

**PLANNING
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**HORSHAM DISTRICT
LOCAL DEVELOPMENT FRAMEWORK
TO 2018**

**Interim Sustainability Appraisal
and Strategic Environmental
Assessment**

of the

**Land West of Horsham Masterplan
Draft Supplementary
Planning Document**

September 2007

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NON TECHNICAL SUMMARY

Horsham District Council is working towards producing a Local Development Framework (LDF). This Framework will contain a range of documents setting out the policies for land-use planning in the District. As part of the preparation of its Local Development Framework, Horsham District Council adopted its Core Strategy Document in February 2007.

The adopted Core Strategy (2007) allocates land to the West of Horsham for development. The West of Horsham Masterplan Supplementary Planning Document will provide more detail on the requirements for this development.

It is a requirement of the Planning and Compulsory Purchase Act 2004 for a Sustainability Appraisal (SA) to be undertaken for each document produced as part of a Local Development Framework. In addition, a Strategic Environmental Assessment (SEA) is also necessary in accordance with European legislation. These two processes are very similar and they have therefore been combined.

This Sustainability Appraisal and Strategic Environmental Assessment will be undertaken in conjunction with the West of Horsham Masterplan and will influence the West of Horsham Masterplan.

Baseline Data

To undertake the Sustainability Appraisal, first baseline data was collected about how the area to the west of Horsham is in social, environmental and economic terms. Baseline information was collected for Broadbridge Heath and Denne wards. The overall findings are summarised below;

Social

Crime levels in the area are generally low; levels in Horsham and Broadbridge Heath are higher than other parts of the District. Data shows that the existing community has very high levels of car ownership and most use their cars to reach their work destination, which is often relatively local. The District has very low levels of deprivation and the health of residents is good. Over 60 percent of the population is of working age.

Economic

The retail sector forms an important part of the District's economy. It employs around 15% of the workforce and helps meet residents' everyday needs. Horsham town was assessed as part of the District Retail Health Check and was considered to be a vital and viable town centre with a good range and choice of facilities. There are however fewer more local stores in the Denne and Broadbridge Heath area, possibly as a result of the proximity of Horsham town centre and Tesco supermarket in Broadbridge Heath. As with the District as a whole, unemployment levels in Broadbridge Heath and Denne are low.

Environment

Most of the land within or close to the proposed development area is currently in arable use. Areas of greater ecological importance include High Wood Hill, which is designated as ancient woodland and a Site of Nature Conservation Importance and the two hedgerows running along Mill Lane and Old Wickhurst Lane. Several protected species have been recorded as being present on the site. To date, the air quality in Horsham District has met government standards.

Sustainability Objectives and Indicators

Using the baseline data, the sustainability issues affecting the area were identified. Taking into consideration the sustainability issues, sustainability objectives were created to assess the contribution the Masterplan will make towards sustainable development. The indicators will be used to monitor the

contribution the Masterplan makes to achieving sustainable development in relation to the sustainability objectives.

Sustainability Objectives and Indicators

Sustainability Objective	Sustainability Indicator
1. To ensure that everyone has access to a good quality affordable home that meets their needs;	<ul style="list-style-type: none"> • Number of affordable housing completions • Affordable housing as a percentage of total completions
2. To ensure that everyone has access to the health, education, leisure and recreation facilities they require;	<ul style="list-style-type: none"> • Number and type of different facilities provided as part of the development • Percentage of homes within 30 minutes public transport time of; a GP surgery; a hospital; a primary school; and a secondary school
3. To ensure that there is integration of new and existing communities;	<ul style="list-style-type: none"> • Post completion residents survey • Provision of bus, foot and cycle links between the areas and across the A24
4. To reduce actual, or fear of, crime and antisocial behaviour;	<ul style="list-style-type: none"> • Post completion residents survey • Number of crime incidents reported in the new development in comparison with other parts of Horsham
5. To integrate development within the existing landscape, conserving and enhancing its character;	<ul style="list-style-type: none"> • Condition of landscape character areas K2 and P1
6. To integrate development in a manner that conserves and enhances the biodiversity in the area;	<ul style="list-style-type: none"> • Changes in the area of key habitats • Changes in the areas designated for their intrinsic environmental value • Change in the numbers of rare and protected species
7. To maintain a high quality environment in terms of air quality;	<ul style="list-style-type: none"> • Post completion residents survey • Complaints regarding odours from sewage treatment works
8. To maintain a high quality environment in terms of water quality;	<ul style="list-style-type: none"> • Water quality in River Adur at measuring points at, and downstream from, the development site • Pollution releases from the sewage treatment works reported to the Environment Agency
9. To reduce car journeys and promote alternative methods of transport;	<ul style="list-style-type: none"> • % of population within 400m of hourly or better bus service • Provision of pedestrian and cycle routes between the new development and the town centre and stations • Post completion residents survey
10. To make the most efficient use of land;	<ul style="list-style-type: none"> • Percentage of dwellings completed at <ol style="list-style-type: none"> (i) less than 30 dwellings per ha; (ii) between 30 and 50 dwellings per ha; (iii) above 50 dwellings per ha. • Percentage of dwellings complying with adopted parking standards
11. To minimise the use of resources, particularly water,	<ul style="list-style-type: none"> • Number of homes built to each level of the Code for Sustainable Homes standards

energy and materials;	<ul style="list-style-type: none"> • Number of non-residential developments built to each level of BREEAM • Provision for recycling/composting • Number of local recycling centres incorporated within development
12. To reduce the risk of flooding;	<ul style="list-style-type: none"> • Number of houses / other land-uses developed in current or future floodplain • Changes in the flood risk area downstream from the development • Incorporation of sustainable urban drainage into the development • Number of properties/other uses developed against the advice of the Environment Agency
13. To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy;	<ul style="list-style-type: none"> • Mega Watts of electricity capacity generated by renewable sources installed by type (domestic and non-domestic) • Percentage of homes with an energy efficiency rating of greater than 10% above the minimum established in Part L of the Building Regulations.
14. To provide employment opportunities which meet the needs of the new and existing community;	<ul style="list-style-type: none"> • Amount of floorspace developed by type • Post completion residents survey
15. To enhance the retail vitality of Broadbridge Heath and Denne wards	<ul style="list-style-type: none"> • Amount and type of retail floorspace created. • Post completion residents survey

The sustainability objectives were used to assess the sustainability of the different possible options for providing development to the west of Horsham. The results of this assessment then helped inform the preferred approaches put forward in the Masterplan. The results of this assessment are summarised below.

Two Masterplan approaches are being consulted on in the West of Horsham Masterplan SPD; the Preferred Approach Masterplan (option 1) and the Alternative Approach (option 2). The Preferred Approach Masterplan (option 1) is to build a new grade separated junction on the A24 with linked/overlapping slip roads to farthings Hill interchange with a dual carriageway in conjunction with the closure of the Western part of the A264 Broadbridge Heath bypass. If this approach cannot be progressed then the Alternative Approach (option 2) will be pursued which includes a new grade separated compact junction with a single carriageway link in conjunction with the downgrading of the existing western part of the A264 Broadbridge Heath Bypass. For the other options assessed the Preferred Approach identified will remain the same for both the Preferred Approach Masterplan (option 1) and Alternative Approach (option 2).

Summary of assessment of options

Subject	Options identified	Most sustainable option	Preferred Approach	Summary of assessment
Integration of the new development with Horsham and	a) Develop a single community b) Develop two communities, one on each side of the A24	b	b this would be the same for the Alternative Approach	It is likely to be more feasible to provide services and facilities to two communities which are linked to existing

Broadbridge Heath	c) Develop three communities, one to the South of Broadbridge Heath, one to the South of Tanbridge School and one South of the River Arun		(option2)	communities. This option will also aid integration of the new and existing communities. This in turn is likely to reduce the need for car journeys and therefore have a positive impact on air quality.
A24 access junction	Option a) Build a new grade separated junction on the A24 with linked/overlapping slip roads to Farthings Hill interchange Option b) Build a new grade separated compact junction Other options have also been considered but have not been progressed as they have not been supported by either the Highways Authority or the community as they would either cause excessive delays on the A24; would cause additional routing through the new community or are against policy.	b	a Option b is included in the Alternative Approach (Option 2)	Both options are likely to have large impacts on the landscape character and biodiversity. Whilst both options are likely to affect air quality, option b will allow a more constant flow of traffic which can reduce emissions. Option a will have a larger land take than option b. Both options will add to the emission of greenhouse gases through the use of energy and resources through construction, although option b is likely to have a smaller resource use. Option b will require lighting between the new junction and Farthings Hill Interchange which will require energy.
New east-west link road and existing Broadbridge Heath Southern Bypass	Option a) Have a single carriageway link in conjunction with the downgrading of the existing western part of the A264 Broadbridge Heath bypass Option b) Have a dual carriageway in conjunction with the closure of the western part of the A264 Broadbridge Heath bypass	a	b Option a is included in the Alternative Approach (Option 2)	Whilst both options will have an impact on landscape character and biodiversity, option b is likely to have a greater impact due to the larger land take required by a dual carriageway. A dual carriageway is also likely to create more noise. Both options are likely to have a negative impact on water quality due to contaminated runoff from the roads. Option b will also be a less efficient use of land and will require more resources during construction.
Provision of a bus service	a) Provide a comprehensive bus strategy that links to existing services b) Provide a bus service that	a and c	b this would be the same for the Alternative	Providing a bus service will have positive effects in terms of access to facilities, air quality and

	<p>serves only the new development</p> <p>c) Provide a bus service that serves the new development and nearby communities</p> <p>d) Do not provide a bus service</p>		<p>Approach (option2)</p>	<p>biodiversity. It could also help to reduce car journeys and consequently reduce the use of resources. Providing a dedicated bus service that serves only the new development could have a negative impact in terms of integration between the new and existing communities.</p>
<p>Cycle and pedestrian strategy</p>	<p>a) Provide a comprehensive cycle and pedestrian strategy</p> <p>b) Do not provide a cycle and pedestrian strategy</p>	a	<p>a this would be the same for the Alternative Approach (option2)</p>	<p>Providing a cycle and pedestrian strategy could potentially reduce the number of car journeys and therefore have a positive impact on air quality and emission of greenhouse gases. It may help provide access to facilities and aid integration of new and existing communities by providing links between them.</p>
<p>Provision of local infrastructure</p>	<p>a) Provide infrastructure for the whole development prior to completion of the first unit.</p> <p>b) Provide infrastructure in a phased approach</p>	b	<p>b this would be the same for the Alternative Approach (option2)</p>	<p>Providing infrastructure in a phased approach will ensure that it will be provided as it is required, it will not therefore be left unused. It could also enable biodiversity enhancement measures to be more easily incorporated in the construction stage. A negative impact identified is the impact on the landscape which construction of infrastructure will have in the short term.</p>
<p>Provision of a new village centre for Broadbridge Heath</p>	<p>a) Do not provide a new village centre for Broadbridge Heath due to the attraction of Tesco's</p> <p>b) Provide a full Neighbourhood Centre containing a mix of retail uses</p> <p>c) Provide a centre containing flexible units for use as retail/offices</p> <p>d) Provide a centre to</p>	d	<p>d this would be the same for the Alternative Approach (option2)</p>	<p>Option d would provide the widest range of community facilities and could aid integration of new and existing communities by sharing a new village centre with a wide range of community facilities. Providing a full community centre could potentially cut down on crime and antisocial</p>

	contain community buildings such as school, parish office, health centre plus some flexible retail/offices			behaviour due to natural surveillance. It could also reduce the need for car journeys, having a positive impact on air quality. Option d would provide employment opportunities and enhance the retail vitality of Broadbridge Heath
Provision of new neighbourhood facilities for Denne	a) Provide new neighbourhood facilities for Denne only as an extension of existing facilities b) Provide new neighbourhood facilities for Denne in the new development area c) Do not provide new neighbourhood facilities for Denne	b	b this would be the same for the Alternative Approach (option2)	Options a and b will both ensure that the new and existing communities will have the facilities they require, they will also help integration of the two communities. However, option a will require land in addition to the development area.
Provision of youth and children's facilities	a) Do not provide youth and children's facilities, there are enough locally b) Have new youth and children's facilities linked with existing community facilities c) Provide stand alone facilities within each community	b	b (potentially in combination with c) this would be the same for the Alternative Approach (option2)	Option b may help to integrate the different communities, providing stand alone facilities in each community would not be likely to aid integration. Option b may mean that facilities are not as easily accessible by all. Both option b and c could potentially reduce antisocial behaviour.
Broadbridge Heath Leisure Centre	a) Expand existing Broadbridge Heath Leisure Centre b) Relocate South of Tanbridge House School c) Relocate South of the River Arun and East of A24 d) Relocate Broadbridge Heath Leisure Centre South of existing location	a	a (option d may possibly be brought forward in the future) this would be the same for the Alternative Approach (option2)	Option a will require a smaller land take and will not leave the existing leisure centre site unused therefore being a more efficient use of land, its construction is also likely to require fewer resources. The impact on the existing landscape of option a is likely to be smaller as it is an extension of the existing centre although this will depend on the detailed final design. If option d was brought forward in the future this would have negative impacts in terms of efficient land and resource

				use as well as potential impacts on the landscape and biodiversity.
Provision of allotments	a) Do not provide any allotments b) Provide allotments to meet the needs of the new development	b	b this would be the same for the Alternative Approach (option2)	Providing allotments will ensure that this facility is widely available, it will also have a positive impact on the environment in terms of biodiversity and air quality and could potentially help to reduce the impact of flooding by slowing run-off. The possibility of contaminated run-off from allotments affecting water quality was also identified.
Broadbridge Heath Football Club	a) Leave Broadbridge Heath Football Club in the existing leisure centre b) Provide formal pitches for Broadbridge Heath Football Club outside of the development area in addition to formal pitch provision for the new development c) Provide formal pitches for Broadbridge Heath Football Club inside the development area as part of the formal pitch provision	a	c this would be the same for the Alternative Approach (option2)	Option a will require no new land take whilst still providing a facility for Broadbridge Heath Football Club. Option c has been chosen, this will have a positive impact in terms of enabling the football club to have better facilities. The chosen option may have negative impacts in terms of resource use and greenhouse gas emissions during construction.
Provision of amenity/natural greenspace	a) Provide amenity/natural greenspace within the development area b) Provide amenity/natural greenspace immediately adjacent to the development area	a	a this would be the same for the Alternative Approach (option2)	Option a will provide a recreation facility and will also have a positive impact in environmental terms whilst retaining all development within the defined area, therefore using land efficiently.
Environmental Protection	a) Have a strategy that minimises the impact of the development on biodiversity and protects species/habitats of importance b) Have a strategy that minimises the impact of the development and enables enhancements of biodiversity	b	b this would be the same for the Alternative Approach (option2)	Option b seeks to enhance biodiversity in addition to protecting it. This will have positive impacts in terms of biodiversity; air and water quality; landscape; flooding and may help to minimise the emission of greenhouse gases by absorbing CO ₂

Employment	<p>a) Provide a business park/ science park in the development area</p> <p>b) Provide an industrial estate in the development area</p> <p>c) Have mixed use units pepper potted around the development site</p> <p>d) Provide an employment hub/ hive/flexible units in one or two locations</p>	c and d	d this would be the same for the Alternative Approach (option2)	Each of the options will provide local employment opportunities. Options c and d will provide a wider range of employment opportunities due to the provision of flexible and mixed use units these are more likely to meet the employment needs of the local community. They are also likely to be more integrated into the community and be more easily accessible potentially reducing car journeys.
Sustainable Development	<p>a) Ensure development is built to BREEAM /Government's Code for Sustainable Homes as a minimum</p> <p>b) Do not build to BREEAM/Government's code for sustainable homes</p>	a	a this would be the same for the Alternative Approach (option2)	Option a will have a positive impact on the environment in terms of biodiversity; air and water quality and flooding. In addition it will minimise the use of resources and emission of greenhouse gases.
Renewable energy	<p>a) Include large scale sources of renewable energy/low carbon energy within the development (e.g. wind turbine)</p> <p>b) Include small scale renewable energy/low carbon energy sources in the development (e.g. solar water heating)</p> <p>c) Have a strategy that requires renewable/low carbon energy sources to be incorporated in the development according to the building type/use and availability of the energy source.</p>	b and c	b this would be the same for the Alternative Approach (option2)	Each of the options will have a positive impact in terms of air quality; biodiversity; resources use and greenhouse gas emissions. Options b and c are likely to have a smaller impact on the landscape.

Collective impacts

Once the Preferred Approaches had been chosen the collective impacts of the Preferred Approaches were then assessed by setting out the Preferred Approaches against the sustainability objectives in a table. The impacts of the Preferred Approaches collectively on each of the sustainability objectives as well as the collective impacts of each of the Preferred Approaches were then summarised. The assessment showed that the development would cumulatively have a negative impact on landscape character and biodiversity. Construction of the development will have a large resource use which will

contribute to emissions of greenhouse gases. The development will have a positive impact in providing affordable homes; local employment opportunities; neighbourhood facilities and opportunities for sustainable transport. The collective impacts of the Alternative Approach (option 2) were also assessed.

Significant effects

The most significant impacts were then identified having assessed each of the options against the sustainability objectives and assessing the collective impacts of the preferred approaches. The most significant impacts are summarised below;

- The development will have a negative effect on the environment in terms of loss of habitat and consequently disturbance and loss of species
- The development will have a significant negative impact on the surrounding landscape
- The development will require a large amount of land and resources
- Increased rates of run-off caused by development could lead to increased instances of flash-flooding
- Greenhouse gases emitted during the construction and operational phase of the development are likely to have an effect on climate change
- A large amount of waste will be produced through the construction and operational phase of the development
- The development will provide affordable housing in the District
- Providing neighbourhood facilities and employment will benefit the existing communities of Broadbridge Heath and Denne, although caution is needed to ensure that they do not have a detrimental effect on existing facilities.
- The new junction and associated road network will ensure the development will not effect the existing road network
- The findings of the Appropriate Assessment show that additional water supply to the new development could have a negative effect the Arun Valley Special Protection Area (SPA)

Mitigation

Possible methods of mitigating these impacts were then identified. Some of the mitigation measures suggested have included;

- Further studies into the effects of the development need to be carried out as part of an Environmental Impact Assessment (EIA) to accompany a planning application. Mitigation measures will be incorporated into the development proposals as a result of the findings of the EIA.
- Building the development to BREEAM/Government Code for Sustainable homes and incorporating renewable energy/low carbon energy sources into the development has the potential to reduce the impact on climate change.

- Having a strategy that minimises the impact of the development and enhances biodiversity will help to minimise the developments impact on biodiversity.
- Building to the Government's Code for Sustainable Homes will ensure water efficiency as it sets a minimum standard for water efficiency for each level of the code.
- The Code for Sustainable Homes requires a site waste management plan to be in operation which requires monitoring of wastes on site and setting of targets to promote resource efficiency from level one of the code.
- Development should be designed to adapt to the effects of climate change.
- Incorporation of Sustainable Drainage Systems (SUDS) to reduce run-off from areas of hard standing and reduce the risk of flash flooding.
- Have high design and construction standards
- A detailed transport study will form part of the detail for the Masterplan this will consider traffic flows in and around the development and maximise the opportunity for sustainable transport

Monitoring

Once the West of Horsham Masterplan document has been adopted, it is required that the effects of document are monitored. This will be achieved by monitoring the indicators which are set out in this document. The monitoring will be undertaken on an annual basis and will be incorporated into the wider annual monitoring which is required for the Local Development Framework.

1. INTRODUCTION

Horsham District Council is working towards producing a Local Development Framework (LDF). This Framework will contain a range of documents setting out the policies for land-use planning in the District. As part of the preparation of its LDF, Horsham District Council adopted its Core Strategy Document in February 2007.

To ensure that the LDF contributes to sustainable development, it is a requirement of the Planning and Compulsory Purchase Act 2004 for a Sustainability Appraisal (SA) to be undertaken for each document produced as part of a Local Development Framework. In addition, a Strategic Environmental Assessment (SEA) is also necessary in accordance with European legislation. These two processes are very similar and they have therefore been combined. An SA/SEA was undertaken as part of the preparation of the Core Strategy document.

The adopted Core Strategy (2007) allocates land to the West of Horsham for development. The West of Horsham Masterplan Supplementary Planning Document (SPD) will provide more detail on the requirements for this development. This SA/SEA will be undertaken in conjunction with and inform the West of Horsham Masterplan SPD.

It should be noted that as the Core Strategy sets out the broad framework for development West of Horsham, some of the work carried out as part of the SA/SEA of the Core Strategy is of relevance. This document should therefore be read in conjunction with the final Sustainability Appraisal and Strategic Environmental Assessment of the Core Strategy 2007.

Table 1: REQUIREMENTS OF THE DIRECTIVE	WHERE / HOW COVERED
Preparation of an environmental report: <i>taking into account current knowledge and methods of assessment, the content and level of detail of the plan, its stage in the decision making process, and the extent to which certain matters are more appropriately assessed at different levels the information to be given in the report is:</i>	
An outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes	Chapters 1, 3 and 4
The relevant aspects of the current state of the environment and the likely evolution without implementation of the plan or programme	Chapter 5
The environmental characteristics of areas likely to be significantly affected	Chapter 5
Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directive 79/409/EEC and 92/43/EEC	Chapter 5
Any existing environmental protection objectives established at international, community or national level which are relevant to the programme and the way those objectives and any environmental considerations have been taken into account during its preparation	Chapter 4
The likely significant effects on the environment, including: short, medium and long term; permanent and temporary; positive and negative; secondary, cumulative and synergistic effects on issues such as: biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and their interrelationships between the above factors.	Chapter 7 and Appendix A
The measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse effects on the environment of implementing the plan or programme.	Chapter 7
An outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	Chapter 2, chapter 7
A description of measures envisaged concerning monitoring (in accordance with regulation 17)	Chapter 8
A non-technical summary of this information	Non technical Summary

Consultation with:	
Authorities with environmental responsibility when deciding on the scope and level of detail of the information to be included in the environment report	Consultation
Authorities with environmental responsibility and the public to be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan and accompanying environmental report before its adoption	Consultation
Other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country	Consultation
Taking the environmental report and the results of the consultations into account in decision making	
<p>Provision of information on the decision: When the plan or programme is adopted the public and any countries consulted must be informed and the following made available:</p> <ul style="list-style-type: none"> • The plan or programme as adopted • A statement summarising how environmental considerations have been integrated into the plan or programme in accordance with the requirements of the legislation • The measures decided concerning monitoring 	On adoption

2. METHODOLOGY FOR THE SUSTAINABILITY APPRAISAL

The Sustainability Appraisal was started at the same time as the preparation of the West of Horsham Masterplan SPD began. The assessment process has been led by the Environmental Officer based in the Strategic and Community Planning Department, but has drawn on technical information and expertise from all members of the Department and from other Departments of the Council. It has also drawn on advice and expertise from external organisations. The methodology for each element of the Sustainability Appraisal process is set out in more detail in the following paragraphs.

The process of Sustainability Appraisal has been iterative and continually updated. The first stage of the process was the preparation of the West of Horsham Strategic Location – Scoping Report which set out the baseline data and plans and policies affecting the West of Horsham Masterplan SPD. It also identified the sustainability issues affecting the area and suggested sustainability objectives and indicators. This was sent to the Statutory Consultees for consultation.

Plans and Programmes influencing the LDF

Plans and Programmes influencing the LDF documentation were identified as part of the Sustainability Appraisal for the Core Strategy and Site Specific Allocations of Land documentation. Key documents for the West of Horsham Masterplan were identified and summarised and following consultation with consultees other key documents were added.

Baseline Data

Baseline data for the District was collected as part of the Sustainability Appraisal for the Core Strategy and Site Specific Allocations of Land documentation. It was thought that this information was too broad and therefore more locally specific information was collected for Denne ward and Broadbridge Heath. Where it was not possible to collect information at a local level District level information was collected. This information was collected for environmental, social and economic issues through a process of literature review, collection of information on web sites and through consultation with other organisations.

Sustainability Issues and Framework

By examining the requirements of the plans and policies influencing the Local Development Framework, as well as findings of the baseline data, the different sustainability issues affecting the West of Horsham location were identified. As part of the SA/SEA of the Core Strategy and Site Specific Allocations of Land documents, a range of sustainability objectives and indicators were developed. Many of these are relevant to the West of Horsham SPD, but others are either too broad to apply to the West of Horsham location, or are not relevant. As a result of this the objectives and indicators have been reviewed for the West of Horsham.

Identification and assessment of options

There are several different ways in which the Council could meet the visions and objectives of the West of Horsham Masterplan, this lead to a range of options being developed.

Once the options had been developed they were assessed against a range of sustainability Objectives using the following assessment matrix and scoring system. The assessment was led by the Environmental Officer in the Strategic and Community Planning Department but brought in technical expertise from other officers in the Department.

Sustainability Objective	Assessment of effects	Option	
		a	b
1-15			

☺☺	Strong positive effect on the SA/SEA Objective
☺	Positive effect on the SA/SEA Objective
☹	No effect of the SA/SEA Objective
☹	Negative effect on the SA/SEA objective
☹☹	Strong negative on the SA/SEA objective
?	The effect on the SA/SEA objective is unknown/uncertain

The results of the assessment helped inform the Preferred Approaches identified in the West of Horsham Masterplan SPD. Once the preferred approaches were identified they were assessed against each other to identify any cumulative and synergistic effects. Following the assessment of the options the most significant effects were then identified, mitigation measures were then incorporated in order to ensure that the Masterplan contributes fully to sustainable development.

3. OBJECTIVES

Before undertaking an SA/SEA of the West of Horsham SPD, it is helpful to have an understanding of the context in which the SPD is being prepared, together with the main principles for the development.

Policy CP7 of the Core Strategy identifies land to the West of Horsham for the development of 2000 homes and other uses in the period to 2018, in accordance with a development Masterplan. It is considered that it is appropriate for this Masterplan to be set out in the form of a Supplementary Planning Document, and it will be accompanied by this SA/SEA.

The principles of the development on the Land to the West of Horsham are set below:

1. the development should be integrated with Horsham and Broadbridge Heath whilst taking account of their separate identities and should reflect the needs of the communities in terms of facilities and services;
2. the impact of new development on the existing transport network should be minimised - development will require a new junction south of the existing Farthings Hill junction to be provided. In order to relieve congestion, particularly at the Farthings Hill junction, local traffic will need to be separated from through traffic using the A24 by way of a new link road, from the A264 south of its junction with the A281 to the proposed new junction on the A24, which will also join the existing A264 at Broadbridge Heath close to the entrance to the Tesco superstore/Leisure Centre;
3. the current western part of the A264 Broadbridge Heath bypass will be closed or downgraded in order to help integrate the new development with the existing community;
4. development should maximise the opportunities for sustainable travel, including reducing the dependency on the car by providing suitable access to local facilities and services, providing high quality passenger transport links to the town centre and Horsham rail station from the outset, and ensuring safe, attractive and convenient pedestrian and cycle routes between the development and local facilities;
5. development should not have a negative impact on the existing local infrastructure, services and facilities - it should provide sufficient high quality community services and facilities to serve the development and should take full account of identified leisure requirements, including enhancement to the Leisure facilities and the potential for specific provision to meet the needs of both Broadbridge Heath and Horsham Football Clubs (although a Horsham facility is only a desirable objective, not related to the development);
6. the opportunities provided by the comprehensive approach to the development of this area should be maximised to enhance the environment, including the quality of open spaces and links to the countryside beyond (including to Denne Hill and the River Arun as a key part of the setting of the town), and enhancements to habitats and the local landscape generally;
7. the provision as part of a mixed-use development of appropriate employment and business uses, in order to enable the opportunity of working locally and to reflect the needs of the local economy;
8. the development should incorporate sustainable development principles and sustainable construction methods, including taking advantage of any changes in technology over the development period.
9. the provision of improved shopping facilities to meet the additional needs of the expanded communities, subject to the nature and scale of development being justified by the need and there being no materially adverse impact on existing centres; and
10. the outer boundaries to the development formed by the railway line south-west of Horsham, the River Arun and its floodplain south of Broadbridge Heath and the existing A281 and A264 roads should provide a long term, firm boundary which can be defended against further development.

Based on these principles, and issues and opportunities that were identified during community consultation a series of 'visions' for the development have been created which outline the type of place that is wanted from the development. These are outlined in more detail in the draft Masterplan but have been summarised below:

- Prepared in partnership with the local community, who's involvement will help to ensure the long term success of the development;
- An extension to the communities of Broadbridge Heath and Horsham that reflects their differing needs, retains their characteristics and gives the new communities a sense of identity;
- A development that provides for the needs of the local residents of Horsham and Broadbridge Heath through a good supply of affordable homes and a variety of other housing types, to meet local needs; alongside a range of business and employment opportunities;
- A new development in which leisure and recreation acts as a focal point for both the new and wider communities;
- A development with the minimum impact on the environment;
- A development that is exemplary in its use of sustainable construction techniques and renewable energy supply;
- A development in which good public transport, pedestrian and cycle facilities provide a realistic alternative to the car and where roads do not pose a barrier to the integration of communities and access to facilities and the wider countryside;
- A development which provides for the needs of the new communities without detriment to the existing through inclusion of facilities and services in locations that will provide lively focal points.

4. OTHER PLANS AND PROGRAMMES

The West of Horsham Masterplan SPD will be influenced by a wide range of other plans and strategies. Many of these have already been identified as part of the Sustainability Appraisal and Strategic Environmental Assessment of the Core Strategy 2007, and the full list can be viewed in Appendix 2 of that document. The documents from that appendix which are of the most relevance to the West of Horsham Masterplan are, however, summarised in the tables below, together with any additional documents that have been identified since.

Table 2: Plans and Programmes

International

Name of Policy / Programme	Broad Aims of Policy / Programme	Requirements in relation to SPD
EC Directive 2001/42/EC (SEA Directive)	Requires that environmental effects of certain plans and programmes are assessed, documented and mitigated against where necessary.	An SEA must be carried out for the West of Horsham Strategic Location SPD.

National

Name of Policy / Programme	Broad Aims of Policy / Programme	Requirements in relation to SPD
Planning and Compulsory Purchase Act 2004	Requires local authorities to prepare LDFs with a view to achieving sustainable development.	Section 39 places a duty on Local Authorities to prepare LDF documents with the objective of contributing to the achievement of sustainable development. Associated regulations require a Sustainability Appraisal of all Local Development Framework Documents.
Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents	Sets out guidance on how to undertake a SA/SEA of an LDF document incorporating the requirements of the SEA directive.	The SA must be undertaken from the start of SPD preparation and improvements made to the plan must be documented.
Planning Policy Statement (PPS) 1- Delivering Sustainable development (and draft Planning and Climate Change Supplement to PPS 1)	Sets out the Government's vision for planning and the key policies which should underpin the planning system.	The SPD should seek to reduce social inequality, ensure accessibility to homes, jobs, services and facilities, deliver safe, healthy and attractive places to live and support the promotion of health and well being. The draft supplement to PPS1 will require the SPD to contribute to reducing

		emissions and stabilise climate change and account for the consequences.
Planning Policy Statement (PPS)3 - Housing	Sets out the Government's approach relating to the provision of housing, including the location of housing development and its density.	Requires that housing development should be at a minimum of 30 dwellings per hectare, with higher densities in more urban areas and that after Brownfield sites, development should be in the form of urban extensions.
PPS 9 - Biodiversity and Geological Conservation	Sets out the Government's approach to biodiversity and geology in the planning system.	The SPD will need to consider any protected sites or species, as well as identifying areas for creation or restoration of biodiversity.
PPS 12 - Local Development Frameworks	Sets out guidance on how to prepare development plan documents.	Contains guidance and advice on preparing SPDs, undertaking consultation with stakeholders and Sustainability Appraisal.
PPG 13 - Transport	Sets out the Government's approach to the provision of transport in relation to development.	Urban growth should be managed to maximise use of public transport, and ensure facilities are accessible by walking and cycling, and reduce the reliance on the car, as well as considering disabled users.
PPG 17 -Planning for Open Space, Sport and Recreation	Sets out the need for Local Authorities to ensure that open space, sport and recreation facilities are provided.	Open space, sport and recreation facilities should be provided according to an assessment of local needs.
PPS 25 - Development and Flood Risk	Sets out the Government's approach relating to the consideration of flooding in relation to planning.	Development should not take place in areas at risk from flooding. Flood Risk assessments should also be carried out as appropriate. Development should incorporate measures to reduce the likelihood of flooding on or off site.
A Practice Guide Companion to PPS25 'Living Draft'	Provides guidance on the implementation of the policy set out in PPS25	
Planning advice for development near Hazardous installations: (PADHI) HSE's	Guidance from the HSE on planning near a range of hazardous installations.	Sets out safe distances for development close to high pressure gas mains and other hazardous installations.

Code for Sustainable Homes	Provides guidance on the design and construction of sustainable homes	The SPD will aim to deliver different types and phases of homes with a Code for Sustainable Homes standard of between 3 and 6.
Building a Greener Future: Towards Carbon Zero Development	Provides an introduction to measures aiming to provide zero carbon homes within a decade.	The SPD should follow these principles in the aim of reducing the carbon footprint of the new development.

Regional

Name of Policy / Programme	Broad Aims of Policy / Programme	Requirements in relation to SPD
"A Clear Vision for the South East" The South \East Plan Core Document, March 2006.	Document setting out the framework for development in the South East up to 2026.	Sets out potential growth areas and total housing numbers for south east, including the provision for the Gatwick sub-area in which the West of Horsham strategic location falls.

County

Name of Policy / Programme	Broad Aims of Policy / Programme	Requirements in relation to SPD
The Adopted West Sussex Structure Plan 2001-2016	Sets out the vision for West Sussex to 2016 in terms of land-use policy.	Contains a range of policies relating to land use planning, including LOC1, which identifies land to the West of Horsham as an area for development.
Sussex Biodiversity Action Plan	Identifies key habitats and species in Sussex, and sets out actions to enhance the biodiversity of these areas.	Contains actions for hedgerows, woodland, riverine and grassland habitats, which occur in the West of Horsham area
The Local Transport Plan for West Sussex 2001-2006	Has the following objectives: 1) Delivering better accessibility to services and improving public transport; 2) Achieving safer roads and 3) reducing pollution and congestion.	The Masterplan should take these issues into account.

District / Local

Name of Policy / Programme	Broad Aims of Policy / Programme	Requirements in relation to SPD
Horsham District Council Community Strategy	Sets out the shared vision for the future of the District.	Visions need to be incorporated into to SPD.
Horsham District Council Local Development Framework Core Strategy (2007)	Sets out the spatial vision for the District with particular reference to land-use planning.	CP1, 2 and 3 set out the principles for sustainable development in the District. CP7 Allocates Land West of Horsham for Development with policy CP 12 setting out the need for affordable housing provision.
SA/SEA of the Core Strategy and Site Specific Allocations of Land	An assessment of the effects of the Core Strategy and Site Specific Allocations of Land documents on Sustainability.	Assesses broad options for development around Horsham, and identifies mitigation measures to help improve the scheme's sustainability. Some need to be incorporated into the Masterplan.
Horsham District Landscape Character Assessment	Sets out the different areas of landscape character across the District, together with their condition and sensitivity.	Development areas mainly fall in K2 "Warnham and Faygate Vale" and P1 "Upper Arun Valley". Features of these areas need to be conserved and enhanced.
Horsham District Council Housing Needs Survey	Survey seeks to identify the number of people in need of an affordable home in Horsham District.	937 new affordable homes are required each year.
Horsham District Council Retail Health Check 2003 and update 2005	Study examining the viability and vitality of 7 different towns in the District, including Horsham. It looks at future retail demand, market pressures and the potential to accommodate further retail development to 2016.	Results of study need to be taken into account when considering retail provision as part of the SPD.
Crawley Horsham and Mid Sussex Employment Land Review	Examines land supply and demand for employment across the 3 Districts.	Results need to be taken into account in the Masterplan to ensure employment needs are met.
Horsham Town Neighbourhood Appraisal	Sets out a character assessment of the Wards in Horsham town.	Sets out the important character features in Denne ward which should be considered in the Masterplanning process.

Parish Plans for surrounding parishes	A range of documents setting out the requirements and needs of surrounding parishes.	Some requirements may need to be incorporated.
Horsham Town Park and Ride Study 2005	Examines the future parking needs of the town.	Some requirements will be examined through the Masterplan.
Horsham District Council Strategic Flood Risk Assessment	Identifies all potential sources of flooding within the District and defines flood risk zones.	Results of study will feed into West of Horsham Masterplan.
Developers Flood Risk Zones Map	Identifies flood risk zones on Land to the West of Horsham identified for development.	Results of study will feed into West of Horsham Options.
Appropriate Assessment of Horsham District Councils Core Strategy	Looks at the implications of land use plans for European Sites. Assesses the impacts of the plan against the conservation objectives of the European Site to determine if the plan will have an adverse affect on the site.	The results of the appropriate assessment will need to be fed into West of Horsham options.

5. BASELINE

Before any appraisal of how the West of Horsham Masterplan SPD will contribute to sustainable development, it is important to have an understanding of the current characteristics of the area allocated for development. This information or 'baseline data' helps to provide a basis for identifying the key sustainability issues for the land West of Horsham, as well as providing a measure against which the predicted effects of the SPD will be tested.

The Sustainability Appraisal and Strategic Environmental Assessment of the Core Strategy sets out baseline data at a District wide level. Whilst this data is relevant to the West of Horsham allocation in terms of setting the overall context for the area, more detailed local information is necessary to help identify the specific sustainability issues for the West of Horsham development.

A summary of the key findings of the baseline data is outlined below, with the full dataset collected to date set out in Appendix B. The information in the Appendix has been grouped under three main headings; Economic, Social and Environmental, and where appropriate these headings have been subdivided into different topics including those specifically identified in the SEA regulations. The Appendix sets out the current data that is available, and has been updated as more information has become available during the preparation of the SPD. The tables also set out trends and targets where these are known and make a note of any problems with the data, including whether it is missing or incomplete.

General Characteristics

The land proposed for the strategic development to the West of Horsham is situated within the northern half of Horsham District. The land is situated on the south-western edge of Horsham, (the largest urban area in the District), adjoining Denne administrative ward, and to the south of Broadbridge Heath.

Population

The population of Denne Ward is 4,831 (10% of the total population of Horsham town and north Horsham Parish, which is 47,804), and Broadbridge Heath has a population of 3,021. Over 60% of these populations are of working age, although it is predicted that this will decrease in the future as the population ages. (2001 Census)

Housing

Within Denne Ward there are 2,305 households, and 1,247 in Broadbridge Heath. Most of these are owner occupied; levels are 70% in Denne and 81% in Broadbridge Heath. It is however worth noting that the level of owner occupation in Denne is 9% lower than the District average of 79%. (2001 Census)

The average house price in the area has increased quite significantly over the past three years. In the Denne Neighbourhood the average house price in January-March 2004 was £212,843, the average house price for July-September 2006 was £246,663. This is an increase of £33,820 over the last three years. By comparison, the average house price in the Broadbridge Heath area in January-March 2004 was £275,627, which increased to £357,823 in July-September 2006. This is more than double the increase in Denne of £82,196 (Land Registry).

Although levels of owner occupation are high, not everyone is able to afford a home. A District wide survey undertaken in 2003 revealed that 937 new affordable homes are needed in the District each year, and recent surveys indicate that the highest level of need for social housing is in the Horsham area.

Social Inclusiveness and Deprivation

Across the District as a whole, there are very low levels of deprivation; nationwide only 12 authorities are less deprived. Despite this, pockets of deprivation do exist in the District. Although it is often

difficult to identify where these areas are, more detailed information from the Indices of Multiple Deprivation show that other parts of the District are more deprived than Denne or Broadbridge Heath.

One issue that can contribute to social exclusion and deprivation is access to local facilities. Although it is primarily rural parts of the District where access to essential services can be difficult it is still worth noting that residents of Broadbridge Heath have to travel over 3km to visit a GP practice, and residents of Denne must travel more than 1km to reach a convenience store.

Community Safety

Overall, levels of crime within Horsham District are low - between January and March 2006 there were just 13.1 recorded offences per 1000 people, this compares with 24.9 recorded offences per 1000 people at a national level (www.crimestatistics.org.uk). On a more local level however data shows that in 2005, incidences of crime were higher in Broadbridge Heath and Denne than in other parts of the District. Denne ward has a particularly high number of reported crime incidents in comparison to elsewhere in the District. The data, however, shows that most crime incidents are in the town centre rather than residential areas. It should however be noted that overall levels of crime are still lower than other parts of the county. (www.caddie.gov.uk)

Health

In general terms the health of residents in Horsham and Broadbridge Heath is good, with just 6.8% of the population in Denne and 4.7% in Broadbridge Heath recording their health as 'not good'. (2001 census). However, access to health care is more of an issue. At the current time there is no GP surgery in Broadbridge Heath, and the nearest main hospitals are at Redhill, Hayward's Heath and Worthing, all of which can be difficult to access by either public transport, or car at certain times. Surrey and Sussex Strategic Health Authority published the consultation document 'Creating an NHS Fit for the Future' in June 2007. The 'Fit for the Future' programme puts forward some ideas for discussion on future provision of health and social care services, this includes the possibility of having one major general hospital in the county at either Chichester or Worthing and downgrading hospitals at Southlands and Haywards Heath.

Education

The general level of education amongst the residents of Denne and Broadbridge Heath is good, and qualification levels are similar to that of the District average. There is however a slightly lower percentage of people with the highest level of qualifications, and slightly higher percentage of people with poor numeracy skills in both areas. (Horsham District Community Profile 2002)

Leisure and Recreation

Horsham District Council recently commissioned a study to assess the level of provision, quality and accessibility of open space, sport and recreation in the District (Horsham District Council PPG17 Open Space and Sport Assessment). Whilst access to, and the quality of, facilities is generally good, some shortcomings have been identified. In Broadbridge Heath this includes a shortfall in allotments, grass pitches and natural greenspace. Ward level information is not available, but Horsham town as a whole has been assessed as being deficient in all terrain pitches, play areas, grass pitches and natural greenspace.

The open space, sport, leisure and recreation requirements of the new West of Horsham Development have been assessed by Horsham District Council. The study has identified the facilities that will need to be provided to meet the needs of the new development. Allotments, amenity green space, equipped children's play spaces and natural green space will need to be provided to meet the very local needs of the development. Also identified is the amount of grass sports pitches, youth activity areas, community centres and other outdoor sports provision e.g. bowls greens which will be required for the new development but will also serve the wider neighbourhood.

Transport

Car ownership in the settlements of Broadbridge Heath and Horsham is high. Nearly 93% of households in Horsham and 89% of Households in Broadbridge Heath have at least 1 car. Figures for 2 car ownership for both settlements are around 40%, which is high when compared at a national level. (2001 Census)

Given the high levels of car ownership it is perhaps unsurprising that 65% of people in Denne and 73% in Broadbridge Heath travel to work by car. Walking is the next most popular mode of transport, with low percentages of the population travelling to work by train, bus or bicycle. The distance travelled to work is however shorter than the average distance travelled to work by District residents as a whole. Many of the residents of Horsham and Broadbridge Heath work in Horsham, although 21% of people living in Broadbridge Heath also work there. There are also significant levels of commuting to Crawley or London from both settlements.

Employment

As with the District as a whole, unemployment levels in Broadbridge Heath and Denne are low, although levels are slightly higher in Denne than the District average (Nomisweb). The populations of the two areas are employed in a wide range of occupations, but there are lower percentages of people employed in managerial and professional occupations than the District average, and more people employed in administration, sales and elementary occupations.

Retail

The retail sector forms an important part of the District's economy. It employs around 15% of the workforce and helps meet residents' everyday needs. Horsham town was assessed as part of the District Retail Health Check and was considered to be a vital and viable town centre with a good range and choice of facilities. There are however fewer more local stores in the Denne and Broadbridge Heath area, possibly as a result of the proximity of Horsham town centre and Tesco supermarket in Broadbridge Heath.

Cultural Heritage

Current data shows that the proposed development area to the west of Horsham is not covered by any historical designation, however there are a small number of areas within the development area that have some archaeological importance, a large number of these are related to World War II. The areas that are related to World War II are an important feature as they form part of a larger system of defensive sites known as the Arun Stop Line. This is part of a series of defensive lines designated to oppose the German armoured thrust on London.

Land to the east of the A24 has three identified areas of archaeological importance. In the centre of the development area to the north of the river there is a WWII pill box with remains of camouflage paint. North of this is an area of earthworks relating to Fulling Mill. This may represent an important part of the industrial and social history of the Horsham area. Both of these are post-medieval artefacts. Towards the southern central part of this side of the development there is evidence of the former site of Parthings Cottage.

On the Broadbridge Heath side of the development area there is possible evidence of a former deer park to the south of the site. This is however where a high pressure gas pipe exits and therefore is likely to have already impacted on any remains within this area.

Biodiversity, Flora and Fauna

Most of the land within or close to the proposed development area is currently in arable use. Areas of greater ecological importance include High Wood Hill, which is designated as ancient woodland and a Site of Nature Conservation Importance and the two hedgerows running along Mill Lane and Wickhurst Lane. The condition of the woodland and hedgerows are thought to be declining, mainly

as a result of recent land management. Other areas of ecological interest include some areas of grassland near Heath Barn Farm and Broadbridge Farm and the Arun river valley.

A Phase 1 Habitat survey has been carried out for the site. This has identified numerous hedgerows throughout the site that are identified as important under the ecological criteria of the Hedgerows Regulations 1997. The Bridleway in the site to the west of the A24 has been assessed as having District level conservation importance due to the species rich hedgerows and rough grassland and herbs that edge it. The River Arun and Boldings Brook are wildlife corridors and have the potential to support a number of protected species. Streams and rivers are Sussex Biodiversity Action Plan Species and therefore have County nature conservation importance. The survey also recorded several protected species being present on the site. Of the other records that are currently available, a "significant breeding bird" has been recorded as being present in the area.

Landscape

Situated in the Low Weald, the land to the west of Horsham falls within the Horsham District Landscape Character Area Assessment areas K1 "Warnham and Faygate Vale", and P1 "Upper Arun Valley". The Warnham and Faygate Vale is characterised by mainly arable land with some pasture and woodland. Hedgerows are an important feature of the area, but are becoming increasingly fragmented or lost. Development at Broadbridge Heath and the road network has eroded the character of this area. The condition of the landscape is declining, and it has a moderate sensitivity to change.

The Upper Arun Valley is characterised by a narrow valley with small irregularly shaped pastures and some small patches of woodland. The river is steeply banked and tightly meandering. There is some visual and noise intrusion to the character area around Horsham. Although the overall condition of this landscape area is good there is some local decline close to Horsham, and the character area has a high sensitivity to change.

Soil

The proposed development area has predominantly clay soils. Contaminated land data for the area shows that there is an area of former landfilling and possible land raising at Baystone Farm to the west of the development area. This is a distance away from the development area and is separated from the development area by the River Arun.

Water

The River Arun and its tributary, Boldings Brook, run along the eastern and southern edge of the proposed development area. There are two buildings which occur within the floodplain of these rivers, but neither are occupied for residential or business uses. It is predicted that climate change will increase the area of the floodplain, but the predicted increased extent of the floodplain does not place any additional existing buildings at risk.

PPS25 puts a responsibility on planning authorities to ensure flood risk is considered in strategic land use planning by undertaking a Strategic Flood Risk Assessment (SFRA). A Strategic Flood Risk Assessment has been carried out for Horsham District, the result of which shows the West of Horsham development area to be predominantly within Flood Zone 1 (low probability of flooding). However, some of the area has been found to be within Flood Zones 2 (medium probability of flooding), Flood Zone 3a (high probability of flooding) and Flood Zone 3b (functional floodplain).

Table 3: Area of West of Horsham Development Area in Flood Zones 2 and 3

Site	Site Area (Ha)	Flood Zone 2	Flood Zone 3 cc	Flood Zone 3a	Flood zone 3b
Land west of A24	50.580	0.548	0.070	0.025	
Land east of A24	49.030	13.930	9.829	8.762	7.421

The sequential test has been applied to the Land West of Horsham and it has been proposed to develop the land outside of Flood Zones 2 and 3 and to allocate land adjacent to the river Arun for informal open space.

The sewage treatment works to the west of the A24, has the capacity for an additional 3800 houses from the January 2005. This limit has been set as the sewage treatment works is upstream of a designated site of special scientific interest (SSSI). The treatment works may be having a detrimental impact on the quality of the river Arun. In recent years river quality levels downstream from the sewage works have been recorded as "marginal". This situation could worsen in the future if drier summers arising as a result of climate change reduce river flows, as discharges from the sewage treatment works would be less diluted. Furthermore, this stretch of the River Arun has been recorded as being at risk of not being able to meet the requirements of the EC Water Quality Framework Directive (www.environment-agency.gov.uk) this is however being monitored by the Environment Agency. In addition there is the issue of odour from the sewage treatment works, the odour arising from the works may increase with the extra waste from the new development being processed at the works. A detailed feasibility study is being undertaken to establish a set of improvements to the sewage treatment works which could resolve the odour issue.

Although data showing water consumption is not available at a local level, regional data from Southern Water shows that domestic water usage is 151 litres a day, an increase of 50% from 25 years ago. In prolonged dry periods, the demand for water can exceed the available supply, and result in restrictions on water use. This may become more common as dry summers become more frequent as a result of climate change.

Water supply in the district is abstracted from the River Rother which feeds into the River Arun and from boreholes at Hardham. The Appropriate Assessment of Horsham District Council's Core Strategy found that additional water supply for new development could affect the river levels in the River Arun and could affect groundwater levels within the Arun Valley SPA. The Environment Agency has concluded that ground water abstraction at Hardham cannot be concluded to have no adverse effect on the SPA. One method proposed to alleviate this is to demand water efficiency measures in new and existing homes or water neutrality of new developments to minimise the effect of water abstraction on the Arun Valley SPA.

Air

To date, the air quality in Horsham District has met government standards. There are however no monitoring sites close to the proposed development area, and it is not therefore possible to set out the actual air quality for the area at this stage. Similarly although the area is likely to be affected by noise from the A24 and the A264, the actual levels have not been measured. Further measurement of air quality and noise will therefore need to be carried out.

Waste

The recycling rate for household waste in Horsham District was 37.95% in 2006/07. The amount of Household waste collected per head in 2006/07 was 425.5 kilos. This is below the national level of 511 kilos (DEFRA).

There are currently two landfill sites within Horsham District; Brockhurst Wood which has a permitted capacity of 750,000 tonnes between 2007 and 2009; and Horton which has a permitted capacity of 360,000 tonnes for 2007 and 90,000 tonnes for 2008.

Climatic Factors

At the current time, there is limited information on climate change at a local level, but data available at a District and higher level shows that average temperatures in the UK are rising. It is predicted that overall, winters are likely to become warmer and wetter, and summers hotter and drier. Emissions of

gases which contribute to climate change have increased since 2002. There have been particularly high increases in emissions from transport since 1990.

Information from DEFRA shows the contribution of each Local Authority towards carbon dioxide emissions. It shows that in 2004 Horsham District contributed 2.8 tonnes per capita, this figure is relatively high as Authorities in the Country mainly contributed between 2.5 and 2.9 tonnes per capita. Within Horsham the contribution per year is 349 tonnes per year from industrial and commercial, 347 tonnes from domestic and 373 tonnes from road transport.

To help reduce reliance on fossil fuels, renewable sources of energy can be used. To date however just 0.65% of energy is produced from renewable sources in the south east, the target is 10% by 2010.

Likely evolution without implementation of the Masterplan

The baseline sets out the area characteristics at present. Due to natural increase and migration the population of the District will continue to increase. National Statistics population projections estimate that the population of Horsham District will reach 140,500 by 2010. The overall UK average increase in population is 0.42 percent per annum. This increase will put added pressure on resources and result in an increased need for infrastructure facilities and housing.

The non-provision of housing would mean that the housing and affordable housing targets would need to be met in another location, which may be less sustainable in the long term. Without the West of Horsham Masterplan access to facilities in Broadbridge Heath and Denne are unlikely to be improved.

6. SUSTAINABILITY ISSUES AND FRAMEWORK

Sustainability Issues

From the analysis of the plans and programmes and the baseline data for the West of Horsham Strategic Location, it is possible to identify a range of sustainability issues facing the area. In addition to this, further sustainability issues have been identified following stakeholders meetings with Council officers and external organisations such as Broadbridge Heath Parish Council, Denne Neighbourhood Council and the Environment Agency.

The key issues summarised in the box below are discussed in more detail in the following paragraphs. The issues have been grouped under three main headings; Social, Economic and Environmental. It should however be noted that some of the issues are cross cutting in nature and could be placed under more than one category.

KEY SUSTAINABILITY ISSUES - WEST OF HORSHAM STRATEGIC DEVELOPMENT

- The need to integrate the new development with Broadbridge Heath / Horsham;
- The need to provide a range of housing that is affordable and meets needs;
- The development will need to be designed to prevent crime / antisocial behaviour;
- New services, including health care, educational and leisure facilities need to be provided to meet the needs of the new and where appropriate existing residents;
- Any new road layout needs to be designed to limit severance between the natural and built environments, and also enable traffic to move into and out of the wider area;
- The need to provide and improve public transport and walking, cycling opportunities;
- Employment opportunities that meet the needs of the new and existing residents needs to be provided;
- Appropriate retail provision needs to be incorporated into the new development;
- Biodiversity, particularly trees, hedgerows and the river valley should be protected and enhanced;
- Landscape character, particularly High Wood Hill and the Arun river valley should be protected and enhanced;
- Development in the current and future floodplain should be avoided;
- The need to protect water resources;
- The need to maintain and improve existing water quality of the river Arun;
- Existing air quality (including consideration of odour) needs to be maintained, or where possible enhanced.
- The development needs to be designed to minimise its impact on climate change, and to be able to cope with any changes in climate that do occur.

Social

Development in the West of Horsham Strategic Location will result in an increase in the population living in the area by approximately 4,800 people. It is important that the new community is integrated with Horsham and Broadbridge Heath in order to prevent social and physical isolation that could otherwise occur. This could have a wide range of negative effects from increased need to travel by car, commuting to areas beyond Horsham for work and leisure activities to the potential for antisocial behaviour.

Any development that takes place will need to meet the needs of the new community by providing a range of housing types and sizes, as well as services and facilities such as education and greenspace provision. In addition, the development also provides an opportunity to help meet the needs of the existing residents of the District. For example, the development could help to meet some of the affordable housing requirement that was identified in the District wide housing needs survey. Also the

development could help meet the long term needs of the population by providing life time homes. The development could also help to provide a doctors surgery for Broadbridge Heath, and a new ground for Broadbridge Heath Football Club.

Although crime levels in the area are generally low, levels in Horsham and Broadbridge Heath are higher than other parts of the District. It will therefore be important to ensure that the development is designed to minimise opportunities for crime and to prevent antisocial behaviour.

Another key issue that is affecting the development is that of transport. The new development will result in changes being made to the existing road network, and it will be important to ensure that the road network is designed to minimise severance with the countryside beyond, and to link to the existing settlements in Horsham and Broadbridge Heath.

Data shows that the existing community has very high levels of car ownership and most use their cars to reach their work destination, which is often relatively local. It is essential to the success of the development that this pattern is changed to ensure that undue pressure is not placed upon the existing or new road networks that arise as part of the development. As part of this it will be important to provide good pedestrian, cycle and public transport links, within and beyond the new development areas.

Economic

Existing baseline data reveals that most residents in the Horsham and Broadbridge Heath area also work locally. This is a sustainable pattern, and it will be important to ensure that new employment facilities are provided that enable new residents to live and work locally, rather than creating a commuter settlement where people drive long distances to reach their place of employment. It will also be important to ensure that a range of employment opportunities are provided, to meet the variety of skills of those living in the area, and those who wish to do so to advance in their careers.

Retail is an important sector of the economy, but the presence of Tescos close to the area of new development could mean that the provision of a local store would not be viable, particularly at Broadbridge Heath. There may however be some opportunities to provide a new neighbourhood centre, but the role of retail will need to be considered carefully. In the Denne area of Horsham, there is more limited provision of local stores, and there may be some opportunity for retail provision in that area.

Environmental

Development of the land to the west of Horsham will inevitably result in the loss of greenfield land. It is however important to protect and enhance existing biodiversity as far as possible. Sensitive habitats that have already been identified include woodlands and hedgerows and the Arun Valley corridor. Development will also bring about a change to the landscape, and it will also be important to protect key features that exist and also design development to provide enhancements and links to the countryside.

Development will need to accommodate existing infrastructure in the area, such as the high pressure gas main. Use of resources is also a key issue, with for example to the potential for development to increase the pressure on water resources. This could be a problem given that dry weather conditions in 2005/2006 led to water restrictions amongst the existing community.

Development will also need to take into account the potential for the area to flood in both the current and any future floodplains that may arise as result of climate change. Climate change may also have other effects and it will be necessary to design developments so that the buildings are able to cope with these changes – e.g. coping with warmer conditions in the summer. It will also be important to ensure that the development incorporates measures to minimise the emission of greenhouse gases.

The development will also need to consider the impact on air quality, both from traffic and the proximity of development to the sewage works, which already generates complaints over its odour from those living further away.

Sustainability Framework

In order to assess the contribution that the West of Horsham Strategic Location Masterplan makes in achieving sustainable development, it is necessary to compare it against a range of sustainability objectives and indicators. As part of the SA/SEA of the Core Strategy a range of sustainability objectives and indicators were developed. Many of these are relevant to the West of Horsham SPD, but others are either too broad to apply to the West of Horsham location, or are not relevant. As a result of this the objectives and indicators for the West of Horsham proposal have been reviewed. Indicators have been selected so that as far as possible they are directly attributable to the development which takes place to the West of Horsham. The objectives and indicators can be seen in the table below.

Table 4: Sustainability Objectives and Indicators

Sustainability Objective	Sustainability Indicator
1. To ensure that everyone has access to a good quality affordable home that meets their needs;	<ul style="list-style-type: none"> • Number of affordable housing completions • Affordable housing as a percentage of total completions
2. To ensure that everyone has access to the health, education, leisure and recreation facilities they require;	<ul style="list-style-type: none"> • Number and type of different facilities provided as part of the development • Percentage of homes within 30 minutes public transport time of; a GP surgery; a hospital; a primary school; and a secondary school
3. To ensure that there is integration of new and existing communities;	<ul style="list-style-type: none"> • Post completion residents survey • Provision of bus, foot and cycle links between the areas and across the A24
4. To reduce actual, or fear of, crime and antisocial behaviour;	<ul style="list-style-type: none"> • Post completion residents survey • Number of crime incidents reported in the new development in comparison with other parts of Horsham
5. To integrate development within the existing landscape, conserving and enhancing its character;	<ul style="list-style-type: none"> • Condition of landscape character areas K2 and P1
6. To integrate development in a manner that conserves and enhances the biodiversity in the area;	<ul style="list-style-type: none"> • Changes in the area of key habitats • Changes in the areas designated for their intrinsic environmental value • Change in the numbers of rare and protected species
7. To maintain a high quality environment in terms of air quality;	<ul style="list-style-type: none"> • Post completion residents survey • Complaints regarding odours from sewage treatment works
8. To maintain a high quality environment in terms of water quality;	<ul style="list-style-type: none"> • Water quality in river Adur at measuring points at, and downstream from, the development site • Pollution releases from the sewage treatment works reported to the Environment Agency
9. To reduce car journeys and promote alternative methods of transport;	<ul style="list-style-type: none"> • % of population within 400m of hourly or better bus service • Provision of pedestrian and cycle routes between the new development and the town centre and stations • Post completion residents survey

<p>10. To make the most efficient use of land;</p>	<ul style="list-style-type: none"> • Percentage of dwellings completed at <ul style="list-style-type: none"> (i) less than 30 dwellings per ha; (ii) between 30 and 50 dwellings per ha; (iii) above 50 dwellings per ha. • Percentage of dwellings complying with adopted parking standards
<p>11. To minimise the use of resources, particularly water, energy and materials;</p>	<ul style="list-style-type: none"> • Number of homes built to each level of the Code for Sustainable Homes standards • Number of non-residential developments built to each level of BREEAM • Provision for recycling/composting • Number of local recycling centres incorporated within development
<p>12. To reduce the risk of flooding;</p>	<ul style="list-style-type: none"> • Number of houses / other land-uses developed in current or future floodplain • Changes in the flood risk area downstream from the development • Incorporation of sustainable urban drainage into the development • Number of properties/other uses developed against the advice of the Environment Agency
<p>13. To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy;</p>	<ul style="list-style-type: none"> • Mega Watts of electricity capacity generated by renewable sources installed by type (domestic and non-domestic) • Percentage of homes with an energy efficiency rating of greater than 10% above the minimum established in Part L of the Building Regulations.
<p>14. To provide employment opportunities which meet the needs of the new and existing community;</p>	<ul style="list-style-type: none"> • Amount of floorspace developed by type • Post completion residents survey
<p>15. To enhance the retail vitality of Broadbridge Heath and Denne wards</p>	<ul style="list-style-type: none"> • Amount and type of retail floorspace created. • Post completion residents survey

7. IDENTIFICATION AND ASSESSMENT OF PLAN OPTIONS FOR WEST OF HORSHAM

Horsham District Council's Core Strategy has now been adopted. This document allocates land to the West of Horsham for development, for this reason no other sites have been considered at this stage. Core policy 7 of the Core Strategy sets out the principles for development for the land West of Horsham and for this reason in some cases a "do nothing" option has not been considered. There are several options which could be implemented to satisfy the development principles for CP7, these options have been identified in the table below. These options have been identified using a range of factors, and are briefly outlined below.

- **Higher level plans** - The Core Strategy already allocates the land West of Horsham for development, this is set out in Core Policy 7 therefore there is not a "do nothing" option in this instance. Wider strategic options were assessed in the Core Strategy SA/SEA, for this reason alternative sites have not been assessed at this stage.
- **Consultation with Planning Policy Officers** - Officers have a good technical understanding of the different issues facing specific policy areas, as well as what is and is not likely to be achievable in planning terms.
- **Responses to Consultation with the community and stakeholders** – Consultation has taken place with the community, stakeholders and technical officers from Horsham District Council and West Sussex County Council. Responses from these consultation events have given an idea of the type of community that the community want and also outlined the constraints and opportunities to providing the community.
- **Information resulting from studies of the area** – There have been several studies carried out for the area such as a strategic flood risk assessment and transport study. These studies show which options are actually feasible and also highlight any possible problems.

Once the options had been chosen they were assessed against the sustainability objectives in a series of matrices to identify the most sustainable options and to highlight any negative impacts which may need to be mitigated. The full assessment can be found in Appendix A but the results of the assessment are summarised in the table 5 below.

Two Masterplan approaches are being consulted on in the West of Horsham Masterplan SPD; the Preferred Approach Masterplan (option 1) and the Alternative Approach (option 2). The Preferred Approach Masterplan (option 1) is to build a new grade separated junction on the A24 with linked/overlapping slip roads to farthings Hill interchange with a dual carriageway in conjunction with the closure of the Western part of the A264 Broadbridge Heath bypass. If this approach cannot be progressed then the Alternative Approach (option 2) will be pursued which includes a new grade separated compact junction with a single carriageway link in conjunction with the downgrading of the existing western part of the A264 Broadbridge Heath Bypass. For the other options assessed the Preferred Approach identified will remain the same for both the Preferred Approach Masterplan (option 1) and Alternative Approach (option 2).

Table 5: Assessment of Options

Subject	Options identified	Most sustainable option	Preferred Approach	Summary of assessment	Possible mitigation
Integration of the new development with Horsham and Broadbridge Heath	<p>a) Develop a single community</p> <p>b) Develop two communities, one on each side of the A24</p> <p>c) Develop three communities, one to the South of Broadbridge Heath, one to the South of Tanbridge School and one South of the river Arun</p>	b	b this would be the same for the Alternative Approach (option2)	It is likely to be more feasible to provide services and facilities to two communities which are linked to existing communities, this will mean the existing communities will benefit also. This option will also aid integration of the new and existing communities. This in turn is likely to reduce the need for car journeys and therefore have a positive impact on air quality.	No negative impacts were identified for the chosen option as a result of the assessment
A24 access junction	<p>Option a) Build a new grade separated junction on the A24 with linked/overlapping slip roads to Farthings Hill interchange</p> <p>Option b) Build a new grade separated compact junction</p> <p>Other options have also been considered but have not been progressed as they have either not been supported by the Highways Authority; would cause excessive delays on the A24 or would cause additional routing through the new community.</p>	b	a Option b is included in the Alternative Approach (Option 2)	Both options are likely to have large impacts on landscape and biodiversity. Whilst both options are likely to affect air quality, option b will allow a more constant flow of traffic which can reduce emissions. Option a will have a larger land take than option b. Both options will add to the emission of greenhouse gases through the use of energy and resources during construction, although option b is likely to have a smaller resource use. Option b will require lighting, between the new junction and farthings Hill Interchange, which will require energy.	Landscaping to reduce the visual impact on the landscape.
New east-west link road and existing Broadbridge Heath Southern Bypass	<p>Option a) have a single carriageway link in conjunction with the downgrading of the existing western part of the A264 Broadbridge Heath bypass</p> <p>Option b) have a dual carriageway</p>	a	b Option a is included in the Alternative Approach	Whilst both options will have an impact on landscape character and biodiversity, option b is likely to have a greater impact due to the larger land take required by a dual carriageway. A dual carriageway is also likely to create more noise. Both options are likely to have a	<p>Use of bunding to reduce impacts of noise.</p> <p>Landscaping to reduce the visual</p>

	in conjunction with the Closure of the western part of the A264 Broadbridge Heath bypass		(Option 2)	negative impact on water quality due to contaminated runoff from the roads. Option b will also be a less efficient use of land and will require more resources during construction.	impact. Use of SUDS to slow run-off and assist in reducing pollution from run-off
Provision of a bus service	<ul style="list-style-type: none"> a) Provide a comprehensive bus strategy that links to existing services b) Provide a bus service that serves only the new development c) Provide a bus service that serves the new development and nearby communities d) Do not provide a bus service 	a and c	b this would be the same for the Alternative Approach (option2)	Providing a bus service will have positive effects in terms of access to facilities, air quality and biodiversity. It could also help to reduce car journeys and consequently reduce the use of resources. Providing a dedicated bus service that serves only the new development could have a negative impact in terms of integration between the new and existing communities.	Impacts not significant enough to mitigate
Cycle and pedestrian strategy	<ul style="list-style-type: none"> a) Provide a comprehensive cycle and pedestrian strategy b) Do not provide a cycle and pedestrian strategy 	a	a this would be the same for the Alternative Approach (option2)	Providing a cycle and pedestrian strategy could potentially reduce the number of car journeys and therefore have a positive impact on air quality and emission of greenhouse gases. It may help provide access to facilities and aid integration of new and existing communities by providing links between them.	No negative impacts were identified for the chosen option as a result of the assessment
Provision of local infrastructure	<ul style="list-style-type: none"> a) Provide infrastructure for the whole development prior to completion of the first unit. b) Provide infrastructure in a phased approach 	b	b this would be the same for the Alternative Approach (option2)	Providing infrastructure in a phased approach will ensure that it will be provided as it is required, it will not therefore be left unused. It could also enable biodiversity enhancement measures to be more easily incorporated in the construction stage. A negative impact identified is the impact on the landscape which construction of infrastructure will have in the short term.	The impact of construction on the landscape will only be a short term impact. It may be possible to use screening to minimise the impact.

<p>Provision of a new village centre for Broadbridge Heath</p>	<p>a) Do not provide a new village centre for Broadbridge Heath due to the attraction of Tesco b) Provide a full Neighbourhood Centre containing a mix of retail uses c) Provide a centre containing flexible units for use as retail/offices d) Provide a centre to contain community buildings such as school, parish office, health centre plus some flexible retail/offices</p>	<p>d</p>	<p>d this would be the same for the Alternative Approach (option2)</p>	<p>Option d would provide the widest range of community facilities and could aid integration of new and existing communities by sharing a new village centre with a wide range of community facilities. Providing a full community centre could potentially cut down on crime and antisocial behaviour due to natural surveillance. It could also reduce the need for car journeys, having a positive impact on air quality. Option d would provide employment opportunities and could enhance the retail vitality of Broadbridge Heath</p>	<p>No negative impacts were identified for the chosen option as a result of the assessment</p>
<p>Provision of new neighbourhood facilities for Denne</p>	<p>a) Provide new neighbourhood facilities for Denne only as an extension of existing facilities b) Provide new neighbourhood facilities for Denne in the new development area c) Do not provide new neighbourhood facilities for Denne</p>	<p>b</p>	<p>b this would be the same for the Alternative Approach (option2)</p>	<p>Options a and b will both ensure that the new and existing communities will have the facilities they require, they will also help integration of the two communities. However, option a will require land in addition to the development area.</p>	<p>No negative impacts were identified for the chosen option as a result of the assessment</p>
<p>Provision of youth and children's facilities</p>	<p>a) Do not provide youth and children's facilities, there are enough locally b) Have new youth and children's facilities linked with existing community facilities c) Provide stand alone facilities within each community</p>	<p>b</p>	<p>b (potentially in combination with c) this would be the same for the Alternative Approach (option2)</p>	<p>Option b may help to integrate the different communities, providing stand alone facilities in each community would not be likely to aid integration. Option b may mean that facilities are not as easily accessible by all. Both option b and c could potentially reduce antisocial behaviour.</p>	<p>Impacts not significant enough to mitigate</p>

Broadbridge Heath Leisure Centre	<p>a) Expand existing Broadbridge Heath Leisure Centre</p> <p>b) Relocate South of Tanbridge House School</p> <p>c) Relocate South of the River Arun and East of A24</p> <p>d) Relocate Broadbridge Heath Leisure Centre South of existing location</p>	a	<p>a (option d) may possibly be brought forward in the future)</p> <p>this would be the same for the Alternative Approach (option2)</p>	<p>Option a will require a smaller land take and will not leave the existing leisure centre site unused therefore being a more efficient use of land, its construction is also likely to require fewer resources. The impact of option a on the existing landscape is likely to be smaller as it is an extension of the existing centre although this will depend on the detailed final design. If option d was brought forward in the future this would have negative impacts in terms of efficient land and resource use as well as potential impacts on the landscape and biodiversity.</p>	<p>No negative impacts were identified for the chosen option as a result of the assessment. However if option d was brought forward in the future the negative impacts identified would require mitigation.</p>
Provision of allotments	<p>a) Do not provide any allotments</p> <p>b) Provide allotments to meet the needs of the new development</p>	b	<p>b this would be the same for the Alternative Approach (option2)</p>	<p>Providing allotments will ensure that this facility is widely available, it will also have a positive impact on the environment in terms of biodiversity and air quality and could potentially help to reduce the impact of flooding by slowing run-off. The possibility of contaminated run-off from allotments affecting water quality was also identified.</p>	<p>The possibility of contaminated run-off from allotments effecting water quality could be mitigated by locating allotments away from water courses.</p>
Broadbridge Heath Football Club	<p>a) Leave Broadbridge Heath Football Club in the existing leisure centre</p> <p>b) Provide formal pitches for Broadbridge Heath Football Club outside of the development area in addition to formal pitch provision for the new development</p> <p>c) Provide formal pitches for Broadbridge Heath Football Club</p>	a	<p>c this would be the same for the Alternative Approach (option2)</p>	<p>Option a will require no new land take whilst still providing a facility for Broadbridge Heath Football Club. Option c has been chosen, this will have a positive impact in terms of enabling the football club to have better facilities. The chosen option may have negative impacts in terms of resources use and greenhouse gas emissions during construction.</p>	<p>The negative impacts of resource use and greenhouse gas emissions during construction could be mitigated by incorporating high design and construction standards</p>

	inside the development area as part of the formal pitch provision						
Provision of amenity/natural greenspace	a) Provide amenity/natural greenspace within the development area b) Provide amenity/natural greenspace immediately adjacent to the development area	a	a this would be the same for the Alternative Approach (option2)	Option a will provide a recreation facility and will also have a positive impact in environmental terms whilst retaining all development within the defined area, therefore using land efficiently.	No negative impacts were identified for the chosen option in the assessment which require mitigation.		
Environmental Protection	a) Have a strategy that minimises the impact of the development on biodiversity and protects species/habitats of importance b) Have a strategy that minimises the impact of the development and enables enhancements of biodiversity	b	b this would be the same for the Alternative Approach (option2)	Option b seeks to enhance biodiversity in addition to protecting it. This will have positive impacts in terms of biodiversity; air and water quality; landscape; flooding and may help to minimise the emission of greenhouse gases by absorbing CO ₂	No negative impacts were identified for the chosen option in the assessment which requires mitigation.		
Employment	a) Provide a business park/ science park in the development area b) Provide an industrial estate in the development area c) Have mixed use units pepper potted around the development site d) Provide an employment hub/ hive/ flexible units in one or two locations	c and d	d this would be the same for the Alternative Approach (option2)	Each of the options will provide local employment opportunities. Options c and d will provide a wider range of employment opportunities due to the provision of flexible and mixed use units these are more likely to meet the employment needs of the local community. They are also likely to be more integrated into the community and be more easily accessible potentially reducing car journeys.	No negative impacts were identified for the chosen option in the assessment which requires mitigation.		

Sustainable Development	<p>a) Ensure development is built to BREEAM /Government's Code for Sustainable Homes as a minimum</p> <p>b) Do not build to BREEAM/Government's code for sustainable homes</p>	a	a this would be the same for the Alternative Approach (option2)	Option a will have a positive impact on the environment in terms of biodiversity; air and water quality and flooding. In addition it will minimise the use of resources and emission of greenhouse gases.	No negative impacts were identified for the chosen option in the assessment which require mitigation
Renewable energy	<p>a) Include large scale sources of renewable energy/low carbon energy within the development (e.g. wind turbine)</p> <p>b) Include small scale renewable energy/low carbon energy sources in the development (e.g. solar water heating)</p> <p>c) Have a strategy that requires renewable/low carbon energy sources to be incorporated in the development according to the building type/use and availability of the energy source.</p>	b and c	b this would be the same for the Alternative Approach (option2)	Each of the options will have a positive impact in terms of air quality; biodiversity; resource use and greenhouse gas emissions. Options b and c are likely to have a smaller impact on the landscape.	No negative impacts were identified for the chosen option in the assessment which require mitigation

Assessment of Cumulative Impacts

Whilst many approaches may individually have a minor impact on the environment, they may collectively have a much larger effect. Additionally the environmental 'response' to the collective impacts of a number of projects may be delayed until a certain threshold is crossed, or when the impact comes to light in sudden or dramatic form such as flooding.

There are two main kinds of collective impacts that may occur as a result of the West of Horsham Masterplan. These are cumulative and synergistic effects:

Cumulative Impacts occur when for example, there are impacts from several developments in one vicinity. The combined effects of these developments can have a significant impact.

Synergistic effects are where the combined impacts from one development have a particular effect on a certain receptor.

In order to assess the cumulative and synergistic effects of the Preferred Approach (option 1), the preferred approaches against the sustainability objectives were set out in a table, this can be seen in table 6 below. This enabled an assessment of where the positive effects of several preferred approaches would work together and also where the negative effects of several preferred approaches would combine to collectively have a greater impact than one option in isolation. The results of the assessment are summarised in tables 7 and 8 below. The collective impacts of the Alternative Approach (option 2) have also been assessed so that if the case arises that the Preferred Approach (option 1) cannot be progressed and the Alternative Approach (option 2) is pursued then the collective impacts have been suitably assessed. This assessment can be seen in table 9 and is summarised in table 10 and 11 below.

Table 6: Assessment of cumulative/synergistic effects – Preferred Approach (option 1)

		Sustainability Objectives															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Preferred approach	1	☺	☺	☺	?	☹	☹	☹	☹?	☺	☺	☺	☹	☹	☺	☺	
	2	☺	☺	☺	?	☹	☹	☹	☹	☺	☹	☹	☹	☹?	☹	☺	☺
	3	☺	☺	☹	?	☹	☹	☹?	☹	☺	☹	☹	☹	☹	☹	☺	☺
	4	☺	☺?	☹	?	☺	☺?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	5	☺	☺?	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	6	☺	☺?	☺	?	☹	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	7	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺?	☺	☺
	8	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺?	☺	☺
	9	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	10	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	11	☺	☺	☺	?	☺?	☺	☺	☹?	☺	☺	☺	☺	☺	☺?	☺	☺
	12	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺?	☺	☺
	13	☺	☺	☺	?	☺	☺	☺	☹?	☺	☺	☺	☺	☺	☺	☺	☺
	14	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	15	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	16	☺	☺	☺	?	☺?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	17	☺	☺	☺	?	☺	☺?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺

Preferred Approach

- 1 Build two communities, one on either side of the A24
- 2 Build a new grade separated junction on the A24 with linked/overlapping slip roads to Farthings Hill interchange
- 3 Have a dual carriageway in conjunction with the closure of the western part of the A264 Broadbridge Heath bypass
- 4 Provide a bus service that serves only the new development
- 5 Provide a comprehensive cycle and pedestrian strategy
- 6 Provide infrastructure in a phased approach
- 7 Provide a centre for Broadbridge Heath to contain community buildings such as school, parish office, Health Centre plus some flexible retail/offices
- 8 Provide new neighbourhood facilities for Denne in the new development area
- 9 Have new youth and children’s facilities linked with existing community facilities and provide stand alone facilities within each community
- 10 Expand existing Broadbridge Heath Leisure Centre and define an area south of the existing leisure centre for possible future relocation
- 11 Provide allotments to meet the needs of the new development
- 12 Provide formal pitches for Broadbridge Heath Football Club inside the development area as part of the formal pitch provision
- 13 Provide amenity/natural greenspace within the development area
- 14 Have a strategy that minimises the impact of the development and enables enhancements of biodiversity
- 15 Provide an employment hub/ hive/ flexible units in one or two areas
- 16 Ensure development is built to BREEAM /Government’s Code for Sustainable Homes as a minimum
- 17 Include small scale renewable energy/low carbon energy sources in the development (e.g. solar water heating)

Summary of cumulative/synergistic effects

Table 7: Effects on Sustainability Objectives – Preferred Approach (option 1)	
Sustainability objective	Summary of cumulative/synergistic effects and possible mitigation
1 To ensure that everyone has access to a good quality affordable home that meets their needs	Each of the options cumulatively have a neutral or slightly positive effect on the availability of affordable homes
2 To ensure that everyone has access to the health, education, leisure and recreation facilities they require	The options cumulatively have a positive effect to ensure access to facilities
3 To ensure that there is integration of new and existing communities	The options cumulatively have a positive effect on integration of new and existing communities. Although the dual carriageway will provide a physical barrier between the new communities and existing communities to the south.
4 To reduce actual, or fear of, crime and antisocial behaviour	The effects of the options on crime are uncertain it is not therefore possible to assess the cumulative effects. Development should meet Secured by Design standards to reduce crime and antisocial behaviour.
5 To integrate development within the existing landscape, conserving and enhancing its character	The new development, junction and dual carriageway will cumulatively have a negative impact on the landscape character, however options to provide natural greenspace and to enhance biodiversity will help to minimise this impact. Landscaping should be used to try to reduce the visual impact.
6 To integrate development in a manner that conserves and enhances the biodiversity in the area	The new development, junction and dual carriageway will cumulatively have a negative impact on biodiversity, however options to provide natural greenspace and to enhance biodiversity, combined with several other options will help to minimise this impact.
7 To maintain a high quality environment in terms of air quality	Options for sustainable transport, renewable energy and sustainable construction together with options to provide natural greenspace and environmental enhancement are likely to cumulatively have a positive effect in reducing the impact the development will have on air quality
8 To maintain a high quality environment in terms of water quality	The development, junction and dual carriageway are likely to combine to have a larger negative effect on water quality. SUDS can assist in reducing pollution from surface run-off.
9 To reduce car journeys and promote alternative methods of transport	Options to provide a bus service and a cycle and pedestrian strategy in addition to providing facilities and employment opportunities locally are likely to cumulatively have a positive effect on reducing car journeys.
10 To make the most efficient use of land	Cumulatively the options have a neutral effect on efficient land use although the dual carriageway and junction are not the most efficient options in terms of land use.
11 To minimise the use of resources, particularly water, energy and materials	The development, junction and dual carriageway will cumulatively have a large resource use; however options for sustainable transport; to use renewable energy technology and to build to the Governments Code for Sustainable Homes/BREEAM will cumulatively help to reduce the use of resources.

12 To reduce the risk of flooding	The new development, junction and dual carriageway combine to increase the rate of run-off and consequently increase the risk of flash flooding. Options to provide natural greenspace, sports pitches, allotments and to enhance biodiversity are likely to cumulatively act to slow the rate of run-off and therefore help to minimise this risk of flash flooding. SUDS should also be incorporated into the development to slow run-off and reduce the risk of flash flooding.
13 To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Although the new development, junction and dual carriageway are likely to cumulatively have a negative effect in terms of greenhouse gas emissions, options to reduce car journeys by providing sustainable transport and by providing facilities and employment opportunities locally will help to reduce greenhouse gas emissions. In addition using renewable energy technology and building to the Governments Code for Sustainable Homes/BREEAM will cumulatively have a positive effect in minimising the developments greenhouse gas emissions.
14 To provide employment opportunities which meet the needs of the new and existing community	Options will cumulatively have a positive effect on the provision of employment opportunities
15 To enhance the retail vitality of Broadbridge Heath and Denne wards	Options will cumulatively have a positive effect on the retail vitality of Broadbridge Heath and Denne Wards

Table 8: Effects on Preferred Approaches – Preferred Approach (option 1)	
Preferred Approach	Summary of cumulative/synergistic effects and possible mitigation
1 Build two communities, one on either side of the A24	This option has a positive effect on affordable housing provision; access to facilities and integration of new and existing communities but negative impacts on landscape, biodiversity, air quality, water quality and flooding. Mitigation will include an Environmental Impact Assessment to be carried out. The incorporation of SUDS will help to reduce the risk of flash flooding and can assist in reducing pollution from surface run-off.
2 Build a new grade separated junction on the A24 with linked/overlapping slip roads to Farthings Hill interchange	This option is likely to have negative effects on the landscape; biodiversity and air and water quality. The larger landtake means it is not an efficient use of land. It will have a high resource use through construction which will also have a negative impact on greenhouse gas emissions. The hard standing created by the junction may increase the rate of run-off leading to an increased risk of flash flooding.
3 Have a dual carriageway in conjunction with the closure of the western part of the A264 Broadbridge Heath bypass	A dual carriageway will have negative impacts on landscape and biodiversity. Contaminated run-off from the road will have a negative impact on water quality; run-off may also increase the risk of flash flooding. The dual carriageway is a less efficient use of land and will have a high resource use during construction which will have a negative effect in terms of greenhouse gas emissions. The dual carriageway is likely to have a negative effect on integration as it will be a physical barrier between the new community and existing communities to the south.

4 Provide a bus service that serves only the new development	This option has positive effects on access to facilities and integration of new and existing communities, it is also likely to reduce car journeys and consequently have a positive effect in air quality, resource use and greenhouse gas emissions.
5 Provide a comprehensive cycle and pedestrian strategy	This option has positive effects on access to facilities and integration of new and existing communities, it is also likely to reduce car journeys and consequently have a positive effect on air quality, resource use and greenhouse gas emissions.
6 Provide infrastructure in a phased approach	This option should have a positive impact on access to facilities as long as provision is correctly phased. Phasing it will mean that construction will be over a longer period of time, if this is phased with construction of housing this will not have a much larger impact on the landscape than that of the development.
7 Provide a centre for Broadbridge Heath to contain community buildings such as school, parish office, Health Centre plus some flexible retail/offices	This option will have positive impacts on access to facilities; integration of new and existing communities; employment opportunities and retail vitality. It is also likely that providing facilities locally will reduce the need for car journeys and consequently have a positive effect on air quality and greenhouse gas emissions.
8 Provide new neighbourhood facilities for Denne in the new development area	This option will have a positive impact on access to facilities; integration of new and existing communities; employment opportunities and retail vitality. It is also likely that providing facilities locally will reduce the need for car journeys and consequently have a positive effect on air quality and greenhouse gas emissions.
9 Have new youth and children's facilities linked with existing community facilities and provide stand alone facilities within each community	This option is likely to have a positive impact in terms of ensuring everyone has access to facilities and also integration of the new and existing communities.
10 Expand existing Broadbridge Heath Leisure Centre and define an area south of the existing leisure centre for possible future relocation	Expanding the Leisure Centre will ensure everyone has appropriate access to leisure facilities. Defining an area for possible future relocation in addition to expanding the existing leisure centre is not an efficient use of land and if relocation goes ahead in the future it will have a much higher resource use. This could be mitigated by incorporating high design and construction standards.
11 Provide allotments to meet the needs of the new development	Providing allotments will have positive impacts in terms of access to facilities also, biodiversity, air quality and greenhouse gas emissions. The effect on the landscape will depend on the construction of sheds etc. Allotments could help slow run-off and reduce the risk of flash flooding, however run-off could be contaminated by the use of chemicals such as herbicides and pesticides which could have a negative impact on water quality. The effect on the water quality could be mitigated by locating allotments away from water courses. The effect on the landscape could be managed by restricting the size/number of sheds allowed on allotments.
12 Provide formal pitches for Broadbridge Heath Football Club inside the development area as part of the formal pitch provision	Providing formal pitches inside the development area will provide a leisure facility. The pitches could also potentially help to reduce the risk of flash flooding by slowing run-off.

13 Provide amenity/natural greenspace within the development area	This will have positive impacts in terms of provision of leisure facilities, biodiversity, landscape, air quality, greenhouse gas emissions and flooding.
14 Have a strategy that minimises the impact of the development and enables enhancements of biodiversity	This will have a positive impact on biodiversity it is also likely to have a positive effect on landscape, air and water quality and greenhouse gas emissions. Retaining and enhancing areas of habitat could slow run-off and reduce the risk of flash flooding.
15 Provide an employment hub/ hive/ flexible units in one or two areas	This option may help to ensure everybody has access to facilities, providing employment locally could also reduce car journeys. Providing mixed use units is also likely to have a positive impact in terms of providing employment opportunities which meet the needs of the new and existing community.
16 Ensure development is built to BREEAM /Government's Code for Sustainable Homes as a minimum	Building to both of the standards will have positive impacts on resource use; air and water quality and greenhouse gas emissions. Biodiversity considerations are part of the standards. The use of SUDS should also be considered as part of the standards, this will help to reduce the risk of flash flooding.
17 Include small scale renewable energy/low carbon energy sources in the development (e.g. solar water heating)	Incorporating renewable energy sources in the development will have a positive impact on the use of resources and also air quality and greenhouse gas emissions; this in turn is likely to have a positive effect on biodiversity.

Collective Impacts of the Alternative Approach (option 2)

The collective impacts of the Alternative Approach (option2) need to be assessed so that if the case arises that the Preferred Approach Masterplan (option 1) cannot be progressed and the Alternative Approach (option2) is pursued the collective impacts of the this approach have been suitably assessed. The results of this assessment are set out in the following tables.

Table 9: Assessment of the collective/synergistic effects - Alternative Approach (option 2)

		Sustainability Objectives														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Preferred Approach	1	☺	☺	☺	?	☹	☹	☹	☹?	☺	☺	☺	☹	☹	☺	☺
	2	☺	☺	☺	?	☹	☹	☺	☹	☺	☹	☹	☹?	☹	☺	☺
	3	☺	☺	☹	?	☹	☹	☺	☹	☺	☹	☹	☹	☹	☺	☺
	4	☺	☺?	☹	?	☺	☺?	☺	☺	☺	☺	☺	☺	☺	☺	☺
	5	☺	☺?	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	6	☺	☺?	☺	?	☹	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	7	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺?	☺
	8	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺?	☺
	9	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	10	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	11	☺	☺	☺	?	☺?	☺	☺	☹?	☺	☺	☺	☺	☺?	☺	☺
	12	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺?	☺	☺
	13	☺	☺	☺	?	☺	☺	☺	☺?	☺	☺	☺	☺	☺	☺	☺
	14	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	15	☺	☺	☺	?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	16	☺	☺	☺	?	☺?	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	17	☺	☺	☺	?	☺	☺?	☺	☺	☺	☺	☺	☺	☺	☺	☺

Preferred Approach

- 1 Build two communities, one on either side of the A24
- 2 Build a new grade separated compact junction
- 3 Have a single carriageway link in conjunction with the closure of the western part of the A264 Broadbridge Heath Bypass
- 4 Provide a bus service that serves only the new development
- 5 Provide a comprehensive cycle and pedestrian strategy
- 6 Provide infrastructure in a phased approach
- 7 Provide a centre for Broadbridge Heath to contain community buildings such as school, parish office, Health Centre plus some flexible retail/offices
- 8 Provide new neighbourhood facilities for Denne in the new development area
- 9 Have new youth and children’s facilities linked with existing community facilities and provide stand alone facilities within each community
- 10 Expand existing Broadbridge Heath Leisure Centre and define an area south of the existing leisure centre for possible future relocation
- 11 Provide allotments to meet the needs of the new development
- 12 Provide formal pitches for Broadbridge Heath Football Club inside the development area as part of the formal pitch provision
- 13 Provide amenity/natural greenspace within the development area
- 14 Have a strategy that minimises the impact of the development and enables enhancements of biodiversity
- 15 Provide an employment hub/ hive/ flexible units in one or two areas
- 16 Ensure development is built to BREEAM /Government’s Code for Sustainable Homes as a minimum
- 17 Include small scale renewable energy/low carbon energy sources in the development (e.g. solar water heating)

Table 10: Effects on Sustainability Objectives – Alternative Approach (option 2)

Sustainability objective	Summary of cumulative/synergistic effects and possible mitigation
1 To ensure that everyone has access to a good quality affordable home that meets their needs	Each of the options cumulatively have a neutral or slightly positive effect on the availability of affordable homes
2 To ensure that everyone has access to the health, education, leisure and recreation facilities they require	The options cumulatively have a positive effect to ensure access to facilities
3 To ensure that there is integration of new and existing communities	The options cumulatively have a positive effect on integration of new and existing communities. The Single carriageway and the downgraded A264 may create a barrier between communities within the development, this can be reduced with the provision of safe pedestrian crossing points.
4 To reduce actual, or fear of, crime and antisocial behaviour	The effects of the options on crime are uncertain it is not therefore possible to assess the cumulative effects. Development should meet Secured by Design standards to reduce crime and antisocial behaviour.
5 To integrate development within the existing landscape, conserving and enhancing its character	The new development, junction and single carriageway will cumulatively have a negative impact on the landscape character, however options to provide natural greenspace and to enhance biodiversity will help to minimise this impact. Landscaping should be used to try to reduce the visual impact.
6 To integrate development in a manner that conserves and enhances the biodiversity in the area	The new development, junction and single carriageway will cumulatively have a negative impact on biodiversity, however options to provide natural greenspace and to enhance biodiversity, combined with several other options will help to minimise this impact.
7 To maintain a high quality environment in terms of air quality	Options for sustainable transport, renewable energy and sustainable construction together with options to provide natural greenspace and environmental enhancement are likely to cumulatively have a positive effect in reducing the impact the development will have on air quality. The compact junction allows a constant flow of traffic reducing car emissions.
8 To maintain a high quality environment in terms of water quality	The development, junction and single carriageway are likely to combine to have a larger negative effect on water quality. SUDS can assist in reducing pollution from surface run-off.
9 To reduce car journeys and promote alternative methods of transport	Options to provide a bus service and a cycle and pedestrian strategy in addition to providing facilities and employment opportunities locally are likely to cumulatively have a positive effect on reducing car journeys.
10 To make the most efficient use of land	Cumulatively the options have a neutral effect on efficient land use. The single carriageway and compact junction are the more efficient options in terms of land use.
11 To minimise the use of resources, particularly water, energy and materials	The development, compact junction and single carriageway will cumulatively have a large resource use; however options for sustainable transport; to use renewable energy technology and to build to the Governments Code for Sustainable Homes/BREEAM will cumulatively help to reduce the use of resources.
12 To reduce the risk of flooding	The new development, junction and single carriageway combine to increase the rate of run-off and consequently increase the risk of flash flooding. Options to provide natural greenspace, sports

	pitches, allotments and to enhance biodiversity are likely to cumulatively act to slow the rate of run-off and therefore help to minimise this risk of flash flooding. SUDS should also be incorporated into the development to slow run-off and reduce the risk of flash flooding.
13 To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Although the new development, junction and single carriageway are likely to cumulatively have a negative effect in terms of greenhouse gas emissions, options to reduce car journeys by providing sustainable transport and by providing facilities and employment opportunities locally will help to reduce greenhouse gas emissions. In addition using renewable energy technology and building to the Governments Code for Sustainable Homes/BREEAM will cumulatively have a positive effect in minimising the developments greenhouse gas emissions.
14 To provide employment opportunities which meet the needs of the new and existing community	Options will cumulatively have a positive effect on the provision of employment opportunities
15 To enhance the retail vitality of Broadbridge Heath and Denne wards	Options will cumulatively have a positive effect on the retail vitality of Broadbridge Heath and Denne Wards

Table 11: Effects on Preferred Approaches – Alternative Approach (option 2)

Preferred Approach	Summary of cumulative/synergistic effects and possible mitigation
2 Build a new grade separated compact junction	This option is likely to have negative effects on the landscape; biodiversity and water quality. It will have a high resource use through construction, although smaller than that for the linked/overlapping slip road junction. Lighting on the junction will have a negative impact on greenhouse gas emissions. The hard standing created by the junction may increase the rate of run-off leading to an increased risk of flash flooding. The impact of the resource use of the lighting on the junction could be mitigated by using a renewable energy source.
3 Have a single carriageway link in conjunction with the closure of the western part of the A264 Broadbridge Heath Bypass	A single carriageway will have a smaller negative impact on landscape and biodiversity. Contaminated run-off from the road will have a negative impact on water quality; run-off may also increase the risk of flash flooding. The single carriageway is a more efficient use of land and will have a lower resource use during construction than a dual carriageway. The single carriageway may effect integration as it will be a barrier between communities within the development, this can be reduced by providing safe pedestrian crossings.

Significant Effects

A development of the size proposed for West of Horsham is likely to have fairly significant effects, both positive and negative, on the receiving environment, landscape and local community. Following the identification of the effects likely to arise from the West of Horsham Masterplan, both individually and cumulatively, the significance of the different effects has been identified using the professional judgement of those undertaking the Sustainability Appraisal work, based on the outcomes of the assessment work.

The most significant positive and negative effects of the West of Horsham Masterplan that have been identified and are set out below:

- The development West of Horsham is likely to have a negative effect on the environment in terms of possible loss of habitat and consequently disturbance and possible loss of species.
- The development is likely to have a significant negative impact on the surrounding landscape.
- The development will require a large amount of land and resources.
- Increased rates of run-off caused by development could lead to increased instances of flash-flooding
- Greenhouse gases emitted during the construction and operational phase of the development will have an effect on climate change
- Waste produced through the construction and operational phase of the development
- Providing neighbourhood facilities and employment will benefit the existing communities of Broadbridge Heath and Denne, although caution is needed to ensure that they do not have a detrimental effect on existing facilities.
- The development will provide affordable housing in the District
- The new junction and associated road network will ensure the development will not effect the existing road network
- The findings of the Appropriate Assessment show that additional water supply to the new development could have a negative effect the Arun Valley Special Protection Area (SPA)

Mitigation Measures

In order to minimise or prevent the negative impacts identified as part of the assessment of the options for the West of Horsham Masterplan document, a number of potential mitigation measures have been identified. These are outlined below:

- Further studies into the effects of the development need to be carried out as part of an Environmental Impact Assessment (EIA) to accompany a planning application. Mitigation and enhancement measures will be incorporated into the development proposals as a result of the findings of the EIA.
- Building the development to BREEAM/Government Code for Sustainable homes and incorporating renewable energy/low carbon energy sources into the development has the potential to reduce the impact on climate change.
- Having a strategy that minimises the impact of the development and enhances biodiversity will help to minimise the developments impact on biodiversity.

- Building to the Government's Code for Sustainable Homes will ensure water efficiency as it sets a minimum standard for water efficiency for each level of the code.
- The Code for Sustainable Homes requires a site waste management plan to be in operation which requires monitoring of wastes on site and setting of targets to promote resource efficiency from level one of the code.
- Development should be designed to adapt to the effects of climate change.
- Incorporation of Sustainable Drainage Systems (SUDS) to reduce run-off from areas of hard standing and reduce the risk of flash flooding. SUDS can also assist in reducing pollution from surface run-off.
- Have high design and construction standards
- A detailed transport study will form part of the detail for the Masterplan this will consider traffic flows in and around the development and maximise the opportunity for sustainable transport.

8. IMPLEMENTATION AND MONITORING

This document sets out the results of the assessment of West of Horsham Masterplan SPD options undertaken to date, and are being made available for comment.

The comments made on this document and the West of Horsham Masterplan SPD will be taken into account and where necessary further assessment of the options will be undertaken, along with any updating of the baseline data, plans and policies and so forth before preparation and adoption of the final documents.

The results of this final assessment will be set out in a final Sustainability Appraisal report, and will be adopted at the same time as the final West of Horsham Masterplan SPD.

Once the West of Horsham Masterplan document has been adopted, it is required that the effects of document are monitored. This will be achieved by monitoring the indicators which are set out in this document. The monitoring will be undertaken on an annual basis and will be incorporated into the wider annual monitoring which is required for the Local Development Framework. In accordance with the regulations regarding monitoring, the report will be prepared prior to the end of December each year. It should be noted that there may be some indicators which cannot be measured annually, depending on the type and nature of the indicator, and these will be monitored according to the timescales which are possible. The findings of these indicators will help measure how well the plan contributes to sustainable development, and inform future reviews of the plans and policies.

9. APPENDICES

APPENDIX A

KEY

☺☺	Strong positive effect on the SA/SEA Objective
☺	Positive effect on the SA/SEA Objective
☹	No effect of the SA/SEA Objective
☹	Negative effect on the SA/SEA objective
☹☹	Strong negative on the SA/SEA objective
?	The effect on the SA/SEA objective is unknown/uncertain

ASSESSMENT OF OPTIONS

Sustainability Objective number four, to reduce actual or fear of crime and antisocial behaviour, is difficult to assess as the effects of the options on this objective are uncertain. The Police will assess the effects of the Masterplan on crime separately.

Integration of the new development with Horsham and Broadbridge Heath

Option a) Develop a single community

Option b) Develop two communities, one on each side of the A24

Option c) Develop three communities, one to the South of Broadbridge Heath, one to the South of Tanbridge School and one South of the River Arun

	Assessment of Effects	Integration of new development		
		a	b	c
Sustainability Objective				
To ensure that everyone has access to a good quality affordable home that meets their needs	The number of affordable homes is unlikely to be affected by the number of communities provided	☹	☹	☹
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Each of the options would have facilities provided for each community, with option c the facilities provided for each of the communities are likely not be of such a good quality or range as they would be providing for fewer people in each community. With option a, providing facilities for a larger community could, depending on the layout, mean facilities are less easily accessible.	☺	☺☺	☺
To ensure that there is integration of new and existing communities	Developing a single community could limit integration with existing communities causing it to become isolated. Options b and c should make integration easier	☹	☺	☺
To reduce actual, or fear of, crime and antisocial behaviour	A single community with limited integration with either BBH or Horsham could increase crime e.g. through lack of access to wider services and facilities	☹	☺	☺

To integrate development within the existing landscape, conserving and enhancing its character	Each option will essentially have the same impact on the existing landscape	☹	☹	☹
To integrate development in a manner that conserves and enhances the biodiversity in the area	It is likely each option will have the same impact on biodiversity	☹	☹	☹
To maintain a high quality environment in terms of air quality	It is likely each option will have the same impact on air quality	☹	☹	☹
To maintain a high quality environment in terms of water quality	It is likely each option will have the same impact on water quality	☹	☹	☹
To reduce car journeys and promote alternative methods of transport	With options b and c existing public transport links could be extended to service these new communities therefore providing greater links to the wider area. Providing transport links to a new single community could prove more difficult and may need to be in the form of a bus strategy that serves only the new community, therefore not providing such a comprehensive service. Option a may therefore cause people to use their car as opposed to public transport	☹	☹	☹
To make the most efficient use of land	The development area has already been defined; the number of communities will not therefore be affecting the amount of land used.	☹	☹	☹
To minimise the use of resources, particularly water, energy and materials	It is likely each option will have the same impact on resource use	☹	☹	☹
To reduce the risk of flooding	The development area has already been defined, the risk of flooding is not likely to be affected by the integration between the communities, the risk of flooding is therefore likely to be the same for each option	☹	☹	☹
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and	Options b and c could help to reduce car journeys as the communities would be better integrated, this would therefore help reduce the emission of greenhouse gases	☹	☹	☹

use of renewable energy				
To provide employment opportunities which meet the needs of the new and existing community	Option a may mean existing communities will not benefit from employment opportunities created by the new development, it may also result in people travelling away from the area for work rather than taking opportunities in Horsham and Broadbridge Heath.	☹	☺	☺
To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	Option a may mean that Broadbridge Heath and Denne wards will not benefit from the retail units provided for the development	☹	☺☺	☺

Option b is the most sustainable. Option b has been chosen and is the same for both the Preferred Approach Masterplan (option1) and the Alternative Approach (option2)

A24 Access junction

Although several different options for the junction type have been considered, these have not been progressed further as they are not supported by either the Highways Authority or the community. The Highways Authority do not support an at grade junction as it is contrary to policy; the community do not support a junction that would result in the closure of the slip roads as it would result in additional traffic routing through the new community. Those options which have been considered but not progressed any further are listed below.

- New grade separated junction in conjunction with the closure of south facing slip roads at Farthing's Hill interchange (A24 at 70mph)
- New grade separated junction but without any north facing slip roads, Farthings Hill slips kept open (A24 at 70mph)
- New grade separated junction without any north facing slip roads in conjunction with the closure of south facing slip roads at Farthing's Hill interchange (A24 at 70mph)
- Conventional at-grade (i.e. it is on the same level as the A24) roundabout on the A24
- Signal controlled at-grade roundabout on the A24

The following two options are now being considered and option a is being progressed as the Preferred Approach Masterplan (option1). We are also consulting on the Alternative Approach (option2) which includes junction arrangement b. Option 2 will be pursued if the Preferred Approach cannot be delivered. The two options are assessed in the table below.

- Option a) Build a new grade separated junction on the A24 with linked/overlapping slip roads to Farthings Hill interchange
- Option b) Build a new grade separated compact junction

Sustainability Objective	Assessment of Options	Junction	
		a	b
To ensure that everyone has access to a good quality affordable home that meets their needs	The type of junction is not likely to effect access to affordable homes	☺	☹
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	The type of junction is not likely to effect access to facilities	☹	☹

To ensure that there is integration of new and existing communities	The type of junction is not likely to affect integration of communities	☹️	☹️
To reduce actual, or fear of, crime and antisocial behaviour	Effects uncertain	?	?
To integrate development within the existing landscape, conserving and enhancing its character	Both options are likely to have a significant impact on the landscape. Option b will be cut into the hill side which may act to reduce the impact; this option will however require lighting on this section the A24, between the new junction and Farthings Hill Interchange, which will have an impact on the landscape. Option a requires a larger land take than option b.	☹️☹️	☹️☹️
To integrate development in a manner that conserves and enhances the biodiversity in the area	Option a will have a larger land take than b, therefore potentially having a larger impact on biodiversity. However option b would be cut into High Wood Hill which may have an effect biodiversity.	☹️☹️	☹️
To maintain a high quality environment in terms of air quality	Option b is likely to allow a more constant flow of traffic than option a, meaning a lower level of emissions from cars.	☹️	☹️
To maintain a high quality environment in terms of water quality	Run off from roads is likely to have a detrimental effect on water quality, although it is uncertain if the type of junction will have a different effect	☹️	☹️
To reduce car journeys and promote alternative methods of transport	The road layout is unlikely to reduce car journeys	☹️	☹️
To make the most efficient use of land	Option a requires a larger land take	☹️	☹️
To minimise the use of resources, particularly water, energy and materials	Both options will require a large amount of resources during construction. Option b will require lighting which will use energy in the long term	☹️	☹️
To reduce the risk of flooding	Hard standing created by a new junction may lead to higher rates of run-off leading to an increased risk of flash flooding, this will depend on the final detailed layout and design	☹️?	☹️?

<p>To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy</p>	<p>Both options will use energy and resources during construction which will add to the emission of greenhouse gases in the short term, although option b is likely to have a smaller resource use. Option b will require lighting which may add to emissions of greenhouse gases in the long term.</p>	<p>☹</p>	<p>☹</p>
<p>To provide employment opportunities which meet the needs of the new and existing community</p>	<p>The type of junction is unlikely to have an effect on employment opportunities</p>	<p>☹</p>	<p>☹</p>
<p>To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.</p>	<p>The type of junction is not likely to effect the retail vitality of Broadbridge Heath and Denne</p>	<p>☹</p>	<p>☹</p>

Option b has been found to be the most sustainable. Option a has been chosen as the Preferred Approach, option b junction arrangement is included in the Alternative Approach (option2).

New east-west link road and existing Broadbridge Heath Southern Bypass

The following two options are being considered, option b is being progressed as the Preferred Approach Masterplan (option1). We are also consulting on Alternative Approach (option2) which includes option a. Option 2 will be pursued if the Preferred Approach cannot be delivered.

Option a) Have a single carriageway link in conjunction with the downgrading of the existing western part of the A264 Broadbridge Heath bypass

Option b) Have a dual carriageway in conjunction with the closure of the western part of the A264 Broadbridge Heath bypass

	Assessment of Options	Impact on existing road network	
		a	b
Sustainability Objective To ensure that everyone has access to a good quality affordable home that meets their needs	Each option is not likely to effect access to affordable homes	☹️	☹️
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Each option is likely to have the same effect on access to facilities	☹️	☹️
To ensure that there is integration of new and existing communities	Both options could effect integration. Option b may cause the new community to be cut off from communities to the south although closure of the western part of the A264 would enable easier integration with other communities. Option a may cause less of a physical barrier between new and existing communities.	☹️	☹️☹️
To reduce actual, or fear of, crime and antisocial behaviour	Effects uncertain	?	?
To integrate development within the existing landscape, conserving and enhancing its character	The dual carriageway will have a large impact on the landscape as it will have a larger land take and will also have impacts in terms of noise.	☹️	☹️☹️

To integrate development in a manner that conserves and enhances the biodiversity in the area	Option b will have a larger land take and is likely therefore to have a larger impact on biodiversity.	☹	☹☹
To maintain a high quality environment in terms of air quality	Each option is likely to have the same impact on air quality	☹	☹
To maintain a high quality environment in terms of water quality	Runoff from roads is likely to have a detrimental effect on water quality it is uncertain if the type of road network will have a different effect	☹	☹
To reduce car journeys and promote alternative methods of transport	The type of road network is unlikely to reduce car journeys	☹	☹
To make the most efficient use of land	Option b will require more land take for the dual carriageway, in addition a buffer zone will be required between the road and residential development	☹	☹☹
To minimise the use of resources, particularly water, energy and materials	Option b will require more resources during the construction phase.	☹	☹☹
To reduce the risk of flooding	The hand standing created by a road may lead to a higher rate of run-off leading to an increased risk of flash flooding, this will depend of the final detailed road layout and design	☹?	☹?
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	The dual carriageway would require more energy and resources during construction, therefore in the short term adding to the emission of greenhouse gases.	☹	☹☹
To provide employment opportunities which meet the needs of the new and existing community	The road network is not likely to effect employment opportunities	☹	☹
To enhance the retail vitality of Broadbridge Heath and	The road network is not likely to effect the retail vitality of Broadbridge Heath and Denne wards	☹	☹

Denne wards and Horsham town centre.			
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Option a has been found to be the most sustainable. Option b has been chosen as the Preferred Approach, option a is included in the Alternative Approach (option 2)

Provision of a bus service

- Option a) Provide a comprehensive bus strategy that links to existing services
- Option b) Provide a bus service that serves only the new development
- Option c) Provide a bus service that serves the new development and nearby communities
- Option d) Do not provide a bus service

	Assessment of Effects	Bus service			
		a	b	c	d
Sustainability Objective					
To ensure that everyone has access to a good quality affordable home that meets their needs	It is likely each option will not have an effect on affordable housing provision	😊	😊	😊	😊
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	A bus service would allow easier access to facilities, reducing the need for car journeys. Options a and c would be more beneficial than option b as it would integrate the new and existing communities.	😊😊	😊	😊😊	😊
To ensure that there is integration of new and existing communities	Options a and c will enable people to move easily between existing communities and the new development. Option b may make the new development isolated from surrounding communities. Option d will cause Horsham centre and BBH to be less easily accessible and possibly increase car journeys.	😊	😊	😊	😊
To reduce actual, or fear of, crime and antisocial behaviour	A bus service that provides access to facilities could potentially reduce antisocial behaviour	😊	😊	😊	😊
To integrate development within the existing landscape, conserving and enhancing its character	It is likely each option will not have an impact on the landscape character	😊	😊	😊	😊
To integrate development in a	Options a b and c could have a positive effect on biodiversity; a bus service could	😊	😊	😊	😊

<p>manner that conserves and enhances the biodiversity in the area</p>	<p>potentially mean fewer cars on the roads which would reduce pollution.</p>				
<p>To maintain a high quality environment in terms of air quality</p>	<p>Providing a bus service would potentially reduce the number of car journeys therefore minimising the impact of emissions on air quality. Options a and c would provide greater links to the local community therefore potentially having a greater effect on reducing car journeys.</p>	😊	😊	😊😊	😊
<p>To maintain a high quality environment in terms of water quality</p>	<p>Each option is likely to have the same effect on water quality</p>	😊	😊	😊	😊
<p>To reduce car journeys and promote alternative methods of transport</p>	<p>Options a and c will link more services making them more easily accessible by public transport. Option b would link fewer services but may have a shorter journey time. Option d could mean an increase in car journeys</p>	😊😊	😊	😊😊	😊
<p>To make the most efficient use of land</p>	<p>Each option is not likely to have an effect on efficient land use</p>	😊	😊	😊	😊
<p>To minimise the use of resources, particularly water, energy and materials</p>	<p>Providing a bus service would potentially reduce the number of car journeys therefore reducing the use of resources</p>	😊	😊	😊	😊
<p>To reduce the risk of flooding</p>	<p>Each option is not likely to have an effect on flooding</p>	😊	😊	😊	😊
<p>To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy</p>	<p>Options a, b and c would potentially reduce the number of car journeys, therefore reducing emissions of greenhouse gases</p>	😊	😊	😊	😊
<p>To provide employment opportunities which meet the needs of the new and existing community</p>	<p>A bus service to BBH and Horsham could encourage people from the new community seeking employment there.</p>	😊	😊	😊	😊
<p>To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.</p>	<p>Each option is not likely to effect the retail vitality of Broadbridge Heath and Denne Wards</p>	😊	😊	😊	😊

Options a and c are the most sustainable. Option b has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option1) and Alternative Approach (option2).

Cycle and pedestrian strategy

- Option a) Provide a comprehensive cycle and pedestrian strategy
- Option b) Do not provide a cycle and pedestrian strategy

	Assessment of Options	Cycle and pedestrian strategy	
		a	b
Sustainability Objective			
To ensure that everyone has access to a good quality affordable home that meets their needs	Each option is not likely to have an impact on affordable housing provision	☺	☹
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Option a will make facilities more easily accessible and may reduce the number of car journeys	☺	☹
To ensure that there is integration of new and existing communities	Option a will make travel between new and existing communities easier, therefore making integration easier. Option b could cause the new community to become isolated from surrounding communities	☺	☹
To reduce actual, or fear of, crime and antisocial behaviour	Effects uncertain	?	?
To integrate development within the existing landscape, conserving and enhancing its character	Each option is likely to have the same effect on the landscape character	☺	☹
To integrate development in a manner that conserves and enhances the biodiversity in	Providing a cycle and pedestrian strategy could potentially reduce the number of cars on the road therefore reducing pollution.	☺	☹

the area			
To maintain a high quality environment in terms of air quality	Encouraging and providing for cyclists and pedestrians could reduce the number of car journeys therefore minimising the impact of emissions on air quality	😊	😞
To maintain a high quality environment in terms of water quality	Each option is likely to have the same effect on water quality	😊	😊
To reduce car journeys and promote alternative methods of transport	Option a would help to promote and encourage the use of alternative methods of transport, consequently reducing car journeys	😊😊	😞😞
To make the most efficient use of land	Each option is likely to have the same effect in terms of efficient land use	😊	😊
To minimise the use of resources, particularly water, energy and materials	Option a would potentially reduce the number of car journeys therefore reducing the use of resources	😊	😞
To reduce the risk of flooding	Each option is likely to have the same effect on flooding	😊	😊
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Option a could potentially reduce the number of car journeys, this would help to minimise the emission of greenhouse gases	😊	😊
To provide employment opportunities which meet the needs of the new and existing community	Each option is not likely to have an effect on employment opportunities	😊	😊
To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	Each option is not likely to have an effect on the retail vitality of Broadbridge Heath and Denne	😊	😊

Option a is the most sustainable. Option a has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option1) and Alternative Approach (option2).

Provision of infrastructure

- a) Provide infrastructure for the whole development prior to completion of the first unit.
 b) Provide infrastructure in a phased approach

Sustainability Objective	Assessment of Effects	Provision of infrastructure	
		a	b
To ensure that everyone has access to a good quality affordable home that meets their needs	Each option is not likely to have an effect on the provision of affordable housing	☺	☺
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	If all infrastructure is provided from the start then much of it will not be used as there will not be the demand for it, it is therefore likely that it will deteriorate. Providing infrastructure in a phased approach will need to be correctly timed so that those moving in are provided for and do not need to travel elsewhere.	☹	☺?
To ensure that there is integration of new and existing communities	Having facilities in place for when people move into the development may help integration as people will be more likely to use the local facilities provided, this will be the case for both options as long as phasing is done correctly to meet the needs of each phase of the development.	☺	☺?
To reduce actual, or fear of, crime and antisocial behaviour	Providing infrastructure prior to completion would mean that it would be left unused/unattended which could lead to it being vandalised in the short term until all construction was complete	☹	☺
To integrate development within the existing landscape, conserving and enhancing its character	Each method of providing infrastructure is likely to have a similar impact on the landscape. Providing all infrastructure prior to completion would mean lots of development where nothing had been built around it. Phasing it with housing development will mean that it will not have that much of a larger impact than the construction of the housing development.	☹☹	☹
To integrate development in a manner that conserves and enhances the biodiversity in the area	Phasing the provision of infrastructure could mean that enhancements to biodiversity could be incorporated more easily throughout the construction stages	☹	☺

To maintain a high quality environment in terms of air quality	Each option is likely to have the same effect on air quality	☹️	☹️
To maintain a high quality environment in terms of water quality	Each option is likely to have the same effect on water quality	☹️	☹️
To reduce car journeys and promote alternative methods of transport	Installing infrastructure prior to completion could mean that initially people would have to travel a long way to get to somewhere where nothing else has been built around it, potentially increasing car journeys in the short term.	☹️	☺️
To make the most efficient use of land	Each option is likely to have the same effect on land use	☹️	☹️
To minimise the use of resources, particularly water, energy and materials	Option b will mean that resources are used in a phased approach therefore fewer resources will be used in the short term although in the long term the overall resource use will be the same.	☹️	☺️
To reduce the risk of flooding	Each option is likely to have the same effect on flooding	☹️	☹️
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Each option is likely to have the same effect on emission of greenhouse gases	☹️	☹️
To provide employment opportunities which meet the needs of the new and existing community	Each option is likely to have the same effect on provision of employment opportunities	☹️	☹️
To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	Each option is likely to have the same effect on the retail vitality of Broadbridge Heath and Denne Wards	☹️	☹️

Option b is the most sustainable. Option b has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option 1) and Alternative Approach (option 2).

Provision of a new village centre for Broadbridge Heath

- a) Do not provide a new village centre for Broadbridge Heath due to the attraction of Tesco's
- b) Provide a full Neighbourhood Centre containing a mix of retail uses
- c) Provide a centre containing flexible units for use as retail/offices
- d) Provide a centre to contain community buildings such as school, parish office, Health Centre plus some flexible retail/offices

	Assessment of Effects	Provision of a new village Centre for BBH			
		a	b	c	d
Sustainability Objective To ensure that everyone has access to a good quality affordable home that meets their needs	Each option is not likely to have an effect on the provision of affordable homes	☹️	☹️	☹️	☹️
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Tesco's is not likely to be able to provide all of the facilities that a new village centre would provide. Options b-c may provide a greater range of facilities catering more to the communities needs, with option d providing the greatest range of facilities.	☹️	☹️	☹️	☹️☹️
To ensure that there is integration of new and existing communities	A new village centre could help to integrate the new and existing communities and provide a sense of community. Options b-d could help to achieve this, option d is likely to provide the greatest range of facilities and therefore be most beneficial to new and existing communities.	☹️	☹️	☹️	☹️☹️
To reduce actual, or fear of, crime and antisocial behaviour	Effects uncertain although d could possibly have a positive effect on crime or the fear of crime due to natural surveillance, having a community centre will mean that for the majority of the time there will be people around.	?	?	?	☹️
To integrate development within the existing landscape, conserving and enhancing its character	Providing a new village centre is likely to change the character of Broadbridge Heath, although this is likely to be small in comparison to the impact of the new development.	☹️	☹️	☹️	☹️
To integrate development in	Each option is likely to have the same effect on biodiversity this will however be	☹️	☹️	☹️	☹️

a manner that conserves and enhances the biodiversity in the area	subject to detailed design.					
To maintain a high quality environment in terms of air quality	Options b-d will provide local facilities which will be easily accessible therefore reducing the need to make car journeys. Option d is likely to provide more facilities therefore having the greatest effect. A reduction in car journeys is likely to minimise the impact on air quality.	☹️	😊	😊	😊	😊😊
To maintain a high quality environment in terms of water quality	Each option is likely to have the same effect on water quality	😊	😊	😊	😊	😊
To reduce car journeys and promote alternative methods of transport	Options b-d could help to reduce car journeys by providing facilities locally, option a is likely not to be as easily accessible or provide a wide range of facilities and therefore not help to reduce car journeys	☹️?	😊	😊	😊	😊
To make the most efficient use of land	Options c and d will both provide flexible units these could help to make efficient use of land as they can change between uses as they are required.	😊	😊	😊	😊	😊
To minimise the use of resources, particularly water, energy and materials	Each option is likely to use the same amount of resources this will however be subject to detailed design.	😊	😊	😊	😊	😊
To reduce the risk of flooding	Each option is likely to have the same effect on flooding	😊	😊	😊	😊	😊
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Options b-d could potentially reduce car journeys, this could help to reduce the emission of greenhouse gases	😊	😊	😊	😊	😊
To provide employment opportunities which meet the needs of the new and existing community	A new village centre could provide some new employment opportunities	😊	😊	😊	😊	😊😊
To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	Options b-d could enhance the retail vitality of Broadbridge Heath	☹️	😊	😊	😊	😊😊

Option d is the most sustainable. Option d has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option1) and Alternative Approach (option2).

Provision of new neighbourhood facilities for Denne

- Option a) Provide new neighbourhood facilities for Denne only as an extension of existing facilities
 Option b) Provide new neighbourhood facilities for Denne in the new development area
 Option c) Do not provide new neighbourhood facilities for Denne

	Assessment of Effects	Provision of neighbourhood facilities for Denne		
		a	b	c
Sustainability Objective				
To ensure that everyone has access to a good quality affordable home that meets their needs	Each option is likely not to have an effect on the provision of affordable housing	☺	☺	☺
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Options a and b would ensure that everybody has access to the facilities they require. Option b could enable facilities to be located in a suitable location so that residents of the new and existing community can easily access facilities.	☺	☺	☹
To ensure that there is integration of new and existing communities	Providing neighbourhood facilities for Denne either as an extension of the existing facilities or in the new development area could help to integrate the new and existing communities as both would be able to use and benefit from the facilities provided	☺	☺	☺
To reduce actual, or fear of, crime and antisocial behaviour	Effects uncertain	?	?	?
To integrate development within the existing landscape, conserving and enhancing its character	Option a, extending the provision of neighbourhood facilities for Denne is likely to change its character, although this is likely to be small in comparison to the impact of the new development. Option b, providing facilities in the new development area would mean that the impact on the landscape character will be no greater than the impact of the new development.	☺	☺	☺

To integrate development in a manner that conserves and enhances the biodiversity in the area	It is likely that each option will have the same impact on biodiversity this will however be subject to detailed design	😊	😊	😊
To maintain a high quality environment in terms of air quality	Providing more neighbourhood facilities could cause people to make fewer car journeys, therefore minimising the impact on air quality.	😊	😊	😊
To maintain a high quality environment in terms of water quality	It is likely that each option will have the same effect on water quality	😊	😊	😊
To reduce car journeys and promote alternative methods of transport	Providing facilities locally, could potentially reduce the need for people to make car journeys	😊	😊	😊
To make the most efficient use of land	Providing neighbourhood facilities for Denne as an extension to the existing facilities will use more land overall as it will be in addition to the designated development area.	😊	😊	😊
To minimise the use of resources, particularly water, energy and materials	The amount of resources used will be subject to the detailed design	😊	😊	😊
To reduce the risk of flooding	It is likely each option will have the same effect on flooding this will however be subject to detailed design	😊	😊	😊
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Options a and b could potentially reduce car journeys, this would help to minimise the emission of greenhouse gases	😊	😊	😊
To provide employment opportunities which meet the needs of the new and existing community	New facilities would provide some local employment provision	😊	😊	😊
To enhance the retail vitality of Broadbridge Heath and	Options a and b are likely to have a positive impact on the retail vitality of Denne	😊	😊	😊

Denne wards and Horsham town centre.				
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Option b is the most sustainable. Options b has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option 1) and Alternative Approach (option2).

Provision of youth and children's facilities

- Option a) Do not provide youth and children's facilities, there are enough locally
- Option b) Have new youth and children's facilities linked with existing community facilities
- Option c) Provide stand alone facilities within each community

	Assessment of Effects	Provision of youth and children's facilities		
		a	b	c
Sustainability Objective				
To ensure that everyone has access to a good quality affordable home that meets their needs	Each option is not likely to effect the provision of affordable housing	☹️	☺️	☺️
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Options b to c would ensure that people would have access to an important facility, by providing stand alone facilities within each community this would ensure that they are easily accessible	☹️	☺️	☺️☺️?
To ensure that there is integration of new and existing communities	Providing stand alone facilities within each community may have a negative effect on the integration of the communities	☹️	☺️	☹️
To reduce actual, or fear of, crime and antisocial behaviour	Crime and antisocial behaviour could potentially be minimised by providing youth facilities	☹️	☺️	☺️
To integrate development within the existing landscape, conserving and enhancing its character	It is likely each option will have the same impact on landscape character	☹️	☹️	☹️
To integrate development in a manner that conserves and enhances the biodiversity in the area	It is likely each option will have the same impact on biodiversity	☹️	☹️	☹️

To maintain a high quality environment in terms of air quality	Each option is likely to have the same effect on air quality	☺	☺	☺	☺
To maintain a high quality environment in terms of water quality	Each option is likely to have the same effect on water quality	☺	☺	☺	☺
To reduce car journeys and promote alternative methods of transport	Each option is likely to have the same effect on the number of car journeys	☺	☺	☺	☺
To make the most efficient use of land	The development area has already been defined, the options for the provision of youth facilities will not therefore effect the amount of land used	☺	☺	☺	☺
To minimise the use of resources, particularly water, energy and materials	Each option is likely to use the same amount of resources	☺	☺	☺	☺
To reduce the risk of flooding	Each option is likely to have the same effect on flooding	☺	☺	☺	☺
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Each option is likely to have the same effect on the emission of greenhouse gases	☺	☺	☺	☺
To provide employment opportunities which meet the needs of the new and existing community	Each option is likely to have the same effect on employment opportunities	☺	☺	☺	☺
To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	Each option is likely to have the same effect on the retail vitality of Broadbridge Heath and Denne	☺	☺	☺	☺

Option b is the most sustainable option. Option b possibly with in combination with option c has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option1) and Alternative Approach (option2).

Broadbridge Heath Leisure Centre

- Option a) Expand existing Broadbridge Heath Leisure Centre
- Option b) Relocate South of Tanbridge House School
- Option c) Relocate South of the River Arun and East of A24
- Option d) Relocate Broadbridge Heath Leisure Centre South of existing location

Sustainability Objective	Assessment of Effects	Leisure facilities			
		a	b	c	d
To ensure that everyone has access to a good quality affordable home that meets their needs	Each option is not likely to effect the provision of affordable housing	☺	☺	☺	☺
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	It is likely that option c may be less easily accessible to more people, possibly causing more people to use their car. Option b, being linked with the school may mean that the school will be able to use the leisure centre facilities.	☺	☺	☹	☺
To ensure that there is integration of new and existing communities	Each option is likely to have the same effect on integration of the new and existing communities	☺	☺	☺	☺
To reduce actual, or fear of, crime and antisocial behaviour	Effects uncertain	?	?	?	?
To integrate development within the existing landscape, conserving and enhancing its character	It is likely that option a will have only a small impact on the existing landscape character as it is an extension to the existing centre, as may option d due its proximity to the existing leisure centre. Option b, due to the fact that it will be within the vicinity of the school is likely to merge in with the existing landscape character. Option c is likely to have the greatest impact due to its location near the river the impact will depend largely on the design and layout.	☺	☺	☹	☺
To integrate development in a manner that conserves and	The development area is already defined, therefore each option is likely to have the same impact on biodiversity	☺	☺	☺	☺

enhances the biodiversity in the area							
To maintain a high quality environment in terms of air quality	😊	😊	😊	😊	😊	😊	😊
To maintain a high quality environment in terms of water quality	?	?	😊?	?	😊?	?	?
To reduce car journeys and promote alternative methods of transport	😊	😊	😊	😊	😊	😊	😊
To make the most efficient use of land	😊	😊	😊	😊	😊	😊	😊
To minimise the use of resources, particularly water, energy and materials	😊	😊	😊	😊	😊	😊	😊
To reduce the risk of flooding	😊	😊	😊	😊	😊	😊	😊
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	😊	😊	😊	😊	😊	😊	😊
To provide employment opportunities which meet the needs of the new and existing community	😊	😊	😊	😊	😊	😊	😊
To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	😊	😊	😊	😊	😊	😊	😊

Option a is the most sustainable. Option a has been chosen as the preferred approach although land has been defined for possible future relocation (Option d). This is the same for both the Preferred Approach Masterplan (option1) and Alternative Approach (option2).

Provision of allotments

Option a) Do not provide any allotments

Option b) Provide allotments to meet the needs of the new development

	Assessment of Effects	Provision of allotments	
		a	b
Sustainability Objective			
To ensure that everyone has access to a good quality affordable home that meets their needs	It is likely the provision of allotments will have no effect on the provision of affordable housing	☹️	☺️
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Allotments are an important facility, it will be necessary to provide enough to meet the needs of the new development to	☹️	☺️
To ensure that there is integration of new and existing communities	The provision of allotments is not likely to effect the integration of the new and existing communities	☹️	☹️
To reduce actual, or fear of, crime and antisocial behaviour	Effects uncertain	?	?
To integrate development within the existing landscape, conserving and enhancing its character	Allotments could help to provide green open space within the development but this will depend on the amounts of sheds etc allowed to be built on them	☹️	☺️?
To integrate development in a manner that conserves and enhances the biodiversity in the area	Allotments could provide a haven for wildlife by maintaining some greenery and open space	☹️	☺️

To maintain a high quality environment in terms of air quality	Allotments could have a beneficial effect on air quality by maintaining green spaces, in addition people producing food locally reduces food miles which could help towards improving air quality	☹️	☺️
To maintain a high quality environment in terms of water quality	If allotments were positioned near a river they could potentially have a detrimental effect on water quality through run-off of pesticides etc, this would be dependent on their location	☹️	☹️?
To reduce car journeys and promote alternative methods of transport	Allotments could potentially help to reduce car journeys by reducing the need to go the shops, this will however depend on the location of the allotments, they would need to be located so they could be accessed by means of sustainable transport	☹️	☹️
To make the most efficient use of land	The development area has already been defined, the provision of allotments is not therefore likely to effect the amount of land used	☹️	☹️
To minimise the use of resources, particularly water, energy and materials	It is likely that each option will have the same effect on resource use	☹️	☹️
To reduce the risk of flooding	Retaining open areas could help slow run-off and reduce the risk of flash flooding	☹️	☹️
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Retaining areas of greenery and planting crops on the land could help to absorb CO ₂	☹️	☹️
To provide employment opportunities which meet the needs of the new and existing community	The provision of allotments is unlikely to effect employment provision	☹️	☹️
To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	The provision of allotments is unlikely to effect the retail vitality of Broadbridge Heath and Denne	☹️	☹️

Option b is the most sustainable. Option b has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option 1) and Alternative Approach (option 2).

Broadbridge Heath Football Club

- Option a) Leave Broadbridge Heath Football Club in the existing leisure centre
 Option b) Provide formal pitches for Broadbridge Heath Football Club outside of the development area in addition to formal pitch provision for the new development
 Option c) Provide formal pitches for Broadbridge Heath Football Club inside the development area as part of the formal pitch provision

		Broadbridge Heath Football Club		
		a	b	c
Sustainability Objective	Assessment of Effects			
To ensure that everyone has access to a good quality affordable home that meets their needs	It is likely that the options for Broadbridge Heath Football Club will have no impact on the provision of affordable houses.	😊	😊	😊
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Each of the options are likely to help towards the provision of recreation facilities, options b and c will allow BBH football club to expand to have better facilities then at their existing location	😊	😊	😊
To ensure that there is integration of new and existing communities	Each of the options are likely to have the same impact on integration of new and existing communities	😊	😊	😊
To reduce actual, or fear of, crime and antisocial behaviour	Effects uncertain	?	?	?
To integrate development within the existing landscape, conserving and enhancing its character	Option a is likely to have no impact on the existing landscape as it will involve no change. Providing formal pitches outside of the new development area may have a greater impact as it will be in addition to the new development area. Option c is likely to have no greater impact than the new development as it is within the defined development boundary	😊	😊	😊
To integrate development in a manner that conserves and	Option a is not likely to have an impact on biodiversity as it requires no additional land take. Option c will be within the already defined development area so will	😊	😞	😊

enhances the biodiversity in the area	have no additional impact on biodiversity. Option b could have an impact on biodiversity as it will require a greater land take in addition to the new development area.			
To maintain a high quality environment in terms of air quality	It is likely each option will have the same effect on air quality	😊	😊	😊
To maintain a high quality environment in terms of water quality	It is likely each option will have the same effect on water quality	😊	😊	😊
To reduce car journeys and promote alternative methods of transport	It is likely each option will have the same effect on reducing car journeys	😊	😊	😊
To make the most efficient use of land	Option a is likely to make the most efficient use of land as it will not require any new land take. Option b will require land in addition to that of the new development site. The development area has already been defined, providing formal pitches for BBH Football club within it will not effect the amount of land used	😊	😊	😊
To minimise the use of resources, particularly water, energy and materials	Formal football pitches are not likely to use a large amount of resources to construct	😊	😊	😊
To reduce the risk of flooding	It is likely each option will have the same effect on flooding	😊	😊	😊
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Options b and c may produce some emission during construction, option a will require no new construction	😊	😊	😊
To provide employment opportunities which meet the needs of the new and existing community	It is likely each of the options will have the same effect on employment provision	😊	😊	😊
To enhance the retail vitality of Broadbridge Heath and	It is likely each of the options will have the same effect on retail vitality	😊	😊	😊

Denne wards and Horsham town centre.				
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Option a is the most sustainable. Option c has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option 1) and Alternative Approach (option2).

Amenity/natural greenspace

- Option a) Provide amenity/natural greenspace within the development area
 Option b) Provide amenity/natural greenspace immediately adjacent to the development area

	Assessment of Effects	Amenity/natural greenspace	
		a	b
Sustainability Objective			
To ensure that everyone has access to a good quality affordable home that meets their needs	It is likely each option will have no impact on affordable housing	☺	☺
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Each of the options will provide leisure and recreation facilities	☺	☺
To ensure that there is integration of new and existing communities	Each of the options is likely to have the same impact on integration of the new and existing communities.	☺	☺
To reduce actual, or fear of, crime and antisocial behaviour	Effects uncertain	?	?
To integrate development within the existing landscape, conserving and enhancing its character	Both options could have a positive effect by reducing the impact of the development on the existing landscape by maintaining areas of greenery and links to the countryside.	☺	☺
To integrate development in a manner that conserves and enhances the biodiversity in the area	Both options could have a positive effect on conserving biodiversity by maintaining areas of green space	☺	☺

To maintain a high quality environment in terms of air quality	Providing amenity/natural greenspace should in turn have a beneficial effect on air quality as more trees and parks etc would have a positive impact on air quality	☺	☺
To maintain a high quality environment in terms of water quality	It is likely each of the options will have the same effect on water quality	☺	☺
To reduce car journeys and promote alternative methods of transport	It is likely each of the options will have no impact on the number of car journeys	☺	☺
To make the most efficient use of land	Option a is possibly a more efficient use of land as it is within the already defined development area, option b would use land in addition to this defined area	☺	☺
To minimise the use of resources, particularly water, energy and materials	It is likely each option will have the same effect on the use of resources	☺	☺
To reduce the risk of flooding	Retaining areas of amenity/natural greenspace could potentially slow down runoff and reduce the risk of flooding	☺	☺
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Conserving areas of greenspace could help to absorb CO ₂	☺	☺
To provide employment opportunities which meet the needs of the new and existing community	It is likely each of the options will have the same effect on employment opportunities	☺	☺
To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	It is likely each of the options will have the same effect on employment opportunities	☺	☺

Option a is the most sustainable. Option a has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option 1) and Alternative Approach (option 2).

Environmental protection

- Option a) Have a strategy that minimises the impact of the development on biodiversity and protects species/habitats of importance
 Option b) Have a strategy that minimises the impact of the development and enables enhancements of biodiversity

		Environmental protection	
Sustainability Objective	Assessment of Effects	a	b
To ensure that everyone has access to a good quality affordable home that meets their needs	Each of the options are unlikely to effect the provision of affordable housing	☺	☺
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Each of the options are unlikely to effect access to facilities	☺	☺
To ensure that there is integration of new and existing communities	Each of the options are unlikely to effect integration of the new and existing communities	☺	☺
To reduce actual, or fear of, crime and antisocial behaviour	Options for environmental enhancement are not likely to have an effect on crime	☺	☺
To integrate development within the existing landscape, conserving and enhancing its character	Both options will have a positive effect on the existing landscape by maintaining areas of greenery and links to the countryside. Option b may have a stronger positive effect as it allows for enhancement of biodiversity which could further enhance the landscape.	☺	☺☺
To integrate development in a manner that conserves and enhances the biodiversity in	Option b is the most favourable option as it aims to enhance biodiversity whereas option a only minimises the impact of the development	☺	☺☺

the area			
To maintain a high quality environment in terms of air quality	Conserving and enhancing biodiversity and species/habitats of importance should in turn have a beneficial effect as more trees and parks etc would have a positive impact on air quality	😊	😊
To maintain a high quality environment in terms of water quality	Conserving and enhancing biodiversity and species/habitats of importance should in turn have a beneficial effect on water quality. The river Arun bounds some of the site, conserving and enhancing it would help water quality	😊	😊
To reduce car journeys and promote alternative methods of transport	Each of the options are not likely to effect the number car journeys	😊	😊
To make the most efficient use of land	Using land efficiently could mean less land take in total, therefore minimising the loss of biodiversity	😊	😊
To minimise the use of resources, particularly water, energy and materials	It is unlikely any of the options will have an effect on the use of resources	😊	😊
To reduce the risk of flooding	Retaining trees and open areas would help slow run-off and reduce the risk of flash flooding	😊	😊
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Retaining habitat for wildlife will ensure that areas of greenery will be conserved, these could help to absorb CO ₂	😊	😊😊
To provide employment opportunities which meet the needs of the new and existing community	It is unlikely any of the options will have an effect on the provision of employment opportunities	😊	😊
To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	A good environment is likely to assist the economy of Broadbridge Heath and Denne wards as it will make it a nice place to live and work	😊	😊

Option b is the most sustainable. Option b has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option 1) and Alternative Approach (option 2).

Employment

- Option a) Provide a business park/ science park in the development area
 Option b) Provide an industrial estate in the development area
 Option c) Have mixed use units pepper potted around the development site
 Option d) Provide an employment hub/ hive/ flexible units in one or two areas

Sustainability objectives	Assessment of effects	Employment provision			
		a	b	c	d
To ensure that everyone has access to a good quality affordable home that meets their needs	Type of employment provision is not likely to effect the provision of affordable housing	☺	☺	☺	☺
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Each of the options are likely to provide facilities/services for the local community, options c and d, are likely to be more integrated with the residential development and will therefore be more easily accessible and beneficial	☺	☺	☺	☺
To ensure that there is integration of new and existing communities	Local employment opportunities may promote community cohesion	☺	☺	☺	☺
To reduce actual, or fear of, crime and antisocial behaviour	Effects uncertain	?	?	?	?
To integrate development within the existing landscape, conserving and enhancing its character	Each of the options will be within the development area they are therefore not likely to change the overall impact on the landscape.	☺	☺	☺	☺
To integrate development in a manner that conserves and enhances the biodiversity in	It is likely each option will have the same impact on biodiversity	☺	☺	☺	☺

the area							
To maintain a high quality environment in terms of air quality	Options a and b may cause people to commute from the wider area to take advantage of the employment opportunities that are not taken up by the local community, increased car journeys would have a detrimental effect on the local air quality. Options c and d are likely to be more easily accessible by means other than private car and are also likely to provide a wider range of employment opportunities more suited to the new community, this will reduce car journeys and as a result have a positive effect on air quality	⊗	⊗	⊗	⊗	⊗	☺
To maintain a high quality environment in terms of water quality	It is likely each option will have the same effect on water quality	☺	☺	☺	☺	☺	☺
To reduce car journeys and promote alternative methods of transport	Options a and b may not meet the employment needs of the local community, by providing a specific type of employment opportunity. These options could therefore encourage inward travel from a wider area, resulting in a possible increase in car journeys. Options c and d, due to their flexibility, are more likely to provide employment opportunities suited to the local community and are likely to be more easily accessible without use of a car.	☺	⊗?	⊗?	☺	☺	☺
To make the most efficient use of land	The development area has already been defined the overall land take is not likely to be effected by the type of employment provision selected	☺	☺	☺	☺	☺	☺
To minimise the use of resources, particularly water, energy and materials	It is likely each of the options will have the same effect on the use of resources	☺	☺	☺	☺	☺	☺
To reduce the risk of flooding	It is likely each of the options will have the same effect on flooding	☺	☺	☺	☺	☺	☺
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Options a and b may encourage a greater number of car journeys, therefore adding to the emission of greenhouse gases. Options c and d could potentially reduce the number of car journeys by providing a mixed range of employment opportunities which are likely to be more easily accessible	⊗	⊗	⊗	⊗	⊗	☺
To provide employment opportunities which meet the needs of the new and existing community	Options a and b may not provide a wide range of employment opportunities, they are therefore likely not to meet the needs of the new and existing community. Options c and d will both provide flexible units, which will be more likely to meet the community's needs.	⊗	⊗	⊗	⊗	⊗	☺

To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	Each of the options should have a positive impact on the retail vitality of Broadbridge Heath and Denne wards.	😊	😊	😊	😊
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Options c and d have been found to be the most sustainable. Option d been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option 1) and Alternative Approach (option2).

Sustainable Development

Option a) Ensure development is built to BREEAM /Government's Code for Sustainable Homes as a minimum
 Option b) Do not build to BREEAM/Government's code for sustainable homes

	Assessment of Effects	Sustainable Development	
		a	b
Sustainability Objective	Each of the options are not likely to effect the provision of affordable homes	☺	☺
To ensure that everyone has access to a good quality affordable home that meets their needs	The location of development in relation to services and facilities is a part of the Code for Sustainable Homes and BREEAM.	☺	☺
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Each of the options are not likely to effect the integration of the new and existing communities	☺	☺
To ensure that there is integration of new and existing communities	Secure By Design is part of BREEAM	☺	☺
To reduce actual, or fear of, crime and antisocial behaviour	The design of the development will influence whether it will change the character of the landscape, however sustainable homes will help protect the wider environment by reducing pollution and damage to biodiversity thereby conserving the landscape character	☺?	☺?
To integrate development within the existing landscape, conserving and enhancing its character	Sustainable homes will reduce resource use and emission of pollutants this will have a positive effect on the wider environment. In addition biodiversity considerations are part of the standards.	☺	☺
To integrate development in a manner that conserves and enhances the biodiversity in the area	Sustainable homes will reduce resource use and emission of pollutants, this will have a positive effect on air quality	☺	☺
To maintain a high quality environment in terms of air			

quality			
To maintain a high quality environment in terms of water quality	Sustainable homes will reduce the emission of pollutants and the use of resources, particularly water, this will have a positive effect on water quality	😊	😞
To reduce car journeys and promote alternative methods of transport	Sustainable homes have to be located near public transport, this should reduce car journeys as long as people use the public transport provided	😊?	😞?
To make the most efficient use of land	Each of the options is not likely to effect the amount of land used	😊	😊
To minimise the use of resources, particularly water, energy and materials	Building sustainable homes will make more efficient use of resources particularly energy and water	😊😊	😞😞
To reduce the risk of flooding	When developing sustainable homes the installation of sustainable drainage systems should be considered, if they were installed this would help to reduce flooding	😊?	😞?
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Building sustainable homes will make more efficient use of resources, and make more use of renewable energy	😊😊	😞😞
To provide employment opportunities which meet the needs of the new and existing community	Each of the options are not likely to effect the provision of employment opportunities	😊	😊
To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	Each of the options are not likely to effect the retail vitality of Broadbridge Heath and Denne	😊	😊

Option a is the most sustainable. Option a has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option 1) and Alternative Approach (option2).

Renewable Energy

- Option a) Include large scale sources of renewable energy/low carbon energy within the development (e.g. large wind turbine)
 Option b) Include small scale renewable energy/low carbon energy sources in the development (e.g. solar water heating)
 Option c) Have a strategy that requires renewable/low carbon energy sources to be incorporated in the development according to the building type/use and availability of the energy source.

Sustainability Objective	Assessment of Effects	Renewable energy		
		a	b	c
To ensure that everyone has access to a good quality affordable home that meets their needs	Each of the options are not likely to effect the provision of affordable homes	☺	☺	☺
To ensure that everyone has access to the health, education, leisure and recreation facilities they require	Each of the options are not likely to effect access to facilities	☺	☺	☺
To ensure that there is integration of new and existing communities	Each of the options are not likely to effect the integration of the new and existing communities	☺	☺	☺
To reduce actual, or fear of, crime and antisocial behaviour	It is not likely that renewable energy provision will have an effect on crime	☺	☺	☺
To integrate development within the existing landscape, conserving and enhancing its character	Option a may have a larger impact on the landscape, some sources of renewable energy such as wind turbines are large in size and would be visible from a long distance, however Combined Heat and Power and District Heating Systems would not have such a significant impact. . Smaller scale renewable energy could be incorporated into the development during construction therefore possibly reducing the impact on the landscape	☺?	☺	☺
To integrate development in a manner that conserves and	Large scale renewable energy sources may be more damaging to biodiversity as some may require a larger area of physical space. Wind turbines can affect	☺	☺	☺

enhances the biodiversity in the area	bird's flight paths. Renewable energy sources which reduce the emission of greenhouse gases will help to limit the effects of climate change this will have a positive impact on biodiversity.				
To maintain a high quality environment in terms of air quality	Burning fewer fossil fuels will be beneficial to air quality in general	😊	😊	😊	😊
To maintain a high quality environment in terms of water quality	Effects uncertain	?	?	?	?
To reduce car journeys and promote alternative methods of transport	Each of the options are not likely to have an effect on car journeys	😊	😊	😊	😊
To make the most efficient use of land	The development area has already been defined the overall land take is not likely to be effected by the type of energy source provided	😊	😊	😊	😊
To minimise the use of resources, particularly water, energy and materials	Each would minimise the use of non-renewable resources	😊	😊	😊	😊
To reduce the risk of flooding	A reduction in the burning of fossil fuels, would help to limit the effects of climate change, therefore reducing the impact on rain and flooding	😊?	😊?	😊?	😊?
To seek to reduce the emission of greenhouse gases, in particular by encouraging provision and use of renewable energy	Each option would help in the reduction in the emission of greenhouse gases	😊	😊	😊	😊
To provide employment opportunities which meet the needs of the new and existing community	Option a may create some local employment opportunities	😊	😊	😊	😊
To enhance the retail vitality of Broadbridge Heath and Denne wards and Horsham town centre.	Each of the options are not likely to effect the retail vitality of Broadbridge Heath and Denne	😊	😊	😊	😊

Options b and c are the most sustainable. Option b has been chosen as the preferred approach and is the same for both the Preferred Approach Masterplan (option1) and Alternative Approach (option2).

APPENDIX B: HORSHAM DISTRICT BASELINE DATA

TOPIC	INDICATOR	CURRENT STATUS / QUANTIFIED DATA	COMPARATORS	TRENDS	TARGETS	POSSIBLE CHANGE WITHOUT SPD	DATA PROBLEMS /COMMENTS	DATA SOURCE
SOCIAL ISSUES								
Population	Population of Broadbridge Heath and Denne Ward in Horsham	3,026(Broadbridge Heath), 4,830 (Denne)	Horsham town has a population of 47,804	Overall, the population of the District has risen in recent years		Predicted increases takes into account anticipated levels of development, so could be less without LDF/SPD	Census collected every 10 years, and other figures rely on estimates. Population rise is mainly due to residential development	ONS (2001 Census)
	Working age population as % of total	65%(Broadbridge Heath), 61% (Denne)	60% (Horsham District as a whole)	Likely to decrease as population ages		Population will age		ONS mid year estimates 2004
Housing	Number of households	1247 (Broadbridge Heath), 2305(Denne)	50,037 households in Horsham District	Increasing		Probable increase in households with continuation of social change and infill development	Results from residential development and social change	ONS (2001 Census)
	Owner Occupation as % all households	81%(Broadbridge Heath), 70% Denne	79% owner occupied in District as a whole	Not Known		Not known		ONS (2001 Census)
	Average House prices	£246,663(Denne), £357,823(Broadbridge Heath) between July and Sept 2006	£212,843(Denne) and £275,627(BBH) between January and March 2004.	House prices rose sharply in the late 90s early 00s, and have risen in the past three years with a slight fall in 2005		Not known		www.upmystreet.com
TOPIC	INDICATOR	CURRENT STATUS / QUANTIFIED DATA	COMPARATORS	TRENDS	TARGETS	POSSIBLE CHANGE WITHOUT SPD	DATA PROBLEMS /COMMENTS	DATA SOURCE
Social Inclusiveness and deprivation	Number of affordable homes needed	937 needed each year to 2011 across District		Likely to increase as a population ages		Likely to rise as further provision would be limited without LDF /SPD	No data available for Broadbridge Heath / Denne areas.	Horsham District Council Housing Needs Survey 2003
	Indices of multiple deprivation	342/354 (1 is the most deprived authority)		Relatively stable		Significant change in deprivation unlikely	Data at District or ward level	Indices of Deprivation 2004.
	Distance to Primary School	0.9km(Denne), 0.7km(BBH)				Likely to remain the same as present		Indices of Deprivation 2004.
	Distance to supermarket /convenience store	1.42km(Denne), 0.6km(BBH)				Likely to remain the same as present		Indices of Deprivation 2004.
	Distance to GP	1km(Denne) 3.2km(BBH)				Likely to remain the same as present		Indices of Deprivation 2004.
	Distance to Post Office	0.7km(Denne), 0.5km(BBH)				Likely to remain the same as present		Indices of Deprivation 2004.
Community Safety	All Crime: monthly per 1000 residents	13.1 January - March 06	Lower than the Sussex average of 7.81 April - June 05	Down from 13.3 Apr- -Jun 2005		Not known	data is measure of incidences per month	www.sussex.police.uk
	Number of police reported incidents(2005)	53(Denne), 12(BBH)		Not Known		Not known	Denne ward includes Horsham town centre, which may account for higher incidences of crime.	www.caddie.gov.uk
	Fear of Crime	Denne neighbourhood appraisal results reveal support for more community officers		Not Known		Not known	No quantitative data	Horsham District Community Profile 2002
TOPIC	INDICATOR	CURRENT STATUS / QUANTIFIED DATA	COMPARATORS	TRENDS	TARGETS	POSSIBLE CHANGE WITHOUT SPD	DATA PROBLEMS /COMMENTS	DATA SOURCE
Human Health	Life Expectancy	78.9 for men, 82.0 for women		Has been rising		Not known - depends partly on wider social trends	District Level Data only	Horsham District Community Profile (2002)
	General Health 'not good'	6.8%(Denne) 4.7%(BBH)	5.7% in District as a whole	Not Known		Not known		ONS (2001 Census)

APPENDIX B: HORSHAM DISTRICT BASELINE DATA

	Access to healthcare	No GP in BBH. Nearest Casualties at Redhill and Worthing		Trend is for more locally based care where possible with larger but fewer hospitals		Local care and fewer hospitals likely to continue	See social inclusiveness section for distances to doctor's surgeries	
Education	Schools	Nearest Primary schools in BBH and Arunside. 3 Secondary Schools in Horsham						Horsham District Community Profile 2002
	People aged 16-74 with no qualifications	19.9%(Denne)18.4%(BBH)	19.4 (Horsham District)	Not Known		Not Known		ONS 2001 Census
	People 16-74 with highest qualification NVQ 4/5	22%(Denne) 20.1%(BBH)	23.3%(Horsham District)	Not Known		Not Known		ONS Census 2001
	% of population aged 16-60 with poor literacy	20.5(Denne), 19.9(BBH)	19% poor literacy,	Not Known		Not Known		Horsham District Community Profile 2002
	% of population aged 16-60 with poor numeracy	19.2(Denne), 20.5(Denne)	17.3% poor numeracy	Not Known		Not Known		Horsham District Community Profile 2002
TOPIC	INDICATOR	CURRENT STATUS / QUANTIFIED DATA	COMPARATORS	TRENDS	TARGETS	POSSIBLE CHANGE WITHOUT SPD	DATA PROBLEMS /COMMENTS	DATA SOURCE
Leisure and Recreation	PPG17 needs assessment	BBH identified as having a shortfall in allotments, amenity greenspace, grass pitches and natural greenspace. Horsham is deficient in all terrain pitches, play areas, grass pitches and natural green space		Not Known		Provision likely to worsen as opportunities for improvement will be limited without LDF		Horsham District Council PPG17 Assessment 2005
Transport	% household car ownership	44.6% households have 1 car/van, 39.2% have 2 or more (Horsham) 46.5% households have 1 car/van, 42.4% 2 or more (BBH)	42.6% have 1 van /car and 38.0% two or more District wide (one of the highest rates of 2 car ownership nationally)					Horsham Settlement Sustainability Study 2005
	Rail Links	Horsham and Christ Hospital are nearest stations - links to south coast & London	N/A					
	Average distance travelled to work	15km for both Horsham and Broadbridge Heath	17.88km	Not Known		Likely to remain stable as no improvements to public transport		Horsham Settlement Sustainability Study 2005
	Main work destination for Horsham Residents Main work destination for Broadbridge Heath Residents	44% Horsham, 16% Crawley, 11%London, 2% South Coast 21% Broadbridge Heath, 25% Horsham, 13% Crawley, 9% London 2% South Coast	Similar travel patterns across the District, Similar travel patterns across the District,	Not known Not known			8.3% work from home 7.7% work from home	Horsham Settlement Sustainability Study 2005 Horsham Settlement Sustainability Study 2005
TOPIC	INDICATOR	CURRENT STATUS / QUANTIFIED DATA	COMPARATORS	TRENDS	TARGETS	POSSIBLE CHANGE WITHOUT SPD	DATA PROBLEMS /COMMENTS	DATA SOURCE
Transport (continued)	% people aged 16 -74 who travel to work by car / van (as driver or passenger)	65.8% (Horsham) 73.3%(Broadbridge Heath)	68.4% for Horsham District			Not known		Horsham Settlement Sustainability Study 2005
	% people aged 16 -74 who travel to work by bus	2.3%(Horsham) 1.8% (Broadbridge Heath)	1.9% for Horsham District			Likely to remain stable as no improvements to public transport		Horsham Settlement Sustainability Study 2005
	% people aged 16 -74 who travel to work by train	7.2% (Horsham) 3.7%(Broadbridge Heath)	5.6% for the whole District			Likely to remain stable as no improvements to public transport		Horsham Settlement Sustainability Study 2005
	% people aged 16 -74 who travel to work by foot / cycle	12.1%foot, 3.0 cycle(Horsham) and 9.0% foot 2.0% cycle (Broadbridge Heath)	11% across the District			Not known		Horsham Settlement Sustainability Study 2005
ECONOMY								
Material Assets	Unemployment rate	1.9% (BBH), 3.0%(Denne)	2.4% (sept 2004) in District	stable	Keep at this low rate	Not known	Low rate could lead to skills shortages	www.nomisweb.co.uk

APPENDIX B: HORSHAM DISTRICT BASELINE DATA

	% employed as Manager / Senior officials	15.8 (Denne), 16.1(BBH)	20.4 (whole District)			Not known	Figures are % of working age population	www.nomisweb.co.uk
	% employed as Professional	12.3(Denne) 9.8(BBH)	12.9 (whole District)			Not known	Figures are % of working age population	www.nomisweb.co.uk
TOPIC	INDICATOR	CURRENT STATUS / QUANTIFIED DATA	COMPARATORS	TRENDS	TARGETS	POSSIBLE CHANGE WITHOUT SPD	DATA PROBLEMS /COMMENTS	DATA SOURCE
Material Assets	% employed as associate professional & Technical	15(Denne), 16.1(BBH)	15.4 (whole District)			Not known	Figures are % of working age population	www.nomisweb.co.uk
	% employed as as administrative and secretarial	15.6(Denne), 14.8(BBH)	13.9 (whole District)			Not known	Figures are % of working age population	www.nomisweb.co.uk
	% employed as skilled trades	9.8(Denne), 10.9(BBH)	10.5 (whole District)			Not known	Figures are % of working age population	www.nomisweb.co.uk
	% employed as as personal services	6.7(Denne), 8.8(BBH)	7.1 (whole District)			Not known	Figures are % of working age population	www.nomisweb.co.uk
	% employed as as sales and customer services	7.8(Denne), 8.3(BBH)	6.6(Whole District)			Not known	Figures are % of working age population	www.nomisweb.co.uk
	% employed as process plant and machine operatives	5.7(Denne), 5.3(BBH)	4.8 (whole District)			Not known	Figures are % of working age population	www.nomisweb.co.uk
	% employed in elementary occupations	11.2(Denne), 10.0(BBH)	8.3 (whole District)			Not known	Figures are % of working age population	www.nomisweb.co.uk
Retail		Tesco's at BBH. Some local shops in Denne, but Horsham town centre nearby. Assessment has shown these centres are viable						
TOPIC	INDICATOR	CURRENT STATUS / QUANTIFIED DATA	COMPARATORS	TRENDS	TARGETS	POSSIBLE CHANGE WITHOUT SPD	DATA PROBLEMS /COMMENTS	DATA SOURCE
ENVIRONMENT								
Cultural Heritage	Sites of historical /	No records on proposed development area, but	N/A	N/A		Likely to remain in present state due	Number of designations is not an	HDC Planning Records
	Horsham Historic Character	Economic zoning and transport links have been key in the recent expansion of Horsham. Area closest to West of Horsham development area is post 1946. Historical vulnerability assessed as low	N/A	N/A		Likely to remain in similar state.		Horsham Historic Character Assessment Report
Biodiversity Flora and Fauna	Nature Conservation Designations	High Wood Hill - SNCI and Ancient Woodland. Old coppice with diverse ground flora,	N/A	Possibly declining in condition as has not been coppiced recently and has experienced trampling from cattle.	Not Applicable	Condition could decline if no management		HDC Planning Records
	Hedgerows	Hedgerows along Mill Lane and Wickhurst Lane are recorded as having some ecological interest	N/A	Condition appears to be declining	N/A	Decline likely to continue without management		Ecological survey data
	Woodland	High Wood Hill is ancient woodland - other important field and woodland trees in the area	21596 ha of ancient woodland lost since the mid 1980s in Sussex	Some areas of woodland may be declining in quality	Maintain existing areas of ancient woodland	Trees and woodland may decline if land management changes		Ecological survey data / Sussex Biodiversity Record Centre
TOPIC	INDICATOR	CURRENT STATUS / QUANTIFIED DATA	COMPARATORS	TRENDS	TARGETS	POSSIBLE CHANGE WITHOUT SPD	DATA PROBLEMS /COMMENTS	DATA SOURCE
Biodiversity Flora and Fauna	Grassland	Some marshy grassland north of Broadbridge Farm may be of ecological note. Some grassland of ecological importance.		Not known		Not known - depends on land management factors		Ecological Survey Data

APPENDIX B: HORSHAM DISTRICT BASELINE DATA

	Other habitats	Land is predominantly arable. Arun valley is likely to be of ecological note and valuable to invertebrates / birds		Not known			Not known - depends on land management factors	Ecological Survey Data
	Species	Significant breeding bird has been recorded near the development area.					Other protected and rare species may be present - further study is needed	Sussex Biodiversity Record Centre
Landscape	Landscape Character Area	Characterised by mainly arable land with some	N/A	The condition of the landscape is	Prevent or minimise further		Landscape is likely to remain in	Horsham District Landscape
	Landscape Character Area P1 "Upper Arun Valley"	A narrow valley with small irregularly shaped pasture and some small patches of woodland. The river is steeply banked and tightly meandering. Some visual and noise intrusion around Horsham. High Wood Hill is a prominent feature. The character areas has a high sensitivity to change.	N/A	Condition of the area is currently good, but there is some decline near Horsham			Landscape is likely to remain in similar condition as today without development of the area	Horsham District Landscape Character Assessment
TOPIC	INDICATOR	CURRENT STATUS / QUANTIFIED DATA	COMPARATORS	TRENDS	TARGETS	POSSIBLE CHANGE WITHOUT SPD	DATA PROBLEMS /COMMENTS	DATA SOURCE
Soil	Soil Type	Predominantly clay soils	N/A	N/A		Soil type will not change!		
	Contaminated Land	Former landfill at Baystone Farm. Some contamination					Further information requested from	HDC Environmental
Water	Per capita consumption of water	Southern water customers use 151 litres a day. This can be broken down as measured - 154l/h/d and unmeasured - 140l/h/d		Water use has increased 50% in the last 25 years			Increased water use may lead to restrictions on water consumption during (drought)	No data at District or more local level www.southernwater.co.uk
	River Quality - Boldings Brook	Quality has been recorded as compliant 1999-2001	N/A	Stable	N/A		May remain stable but other factors eg climate change could contribute to reduction in quality.	No data available on website post 2001. www.environment-agency.gov.uk
	River Quality - Arun	Quality has been recorded as marginal at sewage works site and at site north of Sliinfold	N/A	Appears to be decreasing	N/A		May remain stable but other factors eg climate change could contribute to reduction in quality.	No data available on website post 2001. www.environment-agency.gov.uk
	Flood Risk	Flood map does not show any dwellings at risk from flooding but 2 other buildings are situated in the flood plain.	2750 properties in floodplains across West Sussex		Current floodplain will increase as a result of climate change	No increase in number of properties in floodplain.	Current floodplain will increase as a result of climate change	Further work is ongoing in establishing the extent of the floodplain www.odpm.gov.uk
	Sewage	Horsham Sewage treatment works is situated to the west of the A24, south of Broadbridge Heath. It is currently operating within it capacity.	N/A		N/A			Correspondance from southern water
TOPIC	INDICATOR	CURRENT STATUS / QUANTIFIED DATA	COMPARATORS	TRENDS	TARGETS	POSSIBLE CHANGE WITHOUT SPD	DATA PROBLEMS /COMMENTS	DATA SOURCE
Air	Number of Air Quality Management Zones	None		Areas may need to be declared as a result of development in the future			Not known	No monitoring of air quality undertaken around areas likely to be affected by proposed development Environmental Health
	Noise pollution	Not known, but area is likely to be affected by road noise from the A24					Not known	Need to seek further data Environmental Health
Climatic	Percentage electricity consumption from renewables	0.65% in South East	< 4% nationally	Not known	10% by 2010	Not known	No data available at a local level	Energy White Paper / Environment Agency state of the Environment
	Emissions of greenhouse gases	8.7 tonnes of CO2 emitted per capita in 2003.	9.7 tonnes per capita in Chichester District, 7.5 in Mid Sussex District.	Nationally, emissions have fallen 14.6% between 1990 and 2004, there has been a 1% increase since 2002.			Not known	Local level data and trends are not currently available Office for National Statistics & DEFRA

APPENDIX B: HORSHAM DISTRICT BASELINE DATA

Factors	Emissions of greenhouse gases from transport	86 million tonnes CO2 in 2002		increasing- 58.5 million tonnes in 1990		Could increase if no controls over development	No data available at a local level	Office for National Statistics
	Average temperatures	Five of the six warmest years since 1990. Average increase of 1°C since 1900	0.4-0.8°C rise globally in the same period	Temperatures are rising. Wetter winters and drier summers are predicted		Could increase if no controls over development	No data available at a local level	Office for National Statistics
	Domestic Energy Consumption	1960kg oil consumption per household in 2001		5% increase from 1870 in 1971		Could increase if no controls over development	No data available at a local level	Office for National Statistics