Services and Accessibility:

Provisions for schools and health facilities may need to be upgraded, for instance more GPs would be required even if a further health centre is not. Although there are local amenities, transport links, schools and doctors in the area none of them are that close to the proposed development. For example the nearest doctor's surgery is 1200m away; the train station is 1100m; the local centre 1000m and the nearest primary school is 800m.

Land Uses:

The site centres on Croxley Business Park which is an existing employment area. The area is landscaped with a high provision of car parking. There are vacant offices in the area suggesting an oversupply of office accommodation.

The site is approximately 150m from Three Rivers Greenbelt. There is also registered common land, Common Moor, adjoining the proposed site of development. Although the site has already been developed it is still possible that the new development may impact on the setting of the common land.

There is a waterway which runs along side the potential development.

This site is restricted by several environmental factors, the most prominent of which being the flood risk zones infringing its boundary (therefore at risk of flooding). The site is also in close proximity to Croxley Common Moor SSSI which may be particularly susceptible to construction noise impacts. However, due to the current office / industry land use on the site, a precedence has been set and impacts upon these environmental factors once redevelopment has been complete, may even be less (e.g. use of SUDS). There are local amenities and facilities however

all are approximately 1km away and school / health facilities may need upgrading.

Broad Housing Location 4: East Kings Langley

Overview

Environment:

The proposed site is flanked upon its western boundary by the River Gade and therefore has Flood Zone 3b in its western area, with a Flood Zone 3a extending throughout the centre of the proposed site. The development might also increase the runoff flowing into the River Gade which would contribute to this flooding. However, to some extent the latter issue could be mitigated with the installation of SUDS during any redevelopment.

The site is within the inner groundwater source protection zone, and given the mix of industrial units that are currently located on the site, there could be potential for contamination if care was not taken during redevelopment (remediation may also be needed - adding to risk and cost).

This site also has high archaeological/cultural heritage potential being situated within an Area of Archaeological Importance and having Listed Buildings within the general area.

Key Services and Accessibility:

There is a lack of educational facilities within an acceptable distance (particularly primary) and GP services may need to be improved as part of any additional dwellings in the area.

There is a bus service within walking distance and a railway station within 1 km of the proposed site.

Land Uses:

The proposed development site is currently used for light industrial, office and warehousing and is interspersed with residential properties.

The site is surrounded by Dacorum and Three Rivers Greenbelts but is not actually situated within the Greenbelt. There is a river and a railway line in the vicinity of the proposed site constraining any extensions to the site).

This site is restricted by being surrounded by Greenbelt and a railway line. The main environmental conflicts centre on the site having an Area of Archaeological Importance within its footprint (with listed buildings in the vicinity). The area is also at high risk of flooding due to the Flood Zones that extend through the proposed site.

Although the site has relatively high accessibility levels, there is a lack of education facilities in the locality and this will need to be addressed.

The site benefits from essentially being a redevelopment of previously developed land (and encouraging mixed use development).

Broad Housing Location 5: North East Maple Cross

Overview

Environment:

This broad housing location potentially indirectly conflicts with a number of environmental receptors. The site is located over a groundwater source protection zone (inner zone). Combined with the sites former use as a sludge drying bed / cake loading bay for a sewage plant, there may be potential contamination issues during construction of any new development (remediation may be needed - adding to risk and cost).

In addition to this, the site is bordered on three sides by a Flood Zones (and the River Colne), with a Flood Zone 3b encroaching slightly in the north east of the site whilst a Flood Zone 2 intrudes slightly to the south. Even though there are some existing flood defences protecting the site - with a predicted increase in extreme weather conditions, there is a risk of flooding on parts of the site. Runoff from the site could potentially impact upon the water quality of the adjacent River Colne and Springwell Lake (although a buffer zone is proposed). The Stockers Lake LNR is within 500m of the site and may also be affected by runoff (important as the reed swamp habitats contain the regionally important 'Large Bittercress') and certainly construction noise which may affect feeding / breeding of migratory birds at the lake (e.g. Shoveler and Goldeneye). Construction periods should take account of breeding seasons and

try to avoid these periods.

A TPO also exists onsite and unless development could proceed around the trees which are the subject of this order, it is unlikely it could be preserved. Maple Lodge Marsh wildlife site to the south of the site (species rich marsh habitat) may be impacted upon by construction and operational noise/vibration (particularly increased traffic in the area).

The development of the site might also conflict with the setting of a Grade II listed building to the southwest of the site.

Key Services and Accessibility:

Healthcare provision in the area is considered poor and would need upgrading before further development could be considered. The nearest GP surgery is 1800m from the site. The nearest schools are also at some distance however, there is some additional capacity. The nearest station (Rickmansworth) is over 1km away from the site, however, access via the A412 should be rapid (provided public transport is provided - the Route 6 currently run this route).

Land Uses:

The land to be developed is in the Greenbelt. It was designated in the Three Rivers Local Plan 1996-2011 as a 'Major Developed Site', permitting a certain amount of redevelopment onsite. The site also lies adjacent to a lake and the River Colne, both of which may be affected by contaminated runoff (although a buffer zone is proposed). The site currently has planning permission for a certain amount of office space which presents an opportunity to encourage a mixed use development (see spatial employment area 3).

This option is located on Greenbelt land which conflicts with PPG2, however, planning permission for partial redevelopment of the site into office space has already been granted. The potential site is bordered by high risk Flood Zones. Access to the site is reasonable, although increased public transport provision between Rickmansworth station and the development would be desirable. Enhanced healthcare and education provision would be required as part of the development.

Broad Housing Location 6: North Croxley Green

Overview

Environment:

The broad housing location conflicts with a number of environmental receptors and designations both directly and indirectly. There is a Grade II Listed farmhouse which may be subject to a direct impact as it falls within the actual area of proposed development. Further listed farm buildings are found within the locality and the proposed development poses a risk to historical character of the area. The site also compromises a Conservation Area boundary.

There are also 10 TPOs situated within the site which could be built around, however, given the number of TPOs within the site, this may be unachievable. Croxley Green lies to the west of the site (a very important example of ancient acidic grassland with several scarce and locally uncommon plant species) and Dugdales wildlife site lies to the south of the site (house and environs important for protected species). Both sites may be impacted upon during construction (noise / vibration, light pollution) and operation (noise and light pollution).

Any additional users as a result of the development might also impact upon the plant communities in Croxley Green (as it is common land) through increased trampling risk.

The site also falls within a ground water source protection zone 2 (outer).

Key Services and Accessibility:

If this site was to be developed access improvements to Little Green Lane would be required together with improved access to bus services the nearest of which is approximately 700m away (with only a 2 hourly service). The highways would require improvement to cope with increased trip generation.

Furthermore schooling provisions in the area are at near capacity/over-capacity and are likely to be put under pressure when other large housing developments in the area come on stream. The same is true of the GP Surgery at Baldwins Lane, approximately 600m away. If the site was to be developed then both additional health and education resources may have to be allocated to the locality.

The site lies just over 1000m from Croxley station.

Land Uses:

The present site centres on Killingdown Farm which lies within an area of Greenbelt.

This site has several key restrictions to its development including the Greenbelt, lying within a Conservation Area and direct impacts on a Listed Building. The site would also require a significant improvement in nearby facilities (health, education, bus services) and an upgrade of the local road network.

Broad Housing Location 7: East Carpenters Park**Overview****Environment:**

A Flood Zone 3a borders the northern edge of this broad housing location site. At present, this zone does not encroach into the proposed site, however, taking into account increased extreme rainfall events and that the development might also increase the runoff flowing into the waterbody north of the site there is a High Risk of flooding to the north end of the site. To some extent the latter issue could be mitigated with the use of SUDS.

There is a potential conflict with a number of wildlife sites. Mutton Wood to the east of the site is an area of ancient woodland with Bluebells; Woodwalk to the north of the site is an area of oak woodland with Bluebells; Carpenters Park Cemetery Meadow to the south west of the site is a neutral grassland area and Valley View Farm Meadow to the south east of the site is also a neutral grassland site. Mutton Wood and Woodwalk wildlife sites may be affected during construction and once the development was built it might affect the 'setting' of this natural area for recreational users. However, any increase in additional users as a result of the development might also impact upon the different biodiversity aspects of the wildlife sites (e.g. trampling of bluebells).

Isolated TPOs can also be found on the site and would need to be designed and built around if at all possible.

The site itself is situated in open space although it is unclear whether or not it is public. According to the Natural England Website there is no open country or registered common land on the site or in the near vicinity.

There is a Scheduled Monument (Grim's Ditch) and a Registered Park and Garden (Grim's Dyke) approximately 700m to the south-east of the site. Although neither is in close proximity to the site the need for highway works to increase traffic capacity and access may indirectly impact the designated sites.

Key Services and Accessibility:

Although there are key services and transport access in the vicinity of the site they are at some distance. The bus service is 700m away and the railway station is approximately 1km. The nearest shops are approximately 900m away. Improvements would need to be made to bus provision and even with a scheme of 100 dwellings, it is likely that extensive highways works would be required due to traffic capacity and access issues in the area.

There are schools within 600m but only limited capacity at Bushey Secondary Schools.

Land Uses:

Currently the land which would be developed houses a cemetery and a nursery (the former is unlikely to be part of the redevelopment). Other than that the site is open space. An employment area exists next to Carpenters Park railway station. This area is being considered for redevelopment and as such may provide more / different employment opportunities.

This site also lies within a Greenbelt area.

The key restriction to developing this site is its location within a Greenbelt, however, its proximity to a Flood Zone 3a (adjacent) and the improvements needed in services also need to be considered.

Broad Housing Location 8: East of Abbots Langley

Overview

Environment:

This broad housing location site conflicts with very few environmental receptors other than the site is on open space used for grazing in the Greenbelt (and hence the open character of the area will be compromised). A number of TPO's also exist along the boundary of the site however, with thoughtful planning and construction, these should be preserved in situ and form a valuable part of the site when finished.

Key Services and Accessibility:

A primary school is situated approximately 700m from the site, and does have additional capacity; however the three secondary schools in the area are all over a 1km from the site and have limited capacity. There may be a need to address this if the development was to proceed. The site is also over 1km from the nearest station with no apparent quick road based route to it (i.e. the most direct route takes users through residential areas). Bus services are adequate.

The site is close to existing shops and services e.g. superstore, dentist and pharmacy.

Land Uses:

The land to be developed is in the Greenbelt.

This option is located on Greenbelt land which conflicts with PPG2. It is likely that the development will compromise the open character of the Greenbelt in this area.

Which Option(s) do you think should be taken forward?

Please list in order of priority

Preferred options:

Broad Housing Location 1:

- No conflicts or potential conflicts with designated sites and planning permission already gained for development in Greenbelt area (and a number of developments already in-situ).
- Average provision of services (would need to be upgraded).
- No flood risk.

Broad Housing Location 8:

- Few environmental conflicts (although site is still within Greenbelt).
- Adequate access to services (although education provision may need to be progressed).
- No flood risk.

Options for potential further development and appraisal:

Broad Housing Location 7:

- Potential conflict with four wildlife sites (through construction noise and increased recreation users once development complete).
- Bordered by Flood Zone 3a (high risk).
- Within Greenbelt area.
- Average provision of services (would need to be upgraded).

Broad Housing Location 5:

- Near Stockers Lake LNR and Marsh Lane wildlife site, important areas for water birds and susceptible to increased noise / vibration impacts.
- Former sludge drying beds for sewage plant (potential contamination issues).
- Bordered (and slightly encroached upon) by Flood Zone 3b and Flood Zone 2.

Broad Housing Location 4:

- Lack of educational facilities in area.
- Redevelopment of previously developed land.
- Relatively high accessibility levels (public transport and highway).
- Flood Zones 3b and 3a existing within site.

Broad Housing Location 2:

- On previously developed land so should not significantly impact upon Oxhey Woods LNR after construction (although could potentially lead to a larger number of recreational users which would increase pressure on ground fauna).
- No flood risk.

Options for potential omission from further consideration:

Broad Housing Location 6:

- Direct impact upon listed building.
- Compromises conservation area boundary.
- Poor accessibility.
- No flood risk.

Broad Housing Location 3:

- Potential environmental impacts (during construction) upon Croxley Moor SSSI.
- Poor access and provision of amenities.
- Currently high-grade office space (i.e. lower grade office space elsewhere should be transferred first).
- Heavily encroached upon by Flood Zones 3b and 3a.

Are there other areas of the District that should be considered as Options for broad housing locations? If so, please state which areas and your reasons

Sustainable criteria that should be considered and prioritised where possible when determining locations include:

- Adequate distance from designated sites (including areas of archaeological / cultural heritage, landscape, geological and biodiversity interest).
- Consideration of potential flood risk from Flood Zones (2 and 3) and Groundwater Protection Zones.
- Selection of areas taking into account the need for 'future-proofing' against the effects of climate change (refer to SFRA).
- Accessibility to sources of employment, education, healthcare, leisure facilities and retail centres.
- Access to adequate public transport facilities.
- Areas which allow and indeed encourage walking and cycling (health and air quality benefits).
- Potential need for additional affordable housing.
- Sites which are more amenable to the potential of onsite renewable energy generation.

- Sites where the existing utilities infrastructure / superstructure will need little or no upgrading.
- Prioritise sites utilising previously developed land.
- Avoid overall loss of employment land particularly light industrial / warehousing operations (as opposed to office space).

An overview of the Appraisals of each of the potential new employment areas follows:

Spatial Employment Issue 1: Do you agree in principle that the parts of the District's employment areas at Leavesden, Kings Langley and Croxley Business Park should be released for other uses?

Leavesden - if two thirds of the existing committed employment area was released for residential development, this would still leave one third of the employment area for office space in addition to the offices and film studio already existing on the site. Mixed use developments (assuming some space is released for services and amenities) are to be encouraged and hence the release of employment areas at Leavesden is encouraged. Some local highway improvement would be needed.

Kings Langley - this employment area contains office area, light industry and warehousing. The latter two land uses should preferably not be released for other uses as the Employment Land Study (2005) indicated that Three Rivers could not afford to lose any more employment floorspace within the industrial and warehousing sectors. Even if the area was rationalised, grouping the warehousing and industrial uses and only releasing office space for residential development, these areas may be undesirable for that residential development (effectively being sandwiched between industry, warehouses and a railway line). There is also very little opportunity for further expansion in the future. The employment area at Kings Langley, given the character and value of the present land uses within it, is the least suited for release (although it should also be recognised that some pockets within the area have recently converted to mixed residential / employment uses and its reasonable to assume that this trend may continue in the future).

Croxley Business Park - the office space within this employment area is of good quality and should therefore remain in its current state as a priority above other office spaces of lesser quality. However, there is an opportunity to introduce residential development in this area, partly through higher density development (hence potentially no actual conversion of offices would be needed). Mixed use developments (assuming some space is released for services and amenities) are to be encouraged and hence the introduction of residential development in this area, presuming this is done for the most part through higher density development (not involving conversion of existing offices), is encouraged.

General sustainability commentary:

In general, mixed use developments tend to be more sustainable and thus releasing parts of employment areas for residential development should be encouraged. It should be remembered that some employment area uses (namely industrial and warehousing) may not be appropriate to mix with residential uses. The inclusion of services and amenities is also essential if these mixed use developments are to function viably.

In general it is important that employment areas (and office space) are retained to some extent and spread evenly over the Districts area as far as is possible. Leavesden is currently

over-supplied with potential office floor space, and thus if part of this needs to be sacrificed to enable retention of office space in another part of the district, this should be encouraged. By interspersing this office space around the District, it is hoped that the out-commuting flow from Three Rivers can be somewhat attenuated.

It would be preferable if some employment area was converted from office space to units for small to medium sized businesses, warehousing and industry. Although this should not happen in areas where residential development is also planned as the two types of land use may not be compatible.

In all three employment areas above, it is proposed that employment areas containing existing developments (or earmarked for future employment related development) are being released for residential use. The environmental impacts for both options would be similar and hence no delineation on sites can be decided based on environmental factors alone. It is acknowledged that daytime and peak traffic flows may be different and night-time lighting levels may differ between land uses. In addition, with any development or redevelopment there is likely to be construction impacts upon air quality, noise / vibration, dust and lighting (as well as potential contamination issues).

If so, what proportion of land from each of these areas should be released for other uses?

Leavesden - the projected over-supply of offices is largely as a result of existing commitments at this site, hence it would be prudent to release the largest percentage of employment area from this location. Potentially two thirds of the employment area could be given over.

Kings Langley - given the industrial character and relatively high value to the District of the present land uses within it (warehousing, light industry), should see only a small or negligible percentage of employment area released.

Croxley Business Park - residential development in this employment area should be introduced partly through higher density development (hence potentially no actual conversion of offices would be needed). However, this would involve release of some employment land, although of relatively small proportions.

If so, what other uses would you wish to see in these areas?

It is clear that new sites for additional housing development are needed and hence both at Croxley Park and particularly at Leavesden the majority of land released should be used for this purpose. It is however essential that some land is also released to services and amenities (e.g. local shops, green transport parking provision) if these mixed use developments are to function viably. Provision of public open space should also accompany this development, supporting not only social and human health objectives, but also to help address the urban heat island effect.

It would be preferable if some employment areas were converted from office space to units for small to medium sized businesses, warehousing and industry. Although this should not happen where residential development is also planned for the previously stated reasons. Existing office space in Kings Langley employment area may be a good candidate for release to industry and warehousing land use as certain amounts of those particular land uses already reside in this employment area.

Spatial Employment Issue 2: Maple Cross

Do you think that additional employment land should be planned for at the Maple Lodge site, as an extension to the Maple Cross employment area?

Overview

Environment:

This broad location potentially indirectly conflicts with a number of environmental receptors. The site is located over a groundwater source protection zone (inner zone) and is bordered on by a Flood Zone (and the River Colne). Runoff from the site could potentially impact upon the water quality of the adjacent River Colne and Springwell Lake (although a buffer zone is proposed). The Stockers Lake LNR is within 500m of the site and may also be affected by runoff (important as the reed swamp habitats contain the regionally important 'Large Bittercross') and certainly construction noise which may affect feeding / breeding of migratory birds at the lake (50 recorded species of breeding birds and largest heronry in country). Construction periods should take account of breeding seasons and try to avoid these periods. There is also a wildlife site to the south of the site which may be impacted upon by construction and operational noise/vibration (particularly increased traffic in the area). However, no detail about the wildlife site is known at present and therefore impacts are hard to ascertain.

The development of the site might also conflict with the setting of a Grade II listed building to the southwest of the site.

The process of developing this site as an area of employment may impact the surrounding landscape and visual setting as there are undeveloped areas surrounding it. However, there is already an established industrial estate on this site and the new development is unlikely to produce more negative impacts on its surroundings.

Key Services and Accessibility:

The site is located in a good position for the M25 however it is some distance from the local urban areas of Watford and Rickmansworth. There are residential areas approximately 400m from the proposed site and the local centre is the same distance.

Although there is a bus service within 500m the closest railway station is 3km away, and due to its distance from the districts key centres, most journeys to and from the site are likely to be made by private vehicle. Any additional employment within the site will add to traffic levels in this respect.

Potential impacts from increased traffic become more significant when this proposal is taken into consideration alongside the proposal for residential development in 'North East Maple Cross' which would be adjacent to the employment area.

Land Uses:

This proposed site is located within Greenbelt and is constrained to the east by the River Colne corridor. There is no registered common land or open country within close proximity to the potential site.

When taken into consideration alongside the residential development proposals for 'North East Maple Cross', there is potential for a viable mixed use development if services were developed in conjunction with proposals.

This site is situated within an area of Greenbelt and closely bordered by a flood risk zone. However the site does provide an opportunity for the development of a viable mixed use development when taken in conjunction with residential development options for the area.

Distance from key centres and the nearest railway station indicate that the majority of additional trips to work generated by the expansion of the employment area, would happen by private vehicle. This would need to be mitigated by improving public transport provision and implementing a Green Travel Plan for the employment area.

Given the potential impacts of additional traffic, risk of future flooding and potential impacts upon Stockers Lake LNR, this option should not be given priority to progress unless the residential development option is also selected for progression, in which case it could contribute to a valuable mixed use development. This is on condition that some of the additional employment area is earmarked for services and amenities. To support employment diversity, some light industry and warehousing space should be made available, although this should not

be in close proximity to proposed residential areas and at furthest distance from Stockers Lake (i.e. it should be clustered to the north west of the site).

Spatial Employment Issue 3: Carpenders Park

Do you think the East Carpenders Park Employment area should be retained as employment use?

If not, what other uses should be planned for in the area?

Overview

Environment:

This potential employment site is at risk from flooding, with an Environment Agency flood risk area running through it.

Landscape / townscape is unlikely to be adversely impacted as the site is already developed and is situated in a built up residential area. However, if new development is out of character with the existing development (e.g. at great heights) this may cause some visual intrusion.

There is opportunity to actually improve the landscape / townscape in the employment area with careful landscape design included in any redevelopment.

Key Services and Accessibility:

The site is located within 100m of a residential area and 200m from the local centre. It is adjacent to Carpenders Park railway station situated approximately 200m away, the same distance as the nearest bus service.

Access to the site by road is somewhat constrained due to its location, however, the employment area is in close proximity to public transport and adjoining residential areas.

Land Uses:

The site is occupied by a mixture of office and light industrial unites. A third of the site is under utilised and the northern part is largely disused. The area is constrained by its location, being situated within a residential area. There is a railway line which runs along the site but does not go through its footprint.

Carpender's Park lies near to an area of Greenbelt, although the redevelopment of an existing employment area is essentially what is being proposed.

This site is located in a prime situation for access to transport links, local centres and residential areas. As such there is an opportunity to promote it as an essential part of a viable mixed use development.

Bearing in mind its location and constraints to road access, employment uses should perhaps be swayed towards offices, which involve a higher number of employees and also can be serviced adequately by public transport (for trips to work). Warehousing and light industry, despite being in more demand within the District, should be restricted due to the significant amounts of road transport needed to service these sectors.

There are relatively few environmental conflicts although a flood risk zone does extend through the site.

Taking into account opportunities to develop the site to provide an essential element of 'mixed-use' to Carpenders Park and also improve the environment of the area (through considerate landscaping etc), it is recommended that this area is retained for employment use. This is reinforced by the intention to potentially develop additional residential areas to the south east Carpenders Park.

Spatial Employment Issue 4: Rickmansworth Town Centre

Do you agree that office accommodation in Rickmansworth Town Centre should generally be retained?

If not, what other uses would you wish to see in its place?

Overview

Environment:

The employment option for Rickmansworth Town Centre covers the whole centre as there are many small offices throughout the town, particularly above shops. There are few direct environmental implications to redeveloping these sites should that be proposed. The site is partially covered by an Area of Archaeological Importance. Moor Park registered park/garden is located on the outskirts of Rickmansworth (separated by the A404) and therefore remote from the potential development sites and unlikely to be impacted by any redevelopment. Some potential redevelopment sites are however situated within a ground water source protection zone.

There may be potential impacts upon the townscape character depending on how buildings are redeveloped. Any redevelopment should be sensitive to existing townscape character and aim to preserve or enhance this character wherever possible.

Key Services and Accessibility:

Being situated within the town centre ensures access to the town's facilities and public transport. There is a railway line and station in the north of Rickmansworth.

Land Uses:

Currently the sites are located in a variety of locations spread across the town centre. All development will be on previously developed sites.

The redevelopment of these sites could potentially impact upon townscape character, however, with appropriate mitigation this impact would be negligible (and may even result in an enhancement of townscape character).

It would be preferable for Rickmansworth Town Centre to retain its existing office space wherever possible so that it can continue to function as a viable mixed use development. Additional residential development locations have been suggested in a number of key centres near to Rickmansworth, and it would be preferable if these were to be progressed (assuming no significant environmental impact) relative to releasing employment floorspace in Rickmansworth Town Centre which might degrade its status as a mixed use development.

3 General Appraisal of Broad Locations for Retail Development

This section of the SA Working Note provides a qualitative summary of the sustainability implications of the various proposed issues and options for retail development.

The Additional Issues and Options Paper suggests four options as to where additional retail provision (for comparison goods floorspace) could be located within Three Rivers. Each of the options is set out in this document, with the findings of the sustainability appraisal being discussed below.

A) Rickmansworth

Rickmansworth is the regions principal town and therefore it is likely that it could accommodate some additional retail floorspace (comparison goods). A significant number of shopping trips, for comparison goods or otherwise, will originate from Rickmansworth and hence there are the large gains to be made in terms of obviating the need for inter-settlement car trips by those wishing to buy comparison goods, living in Rickmansworth.

The needs of outlying areas to the north and east of the District however, would not be best served by locating all additional retail floorspace in Rickmansworth. This option is likely to increase the amount of inter-settlement car trips by those wishing to buy comparison goods, and in doing so add to any existing car parking and congestion problems within Rickmansworth town centre and its surrounding area.

B) Rickmansworth and Abbots Langley

This option would reduce the need for inter-settlement car trips from north to south of the District, but would still not serve the east of the district significantly. There may still be congestion / car parking issues in the two town centres and the other three key centres will still suffer a deficit of comparison good floorspace.

C) All five key centres (Abbots Langley, Chorleywood, Rickmansworth, South Oxhey, Croxley Green)

This option is potentially the most sustainable in so far as it encourages the viability of all five key centres. There is a risk when developing just one or two key centres that these areas will become more viable at the expense of the other key centres. Those shopping for comparison goods may combine their trip with shopping for food and other more specialist goods. During these trips, other key centres, although perhaps sufficient in consumer or specialist goods floorspace, would miss out on a proportion of the expected trade from their catchment area.

There is a risk that by spreading the development relatively thinly across all five centres the needs of any one centre may not be fully addressed. However, shoppers tend to travel further for comparison goods relative to food goods for example, and it is likely that if gaps were encountered in any one key centres provision, it would be acceptable for the shopper to travel to another settlement to address that need (if an infrequent occurrence). Smaller centres are unlikely to require a daily need of a large provision of comparison goods, so provision of the more basic comparison goods is likely to be sufficient for the majority of the time.

This option would be preferable when ensuring the viability of all key mixed-use centres (even the smaller ones), leading to an overall decrease in inter-centre shopping trips. This option would also ensure that those residents in outlying areas throughout the District would, in every case, have the same or less distance to travel when compared relative to the other options.

There would also be benefits in terms of evenly spreading employment opportunities throughout the district.

D) One or two key centres only

See commentary for options A) to C).

General sustainability commentary:

Care must be taken to ensure that retail floorspace is not developed in previously undeveloped areas and that development is sensitive to existing townscape character and areas of cultural heritage interest. Additional retail floorspace needs to be developed taking into account the demands upon existing waste management systems. These may need to be upgraded to facilitate recycling, although proposals only involve a relatively small increase in retail floorspace.

The principles of sustainable distribution should also be taken into account, particularly those relevant to accidents, pollution, disturbance and congestion, which may pose an issue for town centres. If additional retail space is made available in town centres it is essential that strategies to combine delivery runs between units; to minimise empty running and to utilise railway services as much as possible should be pursued. It is also important that urban retail locations and supply routes are decided taking into account noise and air quality impacts on residential areas. It is likely that if additional retail space is made available in town centres, supply routes will run close to residential areas at some point along their routes. Existing main routes should be used wherever possible (as opposed to through residential streets) and the location of retail development should take this into consideration.

Consideration also needs to be given to existing public transport provision and parking controls within the key centres and additional services may need to be provided to ensure sufficient capacity (although proposals only involve a relatively small increase in retail floorspace).

By providing further retail areas in town centres issues of access for all sections of society and equity would be taken into account. Town centres tend to be better serviced by public transport or alternative modes such as cycling / walking, and in this way access is possible from the more socially deprived areas (this is assuming that public transport services between these areas and retail areas are adequate).

4 General Appraisal of Strategic Transport Issues

As the District is not directly affected by major growth area proposals in the region there are no significant strategic transport proposals for the district (other than those already taking place). Focus has therefore been concentrated upon more localised schemes and these are set out in the Hertfordshire County Council Local Transport Plan. Although these physical and policy measures will have been subject to Strategic Environmental Assessment (as part of the development and review of the LTP itself), the following section provides a response to the option questions proposed in the Additional Issues and Options Report, relevant to sustainability.

The physical and policy measures are as follows:

Physical measures include:

- implementation of the Croxley Rail Link
- extension of Rickmansworth Controlled Parking zone to facilitate residents' parking and manage commuter parking near the station
- implementation of other parking restraints to assist local residents throughout the District as part of the Three Rivers decriminalised parking scheme
- implementation of district wide cycling strategy
- enhancement of local shopping centres to ensure vitality and viability
- complete installation of parking bay programme
- continued programme of highway improvements

Such *physical* measures would be developed alongside *policy* measures to:

- reduce congestion
- increase public transport and non-motorised mode shares
- reduce local traffic impacts, for example road safety, perceptions of personal safety, and the traffic effects of shorter trips
- manage traffic for local quality of life and environmental benefits
- improve bus services, including school services
- improve rail links and services
- improve safety and facilities for cyclists and pedestrians
- improve access and facilities for mobility impaired and elderly people
- control parking in the district and to (rest of line missing)
- ensure new development does not place undue pressure on infrastructure and encourages the use of sustainable transport modes.

Do you agree with the above measures to improve the transport network in the district?

Physical Measures

Implementation of the Croxley Rail Link - improved access to London via public transport is to be encouraged, especially as there is already a large commuting population in the region. Monitoring of the diurnal migration of working population travelling into Greater London might be undertaken in order to ascertain any potential conflicts with the East of England Plan which encourages creation of sustainable local communities. This includes the provision of services, housing, employment and a sufficient workforce pool.

Extension of Rickmansworth Controlled Parking zone to facilitate residents' parking and manage commuter parking near the station, and, implementation of other parking

restraints to assist local residents throughout the District as part of the Three Rivers decriminalised parking scheme - the extension of parking controls, particularly in Rickmansworth town centre where new retail and residential provision is proposed, is to be welcomed. These controls are also important in encouraging green transport throughout Three Rivers' key centres as a whole.

Extension of parking controls could also have significant positive outcomes benefiting air quality, energy consumption and reducing land take (i.e. space for parking). However, it could also have adverse effects on accessibility (including rural accessibility), the economy and the vitality of the town and local centres. (i.e. shortage of parking could act as restraint to local businesses). Increased parking controls may also lead to an increase in number of drivers parking in areas just outside of the controlled zone (likely to be residential, creating competition for spaces with residents and congestion issues). The preferred option approach should seek a balance between restricting traffic flows and improved accessibility to town and local centres and ensure that alternative sustainable modes of transport are in place before lowering standards.

Implementation of district wide cycling strategy - this physical measure supports a number of SA objectives including those relevant to Health, Air Quality and Noise / Vibration.

Enhancement of local shopping centres to ensure vitality and viability - this measure is to be encouraged if implemented alongside parking controls and increased public transport provision. Enhancement efforts need to cover all five of Three Rivers' district centres.

Complete installation of parking bay programme, and, continued programme of highway improvements - these measures support the additional housing proposals, however, they must be implemented alongside public transport improvements in those areas and works should not compromise the integrity of any sites of biodiversity, cultural heritage, or landscape / townscape value.

There is a risk that high parking standards may make driving into town centres an appealing option and hence have a negative effect on air quality, human health, physical severance, traffic accidents and congestion. In combination these impacts could have a detrimental effect on the quality of the Districts' environment and consequently its ability to attract inward investment. Conversely, too little public parking (particularly without corresponding increase in public transport provision) may undermine the viability of local businesses.

The parking bay programme and programme of highway improvements, even if leading to increased traffic (particularly from areas of new residential development) should not stimulate the development of further transport infrastructure. This infrastructure may have impacts on a variety of sustainability topics including Air Quality, Landscape / Townscape, Biodiversity, Cultural Heritage, Water Quality, Human Health, and Community Severance.

Further infrastructure may also increase flood risk, due to the increased area of impermeable surfaces and reduced flood storage capacity. The effects of climate change will also increase the frequency of extreme rainfall events, which could lead to greater risk of localised flooding. This may be mitigated against to a limited extent through the installation of vegetative treatment systems (SUDS) through highway improvements.

Policy Measures

None of the policy measures suggested within the Additional Issues and Options Report conflict with the objectives of the Sustainability Appraisal. These policy measures will adequately support physical transport measures relevant to parking control and public

transport, as well as encouraging viable mixed use key centres throughout the District (also supporting Option C from the retail development location options).

Are there any other specific measures needed to improve transportation in the District in order to address future development pressures?

Although the general theme of both the physical and policy measures correlates with the minimisation of environmental impacts and the enhancement of sustainability, there is a slight lack of policy measures relating to environmental protection (with the exception of 'manage traffic for local quality of life and environmental benefits'). To some extent, this should be covered by Development Control Policies, however, specific measures related to 'increased rural accessibility' and 'increased accessibility for areas of social / economic deprivation' may be appropriate in light of the rising levels of social deprivation within the District measured between 2000 and 2004. This is likely to be through focussed public transport provision and demand responsive public transport.

Physical measures relating to flooding and transport infrastructure may also be advisable in the light of increased flood risk due to climate change. Highway improvements should include the installation of SUDS in flood risk areas. In addition to this both physical and policy measures relating to the reduction of green house gases from transport might be included, for example, encouraging hybrid vehicles by offering preferential parking options, or, encouraging existing businesses and those locating in new employment areas to develop Green Travel Plans.

Important social and environmental benefits could be gained from including physical and policy measures that support the principles of sustainable freight distribution. Major freight routes should be confined to existing main routes so as to avoid the noise, air quality and 'accident' impacts that might affect more residential areas (see Broad Locations for Retail Development Appraisal – Chapter 3). The same principle could be applied to designated biodiversity conservation areas. Policies designed to minimise empty running and to utilise Three Rivers railway network could also be included.

5 General Appraisal of Implementation and Monitoring Strategy Options

This section of the SA Working Note provides a qualitative response to the option questions posed within this part of the Additional Issues and Options Report, from the sustainability perspective.

Planning Obligations

A range of planning obligations currently sought with developers in Three Rivers is documented below, along with the relevant options questions relating to them:

Affordable housing; a proportion of affordable housing (currently 30%) is sought as part of appropriate housing development.

Open space and recreation facilities; open space, recreation and children's play facilities provision are sought as part of appropriate housing development.

Education facilities – a contribution towards education provision in the area is sought from appropriate housing development in accordance with Hertfordshire County Council guidance.

Health Care facilities – a contribution towards health care provision is sought as part of appropriate development in accordance with guidance from the local Primary Care Trust.

Sustainable transport modes – a contribution towards alternative modes of transport other than the private car, such as cycling, walking and passenger transport is sought as part of appropriate development in accordance with guidance from Hertfordshire County Council as Highway Authority.

Highway improvements – improvements are sought as part of development where highway infrastructure would experience significant additional pressure or where highway safety would be affected in accordance with guidance from Hertfordshire County Council as Highway Authority.

Nature conservation and landscaping – improvements are sought where existing habitats or landscape features are adversely affected by development.

Other appropriate infrastructure provision – appropriate developments are required to make a contribution or set land aside for particular community uses or other infrastructure provision, for example a community hall etc.

Do you think the range of policy issues listed above should be taken forward as planning obligations in the developing of the LDF?

There are no sustainability conflicts with the policy issues listed above, and indeed most would make a valid contribution towards ensuring the sustainability of new developments. In light of this, all should be taken forward as planning obligations in developing the LDF.

The 'Highway Improvements' obligation could be made more specific to include the need for incorporation of vegetative treatment systems and SUDS within highway improvements and also that any improvements should be carried out in a manner not adversely affecting the environment.

Planning obligations relating to the energy / resource efficiency of any new housing development might be considered when not already included as an integral requirement of the design. Specifically, obligations relating to sustainable construction methods and materials, sustainable design (incorporating energy efficiency and use of renewable energy), and specified energy efficiency levels during operation.

Extreme weather events are predicted to become more frequent in the future due to climate change and it may be appropriate to require all developers to include future-proofing measures within their development design.

Contributions towards waste management infrastructure might also be another consideration as a planning obligation, particularly towards recycling facilities in the local community.

Are there any particular obligations do you think we should prioritise?

Obligations should be prioritised in relation to the area that each particular development is proposed for. It will be clear that in some areas of the District education and / or healthcare facilities are overstretched, and in these areas the relevant planning obligations should be prioritised. Similarly, due to some of the proposed additional broad housing locations being located in Greenbelt areas, the 'Nature Conservation and Landscaping' planning obligation should be prioritised in these cases.

The 'Nature Conservation and Landscaping' planning obligation covers development that might be having a direct impact upon wildlife areas, however, impacts on such habitats may also be more subtle. If a residential development is contributing to an increase in population within an area, it is likely that wildlife sites in the locality will experience a corresponding increase in the numbers of people using those areas for recreational purposes. Depending on the sensitivities of individual sites, this may have an adverse impact and hence a planning obligation requiring developers to fund measures to manage this additional pressure would be appropriate.

Given the results of the survey of the Three Rivers Citizen's Panel in 2006, access issues should sometimes be given the priority. In many areas of the District, the issues are not felt to be the actual healthcare or education facilities provision, but more related to the access to these facilities. In these cases planning obligations should focus upon public transport and highway infrastructure improvements.

Three Rivers District Council's 'Access to Services Study' (January, 2007) should enable the needs of each settlement to be assessed and hence planning obligations to be prioritised accordingly.

Securing Obligations

Included within the Additional Issues and Options report are two potential options for securing planning obligations in the future (one being the current approach). The sustainability of these approaches has been appraised and summarised qualitatively below:

A discretionary case by case approach based whereby each development is treated on its merits, taking into account policy and site considerations.

Negotiations with developers on a case by case basis is currently normally only in relation to large scale developments (10 or more dwellings). This may be appropriate to the majority of planning obligations, however, even if the proposed development is not placing a significant additional strain on existing infrastructure, it could still be impacting upon a sensitive environmental resource. In these cases, planning obligations relevant to nature conservation, cultural heritage or the landscape / townscape may be appropriate where they do not duplicate powers available under other legislation.

For the reasons stated in the above response to the option question '**Are there any particular obligations do you think we should prioritise?**' this is the preferred approach to securing obligations from a sustainability perspective. Various Council reports and surveys (reference in above section) have indicated that prioritisation of obligations should occur for different development sites. This prioritisation is best implemented through a case by case approach, taking into account the site and its wider area. However, this preferred approach should be integrated with the requirement that even small developments must contribute to some extent (based on guidance relating to formula for calculating contributions).

Guidance on how small developments should be charged for their contribution to the cumulative impacts on infrastructure loading in an area where many similar developments are occurring would also have to be developed as part of this approach. This is an element of the 'standard charge' approach below, but with careful guidance on how to recognise and measure contributions to cumulative impacts upon infrastructure, services and the environment, this concept could also be adopted as part of the 'discretionary case by case approach'.

A small development may make a small contribution to the cumulative impact upon infrastructure / service loading of a number of similar developments, and be 'charged' a small amount to correspond with this contribution. However, that same development might be located upon a Greenbelt site, causing significant adverse biodiversity and landscape impacts and hence the total 'charge' within its planning obligations could be weighted towards those particular obligations dealing with environmental issues. The 'discretionary case by case approach' could allow cumulative impacts to be considered alongside the need to prioritise certain obligations that are most relevant to the particular site and its locality.

This approach also allows the flexibility for the planning obligation to require the developer to provide the infrastructure / service itself, rather than making a monetary contribution towards it (as is more appropriate for larger developments).

A 'standard charge' approach whereby all obligations are rolled into a single contribution covering a range of service and infrastructure issues in an area; the amount sought will vary according to the size of development but even small scaled developments would be expected to contribute.

Recognition of the cumulative impacts of many small developments is welcomed, however, by using a 'standard charge' approach there may be a lack of transparency as to where funds will be focussed. It is possible that some developers will make a significant contribution to planning obligations, yet not see a corresponding significant improvement in the planning obligation areas which need prioritising around the development site locality.

Pooling and refocusing funds on areas of particular need may be an efficient way of tackling over capacity issues in Three Rivers District as a whole, but only those developing upon sites where the Council considers that the existing capacity of the local services or infrastructure cannot cope with the additional demand arising from the proposed development will be asked for a contribution. If those funds are then refocused away from the development area, this may not be acceptable to the developers or those who live in the area around the site.

It is recognised that the 'standard charge' approach has the potential to speed up the planning obligations process and increase the predictability over the likely cost of contributions for the developer. However, when compared with the flexibility and

transparency that the modified 'discretionary case by case approach' offers (as detailed in the response above), it is the least preferred approach of the two options.

The 'standard charge' approach is broadly not compatible with need to prioritise obligations.

Plan, Monitor and Manage

The principles of 'Plan, Monitor and Manage' should enable local authorities to deliver a planning system that delivers a flexible, responsive supply of land, particularly in relation to housing. Three Rivers District Council intend to action these principles by way of the following actions:

1. Working with others such as the Local Strategic Partnership and other service and infrastructure providers together with the development industry to ensure that there is adequate provision to meet the needs of new development and to ensure that the delivery of land for development is not restricted by inadequate provision or other obstacles
2. Ensuring that a continuous supply of deliverable housing sites for at least five years by preparing a Strategic Housing Land Availability Assessment in conjunction with the development industry
3. Developing an implementation strategy that is sufficiently flexible to take into account changing circumstances such as housing need and supply and any reviews in the regional Spatial Strategy; this may for example entail a strategy whereby strategic housing development is phased and certain areas held 'in reserve' should identified sites not come forward.
4. Continue to monitor the implementation of planning policies and the implementation of the Local Development Scheme (LDS- project plan) through the Annual Monitoring report (AMR) process to ensure that the spatial vision and objectives of the LDF are being delivered.

The sustainability of these actions has been assessed within the response to the following option questions:

Do you agree with the Council carrying out the above actions as part of developing an implementation and monitoring strategy?

Action 1: Working with others such as the Local Strategic Partnership, service and infrastructure providers, and the development industry to ensure adequate provision is made to deliver the required land for development over the Plan's lifetime, will be essential. There are however, other parties that should be included within this negotiation. Consultation at this strategic stage with the Statutory Environmental Bodies, local environmental interest groups and the local community is also important.

This consultation is done to some extent during the LDF preparation process, however, should working groups be formed outside of this process or after plan adoption, it would be better to get 'buy-in' from the Statutory Environmental Bodies and local groups before sites have been put forward for development. This would save time and additional cost later in the process and will ensure that a significant amount of 'sustainability' inputs occur at this early stage of the project.

Action 2: The commitments for increased additional housing provision in Three Rivers District required as a result of the independent Panel report into the examination of the original draft East of England Plan (June 2006) are recognised. However, the impetus to fulfil this commitment should not compromise existing or future environmental and social welfare standards. The Strategic Housing Land Availability Assessment should take these constraints into account, and the assessment should be prepared with the cooperation of the relevant Statutory Environmental Bodies as well as with the development industry.

Action 3: The implementation strategy should also be flexible enough to take into account changing environmental conditions, particularly those occurring as a result of climate change. This might include changing flood risk levels and areas, increasing water resource availability issues and potential proximity to an increasing number of renewable energy ventures that are likely to be developed in the future (e.g. windfarms).

The implementation strategy should also be able to take into account the potential for windfall sites.

Action 4: Monitoring is essential for any reporting process, and the existing Annual Monitoring Report (AMR) process is an appropriate vehicle through which to implement this monitoring. The AMR should detail not only progress (or otherwise) towards targets and visions, but also provide information as to actions being progressed to ameliorate the situation where targets and objectives are found to have not been met.

Monitoring should not only cover the implementation of planning policies and the Local Development Scheme, but also measure the extent to which the Sustainability Appraisal process has succeeded in ensuring the sustainability of the LDS. Indeed, the LDS's performance against the objectives of the Sustainability Appraisal would be a useful indicator.

Other than the specific sustainability objectives and indicators developed in the Sustainability Appraisal, it would be useful to include further environmental and social performance indicators within the AMR as the Council deems appropriate. It is possible that some indicators may become redundant over the LDF's lifetime, whilst others not currently included may become relevant, and the Implementation and Monitoring Strategy must be flexible enough to recognise and accommodate these changes.

Is there anything else the Council should be doing to help ensure the delivery of land over the Plan period?

See comments to specific actions above.

6 Appraisal of Topic Areas and Criteria for Potential Generic Development Control Policies

The policy topic areas and their associated criteria have been assessed against the objectives within the SA Framework in order to identify any potential conflicts. It also allows an informed response to be given to the option questions raised within the Additional Issues and Options Report from a sustainability perspective.

Table 1 in Appendix B illustrates the full results of this appraisal, whilst a summary for each topic area is included within this section of the main report.

The large amount of amber (potential conflict, or, no relationship) scorings reflects the lack of detail provided about actual Development Control policies and criteria at this stage. The aspects of uncertainty are mostly explained within the tables, along with necessary provisions to ensure that these policies do not cause significant negative impacts (reds).

The relevant option questions and responses are presented after this summary.

Note on the Consideration of Cumulative, Temporary, Permanent, Short and Long Term Impacts

Consideration of cumulative, temporary, permanent, short and long term impacts has been carried out to some extent within this appraisal. However, the Three Rivers Additional Issues and Options Paper puts forward a number of broad policy topic areas (and indicates where criteria will be created) as a basis for potential Generic Development Control Policies. As such, the level of detail at this stage is not adequate to viably make such distinctions within the appraisal of impacts in the majority of cases.

Sustainable Development:

All final development control policies developed for all topic areas should be cross-cutting so as to ensure protection of environmental and social aspects even where other development control criteria may support a development in an area of environmental sensitivity or leading to adverse social impacts.

Sustainable development control policies generally support the Framework objectives.

The policy which potentially conflicts with protecting biodiversity is 'ensuring noise sensitive developments are located away from existing sources of noise and that potentially noisy developments are located in areas where noise will not be such an important consideration or where impacts can be minimised'. If potentially noisy developments are situated away from sensitive residential receptors, those same developments, if located to the edge of residential areas, may instead impact on biodiversity within County Wildlife Sites and also impinge upon the tranquillity of open spaces (e.g. the Greenbelt).

Soil objectives are not in conflict with the policies provided agricultural land is not used when ensuring noise sensitive developments are located away from existing source of noise. There is a potential conflict with achieving good air quality if rural / Greenbelt sites are developed thereby increasing car travel to access local amenities, places of work etc. Otherwise the objectives and policies are complementary to one another. Objectives to maximise the use of previously developed land and to use natural resources as efficiently as possible will also conflict with the suggested 'noise' policies if developments are located in Greenfield areas as a result.

Cultural heritage objectives are in line with the suggested sustainable development policies provided appropriate archaeological precautions are taken with regard to promoting Sustainable Urban Drainage Schemes. Likewise landscape objectives do not conflict with sustainable development policies provided the developments within noise sensitive

developments and policies for reclamation and use of unstable land do not negatively impact the landscape.

Policies or criteria relevant to social or human health objectives are largely lacking from the sustainable development topic area. Indeed a potential conflict is presented in so far as providing mixed use developments may be problematic in light of the suggested 'noise' policy and pragmatism will be needed to assess which land uses should be segregated from residential areas.

Water and climatic objectives are not in conflict with the sustainable development control policies, although the former can only be assured when the details of the criteria against which potentially polluting development are to be considered, are known.

Topic specific considerations for next stage of policy and criteria development:

- Policies to ensure that potentially noisy developments are located in areas where noise will not be such an important consideration need to ensure that other environmental factors are not adversely affected by such a siting policy. It is likely that these policies will be focused upon avoiding conflict between noisy developments and residential areas, hence this may lead to locating such development in urban fringe and rural areas where developments could impact upon areas of biodiversity and landscape interest.
- Opportunity to develop policies to enhance waste management facilities for existing developments at the same time as ensuring new development makes sufficient provision.
- Through policies about redevelopment of unstable land, there is opportunity to 'make-safe' these areas and develop some sites as natural areas or recreational facilities (e.g. wetland centres within disused open cast quarries and borrow pits).
- A number of social objectives relevant to housing, access and sport, leisure and recreational facilities are covered under other Development Control topic areas, however, the 'Sustainable Development' topic area could include policies such covering areas such as:
 - Human health and welfare (e.g. provision of cycling / walking facilities);
 - Increased access to services for those who need it the most (ie. services such as healthcare, dentists and schools particularly for those living in areas of social deprivation).

Environment and Resource Conservation:

All final development control policies developed for all topic areas should be cross-cutting so as to ensure protection of environmental and social aspects even where other development control criteria may support a development in an area of environmental sensitivity or leading to adverse social impacts.

The Environment and Resource Conservation policies generally complement the Framework objectives. The Policy stating the 'approach of LPA to replacement dwellings in the Greenbelt, including circumstances (if any) under which replacement acceptable' poses the biggest potential conflict with the framework objectives as re-developing areas of Greenbelt potentially threatens biodiversity, air quality, heritage, landscape and population/human health. Likewise allowing the re-use of buildings within Greenbelt could impact the landscape and heritage by altering the setting of the area and the original context of the current developments i.e. changing farm buildings to housing etc. In turn these could impact upon

air quality due to an increase in road traffic to areas of development. The impermeable surfaces created by these new developments on previously open areas may also increase runoff during rainfall events to nearby watercourses potentially affecting the water quality and causing flooding. The incorporation of SUDS into new developments should go some way towards mitigating this impact.

The material assets Framework objectives support the re-use of buildings within Greenbelt and the replacement of buildings within Greenbelt and the economic objectives could be supported by encouraging rural development when re-using developments within Greenbelt.

It is unclear how the 'criteria based policies against which development on or affecting sites of regional and local biodiversity and geological interest will be judged' affects the Framework objectives as the criteria are as yet undefined.

The social and human health impacts of these policies are unclear as the criteria underlying the policies are not given. It is possible that policies and criteria protecting areas of biodiversity, archaeological interest and historical environment may restrict access to those wishing to use them for recreational purposes (and in these cases, the preservation of the site must be carefully weighed against the need to provide recreational areas for the local population – and a viable compromise reached). Policies for replacement dwellings and the reuse of buildings in the Greenbelt could potentially support the Frameworks social objectives if a significant amount of affordable housing was made available as part of such developments.

Topic specific considerations for next stage of policy and criteria development:

- Greenbelt land, although protected, does not necessarily contain any designated sites. The approach to locating replacement dwellings within the Greenbelt should therefore ensure where Greenbelt land does contain any biodiversity, agricultural, historical or landscape designations, these are protected.
- By placing future development in Greenbelt areas, there is a risk that these could detract from the viability of town centres, especially if these new developments are mixed use. Whilst new mixed use developments should be encouraged, town centre services and amenities should not be allowed to relocate to these new developments and instead services and amenities for these developments should be in addition to provisions made in town centres.
- Policies for reuse of buildings in the Greenbelt could potentially reduce the impacts of existing buildings on landscape character by ensuring careful landscaping within redevelopment proposals and improving the quality / aesthetics of superstructure.

Design:

All final development control policies developed for all topic areas should be cross-cutting so as to ensure protection of environmental and social aspects even where other development control criteria may support a development in an area of environmental sensitivity or leading to adverse social impacts.

There are no conflicts between these design policies and the Framework objectives provided due consideration and sensitivity is shown towards the heritage in the area and the landscape / townscape character while establishing the design principles. This is particularly important when looking at the design policies requiring new developments to be in keeping with neighbouring buildings and the local area.

Topic specific considerations for next stage of policy and criteria development:

- Policies relating to ensuring a high quality public realm should include objectives for encouraging health and welfare through provision of open spaces, recreational facilities, healthcare facilities, and aiding walking / cycling.
- There is also opportunity to focus policies on appropriate inclusive access upon areas of social deprivation.

Housing:

All final development control policies developed for all topic areas should be cross-cutting so as to ensure protection of environmental and social aspects even where other development control criteria may support a development in an area of environmental sensitivity or leading to adverse social impacts.

Policies controlling the location of housing could cause potential conflicts if situated within areas of biodiversity value, areas at risk from flooding, or agricultural land. Furthermore the housing has to have a self-sufficient water supply and be in a convenient position for transportation.

Policies will be needed regarding the incorporation of resource and energy efficiency within the design and construction of new housing if the climatic factor objective of the Framework is to be supported. Likewise efficient water usage needs to be promoted.

The 'rural exception policy' also has the potential to cause issues as such developments may be based on previously undeveloped rural land. This could have negative consequences for currently unknown archaeology and cultural heritage as well as the existing landscape, biodiversity and agricultural designations in these rural areas. However, it is acknowledged that focussed development in rural areas may be necessary to some extent in order to encourage rural renaissance (and satisfy the Frameworks social objectives).

There could also be conflicts between the framework and policies if the housing is not in suitable locations to encourage healthy lifestyles for example if there is no open space, poor access to hospitals, or no facilities for green travel or leisure centres. To this extent more information is needed on the actual criteria for development locations.

Topic specific considerations for next stage of policy and criteria development:

- The 'rural exception policy' may be necessary to encourage 'rural renaissance' (assuming affordable housing is provided), however, given the rural location there may be impacts upon sites of biodiversity, cultural heritage, agricultural and landscape value. Care needs to be taken to ensure that any 'exceptions' do not also extend to these designated sites.
- Criteria for location of Gypsy and Traveller Sites provide a means of integrating such sites into areas with more opportunities for temporary employment, entertainment facilities and services so that conflicts with resident populations may be less likely to occur.

- Opportunities for increasing the amount of affordable housing provision should be focussed in areas where it is most needed.

Employment and Economic Development:

All final development control policies developed for all topic areas should be cross-cutting so as to ensure protection of environmental and social aspects even where other development control criteria may support a development in an area of environmental sensitivity or leading to adverse social impacts.

There is a potential conflict here between employment and economic policies and particularly the environmental Framework objectives. However, in order to comment upon the specific implications the land use policies for the different types of industrial and commercial development need to be developed further.

Topic specific considerations for next stage of policy and criteria development:

- Obvious opportunities exist within land use policies for industrial and commercial development for the protection of designated environmental sites and the minimisation of disturbance (noise, light, air quality, accidents) to residential areas. See comments on 'sustainable distribution' within the Appraisal of Strategic Transport Issues – Chapter 4.

Town and Local Shopping Centres:

All final development control policies developed for all topic areas should be cross-cutting so as to ensure protection of environmental and social aspects even where other development control criteria may support a development in an area of environmental sensitivity or leading to adverse social impacts.

By encouraging new retail and leisure developments to be based in town centres there will be less potential for conflict with the Frameworks environmental objectives, although this is assuming that any development is sensitive to townscape character. There is also a potential conflict if the historic and cultural assets of the town are not preserved / enhanced by the development or if the development is not in keeping with the general heritage of the area.

This policy contributes to the development of viable mixed use developments and as such has the potential to lower the need for private car travel or inter urban centre travel. This will have a corresponding impact upon preserving or even enhancing air quality in the District. Framework objectives related to the use of previously developed land and resource efficiency should also benefit from these policies as buildings which are already in place will be re-developed as opposed to new premises being developed.

By promoting a viable town centre these policies should encourage to a sense of community and identity amongst local residents. An enhanced evening and night time economy should add to this sense of community and increase social activity which should in turn attract people from a broad sector of society and wide range of ages to locate, recreate and work in the town centre (although certain aspects of a night time economy can potentially contribute to antisocial behaviour and crime). The need to travel is reduced if mixed use developments are encouraged and a sense of community is built by locating local amenities together. Policies identifying primary and secondary frontages will have a positive affect upon economic and social factors provided they allow for this mixed use development. These

policies will also need to cater for a variety of different types of housing (e.g. affordable) to allow a diverse range of people to move to the town centres. Evening and night-time economy uses will also encourage more social activities and could potentially provide a feeling of cohesion amongst society.

Identifying primary and secondary frontages also helps ensure the economic success of a town by pin-pointing where various types of business are needed. Encouraging retail and leisure developments to locate within town centres will enhance the viability of these centres by encouraging people to visit and potentially reside in the town centres.

Topic specific considerations for next stage of policy and criteria development:

- Care should be taken when seeking to promote vitality and viability within the town centre and identifying frontages, that the townscape character of the particular area is taken into account (and enhanced if poor). The historic and cultural assets of the town centres must also be preserved and enhanced through such policies.

Communications:

All final development control policies developed for all topic areas should be cross-cutting so as to ensure protection of environmental and social aspects even where other development control criteria may support a development in an area of environmental sensitivity or leading to adverse social impacts.

The communications policies could potentially conflict with the Framework objective relating to biodiversity and landscape. Mast sharing is positive for many environmental factors (e.g. biodiversity and landscape) as it means that fewer masts will need to be erected. However, depending upon the exact details of the other policies there is a potential that these could have negative consequences for biodiversity and landscape. For example, the promotion of maximum levels of parking and of intensive developments in the most accessible sites could nevertheless impact on areas of biodiversity or landscape value.

The soil objectives should not be negatively impacted by the proposed policies provided the land is used is not of agricultural value and that loss of soils is limited.

The policy to impose maximum levels of parking should be encouraged, however, this is dependent upon those levels being restrictive enough so as to discourage dependence on cars (the maximum levels should differ according to provision of public transport alternatives). The policy promoting development close to transport interchanges encouraging the use of public transport supports the air quality objective.

The criteria for the policies guiding development proposals for telecommunications would need to be established to understand whether they encourage efficient use of land although typically they do not have a large footprint. Likewise the locations of the car parks and of the developments on the accessible land would need to be known to see if previously developed land is being used.

The cultural heritage objectives are in potential conflict with the communications policies. Again the criteria for the policies would need to be known to establish the exact implications. For instance, the policies on the appearance of the apparatus and whether the 'intensive developments' will respect the cultural heritage. It is hoped that development control policies relevant to environment will be crosscutting and ensure preservation of the historic environment.

By taking account of people with disabilities and siting near to transport interchanges these communication policies partially satisfy social objectives relating equity and accessibility. However, dependent upon the actual siting criteria for masts and telecommunication installations, there may be impacts upon human health whether perceptual or otherwise.

The communications policies, in general, do not adversely impact upon the Frameworks economic objectives. By stating their aim to promote intensive development on the most accessible sites close to transport links one can assume that some of these sites are within towns which will help to revitalise the centres.

The communications policies should not have any direct impact of the water objective, however, until the actual siting criteria are known this cannot be assured.

Topic specific considerations for next stage of policy and criteria development:

- Relevant to parking a policy regarding ring-fenced provision of spaces for car-sharers might be considered.
- Policies on siting and external appearance of apparatus offer an opportunity to enhance landscape / townscape if located on brownfield sites.
- Policies should take account of low income groups and residents of socially deprived areas, as well as people with disabilities.

Sport, Leisure and Recreation:

All final development control policies developed for all topic areas should be cross-cutting so as to ensure protection of environmental and social aspects even where other development control criteria may support a development in an area of environmental sensitivity or leading to adverse social impacts.

Policies for tourism will definitely be required. Tourism will help to further develop towns, publicise heritage, and will be positive for the economy of the area. In order to support the tourist economy, infrastructure may need to be upgraded, as traffic flow in general and particularly around sites of tourist interest may increase. Demand upon public transport would also rise and pressures on local amenities may increase and a corresponding increase in provision should accompany this demand.

Standards for ensuring the provision of sports, recreational facilities and open space should benefit social objectives and human health if the provision is focused in those communities where they are most needed and where health benefits can be delivered.

Biodiversity objectives could potentially be impacted by provisions for sports and recreational facilities, however this would be dependent upon the siting criteria. Indeed consideration should be given to the role of nature conservation sites as recreational areas and this role could be enhanced if the biodiversity value of such sites is not adversely affected by such uses. Where biodiversity may be adversely affected, ring-fenced money obtained from contributions from local developers may help to manage these recreational activities in a more sustainable manner (see Appraisal of Implementation and Monitoring Strategy Options Chapter 5 – planning obligations).

In the same way, many areas of biodiversity interest could also be site of tourist interest, and as such tourism policies would need to consider whether there is a potential impact upon biodiversity and if so how this could be mitigated against without affecting the viability of the natural area as a tourist site. This may involve limiting access and controlling the number of

visitors. Potential positive impacts include ring fencing tourist revenues to help these biodiversity sites achieve their conservation objectives.

Water objectives should not be affected by the sports, leisure and recreation policies provided any new developments are not located on floodplains.

Tourism policies and sports, leisure and recreation facilities would need to protect the agricultural land and ensure that any developments do not threaten the land. More details on policies and provisions would need to be known to further assess this.

Tourism policies could potentially conflict with the air quality and climatic factor Framework objectives if they do not promote the use and upgrading of public transport for tourist transport.

Policies for tourism and recreation facilities would need to maximise the use of previously developed land for any new development areas in order to support Framework objectives relating to previously developed land and material resource usage.

Tourism policies would need to consider whether there is a potential impact upon cultural heritage and if so how this can be mitigated, this is particularly pertinent in so far as many heritage sites may be popular tourist sites themselves and hence access and number of visitors may need to be controlled. Potential positive impacts include ring fencing tourist revenues to help these heritage sites achieve their conservation objectives. In this way cultural heritage on the whole should benefit from tourism however there would need to be policies in place to protect the historic environment too. Sports and recreational facilities would need to take account of archaeology and heritage to ensure that it is not negatively impacted. Likewise with landscape, provision would need to be made to ensure that tourism and new recreational facilities respect the landscape and townscape.

The provision of open space, sports and recreational facilities could help achieve the human health objectives of the Framework.

Tourism policies and local standards for the provision of open space, sports and recreational facilities should have a positive influence upon social factors. They should enhance the community identity and promote participation, equity and potentially address certain aspects of social exclusion (e.g. access to leisure amenities). They could also potentially reduce crime and perception of crime through the upgrading of services and by providing facilities for evening and weekend activities.

Economic objectives should work in unison with tourism policies and local standards for provision of open space, sports and recreational facilities. Tourism should promote prosperity and economic growth provided there is the infrastructure to support it. Tourism would provide additional employment and strengthen the economy in the District as a whole.

Topic specific considerations for next stage of policy and criteria development:

- Policies should enable the ring-fencing of a certain amount of the revenues from tourism for the purpose of developing and managing services and amenities (e.g. sports and recreational facilities, public transport), focussed upon the areas of most need. It is, however, noted that this may be difficult to secure through the planning process.

Do you think the list covers the right issues to be covered under Generic Development Control policies?

Are there any issues that are missing?

Are there any issues that should not be included?

Bearing in mind that this list does simply cover a broad range of issues and does not identify specific policies or assessment criteria, it is 'potentially' fairly comprehensive. The full extent, however, to which all issues are covered, cannot be sure until the policies and criteria are revealed in more detail.

Potential issues that are missing or could be expanded upon include:

Energy efficiency - Despite mention of criteria for assessing renewable energy projects and policies requiring a percentage of energy in new developments to come from on-site renewables, there seems to be no consideration of energy efficiency within new developments. Standards could be set / adopted by the Council and achieved through innovative sustainable design.

Sustainable Construction - A policy requiring the use of sustainable construction techniques for a new developments or redevelopments would be encouraged. Sustainable construction might include the use of locally sourced materials and secondary / recycled aggregates (and other building materials), along with 'green fuelled' and quiet construction plant. The Council may consider setting a minimum CEEQUAL rating.

Climate Change - Reference is made to controlling development in flood risk areas and also to the use of SUDS, however, specific policies under the Sustainable Development topic area referring to climate change and adapting to climate change might be included. Specifically, encouraging innovative design when 'future-proofing' new developments and infrastructure to take into account the causes and effects of climate change (e.g. rainwater collection for garden watering, car cleaning and even toilet flushing; future-proofing highway infrastructure in terms of preparing for greater diurnal temperature differences and more frequent extreme weather events; planting with semi-arid species).

Water Resource Usage - As eluded to above, new developments will need to be future-proofed against a drier climate in the future. This includes the issue of decreasing water supply for an increasing number of dwellings. A large amount of additional dwellings are planned for the East of England region (including Three Rivers) and as such, water supply is likely to become a significant constraint. Policies and criteria should relate to requirements encouraging innovative forms of water storage (e.g. rainwater collection, storage in old mineral working sites) and water usage efficiency within new developments.

Minerals and Waste - A policy is suggested that covers reclamation and the use of unstable land, however, a specific policy referring to the need to investigate the potential for future water storage opportunities at previous extraction sites may be opportune. A review was undertaken of Hertfordshire Minerals Plan and adopted in 2007 which identifies potential sites. A policy of this nature would support similar policies relevant to climate change and water supply.

Transport - Transport has been dealt with specifically within the LTP process (and its accompanying SEA), however, a specific policy regarding the consideration of opportunities for upgrading public transport and green transport facilities would be welcome under the Sustainable Development topic area. A specific policy regarding the need to upgrade local highway infrastructure and public transport provision to cater for any new developments, should also be considered.

Social and Human Health Issues – There are a number of policies addressing issues such as affordable housing, promoting viable town centres, open space and Gypsy and Traveller sites. However, a policy or set of policies aimed at addressing ‘human health’ problems might be added. Specifically, policies and criteria ensuring the viability of cycling and walking within the District are lacking, along with a policy area addressing ‘hospitals and healthcare facilities’, in the same way that ‘sport, leisure and recreation’ and ‘communications’ are treated as separate policy areas.

7 Overview of the Appraisal

7.1 Introduction

This section draws on the findings of the previous sustainability appraisal work carried out for the original Core Strategy Issues and Options Report and provides a short summary headlining the main sustainability issues attached to the Additional Issues and Options Report.

7.2 Links to Previous Appraisal

The sustainability appraisal for the Three Rivers Core Strategy Issues and Options Paper identified that although the implementation of high density options could lead to potential sustainable conflicts, it is considered that it will have significant positive outcomes for example, higher densities often result in more efficient use of land and thereby reduce greenfield development. This original appraisal was based on a housing requirement 3,600 dwellings (as a maximum ceiling) rather than the 4,000 (as a minimum), which was recommended by an independent Panel to ensure that the Three Rivers LDF conforms to the East of England Plan. This represents an 11% increase.

The previous work identified a number of recommendations that would need to be considered if the high density options for Three Rivers were to be taken forward. If the proposed housing increase is sanctioned these same issues will still need to be looked at, but it is far more likely that there will be significant adverse environmental and social impacts.

Earlier scoping work for the SA/SEA had also identified a series of sustainability issues relating to the Three Rivers area, some which directly relate to the proposals for extra housing in Three Rivers. These included:

- Over abstraction of water resources in the area has been identified as an issue which puts a constraint on the level of new housing;
- Increased air pollution from traffic growth and congestion;
- Increase in light pollution;
- Loss of tranquillity; and
- High levels of out-commuting to London.

7.3 Summary

Given the constraints imposed by the limited capacity at existing sites within the urban area of Three Rivers to absorb the additional housing allocated to the District, any proposed additional housing locations are likely to have widespread sustainability implications. Whilst there may be positive social and economic effects, there are also likely to be significant adverse environmental effects. These adverse effects are mainly linked to the intrusion into the Greenbelt that will almost certainly result from the proposed growth. Although a significant amount of this residential growth is proposed as simple redevelopments of existing developed areas (most notably employment areas) and previously developed land, there will also be a certain amount of direct or loss of greenfield sites and a range of other direct and indirect impacts which have been discussed above.