

Stroud District Council  
**Infrastructure Delivery Plan**  
Refresh Version (Oct 2014) –  
Revised Growth Scenario

4-05/Stroud

Issue | 12 November 2014

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 226824

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# Document Verification

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<b>Job title</b>		Infrastructure Delivery Plan		<b>Job number</b>		226824	
<b>Document title</b>		Refresh Version (Oct 2014) – Revised		<b>File reference</b>			
<b>Document ref</b>		4-05/Stroud					
<b>Revision</b>	<b>Date</b>	<b>Filename</b>	Stroud_IDP_Refresh_Draft1_2014-02-10.docx				
Draft 1	10 Feb 2014	<b>Description</b>	First draft				
			Prepared by		Checked by		Approved by
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Issue	2 May 2014	<b>Filename</b>	Stroud_IDP_Refresh_2014-04-10.docx				
		<b>Description</b>	Final Refresh Document				
			Prepared by		Checked by		Approved by
		Name	Nick Doyle / David Brown		David Brown		Wayne Dyer
		Signature					
		<b>Filename</b>					
		<b>Description</b>					
			Prepared by		Checked by		Approved by
		Name					
		Signature					
		<b>Filename</b>					
		<b>Description</b>					
			Prepared by		Checked by		Approved by
		Name					
		Signature					
<b>Issue Document Verification with Document</b>							<input checked="" type="checkbox"/>

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## Executive Summary

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Ove Arup and Partners was commissioned by a partnership of the District Councils in Gloucestershire to produce Infrastructure Delivery Plans (IDPs) to support Core Strategy/Local Plan preparation. This IDP has been produced for Stroud District Council in order to evaluate the transport, utilities, community and green infrastructure and services that will be required to support the levels of housing and employment growth proposed in the Stroud DC Local Plan.

This version of the IDP presents a refresh of the IDP submitted alongside the Stroud DC Local Plan Submission Draft (Dec 2013) in order to take account of revised housing requirements following Stage 1 of the Local Plan Examination. This revised housing requirement draws upon the demographic forecasting undertaken by Neil Macdonald in relation to assessing the housing requirement, dated October 2014.

The refresh has been prepared in part on the basis of the information received from various service providers as part of the consultation process undertaken during September 2014 and should be read in the context of the following caveats:

- The cost and specification information received for individual infrastructure schemes has not been audited or tested for accuracy. It has not always been possible to ascertain whether some of the infrastructure projects identified have confirmed or guaranteed funding to deliver them;
- The IDP is a high level assessment of infrastructure need which is based on the information received and benchmark indices. This provides an assessment which is based in part on the application of ‘optimism bias’ to theoretical cost estimates which should be further defined as information becomes available;
- Where we have not received an accurate or satisfactory level of actual project information from infrastructure providers, costs and project specifications have been benchmarked and estimated using industry standards and comparable project information from other parts of the UK and/or previous infrastructure projects designed and implemented by Arup;
- We accept that there may be cases where the cost of delivering infrastructure items (for example, some social and community infrastructure) could be reduced by collocating different services together. No allowance has been made at this stage of the potential to collocate and therefore reduce the cost of delivering individual services in multifunctional buildings. This would require further discussions with service providers;
- Infrastructure delivery planning is a live iterative process and it is expected that the figures in this report will change over time. Further work, including infrastructure modelling and on-going consultation with service providers and developers, will be required to refine an understanding of infrastructure requirements, funding and delivery mechanisms. A detailed project tracker which accompanies this report will need to be maintained and updated over years to come to provide the most up to date and accurate picture of the overall funding and delivery picture for infrastructure across the District as a whole;
- This IDP has been prepared on the basis of a maximum development scenario (October 2014) of 11,200 new homes being built over the plan period (2006-

2031) with a maximum development scenario of 8,200 of these new homes being built between 2014 and 2031.

- The project tracker attached to this IDP identifies the projects which have emerged during the preparation of the document. There are likely to be other projects that may come on stream which have not been identified and for this reason, the project tracker forms a live document which will need to be updated over the plan period up to 2031.
- The cost tracker has been produced alongside this IDP in order that forecast infrastructure costs can be detailed by settlement. It is hoped that this will assist Cotswold DC in negotiation with developers and should overall figures change in the future, associated costs will update automatically upon development scenario information being updated.

The next stage of infrastructure planning will involve Stroud District Council continuing to work collaboratively with key service providers in order to make decisions around prioritisation of projects.

## IDP Development Scenario

The development scenario which has been tested as part of this refresh is set out in the table below. This scenario aligns to work undertaken by Neil Macdonald and Christine Whitehead in relation to Stroud's Objectively Assessed Need (OAN) for housing. This estimates that between 7,650 and 8,200 new homes will be required (2014-2031) in addition to the completions since 2006 (3,264). The overall growth scenario for the plan is presented in the table below.

### Stroud District Growth Scenario (2006-2031)

	Population Growth	Dwellings
Stroud District	16,700	11,200

*Source: Assessing the Housing Requirements of Stroud, Neil McDonald with Christine Whitehead (October 2014)*

Working from this overall planned growth, the Refresh IDP has considered the infrastructure requirements of the revised development scenario for 2014-2031 which is presented below.

### Revised Development Scenario (2014-2031)

District / Development Allocation	Dwellings		Population	
	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>
<i>North East Cam</i>	<i>450</i>	<i>750</i>	<i>981</i>	<i>1,635</i>
<i>Sharpness Docks</i>	<i>300</i>	<i>300</i>	<i>654</i>	<i>654</i>
Committed Sites & Windfall	1,169	1,169	2,548	2,548
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>
<i>West of Stonehouse</i>	<i>1,350</i>	<i>1,350</i>	<i>2,943</i>	<i>2,943</i>
<i>Stroud Valleys</i>	<i>400</i>	<i>400</i>	<i>872</i>	<i>872</i>
Committed Sites & Windfall	1,275	1,275	2,780	2,780

<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>
Committed Sites & Windfall	346	346	754	754
<b>D. Gloucester Urban Fringe</b>	<b>2360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>
<i>Hunts Grove Extension</i>	<i>500</i>	<i>750</i>	<i>1,090</i>	<i>1,635</i>
Committed Sites & Windfall	1,860	1,860	4,055	4,055

<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>
<b>Committed Sites &amp; Windfall</b>	4,650	4,650	10,137	10,137
<b>Allocations</b>	<i>3,000</i>	<i>3,550</i>	<i>6,540</i>	<i>7,739</i>
<b>Completions (2006-2014)</b>	<b>3,264</b>	<b>3,264</b>	<b>7,116</b>	<b>7,116</b>

*\* The Revised Development Scenario includes a range of growth on certain sites. This range is reported as a high and a low in order that the infrastructure requirements from the range of development can be assessed.*

The Refresh IDP considers the potential infrastructure demand of the proposed allocations as part of the revised development scenario (2014-2031). In exploring infrastructure requirements, the IDP applies an average household size at 2031 of 2.18 persons, derived from dividing the forecast population at 2031 by the number of households in the District. This is considered the most pragmatic approach to the forecasting of the population expected from each proposed development allocation. This approach considers the demands on infrastructure generated by the proposed development, including both the planned growth (16,700) as well as movement within the District and changes in demographics, for example a reduction in household size.

It is recognised that some infrastructure types have larger catchments and therefore have more of a District focus (e.g. swimming pools). With these types of infrastructure the above approach may lead to some double counting of demand (e.g. movement within the district to new development sites). For some facilities, the IDP therefore presents a worst case demand assessment, whereas for the majority it recognises the need to often provide infrastructure locally to proposed development and population growth.

In order to provide some comparison, the associated Cost Tracker includes an infrastructure calculation for the District which utilises the forecast population growth of 16,700 over the whole plan period (2006-2031). It must be recognised that this can only be considered relevant where infrastructure is provided on a District wide basis and therefore doesn't geographically link to growth.

## Report Structure

The main element of this report explores the infrastructure requirements for Stroud District under the following broad sectors:

- Community & Cultural;
- Education;
- Emergency Services;

- Energy;
- Healthcare;
- Flood Water & Waste Water;
- Recreation, Sports & Open Space;
- Information & Communications Technology;
- Transport & Public Realm; and
- Waste.

Following a review of the infrastructure requirements within each of these broad sectors, the report explores existing or confirmed funding sources and provides some broad recommendations on delivery of infrastructure which is critical to growth.

## Infrastructure Requirements

Delivering infrastructure of importance to support new development and achieving the Vision set out within the Stroud District Local Plan will rely upon a wide range of public, private and community sector organisation working together effectively and efficiently. Stroud District Council has an important role to play in this process, particularly as the Local Plan progresses through examination and planned growth begins to emerge. Key to this role is ongoing review and refinement of the IDP in order to ensure that infrastructure requirements and information on planned projects is as up to date as possible.

It is recommended that Stroud DC commit to infrastructure planning as an iterative process and resource the role as the body responsible for delivering some projects and working with key partners to ensure delivery of others. This IDP is the starting point for an on-going process and regular updates of the project information underlying the IDP will be required. This summary is accompanied by a project tracker which details projects that have emerged through the development of the IDP. This tracker will form an important tool for Stroud DC as infrastructure is planned and implemented and/or as new projects or requirements emerge.

For a number of sectors reviewed, we have undertaken cost assessment using accepted benchmark standards, providing a high level view of infrastructure requirements based on population forecasts. As specific projects and proposals develop, further work will be required to fully test options for delivery, refining project details, costs and timescales over time.

In order to assist in the prioritisation of identified infrastructure, projects have been identified and assigned to one of the following four broad categories:

- *Regionally Critical Infrastructure* – Projects that have wider geographic area implications than Stroud District which must happen to enable the delivery of growth within the District and beyond (i.e. critical to the District functioning as a whole with the potential also for the mitigation of cross boundary needs and effects).
- *Critical Infrastructure* – Projects that the study has identified which must happen to enable the delivery of growth within Stroud District.
- *Essential Infrastructure* – Projects that are required if growth is to be achieved in a timely and sustainable manner.

- *Desirable Infrastructure* – Projects that are required for sustainable growth but is unlikely to prevent development in the short to medium term.

The IDP therefore presents infrastructure requirements and costs for the broad sectors and considers phasing of infrastructure across Stroud District Council. The identified requirements should be read alongside the associated Project Tracker in order to understand specific infrastructure projects.

## Cross Boundary Infrastructure

Through the process of preparing the Stroud IDP for Stroud DC and those for the surrounding authority areas, a number of projects have been identified that are considered to be critical or essential to a geographic area which is county-wide and beyond. This infrastructure largely relates to projects on infrastructure networks (e.g. transport) and where catchments exist (e.g. schools and secondary healthcare) that extend beyond Stroud's administrative area. In many cases, transport projects help to strengthen the network as a whole, and it is therefore difficult to determine that such projects serve only a site specific or local purpose.

Some cross boundary projects have therefore been identified below and are highlighted within the accompanying project tracker. In identifying these projects, it does not necessarily imply that funding will be derived solely from development within Stroud DC.

## Sector Analysis

The analysis below summarises the infrastructure requirements by sector for the revised development scenario (2014 to 2031). This does not consider the infrastructure requirements and/or the financial contributions received from completions (2006-2014). It does, however, consider committed sites for which planning permission and/or S106 agreements may already be in place. Given the level of commitments within the revised growth scenario, Stroud DC should undertake a process of comparison on these sites in order to inform future funding gap analysis.

## Community & Culture

In total, the IDP estimates that community and cultural facilities to serve the revised development scenario could cost between £6.3-6.8m over the plan period to 2031. This can be broken down as follows:

### *Libraries*

Provision of new libraries across Stroud to serve the revised development scenario is estimated to cost between £1.8-1.94m. This estimate doesn't allow for any opportunities for co-location of services (e.g. council services within libraries) which may reduce the overall capital cost.

Taking account of the County Council's Strategy for library services, it is anticipated that the additional demand for services (and related funding) could be channelled towards maintaining and enhancing the existing library network, including the Virtual Library, and providing services for more vulnerable groups such as the elderly. This approach could lead to a lower capital cost requirement.



## Community Centres

The provision of new community centres within the Stroud DC area is estimated to cost between £4-4.3m depending on the exact number of dwellings.

Taking a pragmatic view, financing the modernisation and maintenance of existing community centres is a challenge for the third sector organisations that manage these facilities in many cases. The District Council seeks to provide support, including funding where possible, to these organisations. For this reason, and depending on the scale and location of new development, finance may be directed towards supporting and enhancing existing facilities through maintenance, refurbishment and revenue payments, rather than provision of new halls. Provision of new halls will more than likely be focussed around strategic development sites.

## Youth Support Services

The provision of targeted youth support services infrastructure has been estimated at a cost of between £518,000 -555,000.

Alongside the cost of providing youth services, new development also offers wider opportunities relating to the provision of training, apprenticeships and employment during the construction of new schemes. This will help address youth unemployment issues and local planning authorities are therefore urged to consider the agreement and implementation of Employment and Skills Charters working with developers, to help facilitate the creation of employment opportunities within the construction sector.

## Education

The educational requirements identified across Stroud DC to serve the revised development scenario are summarised in the table below. This theoretical demand has been derived from a model provided by Gloucestershire County council during IDP refresh consultation with the revised development scenario applied.

### Education Requirements

	Theoretical Demand	Cost Provision (£m)
<b>Early Years (2,3 &amp; 4 years)</b>		
High (8,200)	612	£7.15
Low (7,650)	571	£6.67
<b>Primary Education</b>		
High (8,200)	2,276	£26.59
Low (7,650)	2,124	£24.81
<b>Secondary Education (no 6<sup>th</sup> form locally)</b>		
High (8,200)	1,293	£17.18
Low (7,650)	1,206	£16.03
<b>Secondary Education (Sixth Form locally)</b>		
High (8,200)	1,293	£23.06
Low (7,650)	1,206	£21.52

	Theoretical Demand	Cost Provision (£m)
<b>Further Education (Post 16)</b>		
High (8,200)	123	£1.86
Low (7,650)	115	£1.74
<b>TOTAL (with sixth form locally)</b>	<b>High</b>	<b>£58.66</b>
	<b>Low</b>	<b>£54.74</b>

The figures represent a maximum required provision, using child yield ratios and applying these to the development trajectory. The calculations do not consider opportunities presented through the reconfiguration of existing facilities.

Where possible, consideration should be given to the provision of more comprehensive educational facilities that incorporate an element of all three of the above. This could be particularly relevant where strategic allocations lead to sufficient theoretical demand for such a new facility.

## Emergency Services

The IDP estimates that new emergency services provision could cost in the region of £668,610 -716,680. This relates entirely to police service contributions and does not include contributions towards the police station upgrade at Stroud or contributions to the regional custody suite as described below.

Contributions to these wider property infrastructure projects will be calculated separately, especially where facilities are serving the region (e.g. £11.9m for the new central custody suite).

The identified provision can be broken down as follows.

### Ambulance

Emergencies in Stroud are responded to by a number of ambulances and rapid response vehicles that are strategically located throughout Gloucestershire. The ambulance stations in Stroud include:

- Stroud Ambulance Station; and
- Dursley Ambulance Station.

On consultation, the Ambulance Service outlined a need for a number of investments which are summarised below.

- North East Cam – Investment in Dursley Co-Responder scheme would assist with response times;
- Sharpness – Sharpness cannot be reached in acceptable time limits. It is recommended that a community responder scheme is established;
- Stonehouse – Responding in acceptable time limits is not achievable. A facilitated standby point will be required; and
- Brimscombe and Thrupp - Responding in acceptable time limits is not achievable. A facilitated standby point will be required.

In working with the ambulance service to develop standby points, Stroud DC should consider the ability to co-locate services, particularly at existing facilities (e.g. police or fire stations).

## *Fire & Rescue*

Gloucestershire Fire and Rescue Service reviewed their services in 2005 and embarked on the creation of new community fire stations which were completed in 2012. From the retained and wholetime stations the Service is confident they can provide an emergency response to any incident in the County.

Through consultation, a number of specific development measures were identified including:

- Ensuring adequate access points and road sizing to enable rapid response times;
- Fitting housing with sprinkle systems; and
- Fire hydrants, typically spaces at 50m apart.

Costs associated with these measures will be met by the developer at individual sites who should consult the Fire and Rescue Service on design matters.

## *Police*

Gloucestershire Constabulary identified a number of infrastructure needs required to support development in Stroud District. This included both property infrastructure and non-property infrastructure as set out below.

### **Property Infrastructure**

- Contribution to Stroud Police Station refurbishment and upgrade; and
- Contribution to the Central Custody Suite for Gloucester (estimated cost of £11.9m).

### **Non-Property Infrastructure**

The planned new growth in the Stroud District has been identified to require the setting up of 20 new Police Officer and staff posts. Using the Association of Chief Police Officers formula (£87.40 per dwelling), the projected growth could lead to contributions of between £668,610 -716,680. The estimated costs allow for:

- Uniform and protective equipment;
- Patrol car - the Constabulary has a replacement programme but additional vehicles can only be purchased if additional funding is available. The proposed growth within the County would have an impact on the number of vehicles required and this is reflected in the formula. The formula accounts for costs in terms of a patrol car. If a mobile police station were funded the individual costs would be higher but fewer patrol cars would be required.
- Cost of recruitment
- Training
- IT Equipment, airwave /telephony - as the Stroud District is a large rural area, officers will be expected to rely on mobile data and vehicles rather than returning to police stations to complete paperwork.
- Furniture

The central custody suite is a regional project and therefore adjacent authority areas will also be expected to contribute to this infrastructure.

It is understood that the police will seek contributions towards these projects. At the time of writing this IDP no commitment had been made by Stroud District Council towards this infrastructure.

## Energy (Utilities)

The primary concern of the IDP in relation to energy is to understand whether there are any engineering or other obstacles that would prevent or delay the connection of development sites to the electricity and gas grid/network, resulting in implications for site delivery or phasing.

### Electricity

The extra high voltage transmission network (275kV and 400kV) in England is owned and operated by National Grid Electricity Transmission (NGET). The regional distribution network in Stroud is operated by Western Power Distribution (WPD).

WPD have not identified any sites where connections could not be provided, but have identified that development at Sharpness, and load growth in the area, may necessitate the provision of a new 33kV overhead line to Ryeford Bulk Supply Point (approximately 15km away). This could take 3-4 years to complete. Other comments provided include:

- North East Cam – Development here is likely to necessitate two new 11kV circuits from Dursley primary substation. With employment development upstream reinforcement may be required and could take 12-18 months;
- Sharpness – Residential and employment development which would lead to significant load growth will require installation of a new 33kV circuit back to Ryeford BSP.
- Stroud Valleys – WPD have provision for a new substation in the Brimscombe area but progression depends on load growth. The scheme is likely to necessitate an additional 11kV circuit.
- Hunts Grove – WPD have provision for a new substation at Hardwicke, but progression of the scheme depends on load growth. The scheme is likely to necessitate two new 11kV circuits.

WPD advise that the installation of 11kV circuits are not normally significant with the majority installed in the public highway.

### Gas

Wales & West Utilities (WWU) were unable to provide an estimate of infrastructure cost for gas infrastructure due to insufficient details in terms of potential load requirements. WWU require relatively detailed information on development sites before they can provide formal feedback on network capacities and constraints. This should include the size and shape of sites, number of units and indicative layout and phasing.

Stroud District Council should continue to work with WWU and update them as proposals for sites emerge in order that the IDP and associated Tracker can be updated.

## Healthcare

The IDP estimates that the total cost of providing the necessary healthcare facilities to accommodate the revised growth scenario could range between £6.84-7.33 m. This is broken down as follows:

### GPs

It is estimated that development at the identified growth locations (2014-2031) could lead to the demand for an additional 9 to 10 GPs at an estimated capital cost of between £2.8 -3m.

### Dentists

It is estimated that development at the identified growth locations (2014-2031) could lead to the demand for an additional 8 to 9 dentists at an estimated capital cost of between £1.52-1.63m.

### Acute Bed spaces

It is estimated that development at the identified growth locations (2014-2031) could lead to the demand for an additional 30 to 32 bed spaces at an estimated capital cost of between £2.52-2.7m.

In working with the NHS in developing their strategy, further consideration should be given to the fact that not all this demand will necessarily be provided for within Stroud District Council area, along with the fact that some demand will prefer privately funded healthcare.

## Flood Management, Water Supply & Waste Water

### Flood Management

The proposed development locations have been informed by Strategic Flood Risk Assessments (SFRA Levels 1 and 2) and are generally located in areas that are at low risk of flooding (e.g. Flood Zone 1), within only small parts of sites within areas of higher risk (e.g. Flood Zones 2 and 3).

Consultation with the Environment Agency has led to the following conclusions at the various strategic locations along with identification of planned flood risk projects.

Settlement / Allocation	Summary	Planned Flood Risk Projects
<i>Stroud South Vale</i>		
North East Cam	Development in flood risk areas considered avoidable through masterplanning. Expected that an integrated flood risk management and drainage strategy would be devised for the development.	Potential for significant flood risk due to surface runoff. Expected that surface water attenuation facilities will be required to serve discrete areas of the development.
Sharpness	Around 62% of the site is located in Flood Zone 1 with the	No specific projects identified ahead of

	<p>remainder in zones 2 and 3.</p> <p>Detailed site FRA necessary to confirm extent of flood risk management.</p> <p><b>Employment Land:</b> proposals expected to involve allocation and safeguarding of open space for flood storage.</p>	<p>FRA.</p> <p><b>Employment Land:</b> Risk areas should be kept as open space, particularly the high hazard areas identified from the breach scenario of the embankment.</p>
<b>Stroud &amp; West</b>		
Stroud Valleys	<p>Stroud suffers from flooding from a combination of surface and main river flooding.</p> <p>Ham Mill site and Dockyard Works located partly in Flood zones 2 and 3.</p> <p>Brimscombe Mill and Port and Wimberley Works have specific flood projects identified as the majority of the site is located in Flood Zones 2 and 3.</p>	<p>Scheme to offer property-level protection to residents in risk areas.</p> <p>Proposals expected to include the allocation and safeguarding of open space for flood storage.</p> <p><b>Brimscombe Mill</b> – dredging mill pond and sluice gate redesign.</p> <p><b>Brimscombe Port</b> – opportunity to re-excavate port area and/or previously developed land to provide flood storage.</p> <p><b>Wimberley Mills</b> – De-culverting of the river channel to enable areas of the functional floodplain and flood storage.</p>
<b>Gloucester Urban Fringe</b>		
Hunts Grove Extension	<p>A site specific FRA required and investigation into residual risk from blockage or collapse of the culvert beneath the B4008.</p> <p><b>Employment:</b> Proposals expected to involve allocation of open space for flood storage. Opportunities to improve runoff rates should be sought.</p>	<p>Recommended that areas identified and allocated as open space for flood storage.</p> <p>Culvert maintenance strategy required to periodically clear culverts.</p>

### Water Supply & Waste Water

Water supply and wastewater services in Stroud District are provided by the following service providers:

- Severn Trent Water (STW) – Water supply to the District and wastewater services to the majority of the District; and
- Wessex Water (WW) – Wastewater services to some southern parts of the District, including Sharpness.

During consultation as part of the IDP and subsequent refresh versions, the service providers identified the potential constraints in the table below. As with the energy sector, while the review has not identified any constraints that will ultimately prevent delivery, the service providers have provided detail on likely works which may influence the phasing on proposed allocations.

#### Waste Water Treatment

Settlement / Allocation	Provider	Comment
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<i>Stroud South Vale</i>		
North East Cam	STW	<b>Coaley STW Catchment.</b> Additional capacity required in order to accommodate future development. Work planned as part of AMP6 programme following which no capacity issues anticipated.
Sharpness	WW	<b>Sharpness STW Catchment.</b> No capacity improvements required before 2020. Necessary works to accommodate catchment growth beyond 2020 to be established during 2019. WW raised concerns over a need to safeguard an area for future expansion of the STW in this area.
<i>Stroud &amp; West</i>		
West of Stonehouse	STW	<b>Stanley Downton STW Catchment.</b> Maintenance underway in AMP6 including capacity upgrades to accommodate long term developments. Work planned for completion in 2017 and there if sufficient spare capacity to accommodate short term development.
Stroud Valleys	STW	<b>Stanley Downton STW Catchment.</b> Maintenance underway in AMP6 including capacity upgrades to accommodate long term developments. Work planned for completion in 2017 and there if sufficient spare capacity to accommodate short term development.
<i>Gloucester Urban Fringe</i>		
Hunts Grove Extension	STW	<b>Netheridge STW Catchment.</b> Reasonable spare capacity at this STW. The ongoing sewerage project is only dealing with need from the development allocations to the south of Gloucester and STW are in discussions to ensure proposals align with development phasing.

### Sewage and Drainage Capacity

Settlement / Allocation	Provider	Comment
<i>Stroud South Vale</i>		
North East Cam	STW	Subject to hydraulic modelling no capacity issues are envisaged, provided surface water is not connected to the foul sewers.
Sharpness	WW	A range of capacity improvements to the public sewer system will be necessary to accommodate development. WW indicate that foul water disposal constraints at the local pumping station could be overcome by pumping directly to the downstream local pumping station which has greater capacity.
<i>Stroud &amp; West</i>		
West of Stonehouse	STW	Anticipated that capacity improvements will be required to accommodate later phases. A project is ongoing to ensure this capacity at the Stonehouse pumping station. This will be sized accordingly to accommodate employment and residential allocations and completion will be phased to coincide with development.



Stroud Valleys	STW	Significant hydraulic capacity issues in Stroud with known sewer flooding problems. STW assessing improvement options and confirm a strategy is included for completion as part of AMP6.  STW expect all new development within Stroud will be built with separate foul and surface water drainage with surface water drainage not connected to the foul sewer.
<b><i>Gloucester Urban Fringe</i></b>		
Hunts Grove Extension	STW	Topography suggests site will drain south west and will eventually drain to Quedgeley Main Pumping Station. Provided surface water is dealt with sustainably, no major capacity issues are envisaged, although some local upsizing may be required.

In general the funding for any site connections and necessary upgrades to the local water supply and wastewater networks for each settlement come from site developers. On-going maintenance of the water and wastewater networks, including any strategic water resource projects (such as new reservoirs), are funded by ratepayers.

## Recreation, Sport & Open Space

Using benchmark standards, the IDP estimates that the total cost of providing the necessary recreation, sport and open space in relation to the revised development scenario could range between £20.5-22m. This can be broken down as follows.

### *Indoor Sports Facilities*

While the IDP has not undertaken a full audit of existing sports facilities and playing pitches, an overview of current facilities (excluding privately managed facilities) has been provided, along with an assessment of future demand using the Sport England Sports Facility Calculator (SFC). The IDP estimates the following demand for indoor sports facilities:

- 0.8 to 0.9 new swimming pools with an estimated capital cost of between £2.68-2.87m; and
- 1.1 to 1.7 new sports halls with an estimated capital cost of between £3.04-3.26m.

In summary, it is anticipated that provision will be provided in areas with greatest demand (e.g. near to largest growth areas). This is likely to be provided through the provision of 1 new swimming pool and hall. Opportunities to meet this demand through refurbishment or improvement to existing facilities and/or improved hours of opening could also be explored.

### *Outdoor Playing Pitches & Other Outdoor Sports*

The IDP has used a combination of the Fields in Trust (FIT) Benchmark Standards and Natural England Accessible Natural Greenspace Standards (ANGSt) in order to calculate the following demand for playing pitches and outdoor sports:



- Between 20ha and 21.5ha of playing pitches at an estimated capital cost of between £1.95-2.09m; and
- Between 6.7ha and 7.2ha of space for other outdoor sports at an estimated capital cost of between £6.64-7.12m.

### *Children's Play Space*

The IDP estimates a play space demand of between 4.2ha and 4.5ha with an estimated capital cost of between £2.06-2.21m.

### *Informal and Natural Open Space*

Using the same benchmark standards, the IDP estimates the following demand for informal and natural open space:

- Between 9.2ha and 9.8ha of informal open space with an estimated capital cost of between £155,930 -167,141; and
- Between 16.7ha and 17.9ha of accessible natural greenspace with an estimated capital cost of between £4-4.3m.

In relation to natural open space, Natural England have begun discussions in relation to the potential need for contributions from major developments (over 10 dwellings) or the provision of on-site mitigation in order to protect the interests of designated sites in Stroud DC. These contributions would be requested from any such developments within a specified distance of the above designated sites.

## **Information & Communications Technology**

The provision of ICT infrastructure may not be a key factor in determining the soundness of the emerging Local Plan, but it will have implications for the economic competitiveness of Stroud and the ability of households to access the online services of other infrastructure and service providers (e.g. library services, healthcare and education).

Within Stroud District the majority of the local exchanges serving draft Local Plan allocations have now been upgraded to superfast broadband, or the upgrade is scheduled to occur by end 2014 (Berkeley). The Stonehouse exchange is now under evaluation by BT Openreach for upgrade. It is recommended that new developments are encouraged to provide fibre optic connections from the upgraded cabinets to premises from the outset.

The remaining, more rural communities fall into the 'final third' category of upgrade, suffering from below average internet speeds and a lack of competition between services. The Borders Broadband initiative has secured £14.4m towards the rolling out of fibre broadband in rural areas, which has been boosted by an additional £7.5m investment from Gloucestershire County Council and £6m from Herefordshire County Council. This project aims to bring fibre broadband to around 90% of homes by the end of 2016.

## **Transport & Public Realm**

Transport infrastructure planning is viewed as essential to ensuring well planned new development and will be key to delivering growth within the Stroud Local Plan.

In order to assess the impact of planned growth, a strategic highway model was developed as part of the Stroud DC Transport Impact Assessment (March 2014) and further transport assessment work was commissioned following Stage 1 of the Local Plan examination in order to better understand mitigation measures required. In summary, critical junctions and mitigation include:

- **M5 Junction 12 (northbound)** – This junction could reach capacity by 2031.
- **M5 Junction 12 (southbound)** – This junction could reach capacity by 2031.
- **M5 Junction 13** – Potential mitigation required could include full or partial signalisation of the roundabout, widening of the entry arms, widening of the A419 southern exit arm and junction improvements to the south at A419/Grove Lane to limit queuing back towards M5 Junction 13.
- **Cross Keys Roundabout** – Mitigation could include signalisation to give more priority to the A38 and/or a dedicated left turn to the A38 north from the B4008. Both schemes have potential constraints to implementation.
- **A419 / Oldends Lane** – The impact on Oldends Lane will depend heavily on the how sustainable the Stonehouse development becomes. There exists potential scope to lengthen the two lane approaches on both A419 approach arms. However, widening would be difficult, due to mature trees to the north and third party land and a watercourse to the south.
- **A38 Cole Ave / A430 Bristol Rd / B4008** – Potential mitigation required could include provision for a longer flare of the dedicated left turn from Cole Avenue (East to South) to assist vehicle access.
- **M5 Junction 14** – This junction could reach capacity by 2031.
- **A419 / Ebley Rd / Bath Rd** – Potential mitigation could include the provision of longer flares and utilisation of verges to create two lanes on approach.
- **A38 Bristol Rd / A4135 / St John's Rd** – The potential mitigation measures include signalising the junction and possible expansion of flares to the western and southern arms could be considered depending on capacity analysis results. The flare on the A4135 arm could also be lengthened.
- **A38 / Alkington Lane** – Mitigation at this junction could include widening the minor arm to two lanes (one flare for each direction), additional street lighting and implementation of weight restriction on Alkington Lane to prevent use by HGV tankers. Land constraints exist on the northern verge of the minor arm and at the southern verge of the minor arm bordering Alkington Lane.
- **A419 London Rd / Toadsmoor Rd** – Potential mitigation includes the signalisation of the junction. A vehicle activated queue loop system is recommended for the minor arm to only be triggered once vehicles are queuing.
- **B4066 / Alkington Lane** – In terms of actual vehicle numbers, impacts on this junction are considered relatively minimal. Several potential mitigation measures could be implemented including; resurfacing of carriageway, reinstatement of white lining and widening of minor arm to improve turning path / space of HGV's turning right into and left out of Alkington Lane.

## Waste

In order to meet the projected demand for waste management, the Waste Core Strategy identifies a number of locations with the potential to accommodate re-modelled, alternative and/or new waste management facilities over the timeframe of the plan. Two of these sites are located within Stroud DC, including:

- **Javelin Park** – An application for an energy from waste facility on this site was refused during 2013. The applicant is appealing this decision with the decision of the public inquiry still to be announced.
- **Land at Moreton Valence** - This 7 hectare site is located between the M5 and A38 to the north-east of Moreton Valence. The site is partly used for light industrial and waste management. The operators of the site, Smiths (Gloucester) Ltd. have confirmed that the site is available for strategic waste management use.

With respect to potential projects within Stroud District, the County Council have advised that Household Recycling Centres (HRCs) are reaching capacity and therefore the need for additional capacity at Pyke Quarry and Hempsted will need to be kept under review.

## Implementation

Successful implementation of this IDP and the infrastructure requirements identified requires a well-managed infrastructure delivery framework which is monitored and managed by Stroud DC and updated regularly. These updates should record the delivery of infrastructure and details of new projects as they emerge and requirements are developed further and fully costed. This process should:

- Consider any changes to housing and employment trajectories;
- Record and update critical or priority infrastructure as the plan progresses;
- Regularly update costing information in order to analyse the associated funding gap and update any cost plans;
- Review funding arrangements, both from private and public funding sources;
- Keep a robust and appropriate plan for maximising developer contributions; and
- Be shared with various service providers in order that priorities are known and providers are aware of the most up to date trajectories and development proposals.

Implementation of infrastructure requirements will not be possible without monitoring and review of this delivery framework. This can be completed using the associated cost tracker and project tracker.

## Categorisation

The identified infrastructure projects have been placed into four categories, reflecting the relative importance of that infrastructure in achieving growth. The categories include:

- *Regionally Critical Infrastructure* – Projects that have wider geographic area implications than Stroud District but which must happen to enable the delivery of growth within the District and beyond.
- *Critical Infrastructure* – Projects that the study has identified which must happen to enable the delivery of growth within Stroud District.
- *Essential Infrastructure* – Projects that are required if growth is to be achieved in a timely and sustainable manner.
- *Desirable Infrastructure* – Projects that are required for sustainable growth but is unlikely to prevent development in the short to medium term

The table below provides a summary of the total cost and categorisation of the various infrastructure needs identified. In the round, the IDP has taken a worst case scenario in relation to capital cost and therefore the data should be viewed optimistically in terms of potential to reduce capital cost implications.

#### Cost Summary & Prioritisation – Revised Development Scenario (Low) (Oct 2014)

	Regionally Critical	Critical	Essential	Desirable	Total Costs	Secured match funding to date	Associated Funding Gap to date
Community & Cultural	£0	£0	£0	£6,358,749	£6,358,749	Being Investigated	£6,358,749
Education	£0	£0	£54,740,000	£0	£54,740,000	£33,277,017	£21,462,983
Emergency Services	£	£0	£11,900,000	£668,610	£12,568,610	Being investigated	£12,568,610
Energy (Utilities)	£0	£0	£0	£0	£TBC	TBC	£TBC
Flood Water & Waste Water	£0	£1,000,000	£0	£0	£1,000,000	Being investigated	£1,000,000
Healthcare	£0	£0	£6,820,337	£0	£6,820,337	£473,144	£6,347,193
Recreation, Sports & Open Space	£0	£0	£4,158,410	£16,380,117	£20,538,527	Being investigated	£20,538,527
Transport & Public Realm	£0	£0	£16,100,000	£350,000	£16,450,000	Being investigated	£16,450,000
Waste	£0	£0	£0	£94,000,000	£94,000,000	£94,000,000	£0
Cotswold Canal	£0	£0	£0	£2,150,000	£2,150,000	Being investigated	£2,150,000
<b>Total</b>	<b>£0</b>	<b>£1,000,000</b>	<b>£93,718,747</b>	<b>£119,907,476</b>	<b>£214,626,223</b>	<b>£127,750,161</b>	<b>£86,876,062</b>

#### Cost Summary & Prioritisation – Revised Development Scenario (High) (Oct 2014)

	Regionally Critical	Critical	Essential	Desirable	Total Costs	Secured match funding to date	Associated Funding Gap to date
Community & Cultural	£0	£0	£0	£6,815,758	£6,815,758	Being Investigated	£6,815,758

	Regionally Critical	Critical	Essential	Desirable	Total Costs	Secured match funding to date	Associated Funding Gap to date
Education	£0	£0	£58,660,000	£0	£58,660,000	£33,277,017	£25,382,983
Emergency Services	£	£0	£11,900,000	£716,680	£12,616,680	Being investigated	£12,616,680
Energy (Utilities)	£0	£0	£0	£0	£TBC	TBC	£TBC
Flood Water & Waste Water	£0	£1,000,000	£0	£0	£1,000,000	Being investigated	£1,000,000
Healthcare	£0	£0	£7,310,688	£0	£7,310,688	£473,144	£6,837,544
Recreation, Sports & Open Space	£0	£0	£4,457,381	£17,557,771	£22,015,152	Being investigated	£22,015,152
Transport & Public Realm	£0	£0	£16,100,000	£350,000	£16,450,000	Being investigated	£16,450,000
Waste	£0	£0	£0	£94,000,000	£94,000,000	£94,000,000	£0
Cotswold Canal	£0	£0	£0	£2,150,000	£2,150,000	Being investigated	£2,150,000
<b>Total</b>	<b>£0</b>	<b>£1,000,000</b>	<b>£98,428,069</b>	<b>£121,590,209</b>	<b>£221,018,278</b>	<b>£127,750,161</b>	<b>£93,268,117</b>

This categorisation, with reference to the associated Project Tracker and Cost Tracker allows consideration of the infrastructure needs across the authority area and provides a starting point for Stroud DC to begin the process of prioritisation, working alongside key delivery partners and developers. It is particularly important that the Stroud District Council identify any ‘critical’ infrastructure necessary to deliver strategic growth.

Of those projects identified as being ‘regionally critical’ or ‘critical’ in the Project Tracker and table above, a number are currently well advanced in design and funding commitment terms and may be under construction or constructed in the short to medium term.

Further work is necessary from a transport modelling perspective in order to fully analyse ‘critical’ schemes and their alignment in relation to strategic growth.

## Prioritisation for Delivery

Infrastructure planning involves prioritisation at all stages and presents difficult choices in terms of which infrastructure is critical and therefore must be delivered in advance of other requirements. In general, prioritisation will reflect development viability, the availability of public sector funding as well as council and community priorities.

### *Developer Contributions*

As part of the strategy for preparing and adopting a CIL charging schedule, the council will need to identify priorities for spending funds secured through CIL,

and the IDP forms the initial basis of this prioritisation. Alongside this, Stroud have commissioned further viability work to inform the CIL charging schedule and this evidence base should be utilised in prioritising spending of any CIL and S106 monies, taking account of:

- Spatial growth projections and the anticipated phasing of strategic sites;
- The importance of physical infrastructure for enabling development; and
- Opportunities to deliver specific infrastructure through, for example, new funding opportunities.

Infrastructure categorised as critical, and related to the identified strategic allocations should form the initial focus for investment, especially where required to enable development (e.g. flood prevention, access road and utilities).

### ***Public Sector Investment***

Alongside developer contributions Stroud District Council will need to carefully manage and plan other key infrastructure and associated funding sources, ensuring that all delivery partners work together in order to achieve the vision set within the Local Plan and enable sustainable and managed growth.

### ***Funding Gap***

While the data presents a worst case funding gap within Stroud District in excess of £93.2m it must be considered in light of this future prioritisation along with the fact that some of the infrastructure requirements will be delivered at the cost to the developer and/or commercial operator (e.g. utilities infrastructure). Other projects could clearly rely on other private and public funds including bids to central government, National Lottery and other sources.

It is also worth noting that limited information has been received to date on associated funding and therefore Stroud District Council should work closely with service providers and colleagues across various departments in order to ensure an up to date funding picture for projects identified in the Project Tracker.

Consideration also needs to be given to the amount of this identified funding gap which should already be agreed and/or have been received through the level of committed sites identified in the revised development scenario. This totals 4,650 dwellings, over 50% of the allocations for the period 2014-2031 and therefore existing developer contributions should already be known and available to contribute to the identified funding gap.

Stroud District Council should therefore work to understand the existing or known contributions from commitments and continue to prioritise infrastructure development in order to focus efforts to reduce the remaining funding gap.

## **Funding**

This report makes a high level assessment of funding that is available for infrastructure projects and assesses this against estimated capital costs. The assumptions in relation to funding have been informed through discussions with service providers and other stakeholders.

The IDP does not take into account existing contributions which have been received or agreed through known commitments. Stroud DC should work to

assess the level of such contributions in understanding future funding requirements.

Further investigation of public sector funding sources is also required as part of the iterative process required to update the IDP. The IDP Tracker should be updated with the clearer funding picture that will emerge following adoption of the Local Plan. This should be progressed through further consultation following adoption.

In order to meet the funding gap other funding sources and mechanisms will be required in order to offer a range of funding mechanisms to deliver infrastructure.

## Management and Co-ordination

The successful delivery of sustainable and timely employment and housing growth will be dependent on the evolution of the existing strong co-ordination, management and governance arrangements into a more delivery focussed decision making structure.

The delivery of infrastructure projects should be coordinated through a dedicated and independent individual or Implementation Unit (IU) with strong links to the County Council, delivery partners and Local Enterprise Partnership.

Formal arrangements would be required to engage and work with the full range of infrastructure delivery providers. This will be particularly important in trying to deliver efficiencies through innovative approaches to service delivery such as co-location or shared services

## Recommendations and Next Steps

The delivery of the infrastructure required to support new development will rely on a wide range of public, private and third sector organisations working together effectively and efficiently. The District Council has an important leadership role to play in this process as the Local Plan progresses towards examination and adoption and the supporting IDP is refined.

For these reasons, infrastructure planning and delivery must be viewed as an iterative process with the IDP, associated Tracker and Site Calculator reviewed and updated on a regular basis in order to reflect the on-going project development, funding situation and the views of key consultees. Key tasks which must be fulfilled by Stroud DC therefore include:

- Continued liaison with delivery partners, developers and other key stakeholders in order to understand priorities, programmes and delivery plans;
- Utilise the findings within the IDP and Tracker and work with service providers to explore and identify innovative solutions to infrastructure needs that potentially reduce costs. This could include, for example, collocated facilities or expansion of existing facilities over new build.
- Further work on associated funding in order to updated funding gap information;
- Further work to understand the level of agreed/known contributions as a result of the level of commitments within the Plan;
- Regular updates to the IDP and associated Tracker as a 'live process' which will lead to improved accuracy and outcomes of the process;

- Meetings and workshops which focus on particular key infrastructure needs and/or strategic sites, particularly where cross-sectoral working is required;
- Monitoring of local plan policy in relation to infrastructure.

At present there may seem to be more questions than answers raised by the process. This is perfectly normal given that infrastructure planning needs to be a live iterative process to be effective. Perhaps of greatest importance for Stroud District Council is the need to begin to prioritise infrastructure needs and projects and further understand the potential funding situation in order to continue to develop a funding gap model.



# 1 Introduction

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## 1.1 Purpose of the Infrastructure Delivery Plan

The purpose of the Stroud Infrastructure Delivery Plan (IDP) is to evaluate the transport, utilities, community and green infrastructure and services that will be required to support the levels of housing and employment growth proposed in the Draft Local Plan. In doing so, the IDP study fulfils the following roles:

- Provides evidence supporting the preparation of the Local Plan. This version of the IDP presents a refresh of that submitted alongside the Stroud DC Local Plan Submission Draft (Dec 2013) in order to take account of revised housing requirements following Stage 1 of the Local Plan Examination. IDP preparation is seen as an iterative process that should take into account new information as it becomes available.
- Presents estimated infrastructure costs, secured sources of infrastructure funding and whether there is a projected shortfall in infrastructure financing. The study therefore helps to inform the Councils' decisions on priority areas for investment and how they wish to utilise S106 Planning Obligation and Community Infrastructure Levy (CIL) mechanisms to raise funds.
- Identifies whether any Nationally Significant Infrastructure Projects (NSIPs) are expected to come forward within Stroud District.

In addition to enabling planned development to come forward, securing delivery of infrastructure will contribute to the achievement of Stroud District Local Plan objectives. The draft plan sets out an overall vision of the District of:

- A rural District that is modern and innovative, with policies that contribute to reducing CO2 emissions and adapting lifestyles to live within environmental limits.
- A District that exploits unique strengths in green technologies and creative industries, and supports a network of market towns that are well connected to their rural hinterlands and wider regional centres.
- Enjoys a high quality of life within vibrant and diverse communities which are safe and secure and where vulnerable people are supported.
- A District where the historic and cultural heritage is nurtured, from arts and crafts through to the Cotswold Canal and wool and cloth mills.

The overall Vision is supported by 'mini-visions' for parish cluster areas that reflect the distinct priorities, issues and needs in each area, and which may inform infrastructure priorities in certain locations.

Preparation of the Stroud IDP by Arup forms part of a joint commission by a partnership of the following councils in Gloucestershire: Cheltenham Borough Council, Cotswold District Council, Gloucester City Council, Forest of Dean District Council, Stroud District Council and Tewkesbury Borough Council. By preparing a series of IDPs for the District Councils in Gloucestershire, working closely with the County Council, the intention has been to apply a consistent methodology that also supports the identification of cross-boundary infrastructure issues and solutions.

## 1.2 Structure of the IDP

The contents and structure of the IDP is as follows:

- Chapter 2 describes the methodology that has been followed during the preparation of the IDP.
- Chapter 3 sets out the national policy guidance and local context for the IDP, including further information on the development scenarios tested through the IDP process, as well as Parish and Neighbourhood Planning activities.
- Chapter 4 provides a sector by sector assessment of the infrastructure required to support planned development, current projects, responsibilities for delivery, and sector specific funding routes.
- Chapter 5 provides a summary of the emerging infrastructure priorities by infrastructure type;
- Chapter 6 provides a summary of the emerging infrastructure priorities by strategic location and site;
- Chapter 7 sets out projected total infrastructure costs, funding sources and an estimated potential infrastructure funding shortfall.
- Chapter 8 reviews potential funding sources that could be pursued to help deliver priority infrastructure projects.
- Chapter 9 considers next steps and governance arrangements that could help facilitate a collaborative, iterative approach to infrastructure planning and delivery.
- Chapter 10 presents conclusions.

## 2 Methodology

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The common methodology adopted for the preparation of the Infrastructure Delivery Plans (IDP) has been informed by a review of national policy and guidance, together with a review of experience of producing IDPs and Community Infrastructure Levy (CIL) documents elsewhere in England.

### 2.1 National Policy and Guidance

#### 2.1.1 National Planning Policy Framework (March 2012)

The National Planning Policy Framework (NPPF) states that Local Plans must be prepared with the objective of contributing to the achievement of sustainable development (paragraph 151), with infrastructure planning forming an important component of this. The three dimensions of sustainable development give rise to the need for the planning system to perform the following roles (paragraph 7 - summarised):

- an economic role – contributing to building a strong, responsive and competitive economy, which includes coordinating development requirements and ensuring the provision of infrastructure.
- a social role –by creating a high quality built environment, with accessible local services that reflect the community’s needs and support its health, social and cultural well-being.
- an environmental role – helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, mitigate and adapt to climate change including moving to a low carbon economy.

At paragraph 162, the NPPF sets out specific guidance on infrastructure planning, emphasising the need for joint-working with infrastructure and service providers:

“Local planning authorities should work with other authorities and providers to:

- assess the quality and capacity of infrastructure for transport, water supply, wastewater and its treatment, energy (including heat), telecommunications, utilities, waste, health, social care, education, flood risk and coastal change management, and its ability to meet forecast demands; and
- take account of the need for strategic infrastructure including nationally significant infrastructure with their areas.”

#### 2.1.2 Community Infrastructure Levy Legislation and Regulations

As set out in the IDP project objectives in chapter 1, the IDP is expected to inform decisions on the Community Infrastructure Levy (CIL) frameworks to be adopted by the Councils and provide the evidence base supporting any CIL Schedules. It is therefore logical that the IDP methodology complies with relevant legislation and regulations, to the extent that this is necessary to facilitate CIL preparation at a later date.

**The Planning Act 2008** put in place enabling legislation giving local authorities in England and Wales the power to levy a standard charge, the CIL, on most types of new development, to fund the infrastructure needed to support development in

their area. A relatively narrow definition of infrastructure is provided in the Planning Act 2008, when compared to the NPPF. This may be on the basis that other sectors, such as the utilities, are in the main self-financing. Sectors referred to in the Act are:

- roads and other transport facilities;
- flood defences;
- schools and other educational facilities;
- medical facilities;
- sporting and recreational facilities;
- open spaces; and
- affordable housing.

This definition applies to infrastructure for the purposes of defining the CIL legislation. However, the phraseology within the Act allows for this list to be expanded or retracted as the Government sees fit. For instance, the statutory definition of “Infrastructure” which may be funded through CIL in the Planning Act 2008 is wide enough to include affordable housing, but the CIL Regulations specifically exclude affordable housing from CIL at this time.

Further background on CIL and relevant regulations is provided at section 6.2.

### 2.1.3 Planning Advisory Service Guidance

In June 2009, the Planning Advisory Service published ‘A steps approach to infrastructure planning and delivery’. The seven stages of the infrastructure planning process described in the guidance can be summarised as:

- Step 1 – Vision / Policy Context
- Step 2 – Governance
- Step 3 – Evidence Gathering
- Step 4 – Use Infrastructure Standards to assess deficits and identify requirements for strategic sites
- Step 5 - Prepare Infrastructure Delivery Plan, involving phasing and viability testing.
- Step 6 – Validation and consultation
- Step 7 – Implementation and monitoring

The guidance advises that many of the steps can be carried out concurrently and not all parts of the steps will be necessary if other work has already been undertaken. It also advises that evidence and the level of information gathered should be proportionate.

## 2.2 Summary of IDP Project Stages & Outputs

The methodology for the IDP project that was agreed with the partnership of Local Authorities at Stage 1 of this study is summarised in the diagram overleaf and explained in further detail in the subsequent sections.

## **2.2.1 Stage 1 – Development Vision, Scenarios & IDP Governance**

### **Stage 1A – Definition of Development Scenarios and Strategies Locations**

An important first step was to establish the development scenarios that formed the basis for infrastructure planning. This involved confirmation of:

- Strategic and local development Visions that could inform infrastructure delivery and funding priorities.
- Local Plan housing and employment development levels to be tested through the infrastructure planning process.
- Agreement of the appropriate geographies for infrastructure planning, such as the identification of sub-areas and strategic locations for development that underpin the spatial strategy for each Borough, City or District.

This information provides the context for the IDP and is set out at chapter 3.

**Figure 2 - Infrastructure Delivery Plan Study Stages**

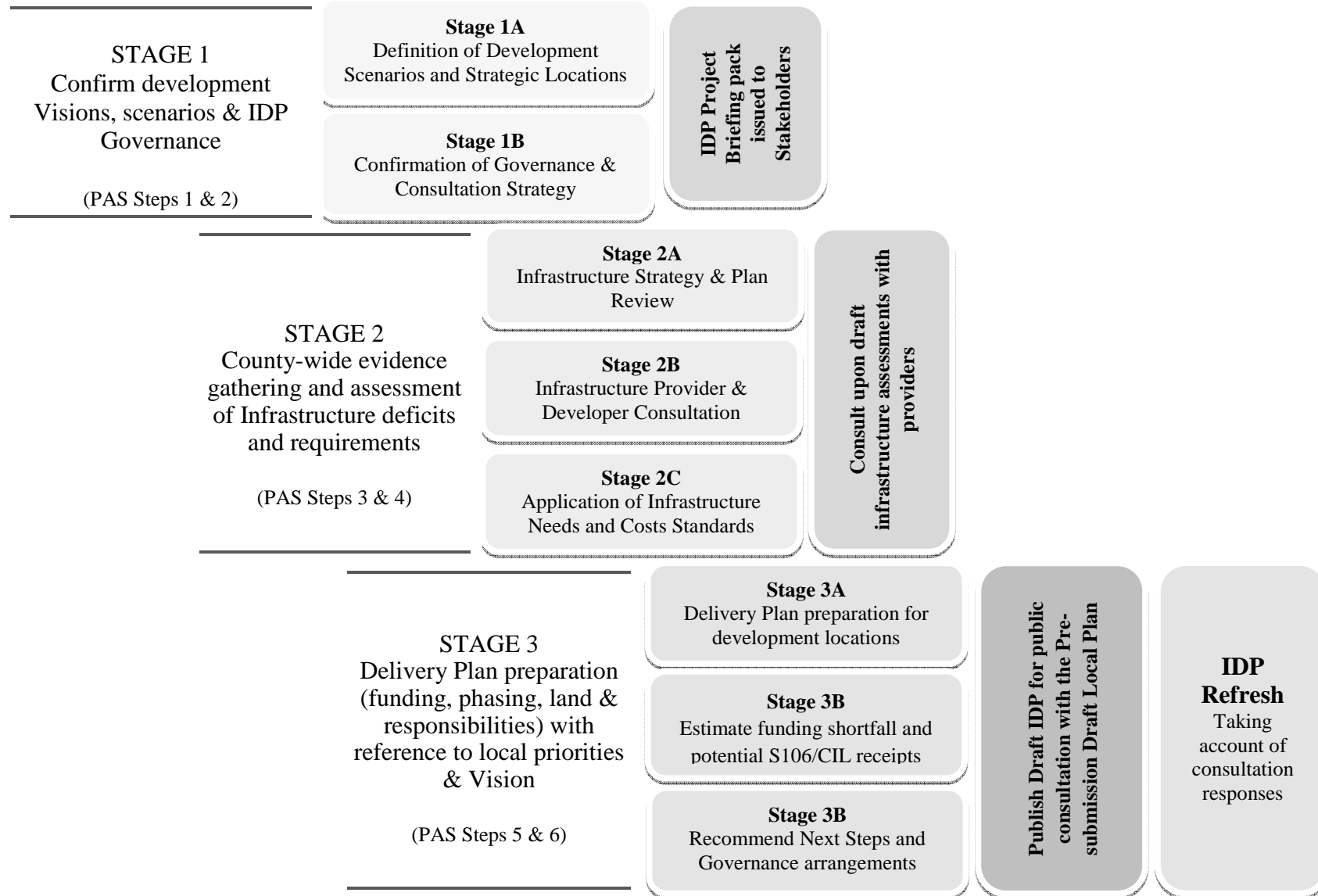


Figure 1 IDP Process Diagram

## Stage 1B – Establish Governance arrangements and Consultation Strategy

The County Planning Officers Group (CPOG) has met on a regular basis during the commission to agree the IDP methodology, review progress and facilitate the consideration of cross-boundary matters in the spirit of the ‘Duty to Cooperate’. The CPOG comprises representatives of Cheltenham Borough Council, Cotswold District Council, Forest of Dean District Council, Gloucester City Council, Stroud District Council and Tewkesbury Borough Council.

As highlighted in the PAS Guidance, the preparation of robust IDPs relies upon consultation with a wide range of infrastructure and service providers, to ensure the projection of infrastructure requirements is realistic and that there is reasonable prospect of infrastructure provision. During the course of IDP preparation Council Members, developers and local communities have also been kept informed of emerging results and recommendations by a variety of means, as set out in the table below.

Table 1 Summary of IDP Consultation Activities

Group	Description
Infrastructure and Service Providers	Issue of IDP Briefing Pack and Questionnaire
	Telecoms and meetings (Stages 2B & 3A)
	Issue of draft IDP outputs for comment (end Stages 2 and 3)
	Consultation on Draft IDP with Pre-Submission Draft Stroud Local Plan
	Issue of IDP Refresh Briefing Pack and Questionnaire
Developers (Strategic Locations)	Consultation on Draft IDP with Pre-Submission Draft Stroud Local Plan
Council Members	Consultation on Draft IDP with Pre-Submission Draft Stroud Local Plan
Local Community	Consultation on Draft IDP with Pre-Submission Draft Stroud Local Plan

### 2.2.2 Stage 2 – County-wide evidence gathering and assessment of infrastructure needs

Infrastructure needs assessment work is undertaken on the basis that the most up to date and detailed information is utilised.

### Stage 2A - Infrastructure Strategy & Plan Review

In many cases infrastructure and service providers prepare their own forward plans for an area. Examples include the School Population Forecast and Organisation Plan of the Education Authority and the 5 year Asset Management Plans (AMPs) prepared by the water supply and wastewater utilities. Where asset plans and strategies are available they have been reviewed to identify relevant information including:

- the methodology used to assess future infrastructure requirements;

- the adequacy of baseline provision and whether there is an existing deficit or oversupply;
- whether the infrastructure plan timeframes and assumed development levels adequately provide for the Local Plan scenarios agreed at Stage 1; and
- whether there are priority infrastructure projects that should be highlighted in the IDP.

This review exercise enables the collation of background information to be further developed through consultation and infrastructure assessment at Stages 2B & 2C.

## Stage 2B – Infrastructure Provider Consultation and Sign-off

IDP Briefing Packs setting out information on Local Plan development scenarios and a series of questions were issued to infrastructure and service providers, with comment requested. Telecoms and meetings were also arranged with individual infrastructure and service providers to understand whether further feedback could be provided in relation to the Local Plan development scenarios set out in the Briefing Packs. Supplementing information from the Stage 2B document review, the objective of the consultation was to understand whether any important development thresholds exist that prompt:

- provision of significant new infrastructure or extension/refurbishment of existing;
- the cost of providing the infrastructure and whether there are funding gaps; and
- whether there are any other viability issues, such as the availability of sites and unrealistic timescales for provision, that threaten reasonable prospect of provision of infrastructure.

## Stage 2C – Application of Infrastructure Needs and Costs Standards

For certain infrastructure sectors it has been beneficial to update information available from existing sector-specific plans by using agreed infrastructure benchmark standards. These can be used to derive estimates of the amount of provision that is required, for instance one new primary school in a particular location, and an estimate of the capital cost for the new infrastructure. This tends to apply to the social and community infrastructure sectors, where benchmarking information has been used to derive national or local standards.

Assessing infrastructure requirements for other sectors, such as the utilities, transport and flood risk management is more reliant on modelling and infrastructure design information available from the service providers and developers.

The methodology used for each sector is described further in chapter 4.

## Stage 2 Outputs

By the end of Stage 2 it was possible to provide draft versions of the sector specific chapters (chapter 4) to infrastructure providers and developers for



comment. As far as possible, these sector specific analysis sections are structured in a consistent way as set out below:

Table 2 Structure of infrastructure assessment by sector

Topic	Contents
Responsibility	The organisation(s) responsible for planning and service delivery
Asset Plans & Strategies	Summary of the relevant plans and strategies and how they have informed the study.
Infrastructure baseline	Commentary and any available figures relating to the infrastructure provision baseline and existing areas/priorities for improvement.
Assessment of Infrastructure Needs	Assessment of infrastructure needs and costs relating to planned development, drawing on relevant strategies, plans, reports and/or national benchmarks
Recent and current infrastructure projects identified	A brief description of recent and current infrastructure projects.
Funding	Identifying relevant sector-specific sources of funding for infrastructure provision

## 2.2.3 Stage 3 – Delivery Plan preparation

### Stage 3A – Delivery Plan preparation for development locations

At this stage of the commission the focus shifted from preparing evidence base on a sector by sector basis towards reaching a view on the potential infrastructure priorities for each sub-area and strategic location for development. Chapter 5 of the IDP sets out potential strategic infrastructure projects and projects of importance for each development location set out in the draft Local Plan.

### Stage 3B – Establish funding shortfall & potential S106/CIL receipts

Drawing together the infrastructure assessment information it is possible to estimate a total infrastructure cost and establish a potential funding shortfall.

Stroud District Council commissioned a Local Plan Viability Report (August 2013), which allows an estimate of infrastructure funding that could be sourced through S106 Planning Obligations and/or the Community Infrastructure Levy to be generated. When compared to the projected infrastructure funding gap, if a shortfall finance persists then this information can inform the Council's consideration of infrastructure funding.

### Stage 3C – Recommend Next Steps & Governance arrangements

Achievement of the Council's Vision and Local Plan for an area will rely on a wide range of public, private and community sector organisations working effectively and efficiently to assist in delivering projects that contribute towards common goals. The Council has an important leadership and coordination role to play in this process and Chapter 8 sets out recommendations on next steps.

## 2.3 IDP Refresh

In recognition that the IDP is a ‘living document’ which will be kept under review, this is the second version of the plan and updates findings of the July 2013 IDP with the latest available information regarding infrastructure provision in Stroud. Future iterations will be produced to reflect the changing plans and strategies of partners, progress in terms of infrastructure delivery and identification of any new infrastructure requirements.

This IDP Refresh has utilised two main sources of information:

- Firstly, consultation on the Pre-Submission Draft Stroud District Local Plan took place during September to October 2013 and a number of representations made were of relevance or specifically referred to within the IDP. This Refresh Version of the IDP has been updated to take into account the comments made.
- Secondly, an IDP Update Briefing Pack was circulated to infrastructure and service providers during September 2014, with any further comments requested. Where additional information has been provided this has been incorporated within this document. Where important matters relating to the potential soundness of the plan have arisen, further focussed telecoms and meetings were arranged.

## 3 Context for the IDP

This chapter of the IDP seeks to provide a summary of the physical, demographic and policy context for the IDP, including an overview of the draft Local Plan development proposals that are assessed through the IDP process.

### 3.1 An introduction to Stroud District

The District of Stroud is located in the county of Gloucestershire and covers an area of approximately 175 square miles. Stroud lies about 20 miles north of Bristol and immediately south of Gloucester and Cheltenham. The district shares boundaries with Cotswold District, Gloucester City, Tewkesbury Borough, the Unitary Authority of South Gloucestershire, and the Forest of Dean District, which sits on the opposite bank of the River Severn Estuary.

Much of the eastern half of the District falls into Cotswold Area of Outstanding Natural Beauty (AONB), while the western half of the District is characterised by the low lying landscape of the Severn Vale and includes extensive areas of land liable to flooding.

The main town, Stroud, is the District's largest commercial centre, yet in terms of retail and leisure it faces competition from the larger towns and cities in the surrounding area. Served by the Gloucester to London main railway line, Stroud has good access to the north and east, including Birmingham and London. Junction 13 of the M5 lies five miles to the west of the town centre.

A more detailed introduction to the District, including an assessment of key issues for the Council, is provided in chapter 1 of the draft Local Plan.

### 3.2 Stroud District Draft Local Plan – Overview of Development Allocations

The submission Draft Local Plan (Dec 2013) identifies a target to provide at least 9,500 dwellings for the period 2006 to 2031. Many of these 9,500 dwellings have already been built or are committed developments (i.e. they have been given planning permission but are yet to be completed; or they are awaiting the signing of legal agreements). This means that the residual number of homes identified in the Draft Local Plan amounted to 2,409.

Following Stage 1 of the Local Plan Examination, Stroud DC commissioned Neil MacDonald and Christine Whitehead to undertake further work on the objectively assessed needs (OAN) for housing during the plan period. This work estimates population growth of approximately 16,700 with a need for an additional 11,200 homes over the plan period (2006-2031).

Table 3 Stroud District Growth Scenario

	Population Growth	Dwellings
Stroud District	16,700	11,200

*Source: Assessing the Housing Requirements of Stroud, Neil McDonald with Christine Whitehead (October 2014)*

Working from this overall planned growth, this Refresh IDP has considered the infrastructure requirements of the revised development scenario for 2014-2031

which is presented below. This considers a need for between 7,650 and 8,200 new homes within the District over this period with the range reflective different density options on sites at North East Cam and Hunts Grove. These have been presented and reported as a ‘Low’ and a ‘High’ scenario.

#### Revised Development Scenario (2014-2031)

District / Development Allocation	Dwellings		Population	
	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>
<i>North East Cam</i>	450	750	981	1,635
<i>Sharpness Docks</i>	300	300	654	654
Committed Sites & Windfall	1,169	1,169	2,548	2,548
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943
<i>Stroud Valleys</i>	400	400	872	872
Committed Sites & Windfall	1,275	1,275	2,780	2,780
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>
Committed Sites & Windfall	346	346	754	754
<b>D. Gloucester Urban Fringe</b>	<b>2,360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635
Committed Sites & Windfall	1,860	1,860	4,055	4,055
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>
<b>Committed Sites &amp; Windfall</b>	4,650	4,650	10,137	10,137
<b>Allocations</b>	3,000	3,550	6,540	7,739
<b>Completions (2006-2014)</b>	<b>3,264</b>	<b>3,264</b>	<b>7,116</b>	<b>7,116</b>

\* The Revised Development Scenario includes a range of growth on certain sites. This range is reported as a high and a low in order that the infrastructure requirements from the range of development can be assessed.

Of importance with respect to the development allocation for Hunts Grove is that the proposed allocation for 500 dwellings would comprise an extension to a committed development of 1,750 dwellings with a business and local centre. This would take the total to 2,250 dwellings. A S106 Planning Obligation attached to the committed planning permission provides for a range of infrastructure provision, and this is taken into account where relevant throughout this study.

With respect to employment land allocations, the refresh considers the provision of approximately 54ha of additional employment (B land use classes). The Local Plan seeks to concentrate most development at a series of strategic employment sites and intensify existing employment uses within the Stroud Valleys, as shown in the Table below.

Table 4 Stroud District Draft Local Plan (Dec 2013) Employment Allocations

Employment Allocations		Ha
Strategic Sites	Quedgeley East	13Ha

Employment Allocations		Ha
	North East Cam	13.4Ha
	Sharpness	17.7Ha
	Stonehouse	9.4Ha
<b>Intensification of employment uses</b>	Stroud Valleys	-
<b>Total</b>		<b>53.5Ha</b>

The above revised growth scenario forms the basis for the October 2014 Refresh of the IDP, superseding the previous scenarios set out within the Consultation Draft (July 2013) and February 2014 Refresh. The locations of strategic allocations are show in Appendix A.

### 3.3 Population growth & IDP demographic scenarios

The revised development scenario has been informed by interrogation of population and household growth projections as part of the report entitled ‘*The Objectively Assessment Housing Needs of Stroud, Forest of Dean and Cotswold*’ (October 2014)<sup>1</sup>. This demographic information has a further important role to play during the interpretation of infrastructure requirements. For instance, population growth that shows a proportionate increase in the number of elderly people would be expected to result in fewer school admissions, but potentially greater demand for healthcare services.

This latest OAN work considers a range of demographic factors, as well as need to accommodate jobs growth within the District. With these factors in mind the propose OAN for Stroud for the period 2006-2031 is 11,200 homes to accommodate a forecast population growth of 16,700. This OAN considers a number of components of change which influence both population forecasts and factors such as household size. These include:

- Births;
- Deaths;
- UK inflow;
- UK outflow;
- International inflow; and
- International outflow.

In calculating the infrastructure needs of the planned growth, consideration has been given to these other factors and the assessment therefore focusses on the infrastructure needs of the proposed allocations, required to meet the planned growth.

To do this, the IDP applies an average household size at 2031 of 2.18 persons to the revised development scenario. This allows for an estimation of the total population at any proposed allocation and considers the infrastructure demand generated by the proposed development, including both the planned growth

<sup>1</sup> Neil MacDonald with Christine Whitehead, ‘*The Objectively Assessment Housing Needs of Stroud, Forest of Dean and Cotswold*’ (October 2014)

(16,700) as well as movement within the District and changes in demographics, for example a reduction in household size.

## 3.4 Stroud District Plans & Strategies

In addition to the Stroud District Draft Local Plan (Dec 2013) there are a number of further strategy and planning documents, including community and neighbourhood plans, that help provide an appreciation of priority matters for the area.

### 3.4.1 Gloucestershire Local Enterprise Partnership Draft Strategic Economic Plan for Growing Gloucestershire 2013

The Gloucestershire Local Enterprise Partnership (LEP) Draft Strategic Economic Plan (SEP) sets out the economic vision for Gloucestershire and aims deliver a business plan to drive growth at a rate of 4.8% GVA per annum (averaged over the plan period).

The SEP aims to achieve growth through focusing on knowledge intensive sectors, supporting business, developing skills and maximising the connections and opportunities of the motorway corridor.

Actions that are of particular relevance to infrastructure planning matters include the SEP's number one transport priority to address the weakness of the Strategic Highways Road Network and the missing link on the A417/A419.

The route provides connectivity for businesses to local, national and international markets. It is also the major strategic route from the Midlands to London, Thames Valley, Airports and the south coast ports. In addition it is a major tourist route to the Cotswolds, Cheltenham and Gloucester. The route is therefore of major importance to Gloucestershire's economy.

The SEP aims to resolve the problems associated with the missing link to achieve economic, environmental and safety improvements, through ensuring that the link is included in Phase 2 of the Route Based Strategy (RBS) work for further development between March 2014 and March 2015. The SEP also has a goal to include the missing link scheme in the Government's major scheme programme for delivery from April 2015 onwards.

### 3.4.2 Stroud District Council Corporate Delivery Plan 2012 - 2026

Stroud DC's Corporate Delivery Plan sets out a series of actions under the themes of economy, affordable housing, environment, resources and health & wellbeing. Actions that are of particular relevance to infrastructure planning matters include:

- Delivery of the £33million Cotswold Canals regeneration project. For every £1 the Council invests a further £9 is invested by partners.
- Commence a council housing new build programme, investing £7million by the end of March 2016.

- Maximise the New Homes Bonus received, in order to invest in ‘jobs and growth’ across Stroud District.
- Develop the council’s approach to building new homes and decide whether to use a special purpose vehicle to deliver this investment.
- Work with partners to deliver the new public health agenda through continued support for the Warm & Well Scheme – The Warm & Well programme is helping low income households in fuel poverty. Vulnerable public and private sector households in off gas rural areas are benefitting from energy efficiency measures that reduce fuel bills and carbon emissions.
- Help vulnerable public and private sector households in off-gas rural areas to reduce their energy bills through renewable technologies (S2S project).
- To work with partners to help deliver the public health agenda – During 2011/12 Stroud DC led a ‘Total Place’ pilot scheme looking at the changing needs of older people in Gloucestershire. The work redesigned service delivery across public bodies in the Cam and Dursley area and is now being applied through Gloucestershire as part of the Living Well programme.

The importance of the Cotswold Canals Project is reiterated in the transport and green infrastructure sections of this report. The implications of an ageing population for healthcare is also considered further in chapter 4.

### 3.4.3 Stroud Sustainable Community Strategy (2010)

The Stroud Sustainable Community Strategy (2010) sets out a Local Strategy Partnership (LSP) vision:

***“We want local people, families, their communities and businesses to be resilient to change and able to thrive in a way that does not compromise the quality of life for present or future generations.”***

The following future challenges for the District are identified:

- a growing but ageing population;
- land availability for both housing and employment;
- obese and inactive young people leading to further adult health problems;
- increasing fuel poverty with increasing fuel prices and reduced income;
- effects of climate change on our natural and built environment;
- decreasing skilled workforce; and
- sustainability of procurement and purchasing of local products, especially food.

The potential for the LSP to have an on-going role in updating the IDP and facilitating infrastructure delivery is considered within chapter 7 of this report.

## 3.5 Community & Neighbourhood Plans

A large proportion of town and parish councils in Stroud District have produced community plans that set out local needs and infrastructure schemes to be taken into account by the IDP.



The Localism Act 2011 introduced new rights and powers to allow local communities to shape new development in their areas through the preparation of Neighbourhood Plans. Successful adoption of a Neighbourhood Plan following a local referendum enables the local community to manage a larger proportion of Community Infrastructure Levy (CIL) receipts as a Neighbourhood Fund. To date the following town and parish councils have expressed interest in preparing a Neighbourhood Plan: Randwick; Eastington; Whiteshill & Ruscombe; Hardwicke; Cam; and Woodchester.

Community Plans and future Neighbourhood Plans that could have a bearing on Strategic Locations for development identified in the Pre-Submission Local Plan are summarised in the table below:

Table 5 Community Plans and Neighbourhood Plans relating to proposed development allocations

Strategic Locations	Community Plan	Neighbourhood Plan
North East Cam	Cam & Dursley Community Plan currently being produced by Town Council	Cam Neighbourhood Plan.
Sharpness	Hinton Parish – no community plan	None proposed to date
West of Stonehouse	Stonehouse Town Council have produced a Community Plan and Eastington Parish Council are in the process of producing one.	None proposed to date
Stroud Valleys	Stroud Town Council has prepared a Community Plan	None proposed to date
	Brimscombe & Thrupp Parish Plan 2011 - 2016	
Aston Down	Minchinhampton Parish Council has prepared a Community Plan	None proposed to date
Hunt's Grove Extension	Hardwicke Parish Plan 2007; Haresfield Parish Council has not produced a plan.	Hardwicke Neighbourhood Plan

Where available, these community plans are taken into account in the commentary on potential infrastructure priorities for different locations within Chapter 5.



## 4 Assessment by infrastructure sector

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### 4.1 Community & Culture

#### Community centres

##### *Overview*

There are existing community centres operated by town/parish councils and community groups within close proximity to the proposed development allocations. Youth centres previously operated by Gloucestershire County Council are now also being offered for transfer to management by community groups as part of the “Big Community Offer.” These include the youth centres at Wotton-under-Edge and Quedgeley.

A high level of assessment of demand for community centres arising from new allocations suggests that it is only the strategic development at Hunts Grove (including commitments) that warrants on-site provision of a new community centre. In each case where development comes forward it will be necessary to consider whether the demand generated by new development is best accommodated through enhancements to existing facilities or provision of new community centres.

Proposals for investment in community facilities should be considered in partnership with community groups that may be willing to take on long term management of buildings. Where large new developments are proposed, the appointment of community development or youth support officers should be considered for an interim period, to help establish community groups that could later take on this role independently.

Based on the assessment of demand, it is predicted that the cost of community centres to serve new development in Stroud District will be around £2.8million.

##### *Responsibility for delivery*

The provision and maintenance of community and cultural facilities, such as community and village halls, will rely upon a mix of public (including use of Parish precept), voluntary and community sector investment, although Stroud DC will have an important leadership and coordination role to play.

##### *Sector plans and strategies*

There is no single county or district-wide strategy for community centres, however information on existing provision and future plans has been gathered from a range of sources, in particular:

- **Gloucestershire County Council ‘Young People’s Services Change Programme Public Consultation Paper’ (November 2010)** – This paper highlighted that there are numerous community, sports, voluntary and faith organisations already providing activities for young people in their local area. The County Council’s on-going strategy is to work with these organisations to ensure a broad range of activities are available, rather than deliver these services independently. This means the County Council is not intending to operate youth centres, but has offered the opportunity for communities to take

over the running of these buildings, with funding support to each District of £50,000.

Of relevance to Stroud District, the County Council has accepted the business case for transfer of the Youth Centres at Quedgeley (within Gloucester City Council) and Wotton-under-Edge, under the *Big Community Offer*<sup>2</sup>.

**Parish Plans & Neighbourhood Plans** – Communities with existing Parish Plans and emerging Neighbourhood Plans are summarised at section 3.6 of this report.

The Gloucestershire Rural Community Council Parish/Community Led Planning Database and Stroud Village & Community Hall’s Network websites provide further useful information taken into account in the preparation of this study.

### **Infrastructure baseline & deficits**

In the majority of cases there are existing community centres in those settlements where strategic development allocations are proposed, although the capacity, range of facilities and state of repair of community buildings will vary from place to place. The table below provides brief details of the community centres located closest to the proposed strategic allocations for development.

Table 6 Community centres close to strategic locations for development<sup>3</sup>

Stroud Sub-area	Strategic Location	Nearest existing community centres	Description
Stroud South Vale (SSV)	North East Cam	Cam Memorial Hall	Hall capacity of 100; 3 meetings rooms. A large hall ideal for dancing, augmented by two smaller meeting rooms and a well fitted kitchen.
		Cam Youth & Community Centre	Hall capacity of 100; 2 meeting rooms.
	Sharpness	Sharpness Village Hall	Hall capacity of 120; 3 meeting rooms
Stroud and West (SW)	West of Stonehouse	The Douglas Morley Hall, Elm Road	
		Oldend Lane Pavillion	Hall capacity of 15; 1 meeting room
		The Scout Hut	
		Stonehouse Community Centre	Hall capacity of 200; 4 meeting rooms. Centre provides a range of room options where small meetings, community events, or large corporate entertainment can be hosted.
		Stonehouse Town Hall	
		Stonehouse Youth Pod	
		St Joseph’s Church	

<sup>2</sup> <http://www.gloucestershire.gov.uk/extra/article/108406/Big-Community-Offer-Youth>

<sup>3</sup> Source: <http://www.grcc.org.uk/village-hall-database/village-hall-database> (April 2013) and <http://www.stonehousetowncouncil.com/your-community/community-buildings/> (April 2013)

Stroud Sub-area	Strategic Location	Nearest existing community centres	Description
	Stroud Valleys	Hall	
		Cashes Green Community Centre	Hall capacity 90; 1 meeting room.
		Paganhill Maypole Village Hall	Hall capacity 60; 1 meeting room.
		Rodborough Community Hall	Hall capacity 87; 1 meeting room; large playing field.
		The Exchange	Hall capacity 40; 2 meeting rooms. Newly extended and refurbished.
		Brimscombe & Thrupp Social Centre	Hall capacity 120; 2 meeting rooms.
		Stroud Youth Centre, Ryeleaze Road	
Gloucester Urban Fringe (GUF)	Hunt's Grove	Hunt's Grove Community Centre and Church site (committed development)	Committed development at Hunt's Grove provides for a community centre comprising a main hall, children's room, craft room, meeting room/parish office, informal seating area/display space, meeting room, office and café/kitchen.
		Hunt's Grove Church Site (committed development)	Committed development at Hunt's Grove provides a site for a church to be constructed.
		Hardwicke Village Hall	Hall capacity 60; 1 meeting room. Small modernised hall with a good kitchen.
		Quedgeley Village Hall	Hall capacity 130; 3 meeting rooms.
		Quedgeley Community Centre and Q Club	Hall capacity 250; and second hall with capacity for 150; committee room and office room. <sup>4</sup>
		Quedgeley Social Club	

### ***Assessment of infrastructure needs & costs***

In order to provide an assessment of community centre provision that would be appropriate to support growth in the Stroud development scenarios, a high level assessment of need has been undertaken. This uses a neighbourhood accessibility standard provided in the publication *Shaping Neighbourhoods – A Guide for Health, Sustainability and Vitality* (Spons 2003, Figure 4.9). Assumptions informing the standard are as follows:

- A community centre per 4,000 population, which equates to a community centre per 1,740 dwellings (based on an average household size of 2.3). Many settlements in Stroud that do have a community centre may not have a current population of 4,000 dwellings and therefore the standard is a guideline only.

<sup>4</sup> Source: <http://www.quedgeley-pc.gov.uk/community-centre/> (accessed April 2013)

- The Village and Community Halls Design Guidance Note (Sport England, 2001) sets out a number of standard floor plans for different sizes of hall. A two hall design with a plan area of 645m<sup>2</sup> is considered a reasonable template as it would allow for a range of activities to be undertaken during higher demand periods at evenings and weekends.
- An estimated capital cost of £1,500/m<sup>2</sup> (rounded) is applied based on Building Cost Information Services (BCIS) Online information (Q2 2013, costs rebased for Gloucestershire location) and SPONS 2012 example community centre achieving BREEAM Very Good (cost rebased to 2013 and Gloucestershire location). This results in an estimated cost of £967,500 for the Sport England template community centre.

A high level assessment of community centre provision to support new development based on this standard is set out in Table 11. This indicates the following:

- The revised development scenario could result in the demand for additional community centre space of between 2,689 and 2,883sqm (equivalent to around 4 community centres based on the 645sqm example), with an estimated capital cost of between **£4-4.3m**.

This figure includes demand generated by both the allocations and committed/windfall sites.

The assessment suggests that it is only at the Hunts Grove strategic allocation, including committed development (2,250 dwellings), that the potential need for a new community centre would be triggered. As set out under current projects below, in this instance provision of a new community centre has been secured through the existing S106 Planning Obligation.

Taking a pragmatic view, financing the modernisation and maintenance of existing community centres is a challenge for the third sector organisations that manage these facilities in the majority of cases. Stroud DC seeks to provide support, including funding where possible, to these organisations. For this reason, and depending on the location of new development, it is recommended that finance may be directed towards supporting and enhancing existing facilities through maintenance, refurbishment, enhancement and revenue payments, rather than provision of new halls. Projects identified through the IDP process to date are set out below.

Table 7 Assessment of demand for Community Centre provision and estimated capital cost

Revised Development Scenario (2014-2031)	Dwellings		Population		Demand (m2)		Capital Cost	
	Low	High*	Low	High*	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>	<b>675</b>	<b>780</b>	<b>£ 1,011,864.71</b>	<b>£ 1,170,050.96</b>
<i>North East Cam</i>	450	750	981	1,635	158	264	£ 237,279.38	£ 395,465.63
<i>Sharpness Docks</i>	300	300	654	654	105	105	£ 158,186.25	£ 158,186.25
Committed Sites & Windfall	1,169	1,169	2,548	2,548	411	411	£ 616,399.09	£ 616,399.09
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>	<b>1,063</b>	<b>1,063</b>	<b>£ 1,595,044.69</b>	<b>£ 1,595,044.69</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943	475	475	£ 711,838.13	£ 711,838.13
<i>Stroud Valleys</i>	400	400	872	872	141	141	£ 210,915.00	£ 210,915.00
Committed Sites & Windfall	1,275	1,275	2,780	2,780	448	448	£ 672,291.56	£ 672,291.56
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>	<b>122</b>	<b>122</b>	<b>£ 182,441.48</b>	<b>£ 182,441.48</b>
Committed Sites & Windfall	346	346	754	754	122	122	£ 182,441.48	£ 182,441.48
<b>D. Gloucester Urban Fringe</b>	<b>2,360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>	<b>830</b>	<b>917</b>	<b>£ 1,244,398.50</b>	<b>£ 1,376,220.38</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635	176	264	£ 263,643.75	£ 395,465.63
Committed Sites & Windfall	1,860	1,860	4,055	4,055	654	654	£ 980,754.75	£ 980,754.75
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>	<b>2,689</b>	<b>2,883</b>	<b>£ 4,033,749.38</b>	<b>£ 4,323,757.50</b>
<b>Committed Sites &amp; Windfall</b>	4,650	4,650	10,137	10,137	1,635	1,635	£ 2,451,886.88	£ 2,451,886.88
<b>Allocations</b>	3,000	3,550	6,540	7,739	1,055	1,248	£ 1,581,862.50	£ 1,871,870.63
<b>Completions (2006-2014)</b>	3,264	3,264	7,116	7,116	1,147	1,147	£ 1,721,066.40	£ 1,721,066.40

### ***Current community centre projects***

- Stonehouse Youth Centre – the Town Council identify the development of new youth facilities at Oldends Lane, including a youth centre and skate park, as a priority for 2013. The Unite Modular Building Company has donated six modules to the Town Council and planning permission has been granted to build a new club on the Oldends Lane field. The Town Council has committed £60,000 to the project and is looking for volunteers to help with the conversion of the modules into a youth club.<sup>5</sup>
- Hunt’s Grove Community Centre - Committed development at Hunt’s Grove provides for a community centre comprising a main hall, children’s room, craft room, meeting room/parish office, informal seating area/display space, meeting room, office and café/kitchen.

### ***Funding Sources***

Local funding initiatives that could be applicable to the enhancement of community centres include:

- The Youth Initiative Fund – The Stroud District Youth Fund has its own budget for making grant awards to young people’s projects. Past grants have been for projects varying from theatre to skiing, basketball to video making and from driving to music making.
- Stroud Town Council Community Support Fund – Community groups can bid for a slice of the £50,000 Community Support Fund on offer from Stroud Town Council. Grants should be between £500-3,000.

Clearly the extent of funding available means that these funding sources will not be appropriate (alone) for provision or major refurbishment works. Communities also often rely on funding from local and national charitable trusts, the Lottery and local fundraising efforts, as well as use of the parish precept in some cases.

Stroud DC will continue to work with partner organisations to identify sources of funding to maintain, enhance and where required, provide new community facilities to support development. Funding sources could include developer contributions through S106/CIL, subject to the prioritisation of planning obligations/CIL infrastructure schedules.

## **Libraries**

### ***Overview***

The way in which library services are provided in Gloucestershire and Stroud District is being reformed taking account of pressure on the financing of public services and the move towards providing digital services. The County Council intends to retain a network of library buildings across the District with the aim that the majority of people should be able to get to a library within a reasonable journey by foot, by public transport or by a short car journey of around 20 minutes. In some cases libraries have been transferred to community management under the County Council “Big Community Offer”.

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<sup>5</sup> Source: <http://www.stonehousetowncouncil.com/the-council/our-priorities/> (accessed April 2013).

Libraries will increasingly act as the local access point for a range of public and digital services and therefore the additional demand for these services generated by new development justifies developer contributions towards the maintenance and enhancement of these facilities, where viable.

Based on a high level assessment of demand, it is predicted that the cost of library services to serve new development in Stroud District will be between **£1.81-1.94m**, depending on final housing figures. Calculations are shown in Table 12.

### ***Responsibilities for delivery***

Gloucestershire County Council is responsible for the delivery of library services across the County and in Stroud District. Under the public libraries and Museums Act 1964 there is a statutory requirement to provide a comprehensive and efficient library service for all.

There have been changes to support for these facilities at the national level that are noteworthy. Responsibilities for museums and libraries, previously undertaken by the Museums, Libraries and Archives Council (MLA), was transferred to the Arts Council in October 2011 as part of the Coalition Government's review to reduce the number of arm's length agencies. The Arts Council is funded by the Department for Culture, Media and Sport and the National Lottery. Whilst not responsible for direct provision or funding of library services, the Arts Council is now responsible for supporting and developing the libraries sector.

### ***Sector plans and strategies***

- **Gloucestershire County Council 'A Strategy for Library Services in Gloucestershire' (April 2012)** – this takes into account pressures on public sector spending and the growing importance of digital information resources. The new strategy proposes a library service that encompasses different delivery mechanisms through:
  - Digital means and via development of the virtual library
  - Services targeted to support vulnerable people
  - A reconfigured network of libraries.
  - Engagement with communities and volunteers
  - Development of partnership with other public sector agencies

### ***Infrastructure baseline & deficits***

There are currently five libraries provided by the County Council in Stroud District, plus three community libraries, that serve a total population of 112,779 (2011 census). Quedgeley Library is also of importance as the closest facility for potential development at Hunts Grove. The libraries are listed below<sup>6</sup>:

- Berkeley Community Library (open 3 days/week; 15 hrs in total)
- Dursley Library (open 6 days/week; 45 hrs in total)
- Minchinhampton Community Library (open 3 days/week; 28 hrs in total)
- Nailsworth Library (open 4 days/week; 21 hrs in total)

<sup>6</sup> Source: <http://www.gloucestershire.gov.uk/libraries> (accessed April 2013)

- Painswick Community Library (open 3 days/week; 15 hrs in total)
- Quedgeley Library, located within Gloucester City Council administrative area (open 5 days/week; 32 hrs in total)
- Stonehouse Library (open 4 days/week; 12 hrs in total)
- Stroud Library (open 6 days/week; 44 hrs in total)
- Wotton-under-Edge Library (open 4 days/week; 22 hrs in total)

During December 2012 the County Council introduced a replacement mobile library service. The newly refurbished van stops at 56 locations in rural areas of the county with visits on a four-week cycle. Modernised facilities include a satellite and computer for internet access, thereby enabling access to information and the services of other public sector partners, such as health for example.

A ‘virtual Library’ website is in operation across Gloucestershire and is available to anyone with internet access. The County Council also operates a ‘Housebound Library Service’, which enables people to pre-arrange a visit by a librarian.

Against a background of public spending cuts and changes in the ways library services are used, such as increasing demand for digital, web-based services, the County Council undertook a review of existing assets and what the library service should look like in the future. Three important elements of the strategy highlighted here are:

***A reconfigured network of libraries and the Big Community Offer*** - In April 2012 the County Council decided to apply a reduction of £1.8million (25%) in the context of library services and the new Library Strategy provided for the retention of 31 council run libraries, and provision of two mobile library services and the Virtual Library. Under the County Council’s Community Offer, 8 communities were invited to submit business cases for running a community library once council funding was withdrawn. By 1<sup>st</sup> January 2013, eight community run libraries had been established across the county. As part of the Big Community Offer encouraging third sector community groups to manage services, these libraries receive on-going support in the form of a cash revenue funding stream of £10,000 per year, provision of PCs and data lines enabling internet access and provision of the Libraries Management System for administering the library loan system. In addition, the library building was made available to them through: a lease arrangement with a ‘peppercorn rent’ (£0); or 20% discount on market value if the library asset was purchased by the community; or up to 50% share of sale proceeds to invest in an alternative community venue for the library provision.

In the case of Stroud District, community libraries were set up at Berkeley, Minchinhampton, and Painswick.

***Co-location of facilities*** – The County Council Strategy identifies libraries as important access points to public services in Gloucestershire and therefore the provision of space for other organisations within library buildings is a logical step. Co-location agreements with the police are in place for a number of libraries, where *Police Points* are now provided, saving costs for both the County Council and Constabulary.

An example of this within Stroud District, is Wotton-under-Edge Library, where a local Police Information Point is available during the library opening hours.



***Development of the Virtual Library*** - The County Council's strategy is that libraries will continue to be key places in the community where people will be able to access broadband and use computers. They will continue to provide support to assist people with accessing digital public services and digital communication, and digital information. As such, the library service will continue to play an important role in ensuring that computer and digital services are accessible to all. The County Council aims to continue with the expansion of the services available through its own virtual library which means wherever the Internet is available anyone will be able to use these digital services 24/7.

### ***Assessment of infrastructure needs & costs***

A high level assessment of library service infrastructure needed to support Local Plan growth has been undertaken using Arts Council benchmark standards. The Arts Council publication *'The Community Infrastructure Levy: advice note for culture, arts and planning professionals'* (April 2012) provides standards to guide the level of provision of library space, as set out below:

- Provision of 30m<sup>2</sup> of Library space per 1000 people.
- An estimated capital cost of £3,500/m<sup>2</sup> is given for England based on 2009/10 prices. Rebasing this estimated cost for 20137 and a Gloucestershire location results in a capital cost of £3839/ m<sup>2</sup>, rounded to £3,800/ m<sup>2</sup>.

An assessment of library space to support new development per settlement based on this standard is set out Table 12.

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<sup>7</sup> BCIS Online – costs rebased to Q2 2013

Table 8 Assessment of need for Library provision and estimated capital cost

		Library Services Infrastructure	
Stroud DC Revised Development Scenario (Oct 2014)	SDC IDP Revised Development Scenario – Housing Units (highest figure)	Indicative Demand Analysis: Application of recommended MLA (now Arts Council) service space requirements (Theoretical m2 requirement)	Indicative Demand Analysis: Application of recommended MLA (now Arts Council) delivery costs (reflective of 2009/10 prices and rounded to nearest £1000)
<b>A. Stroud South Vale</b>	<b>1919</b>		
<i>North East Cam</i>	450	129.5	£453,000
<i>Sharpness Docks</i>	300	30.4	£106,000
Committed Sites & Windfall	1169	20.3	£71,000
<b>B. Stroud &amp; West</b>	<b>3025</b>		
<i>West of Stonehouse</i>	1350	78.9	£276,000
<i>Stroud Valleys</i>	400	204.2	£715,000
Committed Sites & Windfall	1275	91.1	£319,000
<b>C. Stroud &amp; East</b>	<b>346</b>		
Committed Sites & Windfall	346	27.0	£95,000
<b>D. Gloucester Urban Fringe</b>	<b>2360</b>		
<i>Hunts Grove Extension</i>	500	86.1	£301,000
Committed Sites & Windfall	1860	23.4	£82,000
		159.3	£558,000
		33.8	£118,000
		125.6	£439,000
<b>Total Dwellings/Population</b>	<b>7650</b>		
<b>Committed Sites &amp; Windfall</b>	4650	516.4	£1,807,000
<b>Allocations</b>	3000	313.9	£1,099,000
<b>Completions (2006-2014)</b>	3264	202.5	£709,000
		220.3	£771,000

High	<b>A. Stroud South Vale</b>	<b>2219</b>	149.8	£524,000
	<i>North East Cam</i>	750	50.6	£177,000
	<b>D. Gloucester Urban Fringe</b>	<b>2610</b>	176.2	£617,000
	<i>Hunts Grove Extension</i>	750	50.6	£177,000
	<b>Total Dwellings/Population</b>	<b>8200</b>	<b>553.5</b>	<b>£1,937,000</b>
	<b>Committed Sites &amp; Windfall</b>	4650	313.9	£1,099,000
	<b>Allocations</b>	3550	239.6	£839,000

The high level assessment of library provision to support new development indicates the following:

- The revised development scenario could result in the demand for additional library space of around 516 to 550sqm, with an estimated capital cost of between **£1.8-1.9m**.

Taking account of the County Council’s Strategy for library services summarised above, it is anticipated that the additional demand for services (and related funding) would be channelled towards maintaining and enhancing the existing library network, including the Virtual Library, and providing services for more vulnerable groups such as the elderly. The table below identifies the nearest existing library facilities for each strategic development location.

Table 9 Library facilities close to strategic locations for development

Stroud Sub-area	Strategic Location	Nearest existing library facilities
Stroud South Vale	North East Cam	Dursley Library; Cam Mobile Service stop
	Sharpness	Berkeley Community Library; Sharpness Mobile Service stop
Stroud and West	West of Stonehouse	Stonehouse Library
	Stroud Valleys	Stroud Library
Gloucester Urban Fringe	Hunt’s Grove	Quedgeley

Examples of potential schemes to enhance services include:

- **Sharpness** – development at Sharpness has the potential to support the Berkeley Community Library, as well as the existing Mobile Library service stop;
- **Stonehouse Library** – increases to opening hours and resources within the library to support proposed development; and
- **North East Cam** – Dursley library has relatively good opening hours, but development at North East Cam may contribute to the improvement of facilities there or trigger more frequent stops at Cam by the Mobile Library Service.

No library projects specific to Stroud District have been identified through the IDP work to date.

## Youth support services

### *Responsibility for delivery*

Youth Support Teams in Gloucestershire provide a range of services targeted at vulnerable young people aged 11 – 19 (up to 25 for young people with special needs). Gloucestershire County Council is the commissioning authority for Youth

Support Services and has a statutory responsibility to provide support for young people at risk. The Youth Support Team commissions the following services:

- Youth Offending Service
- Looked After Children
- Care Leaver's Support Services (for those aged 16+)
- Early Intervention and Prevention Service for 11-19 year olds
- Support for young people with learning disabilities and/or disabilities and positive activities for young people with disabilities
- Support with housing and homelessness
- Help and support to tackle substance misuse problems and other health issues
- Support into education, training and employment
- Support for teenage parents

Stroud Youth Support Team are part of the Gloucestershire Youth Support Team and are based at Ryleaze Road in Stroud. There are also two youth support teams in Gloucester, based at the Gloucester Youth Support Centre (Westgate Street) and the Vibe Youth Support Centre (Druid's Lane, Stanway Road). While neither of the centres in Gloucester are based very close to the Hunts Grove strategic location for development, they are nevertheless expected to be more accessible than the centre in Stroud for young people in the Gloucester urban fringe area.

#### *Assessment of infrastructure needs & costs*

During consultation with Gloucestershire Youth Support Services three main measures relating to new development were identified.

Firstly, population growth and new residential development results in increased demand for Youth Support Services for vulnerable young people, with the result that it is necessary to increase the capacity of the single Youth Support Centre in each District. Gloucestershire County Council have calculated that the cost of providing services and an assessment of need for Youth Support Services based on this standard is provided in Table 14.

This shows that the revised development scenario could lead to a requirement for between 92 and 99 intervention places at an estimated capital cost of between **£518,000-555,000** over an 8 year period.

Table 10 Assessment of estimated costs for providing Youth Support Services

Targeted Youth Support Services Infrastructure			
Stroud DC Revised Development Scenario (Oct 2014)	SDC IDP Revised Development Scenario – Housing Units (highest figure)	Theoretical 'High-Level' Demand for TYSS Intervention Places (Rounded Totals)	Indicative Capital Delivery Cost (Based on 2012 prices) (Rounded to the nearest £10,000)
<b>A. Stroud South Vale</b>	<b>1919</b>	<b>23.2</b>	<b>£130,000</b>
<i>North East Cam</i>	450	5.4	£30,000
<i>Sharpness Docks</i>	300	3.6	£20,000
Committed Sites & Windfall	1169	14.1	£79,000
<b>B. Stroud &amp; West</b>	<b>3025</b>	<b>36.6</b>	<b>£205,000</b>
<i>West of Stonehouse</i>	1350	16.3	£91,000
<i>Stroud Valleys</i>	400	4.8	£27,000
Committed Sites & Windfall	1275	15.4	£86,000
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>4.2</b>	<b>£23,000</b>
Committed Sites & Windfall	346	4.2	£23,000
<b>D. Gloucester Urban Fringe</b>	<b>2360</b>	<b>28.5</b>	<b>£160,000</b>
<i>Hunts Grove Extension</i>	500	6.0	£34,000
Committed Sites & Windfall	1860	22.5	£126,000
<b>Total Dwellings/Population</b>	<b>7650</b>	<b>92.5</b>	<b>£518,000</b>
<b>Committed Sites &amp; Windfall</b>	4650	56.2	£315,000
<b>Allocations</b>	3000	36.3	£203,000
<b>Completions (2006-2014)</b>	3264	39.5	£221,000

High	<b>A. Stroud South Vale</b>	<b>2219</b>	<b>26.8</b>	<b>£150,000</b>
	<i>North East Cam</i>	<i>750</i>	<i>9.1</i>	<i>£51,000</i>
	<b>D. Gloucester Urban Fringe</b>	<b>2610</b>	<b>31.6</b>	<b>£177,000</b>
	<i>Hunts Grove Extension</i>	<i>750</i>	<i>9.1</i>	<i>£51,000</i>
	<b>Total Dwellings/Population</b>	<b>8200</b>	<b>99.2</b>	<b>£555,000</b>
	<b>Committed Sites &amp; Windfall</b>	<b>4650</b>	<b>56.2</b>	<b>£315,000</b>
	<b>Allocations</b>	<b>3550</b>	<b>42.9</b>	<b>£240,000</b>

A second aspect of Youth Support Services where new development is of importance relates to the opportunity to provide training, apprenticeships and employment during the construction of new schemes. The recession following the global credit crunch of 2008 has resulted in a bulge in youth unemployment in Gloucestershire. 30% of Job Seekers Allowance claimants across the County are aged under 25 years and 32% of these remain unemployed for 6+ months.<sup>8</sup> Local planning authorities are therefore urged to consider the agreement and implementation of Employment and Skills Charters working with developers, to help facilitate the creation of employment opportunities within the construction sector.

The third recommended measure is to ensure that facilities for young people within major new developments are brought forward early in the phasing schedule (by way of appropriate planning conditions) and that a Community Development Officer is appointed to help establish pioneer community activities and services.

The Kingsway development in Gloucester has been identified as an example of where the absence of community infrastructure during the early years of occupation of the estate was a contributing factor to escalating anti-social behaviour, particularly amongst young people. A youth worker is now to be appointed to assist in tackling issues and to improve the availability of facilities for young people.

For those developments that are considered to be of a scale that would warrant the appointment of a community development / youth worker officer, a basic annual cost allowance of £30,000-35,000 is recommended by Gloucestershire County Council. In the case of Hunts Grove, the committed development provides for the appointment of a Community Warden (or police officer as an alternative option) along with a financial contribution towards CCTV.

## 4.2 Education

### Early Year's education & childcare

#### *Overview*

The Childcare Act 2006 requires Local Authorities to provide universal childcare provision for 3 to 4 year olds to ensure that there is sufficient good quality childcare available for parents who want to work, train for work, or who are already in work. The Government is also committed to introducing a new targeted entitlement for 2 year olds to access free early education. This is being introduced in two phases, with free early education for 20% of the least advantaged two-year-olds implemented from September 2013, with the number of places increasing to provide for 40% of the least advantaged children from September 2014. Ensuring there is sufficient capacity within the network of Children's Centres, nurseries, pre-school playgroups and child-minders will therefore be of great importance.

An assessment of need has been undertaken using a locally derived standard provided by Gloucestershire County Council. This suggests that planned

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<sup>8</sup> 'Grow Gloucestershire: A youth employment and skills strategy for Gloucestershire' (Gloucestershire County Council Youth Economic Stimulus Project, July 2012)



development as part of the revised development scenario could result in the need for approximately 571 to 612 Early Year's care places, provided at a capital cost of between **£6.6-7.2m** (see Table 16).

### ***Responsibilities for delivery***

Early Years education is currently defined as full-time or part-time education from the start of the term following the child's 3rd birthday and up to compulsory school age, although coverage is broadening in certain circumstances to include two year olds. Early Years education places are provided through partnership working between the responsible Local Authority (LA) and providers in the maintained, private, voluntary and independent sectors. Gloucestershire County Council's Children's Centres operate some local services through on-site pre-school nurseries to contribute towards local childcare provision, although childcare provision across the county is predominantly delivered through day nurseries and pre-school playgroups that offer full and sessional day care. Other local options include child-minders, nursery classes within independent schools and privately operated nursery schools.

The Childcare Act 2006 requires LAs to provide universal childcare provision for 3 to 4 year olds to ensure that there is sufficient good quality childcare available for parents who want to work, train for work, or who are already in work. The Government is also committed to introducing a new targeted entitlement for 2 year olds to access free early education. This is part of the Government's Fairness Premium, to drive up social mobility and improve life chances.

Department for Education Statutory Guidance for Local Authorities on the Delivery of Free Early Education for Three and Four Year Olds and Securing Sufficient Childcare (September 2012) summarises the responsibilities of English LAs under the 2006 Act:

- 2 year old entitlement – the free entitlement to early education was initially extended to some 2 year olds through a national pilot. Gloucestershire has been part of the pilot since 2007, delivering the free entitlement to the most vulnerable and disadvantaged 2 year olds. The Cirencester Children's Centre was included as part of this pilot. The Government now plans that the new entitlement for 2 year olds will be implemented across the country in two phases. From September 2013 (phase one), it was planned that around 130,000 (20%) of 2 year olds in England would be able to access free early education places. From 2014 (phase 2), the entitlement will be extended to around 260,000 (40%) of two year olds.
- 3 and 4 year olds entitlement – Regardless of their parents' ability to pay, all eligible children are able to take up high quality early education. LAs are required by legislation to make available sufficient free early education places offering 570 hours a year over no fewer than 38 weeks of the year for every eligible child (the equivalent for 15 hours/week for 38 weeks a year).
- Childcare for older children – In addition, LAs are required by legislation to secure sufficient childcare, as far as reasonably practicable, for working parents (or parents studying or training for employment), for children aged 0-14 (or up to 18 for disabled children).

### ***Sector specific plans & strategies***

***The Childcare Sufficiency Assessment (April 2011)*** - The Childcare Act 2006 formalises the process of gathering information on the planning and development of childcare, and requires local authorities to undertake a thorough ‘sufficiency assessment’ every three years, and to update this information regularly in the interim periods. The latest *Childcare Sufficiency Assessment* was prepared by Gloucestershire County Council (CC) Childcare Team and published in April 2011. The assessment sets out details of the current level of provision within the County for Early Years provision and, more specifically, details of the supply and demand of facilities.

***The Gloucestershire Strategic Infrastructure Delivery Plan (October 2010)*** - The Gloucestershire Strategic Infrastructure Delivery Plan (SIDP) provided an initial assessment of Early Years education needs linked to future growth in the County up to 2026, as determined during 2009 and 2010. The section on Social and Community Infrastructure applied locally derived standards for the number of early year’s education places anticipated to be generated through new development.

### ***Infrastructure baseline***

The following provides an overview of Early Year’s provision, based on data collected during the latter part of the 2010/2011 financial year, as set out in the latest Gloucestershire Childcare Sufficiency Assessment (April 2011). Gloucestershire has 39 Children’s Centres in total which vary between large centres offering a wide range of services throughout the week in deprived areas and smaller ‘bases’ that offer occasional activities and staff outreach. Children’s Centres play a pivotal role in the development and delivery of services in partnership in local areas and Children’s Centre reach or cluster areas provided the basis for analysis in the 2011 sufficiency assessment. In total, 164 providers operated through these Children’s Centres in 2011.

There are seven Children’s Centres in Stroud District and the Gloucester Urban Fringe sub-area area in which Hunts Grove is situated is served by three further Children’s Centres located in Kingsway, Quedgeley and Tuffley. The table below sets out the Children’s Centres that are most likely to serve proposed development allocations, based on broad sub-areas, together with matters identified for further investigation in the Childcare Sufficiency Assessment (capacity based on 2011 data). It should be noted that Children’s Centre cluster area boundaries do not fully correspond with the Stroud sub-areas and up to date information will be required to undertake a full assessment, taking account of the new 2 year old entitlement.

Table 11 Children's Centres serving Stroud District

<b>Sub-areas and proposed</b>	<b>Local Children’s Centres reach and cluster areas</b>	<b>Gap analysis – based on 2011 Childcare Sufficient Assessment<sup>9</sup></b>
Stroud South Vale: North East Cam & Sharpness	Treetops Children’s Centre, Dursley	-
	Wotton Children’s Centre, Wotton-under-Edge	Demand high and gaps identified in current provision.

<sup>9</sup> Section 8 of the Childcare Sufficiency Assessment identifies those areas where demand is high and gaps have been identified in current provision. The Childcare Sufficiency Assessment utilises two gradings of issues that need to be addressed: only the higher priority issues are referenced here.

Sub-areas and proposed	Local Children's Centres reach and cluster areas	Gap analysis – based on 2011 Childcare Sufficient Assessment <sup>9</sup>
Stroud & West: Stonehouse & Stroud Valleys	The Park Children's Centre, Stonehouse	
	Five Ways Children's Centre, Stroud	-
	Parliament Children's Centre, Stroud	Cost and affordability of childcare requires further assessment.
Gloucester Urban Fringe: Hunts Grove	Beacon Children's Centre, Kingsway, Gloucester	High take up of existing places available per 100 children.
	Quedgeley Library Children's Centre, Quedgeley, Gloucester	High population of eligible children and young people.
	The Oaks Children's Centre, Tuffley, Gloucester	-

### ***Assessment of infrastructure needs & costs***

To complete a detailed local assessment of the need for additional Early Years places, up to date information on capacities and anticipated future changes in provision will be needed. In addition, more detailed information on proposed housing mix and type (dwellings size and tenure) will be required.

At this stage in the process, a high level District-wide indicative assessment of basic need has been completed. This applies the locally derived Gloucestershire standard for the number of Early Year's places likely to be generated through new development. The standard reads as follows:

- 7.467 (full-time equivalent) Early Year's care places per 100 qualifying homes<sup>10</sup>. To estimate capital cost for providing early years provision Gloucestershire CC use a figure of £11,682 per child.

It is important to note that this indicative assessment has suspended the application of qualifying homes and has included all potential dwellings in its calculations.

This Gloucestershire standard is well established and has been successfully used in local planning for a number of years, including for the consideration of development proposals. It is based upon statistical research into estimating future theoretical demand, which was carried out by Gloucestershire County Council's Chief Executive's Support Unit (CESU) and Business Services (Property) Directorate<sup>11</sup>. In line with good practice, the County Council have recently instigated an update review of this standard.

It should be noted that, as the benchmark standard is based on the number of dwellings, rather than population. As highlighted above, more detailed

<sup>10</sup> A 'qualifying home' for education purposes is defined as a single residential unit that is not an apartment/flat or which has not been covered by restricted occupancy in respect of families (e.g. retirement/age restricted housing).

<sup>11</sup> *Child Population of New Developments in Gloucestershire: An investigation into the Numbers of Children Likely to be Resident on New Housing Developments in Gloucestershire* - Gloucestershire County Council (GCC): Chief Executive's Support Unit (CESU) (June 2007)

assessments would follow once there is greater certainty of dwelling mix and types within each of the development allocations, and potentially for larger windfall site applications as they come forward. It is also considered that a more up to date and locally specific cost multiplier may prove more appropriate when undertaking a detailed analysis at a later stage in the infrastructure planning process.

### ***Current infrastructure projects***

No specific Early Year's provision projects have been identified through consultation to date.

### ***Early Years Funding***

***Early Years Single Funding Formula*** - Funding is channelled through Gloucestershire CC via the Early Years Single Funding Formula (EYSFF) to a mix of local authority, private, voluntary, independent nurseries and accredited childminders. The aim of the EYSFF introduced by the Government is to distribute funding based on common principles. In Gloucestershire the EYSFF was introduced in 2010 and is based on participation of children and so only funds occupied places. The formula consists of a base (hourly) rate plus an annual supplement for deprivation (statutory requirement). The introduction of the EYSFF decreased the base rate, but introduced an annual supplement for deprivation. In April 2010 when the EYSFF was introduced, the hourly base rate was £3.22. This rate increased to £3.25 in April 2011.

## **Primary & secondary education**

### ***Overview***

The education system is currently in a period of transition as management and funding arrangements are changed to reflect the coalition Government's objectives. The Government wants to provide schools with greater management and budgetary freedoms, with the result that many schools, particularly secondary schools at this time, are converting to Academy status. Gloucestershire County Council, the responsible Local Authority (LA) will retain a strategic coordinating role to ensure that all children have a school place and will continue to allocate funding for state schools until such time as they convert to Academies.

Planning for future school capacity is complicated by the desire to enable parent/student choice and changes to the popularity of different schools. This means that pupils may not attend the closest school to new development and the County Council therefore uses School Planning Areas to gauge changes in capacity requirements across a wider area.

At this stage of the infrastructure planning process, high level assessments of need have been undertaken utilising a locally derived Gloucestershire County Council standard. Application of these results is projected to lead to a demand for between **2,123** and **2,276** primary school places at an estimated capital cost of between **£24.8-26.6m**; and between **1,207** and **1,293** secondary school places (including 6<sup>th</sup> form) at an estimated capital cost of between **£21.5 -23.1m**.

### ***Responsibilities for delivery***

Published by the Department of Education in November 2010, *The Importance of Teaching White Paper* sets out the Government's intended direction of travel for the schools system and funding. A principal objective of the Government is to increase the autonomy of schools and reduce bureaucratic constraints at the national and local levels. Based on a review of international experience and the high performance of Academies and City Technology Colleges (CTCs) in the UK, the Government wants to provide schools with greater management and budgetary freedoms, while Local Authorities (LAs) will retain a strategic coordinating role.

In summary, the White Paper states that the Government will:

- Restore all original freedoms to Academies, while ensuring there is a level playing field on admissions (particularly in relation to Special Educational Needs).
- Dramatically extend the Academies programme, opening it to all schools.
- Ensure lowest performing schools are considered for conversion to Academies to effect educational transformation.
- Ensure there is support for schools to collaborate through Academy chains and multi-school trusts and federations.
- Support teachers and parents to set up new Free Schools to meet parental demand, especially in areas of deprivation.

With respect to the on-going role of LAs, the White Paper proposes to give LAs a strong strategic role as champions for parents, families and vulnerable pupils. They should promote educational excellence by:

- ensuring a good supply of strong schools and high quality school places;
- co-ordinating fair admissions to schools for every child;
- retain responsibility for school transport arrangements which promote fair access;
- support vulnerable pupils, including Looked After Children, those with Special Educational Needs and those outside mainstream education;
- support maintained schools performing below the floor standards to improve quickly or convert to Academy status with a strong sponsor;
- use their democratic mandate to stand up for the interests of parents and children; and
- develop their own school improvement strategies.

Importantly, while the majority of schools are LA maintained schools, funding will continue to pass to them through the LA, which is Gloucestershire County Council for Stroud District. As more schools become Academies, funding will be provided directly by the Government to improve funding consistency nationwide.

Local authorities will, over time, play a role in commissioning new provision and overseeing the transition of failing schools to new management.

In practical terms, where there is a need for a new school, the Government advises that the first choice will be a new Academy or Free School. Where a local authority is unable to identify a suitable sponsor to open a new school, it will be

able to contact the Secretary of State, so that they can work together to find a sponsor.

### ***Infrastructure related sector specific plans & strategies***

***The Gloucestershire Strategic Infrastructure Delivery Plan (April 2011)*** - The Gloucestershire Strategic Infrastructure Delivery Plan (SIDP) provided an initial assessment of primary and secondary education needs in the County up to 2026, as determined during 2009 and 2010. The section on Social and Community Infrastructure presented locally applied standards for the anticipated number of education places that would be generated through new development, for primary and secondary education (up to age 16 years).

### ***Infrastructure baseline – Primary Schools***

There are 58 state funded infant and primary schools located within Stroud District (information provided by Gloucestershire County Council). These schools form part of 10 local school planning areas, which encompass the entirety of the district, and also the southern part of Gloucester City including Quedgeley. The 10 local school planning areas broadly cover the settlements and surrounding localities of Berkeley, Dursley, Frampton & Saul, Nailsworth including Minchinhampton, Painswick, Stonehouse, Stroud (broken down into three zones) and Hardwicke, Longney and Haresfield, which fall within the local planning area of the south of Gloucester city known as Quedgeley.

The majority of state funded infant and primary schools in Stroud are either: - Community, Foundation, Voluntary-Aided (VA), or Voluntary-Controlled (VC). There are also several Academy Converters and Academy Sponsor-led primary schools.

The vast majority of primary-level schools in Stroud provide both infant and junior education from reception (4-5 yr olds) through to year 6 (10-11 yr olds). The district has only two infant-only schools, which accommodate pupils from reception (4-5 yr olds) through to year 2 (6-7 yr olds), and two junior-only schools that provide for year 3 (7-8 yr olds) through to year 6 (10-11 yr olds).

### ***Infrastructure baseline – secondary schools***

There are seven secondary schools located within Stroud District, which form part of 2 district-wide secondary school planning areas, namely: Stroud West, which covers the towns, villages and surrounding areas of the southern Berkeley Vale, Cam & Dursley and Wotton-under-Edge; and Stroud East, that includes Stonehouse and the Stroud Valleys. However, due to the relative close proximity of several neighbourhood areas of Stroud District to the nearby urban area of Gloucester City and the reasonable prospect of secondary-school age children travelling beyond their immediate local area, consideration should be given to the likelihood that a proportion of children will attend schools from within the adjacent Gloucester City secondary school planning area.

Stroud Secondary schools are a combination of Community, Foundation and Academy Converters. Stroud High School is a Girl's only Grammar School and Marling School is Boy's only Grammar School. There are also other Grammar schools within Gloucester City and Cheltenham that offer a potential alternative for Stroud residents. Grammar schools are state funded schools that are able to select their pupils on the basis of academic ability. Pupils in their final year of

primary school sit an exam often referred to as the ‘11-plus’ which determines whether or not they are eligible for a place.

Five of the seven secondary schools in Stroud District also provide sixth-form provision. This is complemented by a number of secondary schools within the Gloucester City secondary school planning area that also offer sixth-form provision.

### *Assessment of infrastructure needs & costs*

Providing a meaningful assessment of need for new school places requires careful consideration. It is not a simple exercise of identifying unmet need by deducting the anticipated number of new pupils generated by new development from the current unused number of places available in the closest local schools. A number of other factors need to be taken into account such as increasing opportunities for parental choice – this is a statutory duty of the LA, and acknowledging changes in local popularity of local schools over time. Furthermore, in parts of Stroud District topographic and other associated physical access constraints mean that crude radial proximity assessments rarely yield reliable neighbourhood catchments for identifying potential local schools likely to be selected by parents of new development.

In the future, therefore, detailed site-by-site accessibility assessments will be needed. These will take into consideration up to date baseline information for each school planning area along with more detailed information on planned housing mix and type (dwellings size and tenure). Such need assessments should be augmented by an occurrence of new pupils over time, such as in five-year blocks over the lifetime of the Local Plan.

For the purpose of this study, meanwhile, a high level assessment of indicative need for primary and secondary education places has been undertaken, based on the following locally derived Gloucestershire CC Standards:

- 27.76 primary school places required by every 100 additional dwellings with an estimated capital cost of £11,682 per primary school pupil place.
- 13.87 secondary school places per 100 qualifying homes, for 11-16yrs only at a capital cost of £15,101 per pupil place.

In line with good practice, the County Council are in the process of reviewing these standards. It is therefore expected that the high level assessment of pupil places will need to be updated in due course. Application of these results is shown in Table 16 and leads to a projected demand for between **2,123** and **2,276** primary school places at an estimated capital cost of between **£24.8-26.6m**; and between 1,207 and 1,293 secondary school places (including 6<sup>th</sup> form) at an estimated capital cost of between **£21.5-23.1m**.

Gloucestershire County Council have provided comments on the implications of new development for the three of the proposed development allocations:

- Hunt’s Grove Extension – It is likely that a larger development area (taking into account the existing committed development for 1,750 dwellings) will require a reassessment of education requirements, which may result in revised on-site provision, particularly for primary-level education.
- North East Cam – Larger scale development at this location may require new local primary-level infrastructure. This is due in part to topographic challenges

associated with the proximity of the prospective development area and the location of existing local provision.

- Stroud Valleys – Very careful consideration will need to be taken when assessing individual development sites situated along the Stroud Valleys. Overly simplistic radial proximity assessments will not be sufficient on their own and will require further detailed accessibility work to determine a more realistic view of which local schools may be impacted by new development, both individually and cumulatively over time.

### ***Funding***

***The Dedicated School Grant*** - As set out above under Responsibilities for Delivery, the County Council will remain responsible for the allocation of funding to schools until they reach a stage of converting to Academy status. The Government's proposal in the White Paper is to simplify funding and provide greater flexibility by giving autonomous schools a single funding stream, the Dedicated Schools Grant. This will be based on a national funding formula to improve consistency and fairness of funding levels. The Government also proposes to target more resources towards the most disadvantaged areas, primarily through the application of a 'Pupil Premium', which means schools will receive extra money for each pupil from a deprived background.

***Schools Capital Spending*** – the Building Schools for the Future programme was ended by the Government as it considered that large sums of money were being wasted on bureaucracy. This has resulted in a 60% reduction in education capital spending, but the Government has committed to spend £15.8 billion between 2011-12 and 2014-15. The priority for spending has shifted from new build programmes towards addressing the poor condition of the existing school estate and ensuring that there are enough places for the predicted increase in the number of school age children, particularly at the primary level (paragraphs 8.24 and 8.25 of the *Importance of Teaching White Paper*, 2010).

The Government's recent publication '*Investing in Britain's Future*' (June, 2013) includes a commitment to invest a further £21 billion in schools over the next Parliament. This includes sufficient funding to:

- build over 275,000 new primary school places and 245,000 new secondary places nationwide to keep up with demographic demands, rebuild schools in poor condition, and drive education reform;
- open up to 180 new Free Schools, 20 University Technical Colleges and 20 Studio Schools a year;
- address all essential schools maintenance needs, using improved data to target funding; and
- rebuild 150 schools in very poor condition by 2017, as part of the Priority School Building Programme.

## **Further Education**

### ***Overview***

In 2008 the Government set requirements that by 2015 all 17 and 18 year olds should remain in education or training. This requirement will have clear



implications for capacity at the existing Further Education institutions in Stroud District and neighbouring authorities.

The Education Funding Agency (EFA) has put in place a 16-19 Demographic Growth Fund to assist institutions provide the additional accommodation, however further research will be required to understand whether this will enable the creation of sufficient student places taking account of proposed new development.

A high level assessment of estimated demand has been undertaken, which identifies a demand for between **115** and **123** additional places at an estimated capital cost of between **£1.74-1.86m**.

### ***Responsibilities for delivery***

The Education Funding Agency (EFA), an executive agency of the Department for Education, is responsible for the funding of 16-19 provision in academies, general further education colleges, sixth-form colleges and independent provision. Funding allocations administered by the EFA are designed to support the Government's aims for raising the age of participation in education or training. The Education and Skills Act 2008 sets out that from summer 2013, all young people will be required to continue in education or training. This change is being implemented in two phases:

- From summer 2013, all young people will be required to continue in education or training until the end of the academic year in which they turn 17.
- From 2015 they will be required to continue until their 18th birthday.

This requirement will have clear implications for the capacity of Sixth-Form and Further Education providers and Local Authorities will have a statutory responsibility to secure sufficient education and training places in their areas, taking into account quality and other factors.

### ***Baseline and assessment of need***

Current providers of sixth form and further education in Stroud District are:

- Archway School, Stroud
- Katherine Lady Berkeley's School, Wotton-under-Edge
- Marling School, Stroud
- Rednock School, Dursley
- Stroud High School, Stroud
- South Gloucestershire and Stroud College – campuses in Stroud, Filton and Bristol.

Further Education colleges that offer a range of academic and vocational courses, such as South Gloucestershire and Stroud College, tend to serve a wider catchment area with intake of students from all parts of Gloucestershire, Bristol and neighbouring counties. Students within Stroud District may also choose to attend sixth form and further education establishments within Gloucester, such as Gloucestershire College, given the proximity and accessibility of the city.

In terms of assessing future demand, this study does not seek to assess the full implications of the Government's age of participation objectives, with respect to children and young people already within the system. However, it does seek to appraise the implications of new development in Stroud District Council taking account of the requirements for 17 and 18 year olds to remain in education or training.

A high level assessment of need has been undertaken by applying the following benchmark standard:

- an assumption of 4.8 post-16 full-time education places per 100 qualifying homes; and
- to estimate capital costs calculated at £17,832 per child.

Application of this high level assessment of estimated demand identifies a demand for between **115** and **123** additional places at an estimated capital cost of between **£1.74-1.86m** as shown in Table 16.

### ***Current Projects***

During the year 2011/12 the South Gloucestershire and Stroud College's Estate Strategy was approved, which includes the development of a sports centre and classrooms at the Stroud Campus.<sup>12</sup>

### ***Funding Sources***

During March 2013 the Government made the following announcement regarding capital funding for 16-19 provision<sup>13</sup>: “£80 million will be made available for 2013-14 and 2014-15 to maintained schools, Academies, sixth form colleges and independent specialist providers to fund additional places needed as a result of demographic changes. This funding will also support the provision of new places for students with learning difficulties and disabilities.”

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<sup>12</sup> Source: South Gloucestershire and Stroud College Annual Report 2011/12 - “*Outstanding by Standing Out*”

<sup>13</sup> Source: Department for Education ‘School capital funding’ Press Release (1<sup>st</sup> March 2013) - <https://www.gov.uk/government/news/written-ministerial-statement-on-school-capital-funding>

Table 12 Assessment of demand for School Places

Stroud DC Revised Development Scenario (Oct 2014)	SDC IDP Revised Development Scenario – Housing Units (highest figure)	Early Years Education Infrastructure		Primary Education Infrastructure		Secondary Education (incorporating post-16 6th Form Provision) Infrastructure			Post-16 Education Infrastructure (provided by FE Institutions and / or other publicly-funded providers)			
		Demand (Rounded Totals)	Indicative Capital Delivery Cost (Rounded to the nearest £10,000)	Demand (Rounded Totals)	Indicative Capital Delivery Cost (Rounded to the nearest £10,000)	Demand (Rounded Totals)			Indicative Capital Delivery Cost - where no 6th-form is to be provided locally	Indicative Capital Delivery Cost) - where 6th-form is to be provided locally	Demand (Rounded Totals)	Indicative Capital Delivery Cost (Rounded to the nearest £10,000)
						Secondary element	5th Form element	Secondary incl. 6th Form				
<b>A. Stroud South Vale</b>	<b>1919</b>	143.3	£1,670,000	532.7	£6,220,000	266.2	36.4	302.7	£4,020,000	£5,400,000	28.9	£440,000
<i>North East Cam</i>	450	33.6	£390,000	124.9	£1,460,000	62.4	8.5	71.0	£940,000	£1,270,000	6.8	£100,000
<i>Sharpness Docks</i>	300	22.4	£260,000	83.3	£970,000	41.6	5.7	47.3	£630,000	£840,000	4.5	£70,000
Committed Sites & Windfall	1169	87.3	£1,020,000	324.5	£3,790,000	162.2	22.2	184.4	£2,450,000	£3,290,000	17.6	£270,000
<b>B. Stroud &amp; West</b>	<b>3025</b>	225.9	£2,640,000	839.8	£9,810,000	419.7	57.4	477.1	£6,340,000	£8,510,000	45.5	£690,000
<i>West of Stonehouse</i>	1350	100.8	£1,180,000	374.8	£4,380,000	187.3	25.6	212.9	£2,830,000	£3,800,000	20.3	£310,000
<i>Stroud Valleys</i>	400	29.9	£350,000	111.0	£1,300,000	55.5	7.6	63.1	£840,000	£1,120,000	6.0	£90,000
Committed Sites & Windfall	1275	95.2	£1,110,000	354.0	£4,130,000	176.9	24.2	201.1	£2,670,000	£3,590,000	19.2	£290,000
<b>C. Stroud &amp; East</b>	<b>346</b>	25.8	£300,000	96.1	£1,120,000	48.0	6.6	54.6	£720,000	£970,000	5.2	£80,000
Committed Sites & Windfall	346	25.8	£300,000	96.1	£1,120,000	48.0	6.6	54.6	£720,000	£970,000	5.2	£80,000
<b>D. Gloucester Urban Fringe</b>	<b>2360</b>	176.2	£2,060,000	655.2	£7,650,000	327.4	44.8	372.2	£4,940,000	£6,640,000	35.5	£540,000
<i>Hunts Grove Extension</i>	500	37.3	£440,000	138.8	£1,620,000	69.4	9.5	78.9	£1,050,000	£1,410,000	7.5	£110,000
Committed Sites & Windfall	1860	138.9	£1,620,000	516.4	£6,030,000	258.0	35.3	293.4	£3,900,000	£5,230,000	28.0	£420,000

			£0					0.0				
<b>Total Dwellings/Population</b>	<b>7650</b>	<b>571.2</b>	<b>£6,670,000</b>	<b>2123.8</b>	<b>£24,810,000</b>	<b>1061.3</b>	<b>145.3</b>	<b>1206.6</b>	<b>£16,030,000</b>	<b>£21,520,000</b>	<b>115.2</b>	<b>£1,740,000</b>
<b>Committed Sites &amp; Windfall</b>	4650	347.2	£4,060,000	1290.9	£15,080,000	645.1	88.3	733.4	£9,740,000	£13,080,000	70.0	£1,060,000
<b>Allocations</b>	3000	224.0	£2,620,000	832.9	£9,730,000	416.2	57.0	473.2	£6,280,000	£8,440,000	45.2	£680,000
<b>Completions (2006-2014)</b>	3264	243.7	£2,850,000	906.1	£10,590,000	452.8	62.0	514.8	£6,840,000	£9,180,000	49.1	£740,000

High	<b>A. Stroud South Vale</b>	<b>2219</b>	165.7	£1,940,000	616.0	£7,200,000	307.8	42.1	350.0	£4,650,000	£6,240,000	33.4	£500,000
	<i>North East Cam</i>	750	56.0	£650,000	208.2	£2,430,000	104.0	14.2	118.3	£1,570,000	£2,110,000	11.3	£170,000
	<b>D. Gloucester Urban Fringe</b>	<b>2610</b>	194.9	£2,280,000	724.6	£8,460,000	362.1	49.6	411.6	£5,470,000	£7,340,000	39.3	£590,000
	<i>Hunts Grove Extension</i>	750	56.0	£650,000	208.2	£2,430,000	104.0	14.2	118.3	£1,570,000	£2,110,000	11.3	£170,000
	<b>Total Dwellings/Population</b>	<b>8200</b>	<b>612.3</b>	<b>£7,150,000</b>	<b>2276.5</b>	<b>£26,590,000</b>	<b>1137.6</b>	<b>155.7</b>	<b>1293.3</b>	<b>£17,180,000</b>	<b>£23,060,000</b>	<b>123.4</b>	<b>£1,860,000</b>
	<b>Committed Sites &amp; Windfall</b>	4650	347.2	£4,060,000	1290.9	£15,080,000	645.1	88.3	733.4	£9,740,000	£13,080,000	70.0	£1,060,000
	<b>Allocations</b>	3550	265.1	£3,100,000	985.5	£11,510,000	492.5	67.4	559.9	£7,440,000	£9,980,000	53.4	£810,000

## 4.3 Emergency Services

### Ambulance Service

#### *Overview*

The Great Western Ambulance Service that previously served Gloucestershire has now merged with the South Western Ambulance Service NHS Foundation Trust. As a result of the merger, the new organisation is undertaking a review of the combined estate to understand where disposal, re-provision or new facilities would be appropriate or required. It is not anticipated that the review work will identify any major or key infrastructure projects in the Stroud area, but investment in facilitated standby points, Public Access Defibrillators and Community First Responders Schemes is advocated.

#### *Responsibilities for delivery*

South Western Ambulance Service NHS Foundation Trust (SWASFT) provides services across Gloucestershire as well as Cornwall, Devon, Somerset, Dorset, Wiltshire and the former Avon area. The trust employs more than 4,000 staff across 120 operational sites, responding to over 660,000 incidents. The trust covers an area of 9,600 square miles with a population of more than 5.3 million people.

#### *Baseline and assessment of needs*

Emergencies in Gloucestershire County are responded to by a number of ambulances and rapid response vehicles that are strategically located at Ambulance Stations and Standby Points. There is a requirement to respond to 75% of all Red Calls (Life Threatening) Emergencies) within 8 minutes and therefore the location of these vehicles is of paramount importance. The Ambulance Stations in Stroud are set out below:

- Stroud Ambulance Station; and
- Dursley Ambulance Station

The ambulance service also operates a principal clinical hub and admin centre from Gloucester, which is of particular relevance to proposed development at Hunts Grove.

Following the merger of the Great Western Ambulance Service (GWAS) with SWASFT, a new Estate Strategy is being developed to cover the enlarged area. The current requirement is for existing ambulance stations to be supported by local Standby Points where, if feasible, staff facilities for rest breaks and vehicle parking are provided.

The information in Table 19 is based on feedback provided by SWASFT. This includes several references to the need for further investment in the Gloucestershire Fire and Rescue Service (GFRS) Co-Responder Scheme. There are several pilot sites for this approach to joint-working, which is described as a unique model for the delivery of front-line operations in the UK. A practical example is the increasing co-responding medical responses fire fighters provide in rural areas of the county to support life ahead of the arrival of paramedics.

The ambulance service welcomes engagement in the plan-making process and pre-application discussions so that opportunities for co-location and joint working can be investigated. For example, where new healthcare facilities are planned, in some cases it may be beneficial for the ambulance service to establish a satellite ambulance station or standby point.

***Key infrastructure projects***

As stated above, the two existing trusts were working together prior to acquisition in early 2013 to develop an Estate Strategy covering the wider area. Initial reviews are continuing in the GWAS area following the approval of the GWAS Estate Strategy in May 2011 – these do not include any major or key infrastructure projects in the Stroud area.

Table 13 Ambulance Service requirements relating to proposed development allocations

Areas	Strategic Locations	Revised Development Scenario	Comment on requirements from ambulance service	
Stroud South Vale	North East Cam	450 - 750	Investment in a Dursley Co-Responder scheme would assist with responses in this area.	
	Sharpness	300	Sharpness cannot be reached within acceptable time limits from current stations or standby points. It is recommended that a community responder scheme is established in this area.	
	Sharpness, Severn Distribution Park employment allocation	17.7ha		
Stroud & West	West of Stonehouse	1,350	Responding to incidents at Stonehouse is not achievable within 8 minutes from any ambulance station; a facilitated standby point will be required in this area.	
	Stonehouse employment allocation	9.4ha		
	Stroud Valleys	<b>Sub-total</b>	<b>400</b>	Accessible within 8 minutes from Stroud Ambulance Station.  Brimscombe and Thrupp are not achievable within 8 minutes from any ambulance station: a facilitated standby point will be required in this area.
		Cheapside		
		Ham Mill		
		Brimscombe Mill		
		Brimscombe Port		
		Wimberley Mills		
Dockyard Works				
Gloucester Urban Fringe	Hunts Grove Extension	500 - 750	Development accessible within an 8 minute response time.	
	Quedgeley East employment allocation	13ha		

## Fire & Rescue Service

### *Overview*

The Gloucestershire Fire and Rescue Service undertook a comprehensive review of its estate during 2005 and secured a £multi-million Private Finance Initiative to deliver four new fire stations around Gloucester and Cheltenham. Supplemented by smaller community fire stations in Stroud District, the Fire & Rescue service has put in place the infrastructure to respond quickly to life threatening incidents across the county.

Development proposed in the Stroud Local Plan is not expected to result in a requirement for major new infrastructure. Nevertheless, continuing consultation with the Fire and Rescue Service is recommended to ensure that development proposals enable rapid response times, and include safety measures such as sprinkler systems and fire hydrant provision as appropriate.

### *Responsibilities for delivery*

The Fire and Rescue service for the whole of Gloucestershire is delivered by the Gloucestershire Fire and Rescue Service. From 2012 the service was delivered from 22 community fire stations across the County.

### *Sector plans and strategies*

The Gloucestershire Fire and Rescue Service ***Integrated Risk Management Plan 2012 – 2015*** advises that in 2005 Gloucestershire Fire and Rescue Service carried out a review of the best way to continue to protect their service area. From this review it was noted that the County needed better located fire stations, to enable faster responses to life threatening incidents.

Using the Government's Private Finance Initiative the Fire Service successfully secured a £multi-million project in 2010 to build four new community fire stations. The new community fire stations have been built at Shepherd Road (incorporating the Life Skills Centre) and Cheltenham Road East in Gloucester (replacing existing fire station on Eastern Avenue) and Keynsham Road (existing fire station demolished and rebuilt) and Uckington in Cheltenham.

The Gloucestershire Fire and Rescue Service Integrated Risk Management Plan 2012 – 2015 states that the number of firefighters with specialist skills and vehicles at each station reflects the existing risks within the area, giving the most efficient and effective emergency response to the local community, as well as county wide resilience for larger scale incidents.

### *Infrastructure baseline & deficits*

Of the 22 stations in Gloucestershire, five are crewed permanently 24 hours a day and one is crewed during the day with retained firefighters at night. The other sixteen stations, located in the smaller towns are crewed by retained firefighters only (where firefighters respond to emergencies from their main jobs or from home as and when required). The Gloucestershire Fire and Rescue Headquarters is located in Quedgeley, Gloucester, where a Tri-Service Co-Responding scheme is based (see Ambulance section for further information).

The table below shows each of the community fire stations in Stroud District and Gloucester and the fire equipment available at each station.



Table 14 Fire and Rescue Stations in Stroud District<sup>14</sup>

Community Fire and Rescue Stations	Day crewing / Wholetime / Retained	Fire Equipment
Dursley	Retained	2 x fire engines, mass decontamination vehicle, hovercraft
Gloucester North, Cheltenham Rd East	Wholetime	1 x fire engine, 1 x pump rescue, aerial ladder platform, specialist incident support unit
Gloucester South, Shepherd Rd	Wholetime	1 x pump rescue, rescue boat and DEFRA boat
Nailsworth	Retained	1 fire engine, 1 x narrow access vehicle
Painswick	Retained	1 fire engine
Stroud	Wholetime	1 x pump rescue, 1 x fire engine, narrow access vehicle, environmental protection unit, damage control unit
Wotton-under-Edge	Retained , co-responder	1 fire engine

### *Assessment of infrastructure needs*

As detailed above the Gloucestershire Fire and Rescue Service reviewed their services in 2005 and embarked on the creation of four new community fire stations, which were completed in 2012. The location of existing and new fire stations has been carefully considered and together they provide an emergency response to any incident in the County.

During consultation with the Gloucestershire Fire and Rescue Service, the following matters were raised with respect to ensuring the appropriate design of new development:

- Access points and road sizing within developments are important when ensuring that rapid response times can be achieved. Consultation with the Fire and Rescue Service is recommended at the pre-application stage when development proposals are at an early stage.
- Fitting housing with sprinkler systems is recommended as an important safety measure, particularly within affordable housing developments. This can also form an important form of mitigation where target response times cannot be met due to the location or layout of development.
- Fire hydrants will be required within new developments, typically spaced 50m apart. Developers should consult with the Fire and Rescue Service on layout and minimum standards for hydrants, which are normally secured by a condition attached to a planning permission.
- In the case of the Hunts Grove development, the position of the access point and layout of development will be of particular importance in this location to ensure that target response times can be met.

The Fire and Rescue Service places a great deal of emphasis on accident prevention through education, awareness raising and advice. A complete package

<sup>14</sup> Source: Gloucestershire County Council “*Integrated Risk Management Plan*” (2012-2015)

of care is provided that is aimed at providing advice and education for every age group from the very young to the elderly and vulnerable. This includes the appointment of Community Safety Advisers (CSAs) that visit homes and give advice to the most vulnerable members of the community.

## Police Services

### *Overview*

Gloucestershire Constabulary operates the Stroud Local Policing Area and currently maintains two police stations at Stroud and Dursley. Stroud DC has an obligation to consider crime and disorder reduction in the exercise of all their duties.

Gloucestershire Constabulary has concluded that the proposed level of growth in the Stroud District will not significantly increase demand for police services and place pressure on Gloucestershire Constabulary's infrastructure base within the District and central facilities provided elsewhere in the County.

Nevertheless, the police service has seen substantial budget reductions as part of the Government's Comprehensive Spending Review and the constabulary has emphasised that developer contributions (through S106 Planning Obligations or CIL) will be necessary to provide the minor level of police infrastructure necessary to support growth, as no other funding sources are available. Contributions of around £87.40 will be sought towards the following projects and services: refurbishment and upgrade of existing Police Station; refurbishment and upgrade of the Stroud station; and enhanced vehicles and mobile ICT equipment that enable officers to be "on the streets" for large parts of the day, rather than completing paperwork at stations. Failure to secure appropriate developer contributions may necessitate additional borrowing by the Constabulary, reducing the amount of money available for operational policing.

### *Responsibilities for delivery*

**Gloucestershire Constabulary** has a statutory responsibility to ensure that Stroud District is a safe place to live and work; where crime and fear of crime is reduced.

The Crime and Disorder Act 1998 introduced a wide range of measures for preventing crime and disorder. Section 17 (as amended by Schedule 9 of the Police and Justice Act 2006), imposes an obligation on every local authority (which includes Local Planning Authorities such as Stroud DC) and other specified bodies to consider crime and disorder reduction in the exercise of all their duties. This duty extends to spatial planning and by clear association the infrastructure planning required to facilitate growth in a sustainable way.

### *Sector plans & strategies*

**Police and Crime Commissioner's Police and Crime Plan ( 1 April 2013) - A** Police and Crime Plan replaces the "old" Local Policing Plan and sets out to reduce crime by: involving all of Gloucestershire's criminal justice agencies in one joined-up strategy, bringing together the Police, Crown Prosecution Service, Courts, Probation Service and HM Prison Service and including community and voluntary sectors. It is the first time the county's police, criminal justice services, community and voluntary sectors have all been included in a co-ordinated approach to reducing crime. Commissioner Surl's vision can be described as

“*less crime, more peace and good order*”. The Police and Crime Commissioner’s priorities are:

- Accessibility and accountability
- Older but not overlooked
- Young people becoming adults
- Safe days and nights for all
- Safe and social driving

**‘People First Policing’ 2012 – 2013** - The Policing Plan for Gloucestershire, ‘People First Policing’ 2012 – 2013, set out the purpose of Gloucestershire Constabulary as an organisation is “to keep people safe from harm and to inspire the highest levels of public confidence in us, their local police.” The Constabulary’s mission is “to consistently deliver first class policing that meets the expectations and needs of individuals and communities.” Key activities identified for the year were:

- Improve: the deployment of police officers and staff; and organisational structures, processes and systems.
- Achieve the savings required. The Government’s Comprehensive Spending Review requires the constabulary to make savings of £18million. This will include the closure of Police Stations, which will be replaced with Police Points that enable members of the public to meet local officers through locally arranged surgery hours.
- Realise opportunities for collaboration and sharing resources. This includes the establishment of Police Points in shared accommodation such as Council offices or libraries.

Neighbourhood Policing and Mobile Information are important aspects of the constabularies approach to policing.

- Neighbourhood Policing is identified as being at the heart of Gloucestershire Constabulary with teams established in each of our 55 communities, staffed by Police Officers and Police Community Support Officers. The ongoing success of these teams is built through improvements in the quality of our engagement and communication as we continue tackling local priorities identified by our communities. Research suggests that people who feel well informed about local policing feel more confident in their local police and are more likely to believe that levels of local crime and anti-social behaviour have improved.
- Mobile Information will enable Officers to make enquires and provide updates using hand-held BlackBerry devices reducing the requirement to return to a police station to access systems.

**Asset Management Strategy (April 2013)** - The Asset Management Strategy is a strategic level document to guide the delivery of an estate that meets operational needs, including the requirements of planned growth in the County. The strategy covers a 20 year period and lists the high level priorities, but does not include timescales for the delivery of any projects. Priority projects are:

- Centralised Custody Suite – this project was initiated in October 2011 and building work on the £12.4mil project commenced during the summer 2013. The new custody suite is planned to open by November 2014.

- New Gloucester Police Station – a site has been purchased and an outline business case approved but no timescales are available as yet.
- New Cheltenham Police Station – a site has been identified but to date no further progress has been made on this project.

### ***Baseline***

Gloucestershire Constabulary has recently been restructured and now operates with six Local Policing Areas, commanded by Superintendents, corresponding with the six District authorities. Local policing is provided by response teams in each area and nine Neighbourhood Policing Teams, two each in Cheltenham, Gloucester and Stroud and one in Tewkesbury, the Forest of Dean and the Cotswolds. Within the Local Policing Areas are fifty-five neighbourhoods, each with identified officers and locally agreed priorities.

Each neighbourhood has a dedicated neighbourhood policing team and in Stroud District there are currently policing facilities in Stroud and Dursley, with some specialist services centralised in larger stations in the county. The table below summarises relevant existing facilities, their key functions and comments on future strategy in each case.

The Constabulary has also set up a number of Policing Points across the County which are leased and therefore supported by revenue budgets.

Table 15 Police Stations in Stroud District

<b>Name of facility</b>	<b>Key functions</b>	<b>Infrastructure required</b>
Stroud	Neighbourhood policing and response	Refurbishment and upgrade of existing building. This building is well situated but is very out of date and requires upgrading to make it fit for purpose in the future. The extent and cost of the refurbishment has been estimated at this time to inform the proposed level of developer contribution.
Dursley	Neighbourhood policing and response	No current plans and developer contributions would be used for additional mobile data and vehicles as appropriate.

**Central Custody Facility** - When assessing the additional property infrastructure that is required to meet planned growth in Stroud District, it is also necessary to look at the whole of the County and the level of growth proposed in other local authority areas. The central custody suite in Gloucestershire is one of the central specialist facilities in Gloucestershire utilised by Neighbourhood Policing Teams in the Stroud District. A decision has already been made to replace custody facilities as the current suites are increasingly becoming unfit for purpose. However, the suites also do not have the capacity to meet the needs of planned growth, so if the replacement facility with extra capacity was not provided officers will be forced to take arrestees to other county custody suites such as West Mercia or Wiltshire or not to make arrests. The new facility, which is now being constructed at a site close to the Police Headquarters in Waterwells will replace the existing custody facilities at Gloucester, Bearland and Lansdown Road, Cheltenham, but has also been designed so as to provide additional capacity for planned growth across the County.

In terms of the number of Police Officers and staff, recruitment has been frozen for a number of years and only recently has the constabulary been able to commence recruiting new Police Officers. However, these will only be replacing the officers who have retired as the overall establishment has been cut. The current funding arrangements will not allow for growth.

Potential constraints/issues faced by the Police characteristic of the Stroud district are:

- The population in the Stroud District is sparsely dispersed across a large rural area with the largest town being Stroud. Dursley and Cam provide the main focus for industry and commerce in the southern part of the District.
- Stroud District covers a less popular area of the Cotswolds and despite the overall healthy nature of the Stroud economy there are pockets of social deprivation. Symptoms of exclusion and underlying decline are apparent in parts of Stroud, Cam and Dursley.

The Constabulary is confident that in the future there will be greater need for mobility and therefore a greater requirement for non-property infrastructure (vehicles and mobile ICT equipment) to allow officers to be 'on the streets' for large parts of their working day in such a large rural area.

#### *Assessment of infrastructure needs & costs*

Gloucestershire Constabulary has advised that the growth related impacts of effective and efficient policing are twofold:

- Population growth - Policing is essentially a population driven service; with any increase in population there is a concomitant increase in the pressure on the ability of the Police to fulfil their obligation under the Police Act 1996 to deliver an efficient and effective Police service. The causal relationship between population size and levels of crime is supported by academic research. Put simply, if a population increases there is a proportionate increase in the level of crime.
- Dispersal or concentration of property - New housing is delivered (broadly) either through redevelopment and intensification of existing urban areas, or through the development of new peripheral green field sites. Each will impact on delivery of policing; either through a concentration of population within an existing urban area, which places greater demand on existing facilities/staff; or by spreading the growing population more widely within an area, thereby facilitating a need for additional facilities located more closely to new centres of population.

Economic growth is also a key Government policy objective. Economic growth creates a greater stock of premises to be policed, which impacts for similar reasons (to residential growth) on the delivery of policing. Maintenance of a visible police presence is a key deterrent to crime, and therefore an increase in the amount and dispersal of all types of property necessarily increases demands on policing infrastructure.

In broad terms, Gloucestershire Constabulary has concluded that the proposed level of growth in Stroud District will not significantly increase demand for policing services and pressure on Gloucestershire Constabulary's infrastructure within the Stroud District area. The Constabulary has sought to identify the

minimum level of additional infrastructure necessary to cater for the increased demands on policing generated by the planned level of growth. This has been assessed at the county-wide and district level and both for property and non-property infrastructure.

In line with guidance from the Association of Chief Police Officers (ACPO) (which advises Police Forces nationally), Gloucestershire Constabulary has prepared a county-wide formula in order to provide a quantitative assessment of infrastructure needs and costs for each Local Policing Area. The formula produces an indicative figure that is based on the premise that an increase in population will necessitate further recruitment and associated infrastructure provision. This indicative figure has enabled the Constabulary and its Local Area Commanders to identify levels of additional infrastructure which are proportionate to the levels of growth proposed.

Infrastructure investment required to support development in Stroud District is summarised below:

**Property infrastructure:**

- Contribution to Stroud Police Station Refurbishment and Upgrade
- Contribution to Central Custody suite for Gloucestershire

**Non-property infrastructure:**

The planned new growth in the Stroud District has been identified to require the setting up of 20 new Police Officer and staff posts. The estimated costs applied using the ACPO formula allow for:

- Uniform and protective equipment;
- Patrol car - the Constabulary has a replacement programme but additional vehicles can only be purchased if additional funding is available. The proposed growth within the County would have an impact on the number of vehicles required and this is reflected in the formula. The formula accounts for costs in terms of a patrol car. If a mobile police station were funded the individual costs would be higher but fewer patrol cars would be required.
- Cost of recruitment
- Training
- IT Equipment, airwave /telephony - as the Stroud District is a large rural area, officers will be expected to rely on mobile data and vehicles rather than returning to police stations to complete paperwork.
- Furniture

In accordance with the ACPO formula, the funding to be sought from developers through S106 Planning Obligations or CIL would equate to around £87.40 per dwelling based on the total draft Local Plan dwelling provision of 9,500.<sup>15</sup>

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<sup>15</sup> Gloucestershire Constabulary has obtained population figures from the Gloucestershire County Council demographics team to input to the ACPO formula. The projected population figure of 121,800 by 2031 is consistent with the ONS 2010 based Sub-National Population Project referred to in section 3.4 of the IDP.

Of note is that for Hunts Grove, committed development provides for the appointment of a Community Warden (or police officer as an alternative option) along with a financial contribution towards CCTV.

Gloucestershire Constabulary has stressed that if developer contributions towards policing infrastructure cannot be secured, the Constabulary would only be able to provide a reduced service which would impact detrimentally on the sustainability of planned development. Failure to secure appropriate developer contributions/CIL funding for police infrastructure may necessitate additional borrowing by the Constabulary, reducing the amount of money available to deliver operational policing (further notes on the funding situation are provided below). Failure to secure appropriate developer contributions/CIL funding for infrastructure to police new growth will put the public at risk because of:

- inability to respond to police incidents within safe parameters of risk; and
- dilution of police presence within communities which will result in higher levels of criminality.

### ***Funding***

The delivery of growth and new development within the Stroud District imposes some additional pressure on Gloucestershire Constabulary's infrastructure base, which is critical to the delivery of effective policing and to securing safe and sustainable communities. The Police Service does not receive any dedicated funding for capital projects. While revenue funding is provided by the Home Office and the Council Tax precept, capital spending is predominantly financed by prudential borrowing. Borrowing to provide infrastructure necessarily has an impact on the delivery of safe and sustainable communities because loans ultimately have to be repaid from revenue budgets, the corollary of which is a reduction in the funding available to deliver operational policing.

As part of the Government's Comprehensive Spending Review (CSR) announced in November 2010, Gloucestershire Constabulary has been forced to rationalise its estate and plan for future financial cuts in order to achieve its CSR requirements of an £18 million saving over 4 years. This has included the consolidation of policing services at some police stations and the closure of other police stations. Any receipts generated from the disposal of existing facilities cannot be 'ring-fenced' or dedicated to new capital spending projects; instead the funds are required by statute to be reinvested into the running of the police estate as a whole. Income is therefore ploughed back into areas such as building maintenance; replacement of operational equipment and operational funding. As a consequence, in practical terms there is no 'pot' of money available to provide new facilities, where expansion, replacement or upgrading is required. Capital receipts from the sale of stations are committed to supplementing other funding streams within Gloucestershire Constabulary (to minimise potential impacts on frontline services). Post-CSR, through its Estate Plan, the Force has sought to streamline its infrastructure base to reduce operational costs whilst maintaining frontline presence to match the existing population and maintain delivery of an efficient and effective police service.

To this end, the baseline position for this document reflects the post-CSR spending cuts. Therefore, any net additional growth within the Local Policing Area will place some additional pressures on policing infrastructure.

## 4.4 Energy

### *Overview*

This study is primarily concerned with understanding whether there are any engineering or other obstacles that would prevent or delay the connection of development sites to the electricity and gas grid/network, resulting in implications for site delivery or phasing. Network operators have not identified any sites where connections could not be provided, but have identified that development at Sharpness, and load growth in the area, may necessitate the provision of a new 33kV overhead electricity circuit to Ryeford BSP (Bulk Supply Point), some 15km away. This reinforcement work could take 2-3 years to implement.

With respect to waste heat as an energy source and the possibility of establishing heat networks, Stonehouse, Stroud, Cam & Dursley and Quedgeley are identified as locations that potentially have sufficient demand intensity, along with ‘anchor loads’, that could make district heating networks fuelled by low carbon fuels viable.

No energy projects of sufficient scale to be classed Nationally Significant Infrastructure Projects (NSIPs) have been identified, although it is noted that proposals for a new nuclear power station at Oldbury could have implications for the south west of Stroud District.

### *Responsibilities for delivery*

Following the privatisation of the English energy industry in 1990, responsibilities for energy generation and distribution has been dispersed to numerous private sector infrastructure operators, as described in the sections below, with oversight and regulation provided by the industry regulator Ofgem. More recently, however, in response to energy security and climate change drivers, both the national and local tiers of government have become increasingly active in strategy and planning processes and promoting low carbon energy generation.

## Electricity generation

### *Responsibilities for delivery*

Security of energy supply in terms of generation capacity is a matter safeguarded at the national level and there is not a requirement to demonstrate there is sufficient supply overall to ensure Local Plan soundness, however Stroud DC does have a responsibility to assist in the achievement of UK targets to reduce emissions of greenhouse gases.

The Climate Change Act 2008 sets a target to reduce greenhouse gas emissions in the UK by at least 80 per cent from 1990 levels by 2050. To achieve this, nationwide there will need to be an increase in energy generation from renewable sources, a new generation of nuclear power stations, the development of newer and sometimes smaller scale generation techniques such as anaerobic digestion and the replacement of existing coal-fired power stations with cleaner alternatives, including the commercial deployment of carbon capture and storage technology.

The NPPF states that ‘...local planning authorities should recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources’ (paragraph 97). They should (in summary):



- have a positive strategy to promote energy generation from renewable and low carbon sources;
- design policies to maximise renewable and low carbon energy development while ensuring that adverse impacts are addressed;
- consider identifying suitable areas for renewable and low carbon energy sources;
- support community-led initiatives for renewable and low carbon energy; and
- identify opportunities where development can draw its energy supply from decentralised, renewable or low carbon energy sources.

### ***Sector plans & strategies***

***Gloucestershire Renewable Energy Study (2010-2011)*** A two stage study looking at the potential for renewable energy in Gloucestershire in the period to 2026<sup>16</sup>, forms part of the evidence base underpinning the Stroud Local Plan. The Stage 2 report considers that in Stroud District there is some potential for renewable energy generation from wind, but significant constraints. There is some existing biomass resource and the District is well suited to growing energy crops.

***Stroud District Council ‘Renewable Energy: Supplementary Planning Advice’*** – This document has not formally been adopted as part of the Local Development Framework, but sets out the Council’s expectation that all major development<sup>17</sup> (either new build or conversion) should incorporate renewable energy technology on-site to reduce predicted CO<sub>2</sub> emissions by at least 10%.

### ***Current & planned infrastructure projects***

Current major energy generation proposals within Stroud District are listed below:

- Sharpness Wind Turbine – a planning application has been submitted for one wind turbine at Sharpness with a maximum overall height of up to 122m (Application ref: S.11/2448/FUL). This application is pending consideration (updated Feb 2014).
- Energy from Waste facility at Javelin Park, Stroud – during March 2013 Gloucestershire County Council considered a planning application for a £500million Energy from Waste facility at Javelin Park. The application was refused planning permission and an appeal to the Planning Inspectorate has been submitted.

There are no current proposals for Nationally Significant Infrastructure Projects (NSIPs) within Stroud, however, proposals for a new nuclear power station at Oldbury in South Gloucestershire has been registered with the National Infrastructure Planning department of the Planning Inspectorate. The proposals may have implications for the south west of Stroud District, such as off-site infrastructure improvements necessary to facilitate construction of the new plant:

- ***Oldbury New Nuclear Power Station*** – A nuclear power station proposed by Horizon using Pressurised Water Reactor (PWR) technology. Comprising of

<sup>16</sup> Gloucestershire County Council (2010) Renewable Energy Study and Resource Assessment  
Gloucestershire County Council (2011) Renewable Energy Study 2 – Resource Assessment

<sup>17</sup> Major development is defined as: Residential – ten or more dwellings, or if outline 0.5ha or greater site area; Other development – 1,000sqm or more, or if site is 1.0ha or more.

up to 7 three nuclear reactors with a combined expected output of about 3,300MW. Horizon's shareholders are seeking new owners for the business and as such the project timings are currently under review.

## Electricity Transmission

### *Responsibilities for Delivery*

The extra high-voltage transmission grid (275kV and 400kV) in England is owned and operated by National Grid Electricity Transmission (NGET). The regional distribution network operator for Stroud District is Western Power Distribution (WPD), who are responsible for distributing electricity from the national grid to consumers.

### *Assessment of Infrastructure needs & costs*

Electricity is transferred from generation to point of use via Transmission and Distribution networks. Transmission networks (TN) in England typically operate at 275kV and above whereas the Distribution network (DN) generally operates from 132kV down to the 240V supplied to domestic customers.

The Stage 2 report of the Gloucestershire Renewable Energy Feasibility Study confirms that “...there is a relatively even distribution of circuits across Gloucestershire and there are no areas of the County which are remote from the grid..... however, a connection to the closest point of grid infrastructure is not guaranteed and any generation development should be assessed on its own merits” (Section 9.2 GCC 2011).

With respect to the TN network operated by National Grid, there is a possibility that proposed allocations could coincide with the existing network of high voltage lines, with implications for the acceptability, layout or viability of development. A map showing the locations of the TN network in relation to potential strategic locations for development is provided at Appendix B. This shows that there are no National Grid overhead powerlines within Stroud District, with the exception of one circuit that terminates a significant distance to the south of Sharpness. No conflicts of development with the National Grid network are therefore expected.

WPD have provided initial feedback in relation to the proposed strategic development locations, as set out in the table below. With respect to the timescales for providing site connection upgrades, WPD advise that the installation of 11kV circuits from primary substations are not normally significant as the majority of circuits are installed in the public highway. Typically 3km of cable could be installed within 2-3 months, depending on the route and any engineering difficulties. Where a 33kV circuit reinforcement is required (potentially in the case of Sharpness) the timescale for implementation is significantly greater as the route is more likely to cut across third party land. A 15km 33kV circuit (overhead) could potentially take between 3-4 years, depending on negotiations with the landowners.

Table 16 Western Power Distribution comments on electricity connections to proposed development allocations

Stroud Sub-area	Strategic Locations and scenarios	Comment from WPD
Stroud South Vale (SSV)	North East Cam (450 – 750 dwellings)	The anticipated demand requirement for this site is 1.5MVA. The primary substation (Dursley PSS) adjacent to the proposed site currently has ample capacity to accommodate the proposed development. This development will probably necessitate two new 11kV circuits from Dursley PSS, along with associated 11kV infrastructure.
	North East Cam (13.4ha employment)	Approximate load requirement 6MVA. The primary substation (Dursley 33/11kV substation) adjacent to the proposed site presently has sufficient capacity to accommodate the employment development. However, with the proposed domestic development, capacity is limited, therefore upstream reinforcement would be required. This is likely to take around 12-18 months and cost will be apportioned between WPD and the developer.
	Sharpness (300 dwellings)	The anticipated demand requirement for the development at Sharpness is 0.6MVA. The primary substation, Berkeley 33/11kV is nearing full capacity, therefore accommodation of proposed development can be accepted at the moment with minimal works, but significant load growth in the area, coupled with the Severn Distribution Park proposals may necessitate installation of a new 33kV circuit back to Ryeford BSP some 15km away.
	Sharpness - Severn Distribution Park (17.7ha employment)	Approximate load requirement 9MVA. The primary substation (Berkeley PSS) adjacent to the proposed site is nearing full capacity and does not have enough capacity to cater for the development. Reinforcement will be required with installation of a new 33kV circuit back to Ryeford BSP some 15km away. This is likely to take around 3-4 years, depending on wayleave negotiations.
Stroud and West (SW)	Stonehouse (9.4ha employment)	Approximate load requirement 9MVA. The primary substation (Ryeford/Netherhills PSS) adjacent to the proposed site currently has ample capacity to accommodate the proposed development.
	West of Stonehouse (1,350 dwellings)	West of Stonehouse (1,350 dwellings) The anticipated demand requirement for this site is 2.7MVA. The primary substation (Ryeford and Netherhills 33/11kV substations) adjacent to the site currently have ample capacity to accommodate the proposed development.
	Stroud Valleys (400 dwellings)	The anticipated demand requirements for the above developments is 0.8MVA. The primary substation (Dudbridge PSS) is near capacity. WPD have made provision to install an additional primary substation in the Brimscombe area, but progression on this scheme depends on load growth in the area. The development will probably necessitate an additional 11kV circuit from Dudbridge PSS, along with associated 11kV infrastructure to suit the developments.

Stroud Sub-area	Strategic Locations and scenarios	Comment from WPD
Gloucester Urban Fringe (GUF)	Hunts Grove Extension (500 dwellings)	The anticipated demand for this allocation is 1.5MVA. The primary substation (Tuffley PSS) adjacent to the site is near capacity. WPD have made provision to install an additional primary substation at Hardwicke, but progression of this scheme depends on load growth in the area. This development will probably necessitate two new 11kV circuits from Tuffley PSS, along with associated 11kV infrastructure to suit the development.
	Quedgeley East (13ha employment)	Approximate load requirement 6MVA. The primary substation (Tuffley PSS) adjacent to the proposed site is near capacity. WPD have made provision to install an additional primary substation at Hardwicke, but progression of this scheme depends on load growth in the area.

## Gas Distribution

### *Responsibilities for delivery*

National Grid Gas (NGG) transmits gas from the production beachhead and import terminals to regional distribution companies or Distribution Operators (DOs) that operate the network of pipelines serving consumers. Wales and West Utilities (WWU) are the DO for Stroud District.

### *Assessment of infrastructure needs & current projects*

With respect National Grid pipelines, a map showing the locations of the TN network in relation to potential strategic locations for development is provided at Appendix B. This confirms that there are no National Grid gas pipelines within Stroud District and therefore no conflicts of development with the National Grid network are expected.

WWU require relatively detailed information on development sites before they can provide formal feedback on network capacities and constraints. This should include the size and shape of sites, number of units and indicative layout and phasing. However it is understood that Wales and West Utilities can respond to developer connection requests within a relatively short time frame.

Further more detailed information will be issued to WWU as soon as available, in order to inform and future update of the IDP and discussions with site developers. Comments have been provided in relation to proposed development at Hunts Grove, as set out in Table 23:

Table 17 Wales and West Utilities comments on gas connections to Strategic Locations

Stroud Sub-area	Strategic Locations and scenarios	Comment from WWU
Stroud South Vale (SSV)	North East Cam (450 dwellings)	Further more detailed information is required to judge capacity or whether reinforcements to infrastructure will be necessary.
	Sharpness (300 dwellings)	Further more detailed information is required to judge capacity or whether reinforcements to infrastructure will be necessary.
	Sharpness - Severn Distribution Park (17.7ha employment)	No comment to date.
Stroud and West (SW)	West of Stonehouse (1,350 dwellings)	Further more detailed information is required to judge capacity or whether reinforcements to infrastructure will be necessary.
	Stonehouse (9.4ha employment)	No comment to date.
	Stroud Valleys (400 dwellings)	WWU does serve the Stroud Valleys, but will require further more detailed information to judge capacity or possible reinforcements to infrastructure.
Gloucester Urban Fringe (GUF)	Hunts Grove Extension (500 dwellings)	There is existing medium pressure mains available in Waterwell Business Park. There is also Low Pressure mains to the west of the site but reinforcement of this would be required to support the number of dwellings proposed.
	Quedgeley East (13ha employment)	No comment to date.

## Heat Distribution

### *Sector plans and strategies*

The Gloucestershire Renewable Energy Feasibility Study has looked at the potential for district heat networks. It illustrates that there are areas in Stroud District where there is potentially sufficient demand intensity that large district heating networks fuelled by low carbon fuels such as biomass or waste may be viable, as shown in the figure below. These include Stonehouse, Stroud, Cam & Dursley and Quedgeley. It is also noted that small networks may be viable at other sites.

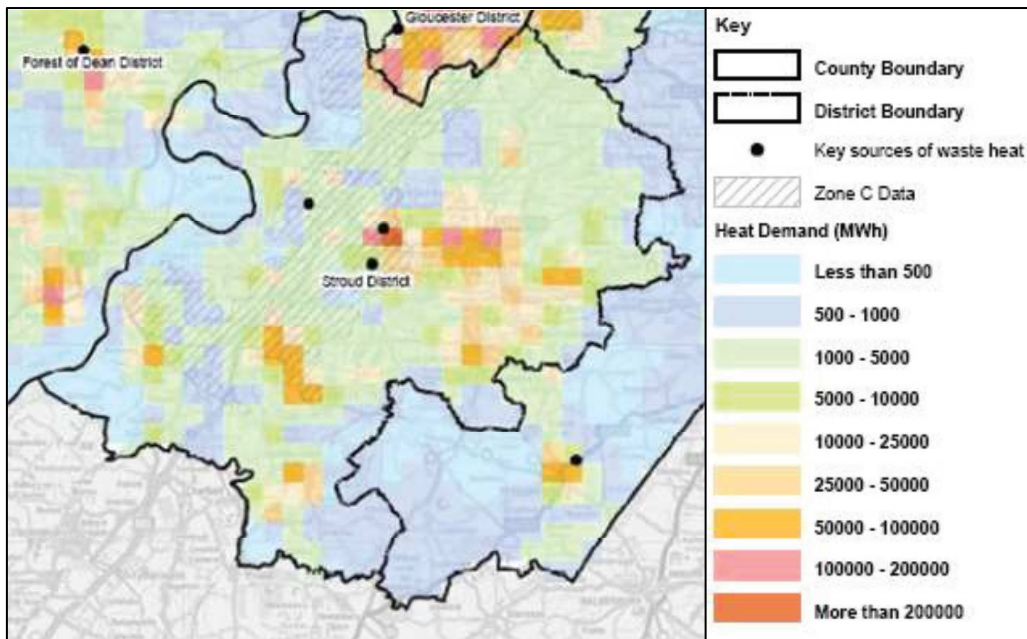


Figure 3 Heat Demand in Stroud District (recreated from Gloucestershire County Council (2011) Renewable Energy Study 2 – Resource Assessment, Figure 8.1)

The study has also identified potential sites for the deployment of stand-alone installations or ‘anchor loads’. These include: business parks, boarding schools, offices, colleges and leisure sites in Stonehouse and Stroud; a leisure site in Dursley; and hotel, office and leisure uses in Quedgeley.

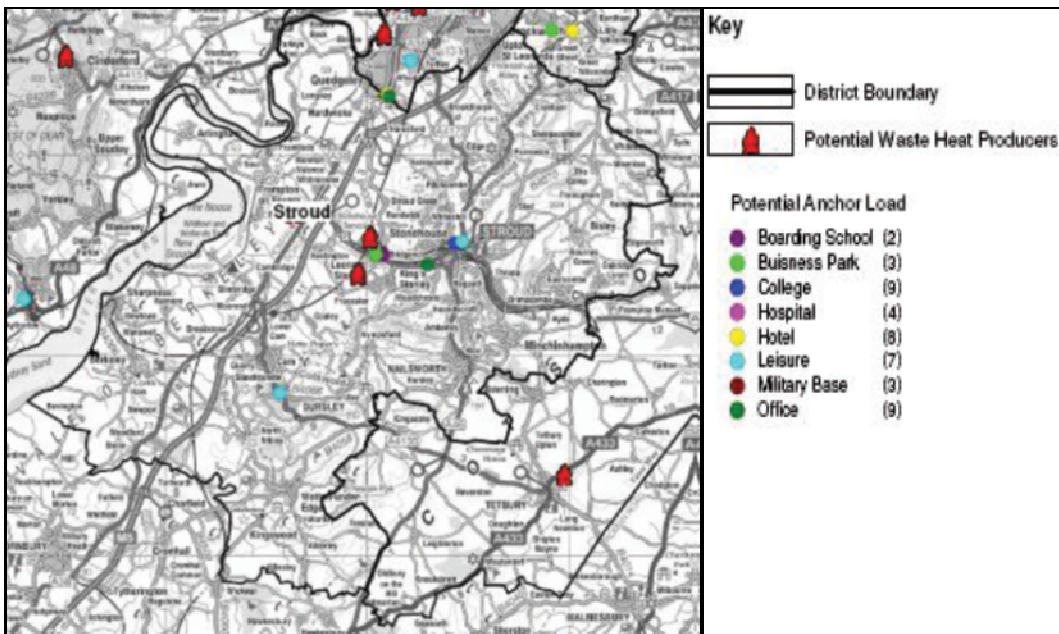


Figure 4 Sites with Good Potential for Renewable Heating - recreated from Gloucestershire County Council (2011) Renewable Energy Study 2 – Resource Assessment, Figure 8.1

The feasibility study considers where particular forms of energy are most suitable, in terms of new residential development, and concludes that new build



flats/apartment complexes provide the best opportunities, along with other large high density uses such as hospitals, while noting that the use of heat networks may be possible for other forms of development.

### ***Funding***

***The UK Green Investment Bank*** - The GIB was established in 2012 and the following priority sectors for investment were set out by Government:

- Offshore wind power generation;
- Commercial and industrial waste processing and recycling;
- Energy from waste generation, including gasification, pyrolysis and anaerobic digestion for the production of heat and/ or power;
- Non-domestic energy efficiency, including onsite renewable energy generation and heat; and
- Support for the Green Deal.

There is initial capitalisation up to £3 billion until 2015, which the GIB will have powers to borrow (subject to debt falling as a % of GDP) subject to State aid clearance from DG Competition and the European Commission. Since 2012 the GIB has committed £625million.

The recent Spending Round allocates additional capital of £800million in 2015-16 for commitment by the GIB, up to £500million of which can be borrowing from the National Loans Fund. The GIB has a full pipeline of further commercial low carbon infrastructure projects under active consideration including ventures in renewable energy, waste management and energy efficiency. This additional capital will allow it to continue to make investments in these areas.<sup>18</sup>

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<sup>18</sup> Source: 'Investing in Britain's Future' (June 2013, HM Treasury)

## 4.5 Healthcare

### Responsibilities for delivery

Healthcare structures in Gloucestershire, as across England, are in a period of transition as a result of the Coalition Government's recent health reform plans. Subject to the changes proposed by the Health and Social Care Act 2012, the Gloucestershire Primary Care Trust administration level has been phased out. From April 2013 the responsibility for commissioning and managing primary and secondary healthcare services and the management of healthcare estates moved to the following organisations and groups:

- ***NHS England (formerly the NHS Commissioning Board)*** – Established in October 2011 as an independent body, at arm's length to the Government, the Commissioning Board's first responsibility was the authorisation of locally based Clinical Commissioning Groups (CCGs) across England. From April 2013 the NHS England became responsible for commissioning Primary Healthcare from CCGs in ways that support consistent, high standards of quality across the county.
- ***Gloucestershire Clinical Commissioning Group (GCCG)*** – In Gloucestershire there is one county-wide clinical Commissioning Group, with a locality sub-structure. The CCG is a membership organisation and currently membership includes all of the 85 GP practices in the county. The Forest of Dean District corresponds with the Forest of Dean CCG locality. From April 2013 the GCCG became responsible for commissioning Secondary Healthcare services from the Gloucestershire Hospitals NHS Foundation Trust and other equivalent providers. This is a key element of the Government's objective to establish a clinically-led commissioning system.
- ***Secondary Healthcare providers*** – The principal secondary healthcare provider for the county is the Gloucestershire Hospitals NHS Foundation Trust, which provides countrywide acute hospital services from two large district general hospitals, Cheltenham General Hospital and Gloucestershire Royal Hospital. Gloucestershire Care Services NHS Trust (established in April 2013) delivers nursing and community hospital services. There are eight community hospitals in the county and a major building programme aimed at enhancing or replacing several of them is currently in progress.
- ***Gloucestershire County Council and the Gloucestershire Shadow Health and Wellbeing Board*** – Established by Gloucestershire County Council, the Board is a high-level strategic group whose purpose is to drive the new health and social care agenda and improve outcomes through monitoring, forward planning and promotion of public health. The Board has oversight of the Joint Strategic Needs Assessment (JSNA) and has a duty to produce a Joint Health and Wellbeing Strategy that identifies key priorities for health and local government commissioning. The County Council and Gloucestershire Clinical Commissioning Group (GCCG) also have a joint statutory responsibility to ensure the use of the Joint Strategic Needs Assessment to inform commissioning and the board has to ensure that GCCG has demonstrated its use in its commissioning plans for the NHS.
- ***NHS Property Services Ltd*** - A Government-owned limited company, NHS Property Services, has taken over ownership and management of that part of



the former Primary Care Trust estate that have not transferred to NHS community care providers under the healthcare reform plans. It is intended that PropCo will: hold property for use by community and primary care services, including social enterprises; cut costs of administering the estate overall by consolidating the management of over 150 estates; deliver and develop cost-effective property solutions for community health services; and dispose of property surplus to NHS requirements. It should be noted that most GP surgeries are independently owned.

## Primary healthcare

- Primary Care Trusts (PCTs) in the past include General Practitioners (GPs), nurses, therapists, dentists, optometrists and pharmacists. This study has focussed on the provision of GP and dentists surgeries as key local services.

## General Practitioners (GPs)

### *Responsibilities for delivery*

As summarised above, a Stroud Practice-Based Commissioning Cluster will oversee Primary Healthcare in Stroud District, with funding provided by the NHS England.

### *Plans and strategies*

The following healthcare plans and strategies will inform decisions relating to the commissioning of primary care services.

- ***Joint Strategic Needs Assessment (JSNA)*** - The Joint Strategic Needs Assessment (JSNA) is a 'live' strategic planning tool which brings together the latest information on the health and wellbeing of people who live in Gloucestershire and people who use Gloucestershire public services. The JSNA looks at all the factors which impact on health and wellbeing, including income, work, environment and housing; and individual lifestyle behaviours, like smoking and alcohol consumption.
- ***Joint Health and Wellbeing Strategy: Fit for the Future (2012 – 2032)*** - The JSNA informs Gloucestershire's Joint Health and Wellbeing Strategy. The strategy sets out the key priorities for action to improve the health of Gloucestershire's population at different stages of life. It does not yet provide information on what interventions or programmes will be put in place to achieve improvements, but identifies the following key principles that will guide the development of actions plans:
  - Supporting communities to take an active role in improving health.
  - Encouraging people to adopt healthy lifestyles to stop problems from developing.
  - Taking early action to tackle symptoms or risks.
  - Helping people to take more responsibility for their health.
  - Helping people to recover quickly from illness and return home to their normal homes.

- Supporting individuals or communities where life expectancy is lower than the county average or where quality of life is poor.

### ***Baseline and assessment of infrastructure needs and costs***

The IDP assessment of need is based upon initial feedback provided by a representative of the Stroud CCG, supported by a preliminary assessment of need of the additional GPs and associated surgery space that would be required to support growth. This study also incorporates a brief commentary on the implications of an ageing population for healthcare and what this could mean for the evolution of local services and priorities.

The locations of the nearest existing GP surgeries with respect to proposed allocations for residential development in the District are set out in Table 24. An initial commentary on the capacity of the GP surgeries to accommodate additional demands arising has been provided by a representative of the Stroud Commissioning Cluster, however, it must be emphasised that this is a initial view only and further more detailed assessment work may be required. Existing patient list sizes are also shown to give an impression of relative capacity, however it should be noted that General Practitioners have recommended that the data on the number of GPs is updated to reflect Whole Time Equivalent (WTE) partners in the future, to improve the accuracy of the average patient list size recorded here.

In order to undertake a preliminary assessment of need utilising benchmark standards, it is assumed that a reasonable average GP list size should be maintained at the District's surgeries. Based on the advice of the Gloucestershire Clinical Commissioning Group, the demand for doctors is based on:

- an average GP patient list size of 1,800 patients per GP; and
- a capital cost of delivering surgeries based on a standard of 150m<sup>2</sup> per GP, at a capital cost of £2,000/m<sup>2</sup> (the floorspace capital cost of £2,000/ m<sup>2</sup> is based on £1,500 m<sup>2</sup> plus VAT plus 12% fees).

It is noted following consultation with GPs that the capital cost of surgery provision can be greater than indicated here, particularly where additional design standards apply, such as within designated Conservation Areas.

The assessment of need based on benchmark standards indicates the following:

- The revised development scenario could result in the demand for between 9 and 10 additional GPs, with an estimated capital cost of between **£2.8-3m** to provide surgery space. This analysis is shown in Table 23.

### ***Demographic considerations***

It is important that the demographics of the growing population, and the dwelling mix at each development site, is considered as the IDP is refined over time. As highlighted within chapter 3, a foremost issue with respect to future healthcare delivery across Gloucestershire is that of the ageing population, which is expected to lead to increased demand for healthcare services and a transformation in service delivery.

‘Ready for Ageing?’<sup>19</sup>, a recent report prepared for a House of Lords select committee, advises that rapidly ageing society means many more people living more years, often with one or more chronic long-term health conditions; a consequence of this and other pressures is a large increase in health and social care costs. Predicted increases in demand for health and social care from 2010 to 2030 for people aged 65 and over in England and Wales include:

- People with diabetes: up by over 45%
- People with arthritis, coronary heart disease, stroke: each up by over 50%
- People with dementia (moderate or severe cognitive impairment) : up by over 80% to 1.96 million
- People with moderate or severe need for social care: up by 90%

The treatment and care of people with long-term conditions accounted for 70% of the total health and social care spend in England in 2010, so the large increases in the number of older people with long-term conditions will create significant extra costs. ‘Care at home - whenever possible’ provides a summary statement for the recommended evolution of service delivery, which would:

- Be more focused on prevention, early diagnosis, intervention, and managing long-term conditions to prevent degeneration, with much less use of acute hospitals.
- Be centred on the individual person, with patients engaged in decisions about their care and supported to manage their own conditions in their own homes so that they can be prevented from deteriorating.
- Have the home as the hub of care and support, including emotional, psychological and practical support for patients and caregivers.
- Ensure older people only go into hospitals or care homes if essential, although they must have access to good specialist and diagnostic facilities to ensure early interventions for reversible conditions and prevent decline into chronic ill health.

‘Ready for Ageing’ concludes that a remarkable shift in NHS services will be needed to deliver this. Older people with long-term conditions need good, joined-up primary care, community care and social care, with effective out-of hour services. Such services make it possible to minimise hospital stays. The report remarks that time in hospitals is often not what older people want or need, and it is expensive.

While the details of policy and service delivery mechanisms are yet to be worked through in full, there is a clear implication for the demands placed on primary healthcare and community care services.

### ***Current infrastructure projects***

Presently, there is a single confirmed primary care project within the District:

- ***Hunt’s Grove Surgery*** – committed development at Hunt’s Grove provides a site of 0.2ha for the construction of a doctor’s surgery.

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<sup>19</sup> House of Lords Select Committee on Public Service and Demographic Change ‘Ready for Ageing?’ – report’ (14 March 2013)

Table 18 Stroud District Doctors (General Practitioners) Surgeries

Strategic Location	Surgeries within settlements (or closest available)	Number of GPs <sup>20</sup>	Patient list size <sup>21</sup>	Average patient list size per GP	Description / comment
North East Cam	Orchard Medical Centre, Cam	6	7,161	1,194	The Orchard Medical practice has a high degree of confidence that it would be able to expand to accommodate demand from proposed development at NE Cam. This would entail investment in the expansion of premises at the existing site, together with associated facilities such as parking. The practice has been in contact with the PCT/CCG around potential funding mechanisms
	May Lane Surgery, Dursley	3	3,969 (NHS Choices Data)	1,323	
	Walnut Tree Practice, Dursley	4	4,509	1,127	
Sharpness	Marybrook Medical Centre, Berkeley (approx. 2.25miles)	4	4,782	1,196	It is anticipated that Marybrook Medical Centre would have capacity to cater for the relatively modest levels of development proposed.
West of Stonehouse	High Street Medical Centre, Stonehouse	3	5,192	1,731	Options for Stonehouse will vary significantly depending on the level of development pursued in this location. Scenario 1 proposes 750 dwellings and it is anticipated that demand could be accommodated by the network of existing surgeries, although there is considered to be relatively limited spare capacity. Higher growth scenarios would prompt an investigation of options that could include a new branch surgery or amalgamation of existing practices within a larger healthcentre providing increased capacity. Co-location with other community services could be explored.
	Regent Street Surgery, Stonehouse	4	4,262	1,066	
	Stonehouse Health Clinic, Stonehouse	1	2,715	2,715	
Stroud Valleys	Beeches Green Health Centre, Stroud	10 (total, within 2 practices)	11,736 (NHS Choices Data)	1,174	It is anticipated that the lower numbers of dwellings proposed in Scenarios 1 and 2 could be absorbed by existing surgeries. Locking Hill Surgery is investigating options for relocation, which may provide an opportunity to expand capacity to cater for increases in demand in higher growth scenarios, such as the 800 dwellings proposed in Scenario 3. The Beeches Green Health Centre property is now managed by PropCo.
	Locking Hill Surgery, Stroud	8	9,374	1,172	
	Rowcroft Medical Centre, Stroud	6	11,195	1,866	
	St Luke's Medical Centre, Stroud	3	4,233	1,411	
Hunts Grove	Quedgeley Medical Centre, Quedgeley (Siva)	1	3,753	3,753	Committed development at Hunts Grove provide for a site for the construction of a doctor's surgery of 0.2ha. The capacity of the new proposed doctor's surgery will need to be reassessed taking account of the additional proposed development for Hunt's Grove as well the level of proposed development in adjoining parts of Gloucester.
	Severnvale Surgery, Quedgeley	7	21,551 (NHS Choices data)	3,079	
	St James Family Doctors, Quedgeley Health Campus (Brooke & Partners)	8	13,489	1,686	

<sup>20</sup> Data on number of GPs sourced from NHS Choices website in November 2012.

<sup>21</sup> Data source from [www.apho.org.uk](http://www.apho.org.uk) National General Practices Profiles (accessed April 2013)

Strategic Location	Surgeries within settlements (or closest available)	Number of GPs <sup>20</sup>	Patient list size <sup>21</sup>	Average patient list size per GP	Description / comment
	Tuffley Lane, Gloucester (Evans)	1	4,181	4,181	
	Warwick Avenue, Tuffley (Watkins)	7	10,010	1,430	

**Note:** The average patient list sizes calculated in the table for Stonehouse Health Clinic, Quedgeley Medical Centre, Severnvale Surgery and Tuffley Lane are unusually high, which may be due to inaccurate information on the NHS Choices website.

Table 19 Preliminary assessment of need for General Practitioner positions (GPs) and cost of surgery provision

Revised Development Scenario (2014-2031)	Dwellings		Population		Demand		Capital Cost	
	Low	High*	Low	High*	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>	<b>2.3</b>	<b>2.7</b>	<b>£ 697,236.67</b>	<b>£ 806,236.67</b>
<i>North East Cam</i>	450	750	981	1,635	0.5	0.9	£ 163,500.00	£ 272,500.00
<i>Sharpness Docks</i>	300	300	654	654	0.4	0.4	£ 109,000.00	£ 109,000.00
Committed Sites & Windfall	1,169	1,169	2,548	2,548	1.4	1.4	£ 424,736.67	£ 424,736.67
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>	<b>3.7</b>	<b>3.7</b>	<b>£ 1,099,083.33</b>	<b>£ 1,099,083.33</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943	1.6	1.6	£ 490,500.00	£ 490,500.00
<i>Stroud Valleys</i>	400	400	872	872	0.5	0.5	£ 145,333.33	£ 145,333.33
Committed Sites & Windfall	1,275	1,275	2,780	2,780	1.5	1.5	£ 463,250.00	£ 463,250.00
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>	<b>0.4</b>	<b>0.4</b>	<b>£ 125,713.33</b>	<b>£ 125,713.33</b>
Committed Sites & Windfall	346	346	754	754	0.4	0.4	£ 125,713.33	£ 125,713.33
<b>D. Gloucester Urban Fringe</b>	<b>2,360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>	<b>2.9</b>	<b>3.2</b>	<b>£ 857,466.67</b>	<b>£ 948,300.00</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635	0.6	0.9	£ 181,666.67	£ 272,500.00
Committed Sites & Windfall	1,860	1,860	4,055	4,055	2.3	2.3	£ 675,800.00	£ 675,800.00
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>	<b>9</b>	<b>10</b>	<b>£ 2,779,500.00</b>	<b>£ 2,979,333.33</b>
Committed Sites & Windfall	4,650	4,650	10,137	10,137	5.6	5.6	£ 1,689,500.00	£ 1,689,500.00
<b>Allocations</b>	<b>3,000</b>	<b>3,550</b>	<b>6,540</b>	<b>7,739</b>	<b>3.6</b>	<b>4.3</b>	<b>£ 1,090,000.00</b>	<b>£ 1,289,833.33</b>
<b>Completions (2006-2014)</b>	<b>3,264</b>	<b>3,264</b>	<b>7,116</b>	<b>7,116</b>	<b>4.0</b>	<b>4.0</b>	<b>£ 1,185,920.00</b>	<b>£ 1,185,920.00</b>

## Dentists

### *Responsibilities for delivery*

Under the Health and Social Care Act 2012, responsibility for commissioning and managing NHS dental contracts moved from local PCTs to NHS England (previously the NHS Commissioning Board) in April 2013. Most dental care is provided by privately operated general dental practitioner surgeries, for whom NHS contracts are very important. Some treatment, however, is carried out directly by NHS community dental services and hospital dental departments.

Local Dental Networks (LDNs) now clinically lead on and own the delivery of:

- quality and performance improvement and assurance;
- local implementation of NHS England Strategy;
- planning and designing local care pathways and services;
- oral health strategy and improvement; and
- clinical and professional leadership and engagement.

### *Baseline and assessment of infrastructure needs & costs*

The IDP assessment of need is based upon a high level assessment of need of the additional Dentists and associated surgery spaces that would be required to support planned growth. The table below sets out the existing availability of surgeries within, or close to, those settlements where strategic locations for development are proposed.

Table 20 Dental practices serving Stroud District

Strategic Location	Surgeries within settlements (or closest available)
North East Cam	Archway Dental Practice, Dursley
	Cam Dental Surgery, Cam
	Sandpits Clinic, Dursley
Sharpness	Berkeley Hospital, Berkeley
West of Stonehouse	High Street, Stonehouse
	HRS Dentalcare, Stonehouse
	Queens Road Surgery, Stonehouse
	Woodcock Lane Dental Care, Stonehouse
Stroud Valleys	Archway Dental Practice, Stroud
	Brockley House Dental Surgery, Stroud
	The Dental Clinic, Stroud
	Lansdown Dental Practice, Stroud
	Nelson Street Dental Practice, Stroud
	Rowcroft Dental Practice, Stroud
	Stroud Health Centre, Stroud
Aston Down	Minchinhampton Dental Practice, Minchinhampton
Hunt's Grove	Quedgeley House Dental Practice, Quedgeley

Strategic Location	Surgeries within settlements (or closest available)
	St James' Dental, Quedgeley
	Windsor Drive Dental Practice

It is apparent from the locations of existing surgeries that it is the proposed strategic locations at Sharpness and Aston Down that are not currently served by a dentist surgery.

The preliminary assessment of demand for additional dental services is based on the application of a benchmark standards that assumes a current average Dentist list size is maintained at the District's surgeries:

- The demand for dentists is based on the average number of dentists in the South West region of 0.5 per 1,000 population (taken from the NHS Information Centre *NHS Dental Statistics for England: 2010/2011*).
- The capital cost of delivering surgeries is based on a standard of 130m<sup>2</sup> per Dentist, at a capital cost of £1,400/m<sup>2</sup> (floorspace standard taken from NHS London Healthy Urban Developments Unit model, with estimated cost based on BCIS Online Q2 2013 information and Spons 2012 surgery example rebased for 2013 and Gloucestershire location).

The assessment of need based on benchmark standards (see Table 26) indicates the following:

- The revised development scenario could result in the demand for between 8 and 9 additional dentist positions, with an estimated capital cost of between **£1.52-1.63m** to provide surgery space, as shown in Table 25.

### ***Recent and current projects***

No current projects to establish new dentist surgeries within the District have been identified.



Table 21 Preliminary assessment of need for Dentist positions and cost of surgery provision

Revised Development Scenario (2014-2031)	Dwellings		Population		Demand		Capital Cost	
	Low	High*	Low	High*	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>	<b>2.1</b>	<b>2.4</b>	<b>£ 380,691.22</b>	<b>£ 440,205.22</b>
<i>North East Cam</i>	450	750	981	1,635	0.5	0.8	£ 89,271.00	£ 148,785.00
<i>Sharpness Docks</i>	300	300	654	654	0.3	0.3	£ 59,514.00	£ 59,514.00
Committed Sites & Windfall	1,169	1,169	2,548	2,548	1.3	1.3	£ 231,906.22	£ 231,906.22
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>	<b>3.3</b>	<b>3.3</b>	<b>£ 600,099.50</b>	<b>£ 600,099.50</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943	1.5	1.5	£ 267,813.00	£ 267,813.00
<i>Stroud Valleys</i>	400	400	872	872	0.4	0.4	£ 79,352.00	£ 79,352.00
Committed Sites & Windfall	1,275	1,275	2,780	2,780	1.4	1.4	£ 252,934.50	£ 252,934.50
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>	<b>0.4</b>	<b>0.4</b>	<b>£ 68,639.48</b>	<b>£ 68,639.48</b>
Committed Sites & Windfall	346	346	754	754	0.4	0.4	£ 68,639.48	£ 68,639.48
<b>D. Gloucester Urban Fringe</b>	<b>2360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>	<b>2.6</b>	<b>2.8</b>	<b>£ 468,176.80</b>	<b>£ 517,771.80</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635	0.5	0.8	£ 99,190.00	£ 148,785.00
Committed Sites & Windfall	1,860	1,860	4,055	4,055	2.0	2.0	£ 368,986.80	£ 368,986.80
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>	<b>8</b>	<b>9</b>	<b>£1,517,607.00</b>	<b>£ 1,626,716.00</b>
<b>Committed Sites &amp; Windfall</b>	<b>4,650</b>	<b>4,650</b>	<b>10,137</b>	<b>10,137</b>	<b>5.1</b>	<b>5.1</b>	<b>£ 922,467.00</b>	<b>£ 922,467.00</b>
<b>Allocations</b>	<b>3,000</b>	<b>3,550</b>	<b>6,540</b>	<b>7,739</b>	<b>3.3</b>	<b>3.9</b>	<b>£ 595,140.00</b>	<b>£ 704,249.00</b>
<b>Completions (2006-2014)</b>	<b>3,264</b>	<b>3,264</b>	<b>7,116</b>	<b>7,116</b>	<b>3.6</b>	<b>3.6</b>	<b>£ 647,512.32</b>	<b>£ 647,512.32</b>

## Secondary healthcare

### *Responsibilities for delivery*

At present, Gloucestershire Hospitals NHS Foundation Trust provides countywide acute hospital services from two large district general hospitals, Cheltenham General Hospital and Gloucestershire Royal Hospital.

Gloucestershire Care Services NHS Trust (established in April 2013) delivers nursing and community hospital services. There are eight community hospitals in the county and a major building programme aimed at enhancing or replacing several of them is currently in progress.

### *Plans & strategies*

**Gloucestershire Hospitals NHS Foundation Trust “Forward Plan Strategy document” (2013/14)** – this sets out the Trust’s priorities for the next three years, that will enable it to deliver appropriate, high quality and cost-effective services for its patients.

**Gloucestershire Care Services NHS Trust “Our priorities for 2013/14”** – The document sets out the Trust’s ambition to provide comprehensive community and social care, with the aim of providing services as part of a seamless pathway between acute hospital and primary care. This includes specialist community provision that increasingly delivers local treatments as an alternative to hospital care.

### *Baseline*

During 2012/13 the Hospitals Trust secured around 80% of the locally available acute funding, indicating that the trust the majority of the market share in Gloucestershire. The Hospitals Trust is also a net ‘importer’ of patients for the services they deliver, suggesting that more patients come from surrounding counties into the Trust than those who leave the Gloucestershire area to providers outside the county.

Two of the seven Community Hospitals currently operated by Gloucestershire Care Services NHS Trust are located within Stroud District, providing local facilities in Stroud and Dursley:

- **Stroud General Hospital** – Services at the hospital include: inpatient medical care on two wards; 24 hour Minor Injury Unit; Day Theatre and Endoscopy Unit; Outpatient department; x-ray and ultrasound facility; physiotherapy department and gym.
- **Vale Community Hospital, Dursley** – Vale Community Hospital is a new, purpose-built hospital in Dursley. It offers 24 hour nursing in 20 inpatient beds, supported by local GPs, Minor Injuries Unit, a range of outpatient clinics and x-ray facilities.

The following table summarises the average number of beds available and percentage of occupied beds by sector for hospitals operated by Gloucestershire NHS Foundation Trust and Gloucestershire Care Services. The information shown is sourced from the Department of Health Unify2data collection (KH03 – January to March 2012), with the number of beds available per 1,000 population based on the county population of 596,984 (2011 census estimate). This does not account

for movement of people across county boundaries for treatment, such as use of hospitals in Swindon or Bristol.

Table 22 Average number of beds available within Gloucestershire hospitals

Bed Type	Number available	Number available / 1,000 pop'n	Number occupied	% Occupied	% Occupied, England average
General & Acute (Hospitals Trust)	980	-	908	92.6%	-
General & Acute (PCT)	80	-	76	95.4%	-
General & Acute Sub-total	1,060	1.78	984	92.8%	89%
Learning Disabilities	-	-	-	-	
Maternity	46	0.08	39	85.1%	61%
Mental Illness	-	-	-	-	
Total	1,106	1.85	1,023	92.5%	86.9%

These figures demonstrate that there is less than 10% spare capacity in the system for General and Acute beds and that the level of bed occupation is higher than the average for England. This is particularly the case for maternity beds.

### *Assessment of infrastructure needs & costs*

The Hospital Trust's Annual Plan refers to the challenges posed by a growing and ageing population, noting that the population of Gloucestershire will increase from 596,200 to 636,400 over a ten year period and that the population is ageing at a higher rate than national average rate. Key areas of investment identified by the Hospitals Trust are:

- Developing the workforce;
- Developing information technology and communications infrastructure; and
- Developing buildings and equipment infrastructure – each year the Trust plans to create a financial surplus to enable it to maintain a capital programme. Priorities for the capital programme over the next three years include a satellite radiotherapy unit in Hereford, improvements to the clinical area around the trust, new and replacement equipment, and implementation of SmartCare and our technology blueprint.

In order to provide a preliminary assessment of long term acute care needs for the purpose of this study, a standards based approach has been utilised. This applies:

- An overall target that the average number of General and Acute beds of 1.78 per 1,000 population is maintained.

- Capital costs have been estimated on a floorspace standard of 50m<sup>2</sup> per bed (based on the NHS London Healthy Urban Development Unit model) and cost per bed of £1,700/m<sup>2</sup>, based on BCIS Online April 2013 information with cost rebased to a Gloucestershire location.

The results of the preliminary assessment of need is summarised in Table 27, and indicates that the revised development scenario could result in the need for between 30 and 32 additional acute care bedspaces at an estimated capital cost of between **£2.5-2.7m**.

It is understood from initial discussions with the Gloucestershire Hospitals NHS Foundation Trust that they are undertaking their own service planning based on the Office of National Statistics (ONS) 2011-based Subnational Population Projections (SNPP). As shown in chapter 3, the ONS SNPP covers a time period to 2021 and shows higher population growth than the preceding 2008 and 2010 forecasts. As a result, there is a reasonable expectation that sufficient capacity to accommodate the demands of new development will be made available. The hospitals typically serve wide catchments and therefore the precise locations of development are less of a concern, subject to transport accessibility considerations.

Table 23 Preliminary assessment of need for acute healthcare bedspaces and cost of floorspace provision

Revised Development Scenario (2014-2031)	Dwellings		Population		Demand		Capital Cost	
	Low	High*	Low	High*	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>	<b>7.4</b>	<b>8.6</b>	<b>£ 632,951.45</b>	<b>£ 731,901.65</b>
<i>North East Cam</i>	450	750	981	1,635	1.7	2.9	£ 148,425.30	£ 247,375.50
<i>Sharpness Docks</i>	300	300	654	654	1.2	1.2	£ 98,950.20	£ 98,950.20
Committed Sites & Windfall	1,169	1,169	2,548	2,548	4.5	4.5	£ 385,575.95	£ 385,575.95
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>	<b>11.7</b>	<b>11.7</b>	<b>£ 997,747.85</b>	<b>£ 997,747.85</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943	5.2	5.2	£ 445,275.90	£ 445,275.90
<i>Stroud Valleys</i>	400	400	872	872	1.6	1.6	£ 131,933.60	£ 131,933.60
Committed Sites & Windfall	1,275	1,275	2,780	2,780	4.9	4.9	£ 420,538.35	£ 420,538.35
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>	<b>1.3</b>	<b>1.3</b>	<b>£ 114,122.56</b>	<b>£ 114,122.56</b>
Committed Sites & Windfall	346	346	754	754	1.3	1.3	£ 114,122.56	£ 114,122.56
<b>D. Gloucester Urban Fringe</b>	<b>2,360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>	<b>9.2</b>	<b>10.1</b>	<b>£ 778,408.24</b>	<b>£ 860,866.74</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635	1.9	2.9	£ 164,917.00	£ 247,375.50
Committed Sites & Windfall	1,860	1,860	4,055	4,055	7.2	7.2	£ 613,491.24	£ 613,491.24
					-		£ -	
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>	<b>30</b>	<b>32</b>	<b>£ 2,523,230.10</b>	<b>£ 2,704,638.80</b>
<b>Committed Sites &amp; Windfall</b>	4,650	4,650	10,137	10,137	18.0	18.0	£ 1,533,728.10	£ 1,533,728.10
<b>Allocations</b>	3,000	3,550	6,540	7,739	11.6	13.8	£ 989,502.00	£ 1,170,910.70
<b>Completions (2006-2014)</b>	3,264	3,264	7,116	7,116	12.7	12.7	£ 1,076,578.18	£ 1,076,578.18

## 4.6 Flood management, water supply & wastewater

### Flood risk management

#### *Overview text*

At a strategic level, the Severn Estuary Flood Risk Management Strategy (2013 Consultation) informs a 100 year investment plan to manage tidal flood risks in the Severn Estuary. Within Stroud District, the areas of Fretherne-with-Saul, Epney, Arlingham, Longney and Elmore are identified as locations where agricultural land and properties are at a relatively greater risk of flooding in the long term (by 2030) taking account of climate change.

With respect to the development allocations set out within the draft Local Plan, these have been informed by Strategic Flood Risk Assessments and Sequential Tests and it is not anticipated that any abnormal or onerous site specific flood risk management infrastructure requirements will arise. Site selection informed by the Strategic Flood Risk Assessment process means that it has been possible to select areas of land that are predominantly located in Flood Zone 1 (low risk), although in the cases of Wimberley Mill, Brimscombe Port and Brimscombe Mill, specific flood risk management projects have been identified as required to facilitate development. Further understanding of detailed flood risk management requirements for development sites will be gained when Site-specific Flood Risk Assessments are submitted with planning applications.

Through the preparation of the Draft Gloucestershire Flood Risk Management Strategy, the partnership of organisations have identified two further priority schemes within Stroud District: a flood risk investigation in Cam; and a Property-Level Protection initiative in Stroud.

#### *Responsibilities for delivery*

When preparing a Local Plan it is the responsibility of Stroud DC to ensure that inappropriate development in areas at risk of flooding is avoided, but where development is necessary in flood risk areas, this can be provided safely and without increasing flood risk elsewhere (NPPF, para. 100). Local Plans should be supported by Strategic Flood Risk Assessment and develop policies to manage flood risk from all sources, using opportunities offered by new development to reduce the causes and impacts of flooding (NPPF, para. 100).

Wider responsibilities for flood risk management are complex and shared amongst a number of organisations. A summary of responsibilities most relevant to the IDP is provided below<sup>22</sup> and a full list of responsibilities is attached at Appendix C.

**The Environment Agency (EA)** – With its national role, the EA has a strategic overview of all sources of flooding and coastal erosion (as defined in the Flood and Water Management Act). It is responsible for flood and coastal erosion risk management activities on main rivers and the coast, regulating reservoir safety,

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<sup>22</sup> Summary of Local Government Association information:  
<http://www.local.gov.uk/web/guest/local-flood-risk-management/>

and working in partnership with the Met Office to provide flood forecasts and warnings. It must also look for opportunities to maintain and improve the environment for people and wildlife while carrying out all of its duties.

The Environment Agency is a ‘category one responder’ to flood events under the Civil Contingencies Act.

***Gloucestershire County Council (GCoC) as Lead Local Flood Authority (LLFA)*** – The LLFA is required to perform roles that include:

- prepare and maintain a strategy for local flood risk management in their areas;
- maintain a register of assets and designate flood risk management assets;
- investigate significant local flooding incidents and publish the results;
- establish approval bodies for Sustainable Drainage Systems (SuDS); and
- play a lead role in emergency planning and recovery after a flood event.

As the Highways Authority, GCoC has lead responsibility for providing and managing highway and roadside drainage under the Highways Act 1980.

***Stroud DC*** – all LAs are ‘category one responders’ to flood events under the Civil Contingencies Act and are also able to designate flood risk management assets.

***Water and wastewater companies*** – Water companies are responsible for the provision, maintenance and operation of public sewers and works for the purposes of ‘effectually draining’ their area. They are also responsible for managing the risk of flooding to water supply and sewerage facilities and the risk to others from the failure of their infrastructure. The utilities are partners in developing the county flood defence strategy and must share data with the LLFA.

***Lower Severn Internal Drainage Board (IDB)*** – IDBs are local public authorities established in areas of special drainage need within the UK. They have permissive powers to undertake works to reduce flood risk and manage water levels within their respective drainage areas. The Lower Severn IDB area includes land alongside the River Severn in the Stroud South Vale, Stroud & West and Gloucester Urban Fringe sub-areas, as well as land along the River Frome at Stroud and Stonehouse.

***Developers*** – site developers must demonstrate that their proposals would not increase flooding elsewhere and, if the site is in an area at risk of flooding, demonstrate that the development is appropriately flood resilient and resistant (NPPF, para. 103).

***Sector plans and strategies***

The following plans and strategies have been reviewed to inform the IDP:

***Gloucestershire County Council Preliminary Flood Risk Assessment (PFRA)(Nov 2011)*** – Undertaken in compliance with the EC Floods Directive and UK Flood Risk Regulations (2009), the PFRA is a high level screening exercise to identify the areas of most significant ‘flood risk areas’ across Europe. Using national criteria approved by Defra it was found that there are ten ‘Flood Risk Areas’ in England, none of which are in Gloucestershire. GCoC did not propose to add any new ‘Flood Risk Areas’ for the PFRA, but have identified

actions that include the development Surface Water Management Plans for the most vulnerable areas.

***Severn Estuary Shoreline Management Plan (SMP)(2000) and SMP2 Consultation Draft (Oct, 2010)*** – The aim of the Shoreline Management Plan is to provide the basis for sustainable coastal defence policies within the Severn Estuary and to develop objectives for the future management of the shoreline. Sustainable coastal defence policies need to take account of the inter-relationships between defences, developments and processes within the Estuary, and they should avoid as far as possible tying future generations into inflexible and expensive options for defence. A Draft SMP2 was published for consultation in October 2010. Actions identified in relation the Stroud District shoreline include:

- research to identify where new Managed Realignment defences should be (for construction in 20-50 epoch); and
- undertake a study into opportunities to remove flood embankments.

***Severn Tidal Tributaries Catchment Flood Management Plan (CFMP)(Dec 2009)*** – CFMPs are intended to provide an understanding of the scale and extent of flooding now and in the future and set policies for managing flood risk within the river catchment. The Rivers Frome and Cam, located within Stroud District, both fall within the Severn Tidal Tributaries CFMP plan area. Of eight sub-areas identified within the CFMP, four are located partly within Stroud District:

- Severn Vale – Categorised as area of low to moderate flood risk. Actions include: reviewing opportunities to remove flood embankments and increase connection to the floodplain where this reduces overall flood risk; support ecological improvements.
- Cotswold – Categorised as area of low to moderate flood risk. Actions include: reviewing feasibility of floodwater storage, including wetland habitat creation; and ensure culvert maintenance.
- Frome - Categorised as area of low to moderate flood risk. Actions include: ensure maintenance of flood defences; and seek opportunities to sustain and improve the status of Frampton Pools SSSI through appropriate frequency, extent and duration of flooding.
- Little Avon, Cam and Thornbury – Produce strategy for maintenance and operation of channel features and flood risk management assets, particularly around Cam and Dursley; seek opportunities to sustain and increase floodplain grazing on lower reaches of River Cam.

***Severn Estuary Flood Risk Management Strategy (2013 Consultation)*** – The Strategy is the Environment Agency’s plan to manage tidal flood risks in the Severn Estuary. The three main objectives of the strategy are:

- To define a 100 year plan of investment for flood defences by the Environment Agency and local authorities.
- To prioritise other flood risk management measures such as providing advice to utility companies to protect critical infrastructure, development control advice and flood warning investment.
- To decide where we should create new inter-tidal wildlife habitats to compensate for losses of habitat caused by rising sea levels.



**Gloucestershire Flood Risk Management Strategy** – the County Council are in the process of preparing a Local Flood Risk Management Strategy, which will be published for consultation during the summer 2013. This is prepared in consultation with a Flood Risk Management Partnership Group with representatives from the Borough, City and District authorities. The Strategy is expected to identify a list of the twenty priority flood risk schemes and areas for investigation across the county. Preliminary information provided by the County Council has been incorporated within this chapter.

**Level 1 Strategic Flood Risk Assessment (SFRA)(Sep 2008)** – GCoC together with the District Councils commissioned the SFRA to inform the preparation of Local Plans. The aim of the SFRA therefore is to map all forms of flood risk and use this as an evidence base to locate new development primarily in low flood risk areas (Zone 1). Where development cannot be located in Flood Zone 1, the planning authority should apply the Sequential Test to land use allocations and, where necessary, the Exception Test (requiring a Level 2 SFRA).

**Level 2 Strategic Flood Risk Assessment (SFRA)(March 2012)** – The Stroud SFRA Level 2 refines the coarse flood plain mapping undertaken for the Level 1 Study in order to inform the Sequential Test and Local Plan site selection. Key matters identified for the area include:

- Important overland surface water flows have been identified in the steep-sided upper valleys of the Frome at Stroud and Rive Cam. These surface water flow paths should be safeguarded from development.
- Residual risk from culvert blockage or collapse identified. Opportunities to increase the capacity of culverts should be explored bringing flood risk management benefits to the wider community.
- Within the Stroud area there are complex interactions between the River Frome and existing sections of the Thames and Severn Canal.
- Risk of breach along the River Severn, with scenarios demonstrating that inundation would be rapid, with fast, deep waters producing areas of extreme flood hazard.

**Stroud District Strategic Flood Risk Assessment Level 2 Addendum** (March 2014) – This addendum report builds on the previous Level 2 SFRA and provides an update to the assessment of flood risk for three sites identified by Stroud District Council, including:

- Land South of Severn Distribution Park
- Hunts Grove extension
- Quedgeley East

The findings of this addendum have been reflected in Table 30 below.

**Stroud District Sequential Flood Risk Assessment Evidence Base (Dec 2013)** – responding to consultation comments from the Environment Agency, a sequential test has been undertaken covering a range of sites across the District. The Sequential Test concludes that the Council has attempted to balance competing sustainability and regeneration objectives with flood risk management issues when selecting Draft Local Plan site allocations.

**Groundwater Scoping Study** – The County Council is in the process of preparing a groundwater study that will cover Stroud District.

### **Assessment of local infrastructure needs & costs**

At a strategic level, the Severn Flood and Coastal Erosion Management Plan (Consultation ) provides a summary of the probability of flooding, condition of existing defences and future interventions for each section of the River Severn. Conclusions with respect to Stroud District are:

- **Sharpness to Aust (including Berkeley)** – The probability of tidal flooding is currently 1 in 200 or less, but this is predicted to increase to approximately 1 in 50 at Berkeley by 2060. There is currently sufficient public benefit for the Environment Agency (EA) to continue maintenance of the defences into the foreseeable future. After 2030, providing funding can be secured, the embankments will be strengthened and raised to keep pace with climate change.
- **Slimbridge** – The existing defence is in good condition and the Gloucester and Sharpness Canal also acts as high ground behind the defences. The EA intends to continue to carry out maintenance as needed on the embankment to protect properties at Slimbridge. Managed realignment of defences on the estuary side of the canal may be an option should landowners wish to consider this.
- **Frampton** – The earth embankments at Slimbridge and Saul Warth are in good condition and the EA intend to carry out maintenance as needed. The potentially more frequent inundation of the inner warth land will be monitored to ensure it does not impact on the integrity of the western canal bank that is currently in good condition.
- **Arlingham** – The earth embankments are currently in good condition, but a sea level rise of 0.3m (projected to occur by 2060) would result in a 1 in 50 chance of flooding to land and 1 in 100 chance for property. The EA intends to continue maintenance of the existing embankments, but may need to consider alternative options if a tipping point is reached. This may include: working in partnership to improve defences, explore options for managed realignment, properties are made more resilient to flooding.
- **Fretherne-with-Saul and Epney** – This area is currently protected to a 1 in 100 chance, but a sea level rise of 0.1m in the upper estuary (projected to occur by 2030) would increase the risk of tidal flooding to 1 in 50. The EA intends to maintain and then raise the defences in phases to sustain the current standard of protection in response to climate change.
- **Longney** – Most properties are protected in a 1 in 200 chance of tidal flooding, but this is projected to increase to 1 in 100 by 2030 (a 0.1m sea level rise). The EA intends to continue maintenance of the existing embankments, but may need to consider alternative options if a tipping point is reached. This may include: working in partnership to improve defences, explore options for managed realignment, properties are made more resilient to flooding.
- **Elmore** – At Elmore Back, there is already a 1 in 20 chance in any year of tidal flooding to agricultural land and the lowest lying Elmore Back properties have a 1 in 50 chance of flooding. A sea level rise of 0.1m (by 2030) would result in a 1 in 10 risk to agricultural land. The EA intends to continue maintenance into the medium to long term (about 40 to 50 years), but may need to consider alternative options if a tipping point is reached. This may

include: working in partnership to improve defences, explore options for managed realignment, properties are made more resilient to flooding.

In the latter part of the new Stroud Local Plan period, the consideration of flood risk management options that include improvements to defences, increased resilience and/or managed realignment are therefore most likely to be required in the Arlingham, Longney and Elmore Back areas.

Proposed site allocations within the draft Stroud Local Plan have been informed by Strategic Flood Risk Assessments (SFRA Levels 1 and 2) and are located within areas that are predominantly at low risk of flooding (Flood Zone 1). In each case small parts of the site are located with Flood Zones 2 and 3 (medium and high risk), however it should be possible to avoid development in these areas through the careful masterplanning of development proposals. The addendum to the SFRA explored further the flood risk on three sites identified as being at risk from flooding in order to further inform the development of these allocations.

It is expected that for the majority of the proposed allocations within the Draft Local Plan, a Site Specific Flood Risk Assessment will be required to demonstrate flood risk to the site is appropriately managed and that flood risk is not increased elsewhere (NPPF para. 103). In some instances, in particular the Stroud Valleys sites at Wimberley Mills, Brimscombe Port and Brimscombe Mill, flood risk management projects/measures are expected to form important components of the development schemes.

Through the preparation of the Draft Gloucestershire Flood Risk Management Strategy, two further flood risk management projects within Stroud District have been identified. Table 30 provides a summary of the relevant SFRA Level 2 and Sequential test findings for each of the Draft Local Plan site allocations, together with notes on planned infrastructure projects within the relevant sub-area.

Drainage capacity has been a factor in recent flooding events in Gloucestershire and it is recommended that the Local Plan should include policy emphasising the need for this potential cause of flooding to be assessed robustly within site-specific Flood Risk Assessments. The need for early engagement with the relevant wastewater utility provider, the Environment Agency and County Council should be highlighted within the policy, on the basis that planning conditions requiring capacity upgrades (where necessary) could influence how quickly development can be brought forward (see also wastewater section below).

Table 24 Review of flood risk management information by sub-area and draft Local Plan site allocation

Areas	Strategic Locations	SFRA Level 2 / Sequential Test flood risk information	Planned flood risk projects / measures	Comment
Stroud South Vale	North East Cam	Sites 150 and 151 in Flood Zone 1 but marginally affected by Flood Zones 2, 3a and 3b (around 92% of the site is within Flood Zone 1). Development in flood risk areas considered to avoidable through masterplanning process.	There is little anecdotal evidence of flooding in Cam, but surface water mapping predicts a significant flood risk due to surface runoff. An investigation is planned for 2014/15 to confirm flood risk in the area and identify suitable mitigation measures.  For the development allocation itself, it is expected that surface water attenuation facilities will be required to serve discrete areas of development.	There is committed development for around 12ha of employment land adjacent to the strategic location. It is expected that an integrated flood risk management and drainage strategy would be devised for the employment and proposed residential development.
	Sharpness	The site is located in Flood Zones 1, 2 & 3. Around 62% of the site is located in Flood Zone 1.	No specific projects identified to date, ahead of Site Specific Flood Risk Assessment.	A detailed Site Specific Flood Risk Assessment will be necessary to confirm the extent of flood risk management measures necessary to reduce residual flood risks to acceptable limits.
	Land South of Severn Distribution Park	The greenfield site is substantially located in Flood Zone 1 (66%) where port related uses could potentially be carried out.  The addendum has utilised updated flood extent maps for the Tidal Severn and shows there is a risk of tidal flooding to the site, with approximately two thirds of the site affected by Flood Zones 2 and 3	Proposals for the site are expected to involve the allocation and safeguarding of open space for flood storage.  For the unnamed drain on the eastern boundary of the site, a development easement should be applied.	It is recommended that the sequential approach is applied to the site with development directed to the least risky part of the site (FZ1).  Risk areas should be kept as open space, particularly the high hazard areas identified from the breach scenario of the embankment.  It must be ensured that safe access

Areas	Strategic Locations		SFRA Level 2 / Sequential Test flood risk information	Planned flood risk projects / measures	Comment
			within only the north eastern part of the site in Flood Zone 1.		and egress to the site can be achieved in a 1 in 100 year climate change event.
<b>Stroud &amp; West</b>	West of Stonehouse		Site reference 23 in Flood Zone 1 but marginally affected by Flood Zones 2, 3a and 3b. Development in flood risk areas considered to avoidable through masterplanning process.	No specific projects identified.	The EA advise that there are complex interactions between the Cotswold Canal and River Frome in this location that may need to be remodelled to take account of proposed development.
	Stroud Valleys	General	Approximately 60 properties in Stroud flooded in 2007 from a combination of surface and main river flooding. The Environment Agency is progressing a scheme to offer Property-Level Protection to residents adjacent to Slad Brook (estimated capital cost of £500,000 to £1,000,000. There are a number of other 'clusters' of flooding in Stroud (e.g. Devereaux Crescent) which needs to be investigated to identify flood alleviation schemes.		
		Cheapside	Brownfield site substantially located in Flood Zone 1 and is on the edge of Flood Zone 2.	No specific projects identified to date, ahead of Site Specific Flood Risk Assessment.	Draft Local Plan sets out reduced site development capacity which should reduce flood risk and allow for SUDS.
		Ham Mill	Site located in Flood Zones 1, 2 & 3. Around 57% of the site is within Flood Zone 1.	Proposals for the site are expected to involve the allocation and safeguarding of open space for flood storage.	
		Brimscombe Mill	Site located in Flood Zones 1, 2 & 3. Around 24% is located within Flood Zone 1.	Measures identified involve: dredging of the Mill Pond to provide flood water storage capacity; and sluice gate redesign.	

Areas	Strategic Locations		SFRA Level 2 / Sequential Test flood risk information	Planned flood risk projects / measures	Comment
		Brimscombe Port	Site located in Flood Zones 1, 2 & 3. Around 3% is located within Flood Zone 1.	Potential opportunity to re-excavate port area (currently filled in and built upon), and /or areas of adjacent previously developed land area to provide flood storage.	
		Wimberley Mills	Site located in Flood Zones 1, 2 & 3. Around 33% is located within Flood Zone 1.	De-culverting of the river channel to enable areas of functional floodplain and flood storage.	
		Dockyard Works	Site located in Flood Zones 1, 2 & 3. Around 51% is located within Flood Zone 1.	Proposals for the site are expected to involve the allocation and safeguarding of open space for flood storage.	
<b>Gloucester Urban Fringe</b>	Hunts Grove Extension		The majority of the site is located in Flood Zones 1 with the western part of the site marginally affected by Flood Zones 2, 3a and 3b.	Recommended that the identified FZ2, 3a and 3b areas are kept as open space.  Culvert maintenance strategy required to periodically clear culverts of debris, reducing the risk of blockage.	A site specific Flood Risk Assessment will be required to confirm the extent of flooding within the area and investigate further the residual risk to the site from a blockage or collapse of the culvert beneath the B4008.
	Quedgeley East		The greenfield site is substantially located in Flood Zone 1 (93%) where a variety of employment uses could potentially be carried out.	Proposals for the site are expected to involve the allocation and safeguarding of open space for flood storage in areas susceptible to surface water.  Opportunities to improve runoff rates from the site and reduce flood risk should be sought.	A site specific Flood Risk Assessment will be required and it is recommended that this includes a more detailed representation of the watercourse channel and structures, incorporating a full survey of Bearepair Brook.  This FRA should confirm that access and egress to the site can be achieved

Areas	Strategic Locations	SFRA Level 2 / Sequential Test flood risk information	Planned flood risk projects / measures	Comment
			Culvert maintenance strategy required to periodically clear culverts of debris, reducing the risk of blockage.	during the 1 in 100 year climate change event.

## ***Funding Sources***

There are a range of funding routes that could be pursued to deliver flood risk management infrastructure:

**Developer flood risk management and financial contributions (S106/CIL) -** Typically, where new development takes place, the onus falls upon the developer to demonstrate that flood risk to the site is appropriately managed and that flood risk is not increased elsewhere (NPPF para. 103). This can involve the delivery of on-site flood risk management measures and/or contributions to off-site flood risk management infrastructure through S106 Planning Obligations or a Community Infrastructure Levy.

**Flood Defence Grant-in-Aid: Defra Resilience Partnership Funding -** During 2011 Defra announced changes to the way funding is allocated to flood and coastal defence projects. The reformed funding programme, entitled Resilience Partnership Funding, aims to allow more schemes to go ahead and to give each community more of a say in what is done to protect them. Instead of meeting the full costs of a limited number of schemes, the new partnership approach to funding flood and coastal resilience will mean Government money is potentially available towards the cost of any worthwhile scheme, where other local committed funds are available. Government funding levels will be based on:

- the numbers of households protected;
- the damages being presented; and
- the other benefits a project would deliver.

Overall Defra expect more schemes to go ahead than if the previous ‘all or nothing’ approach to funding were to continue. The ability of Stroud DC to demonstrate that match funding could be achieved through developer contributions or another source is therefore likely to be essential for accessing flood risk management grant funding from the Government.

**Local Action through an Environment Agency Local Levy -** Section 17 of the Flood and Water Management Act 2010 enables the Environment Agency to issue a levy in respect of flood and coastal erosion risk management functions carried out by the Environment Agency. Income is raised by way of a levy agreed with local authorities and is used to support locally important flood risk management projects that are not considered to be national priorities and hence do not attract national funding through flood defence grant in aid. There are currently no Environment Agency Local Levy projects in Stroud District.

**Gloucestershire One-Off Levy -** There is a precedent for local action to raise funds for flood risk management works. Following the severe floods in 2007, nearly £29million was provided by the Government to assist with the recovery from the flooding, but no significant finance was made available for flood risk management measures that would make the county less vulnerable in the future. Politicians in Gloucestershire, with a record of maintaining low council tax rises, consulted the community on whether they would pay a one-off levy to raise a ‘fighting fund’. There was a positive response and an extra 1.1% council tax rise for 2008/09 was turned into a fighting fund of nearly £10million.

**Private Beneficiary Investment –** This comprises voluntary contributions from private beneficiaries and could include local businesses, landlords, etc. This



method is becoming increasingly common, although can be time consuming to agree and underpin with legal agreements.

**General Drainage Charge / Special Drainage Charge** – These charges comprise money raised from landowners to fund additional works by the Environment Agency. This mechanism has been used to raise £3million a year in the Anglian region, primarily for projects that protect agricultural areas.

**Investing in Britain's Future (June 2013)** - The Government's investment prospectus introduced a specific long term funding settlement for flood defences, rising to £370mil in 2015-16 and then protected in real terms to 2020-21. This provides a total of £2.3billion and represents a real annual increase of 18% compared with the Spending Review 2010 period. This is intended to:

- fund a pipeline of projects across England;
- deliver improved protection to at least 300,000 homes;
- support an ambition to increase the efficiency of this investment by at least 10% across the investment period compared to a 2014-15 baseline;
- make it easier for communities and businesses to contribute towards schemes, allow public money to go further and help more schemes be built; and
- support the insurance industry in maintaining available and affordable flood cover for households.

## Water & wastewater utilities

### *Overview*

Severn Trent Water is responsible for water supply to Stroud District. Severn Trent Water's draft Strategic Water Resources Management Plan (2015-2040) advises that they have high confidence of having sufficient water resource to meet customer's needs, by managing the supply/demand balance through ongoing leakage control and water efficiency measures.

Severn Trent Water also provides wastewater services to the majority of the district, with the exception of the south western area around Sharpness which falls within the service area of Wessex Water. With respect to wastewater sewerage and treatment plant capacity, the following potential schemes to facilitate development at strategic locations have been identified:

- For the Stroud Valleys, there are significant hydraulic capacity issues confirmed by known sewer flooding problems. Strategic sewerage improvement options are being assessed that may take 3 – 5 years to implement. Nevertheless, temporary arrangements to manage flows from new development may be possible that would prevent delays to development coming forward.
- Hunts Grove – Subject to hydraulic modelling, some localized upsizing of pumping and sewerage infrastructure may be required, but no major capacity issues are envisaged.
- Sharpness - Wessex Water have undertaken strategic planning for their capital programme over the 5 year period to 2020. There is currently no defined wastewater schemes proposed at Sharpness over this period. Wessex Water have confirmed there is low probability of any capacity improvements being required by 2020 for the level of residential development proposed. However, a capacity appraisal would be required at pre-planning or masterplanning stage. Wessex Water are satisfied that they could deliver any necessary capacity improvements for the residential development at Sharpness over the plan period if required.

The proposed employment development at Sharpness is located immediately adjacent to the existing sewage treatment works, within a development restraint zone. Wessex Water advise that this location is subject to high risk of complaint and statutory nuisance due to odour emissions and request further discussion with Stroud DC prior to any development. Alongside the statutory nuisance risk, Wessex Water have also raised concerns around the need to safeguard land around the existing WWTW for future expansion.

### *Responsibilities for delivery*

Stroud District is served by the following water and wastewater utility companies:

- **Severn Trent Water (STW)** – STW provides water supply and wastewater services to the majority of the District.
- **Wessex Water (WW)** – Wessex Water provides wastewater services to some southern parts of Stroud District, including the proposed locations for strategic housing and employment development at Sharpness.

Where strategic capacity is required we allocate defined schemes for sewage treatment and sewerage across the region to meet demand and environmental consents. These outputs are normally agreed with industry regulator OfWAT for delivery within a defined programme.

Allocated development sites and windfall development will proceed at different timescales and we use a contingent approach. Our assessments allow for an aggregated approach to service development with some recognition of phasing arrangements for capacity led schemes.

For sewerage planning we will seek engagement with the planning authority and the developer to participate in master-planning. Where appropriate we will complete network modelling to confirm the impact upon the public sewer system. This approach will normally facilitate agreement upon a drainage strategy and the trigger points for any phased improvements to match the rate of development.

**The Environment Agency** – the Environment Agency has a role as regulator with respect to managing water resources under the Water Framework Directive. This includes the granting of Environmental Permits held by the water utility companies (these permits were previously known as Abstraction Licences and Discharge Consents, but are now Environmental Permits under the Environmental Permitting Regulations 2010).

### ***Sector plans & strategies***

**Water Resource Plans** - All water supply companies are required to produce Water Resource Plans covering a period of 25 years, which should demonstrate the predicted demand and supply requirements resulting from population growth. The preparation of Local Plans and the associated Infrastructure Delivery Plans should feed into this process, providing water companies with important information on planned development levels. Severn Trent are in the process of preparing a Water Resource Plan for the period 2015 – 2040 and published a consultation draft during May 2013.

**Asset Management Plans** - Water and wastewater companies also produce 5 year business plans, known as Asset Management Plans (AMPs), setting out their planned infrastructure projects for that period. The Current AMP5 period covers 1<sup>st</sup> April 2010 to 31<sup>st</sup> March 2015. AMP6 will cover the period from 1<sup>st</sup> April 2015 to 31<sup>st</sup> March 2020 and the water companies' draft Business Plans were submitted to Ofwat in August 2013.

**Severn River Basin Management Plan (December 2009)** – The plan sets out the pressures facing the water environment in this river basin district and the actions that will address these. The plan is prepared under the Water Framework Directive and will be reviewed on a six year cycle with the first cycle ending in 2015. Stroud District is located within the Severn Vale catchment area, and watercourses in the District are shown to have Moderate or Good ecological status (Figure 17).

**Midlands Catchment Abstraction Management Strategy (CAMS)(February 2013)** – The Midlands CAMS covers the Severn Vale area including Stroud District and sets out the licensing strategies that the Environment Agency use to manage water resources, existing and future abstraction licences and water availability within river catchments. For the Cotswold South Groundwater

Management Unit, which contains the town of Stroud and surrounding area, the CAMS concludes that there is “restricted water available for licensing”.

### ***Baseline infrastructure & deficits***

STW does not provide details of specific projects within the 2010 – 2015 AMP Business Plan, but does set out overall commitments for the five year period. For water supply these are<sup>23</sup>:

- Increase the reliability of services by protecting assets from flooding and providing alternative supplies.
- Use water resources more sustainably by reducing leakage.
- Promote greater water efficiency and metering with our customers.
- Sustain high levels of drinking water quality.
- Investigate how the need for carbon intensive and expensive treatment processes can be reduced.

For wastewater services the key commitments are:

- Solve 885 internal sewer flooding problems and 678 external sewer flooding problems.
- Tackle odour issues at 16 sewage treatment works across the STW region.
- Reduce the number of pollution incidents.
- Deliver improvements to treatment processes to make a contribution to improving the natural environment and compliance with European Union standards.

Stated priorities for Wessex Water within their Final AMP Business Plan (2010 – 2015), with respect to wastewater services, include:

- Reduce risk of internal flooding at 338 properties and external flooding at 170 properties.
- Improvements at two critical pumping stations to avoid customer flooding.
- Work to eliminate 700 sewer misconnections to reduce pollution.

The emphasis within wastewater investment plans on works to prevent flooding from sewers highlights the importance of ensuring sufficient capacity is provided within sewage and drainage networks to accommodate new development, along with appropriate design measures. Within Stroud District sewage flooding problems have arisen in relatively new housing developments at Littlecombe in Dursley and Bridge Mead in Stroud. In some instances new development may necessitate downstream improvements to network capacity and Stroud DC will seek to ensure that flood risks are adequately assessed by developers through consultation with the relevant utility provider and Site-specific Flood Risk Assessments.

### ***Assessment of infrastructure needs & costs***

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<sup>23</sup> Source: “Our commitment to your services – Severn Trent Water’s investment plans for 2010-15”

As part of the process of preparing the IDP, the water and wastewater utility companies have been asked to comment on whether they see any specific infrastructure needs arising from the growth levels set out in the Stroud Local Plan development scenarios circulated for comment during March 2013.

**Water supply** - With respect to water supply, the draft Water Resource Management Plan takes account of future development and sets out the interventions Severn Trent Water propose to maintain the supply-demand balance. This confirms that for the Forest and Stroud water resource zone, Severn Trent Water have high confidence of having sufficient water resource to meet customer's needs. The company does face pressure to reduce abstraction from unsustainable sources and climate change impacts, but these are not expected to trigger the need for investment in new sources of supply. Instead, plans for these zones are to manage the supply/demand balance through ongoing leakage control and water efficiency measures. Parts of Stroud District may also fall within the large Strategic Water Resource Zone that includes the large conurbations of Birmingham and Derby further north. Whilst proposals for this area include some water resource projects, none of these are located within the Stroud District area.

**Wastewater** - In terms of the capacity of the sewerage system and wastewater treatment plants, Severn Trent have provided a commentary for each of the proposed Local Plan site allocations. The information in the table below is provided as a guide only and it is important that the utility companies are consulted early by developers to ensure that water and wastewater infrastructure issues are given adequate consideration.

The Environment Agency have advised that they do not anticipate 'showstopper' issues arising for the development scenarios or growth options identified in the briefing pack. They identify that in those instances where additional treatment capacity is required at sewage works to accommodate the additional growth, this may mean tighter controls in any Environmental Permits to ensure no deterioration in the ecological status of the receiving water bodies. In addition, there should be no increase in Combined Sewer Overflows (CSOs) as a result of additional development.

In a number of cases in Table 31, STW has advised that hydraulic modelling is undertaken in order to confirm capacity to accommodate the proposed developments. This is recommended in areas where a desk top review of development has indicated there may be adverse impact from the proposed development.

Developers should contact STW to request modelling through the following website: <http://www.stwater.co.uk/developers/>.

While this is optional it is intended to provide the developer with an early indication of any likely issues with sewerage capacity which may assist in the application for planning permission. The developer will be required to pay the hydraulic modelling charges and a report will be created by STW which outlines what, if necessary, is required to accommodate the development.

STW has a general duty under section 94 (clauses 1a and 1b) of the Water Industry Act (1991):-

- To provide, improve and extend such a system of public sewers (whether inside its area or elsewhere) and so to cleanse and maintain those sewers and

any lateral drains which belong to or vest in the undertake as to ensure that the area is and continues to be effectually drained; and

- To make provision for the emptying of those sewers and such further provision (whether inside its area or elsewhere) as is necessary from time to time for effectually dealing, by means of sewage disposal works or otherwise, with the contents of those sewers.

In effect, STW have an obligation to provide such additional capacity as may be required to treat additional flows and loads arising from new domestic development. STW request that developers contact their team as early in the planning process as possible.

### ***Funding***

The utility companies would expect the funding for any site connections and necessary upgrades to the local water supply and wastewater networks for each settlement to come from site developers.

Ongoing maintenance of the water and wastewater networks, including any strategic water resource projects (such as new reservoirs), are funded by ratepayers. Investment plans set out in the Water Resource Management Plans and AMPs and subsequent variations in rates paid are regulated by Ofwat.

### ***Planned infrastructure projects***

Severn Trent Water have advised that they are in the process of assessing strategic sewerage improvement options to address sewerage capacity issues in Stroud (see Table 28 below for further details). As part of the IDP Refresh, STW have confirmed that the Stroud scheme which was originally included in their AMP6 business plan, has since been removed on the basis that a number of assumptions had to be made without detailed analysis on the catchment risks.

STW still has funding allocated for this project and remains fully committed to resolving the flooding issues in Stroud and intend to deliver the first element of a phased solution by the end of AMP6.

In their response to this refresh and in correspondence with Stroud DC and the Environment Agency, STW confirmed that the project known as The Stroud Strategy will be delivered during AMP6. This will address sewerage capacity constraints in the main sewer outfall connecting Stroud to Stanley Downton sewerage treatment works. The primary objective of this work is to address long standing frequent external flooding affecting the Ebley Meadow and Dudbridge areas plus some internal flooding issued in the Walbridge areas of the catchment.

These works will accommodate new development within Stroud itself, including the development proposals in the Stroud Valley. The current anticipated completion of the Stroud Strategy is mid-2019.

Alongside these strategic capacity improvements, STW confirmed the likely need to undertake local improvements but confirmed these would be assessed as and when development comes forward.

A more general point raised by STW confirmed that key to accommodating new developments is to ensure surface water is managed sustainably and is not connected to the foul/combined sewerage system as additional flows will impact on sewer performance. Additional foul only flows are not expected to have

significant impact on sewer performance as it is surface water that causes the main issues in the catchment. As part of the Stroud Strategy work STW will also look to identify locations where they can undertake surface water separation work, to release capacity and accommodate additional developments.

Further phases of the strategy will be forecast for AMP7. To this end and under their legal obligation, STW are committed to working with Stroud District Council to ensure that any forecast developments are included in the Stroud Scheme to ensure they do not adversely impact network capacity.

STW have identified that depending on the size of the upstream developments, it could take up to two – three years to provide additional capacity at a treatment works to accommodate growth.

Table 25 Water and wastewater utility comments by strategic location for development

Areas	Strategic Locations	Waste water treatment capacity	Sewage and drainage network capacity
<p><b>Stroud South Vale</b></p>	<p>North East Cam</p>	<p>STW – Proposed site located within Coaley Sewage Treatment Works catchment. Comparison of current measured dry weather flow against the consented dry weather flow and current quality performance assessments indicate there is no spare capacity at this treatment works. Additional capacity will be required in order to accommodate future development. STW do not envisage any issues as there are no land or other physical constraints preventing expansion.</p> <p>In further correspondence as part of the refresh STW confirm that work at Coaley is planned as part of the AMP6 programme. As part of initial feasibility STW report that the STW is working well and they do not anticipate any sewerage treatment issues at Coaley to accommodate planned growth at North East Cam. Should detailed assessments indicate capacity requirements these would be undertaken during AMP 6 alongside capital and refurbishment works.</p>	<p>STW - This proposed site is immediately upstream of the sewage treatment works and is crossed by outfalls sewers from Cam/Upthorpe. Subject to hydraulic modelling no capacity issues are envisaged in the area <u>provided surface water is not connected to the foul sewers</u>. Should hydraulic modelling indicate that additional capacity is required then this is not expected to be significant due to the close proximity to the sewage treatment works.</p>
	<p>Low potential impact on sewerage infrastructure (subject to hydraulic modelling).</p>		
	<p>Sharpness (residential)</p>	<p>WW – Recent technical assessment confirms that no capacity improvements will be required at Sharpness STW before 2020. We will be completing a further assessment at the next review of the asset management plan during 2019 to confirm any necessary works to accommodate catchment growth.</p>	<p>WW – Sewerage network at Sharpness has limited capacity and a range of capacity improvements to the public sewer system will be necessary to accommodate development of the scale proposed.</p> <p>We request that Wessex Water participate with the planning authority and the developer during the master-planning exercise to complete appropriate assessments and agree a drainage strategy. We will request a contribution to sewerage modelling where necessary. The use of a Grampian condition may be considered to agree a suitable drainage strategy where capacity</p>



Areas	Strategic Locations	Waste water treatment capacity	Sewage and drainage network capacity
			<p>improvements are necessary.</p> <p>Subsequent correspondence with WW stated that a preliminary review of the system indicates that foul water disposal capacity constraints at the local pumping station can be overcome by pumping directly to the downstream local pumping station which has a much greater capacity to deal with the proposed flows. WW would need to work with the developer and agree a sustainable drainage strategy with cost estimates.</p>
	<p>Sharpness (employment)</p>	<p>WW – Land at Severn Distribution Park, Sharpness, occupies a position adjoining the existing sewage treatment works and is located within a development restraint zone around the works. WW has serious concerns over the risk of odour nuisance and request that the Council review the scope of proposals at this location. WW advise that any application made for this land should be supported with an appropriate assessment to confirm the odour radius and the impact upon the development. We would request that the planning authority resist any application that is at significant risk of statutory nuisance from odour. We would advise that the Environmental Health Officer is also consulted on these proposals.</p> <p>Wessex Water also raised concerns over the need to safeguard areas for the future expansion of the works in this area.</p>	<p>No specific comments raised.</p>

Areas	Strategic Locations	Waste water treatment capacity	Sewage and drainage network capacity
<p><b>Stroud &amp; West</b></p>	<p>West of Stonehouse</p> <p>North of Stroudwater Industrial Estate (employment)</p>	<p>STW - Proposed site within Stanley Downton sewage treatment works catchment. Comparison of current dry weather flow against consented dry weather flow indicates there is reasonable spare capacity at this treatment works. Should additional capacity be required in order to accommodate future development above the existing capacity then STW do not envisage any issues as there are no land or other physical constraints preventing expansion</p> <p>STW confirmed that a maintenance programme is underway in AMP6 which includes capacity upgrades to accommodate long term developments. Work planned for completion in 2017.</p>	<p>STW - Ground topography suggests this site will drain south to an existing sewage treatment works serving the Oldend industrial estate. All flows are then pumped directly to Stanley Downton STW, approximately 1.3km distance.</p> <p>While it is envisaged that there will be some spare capacity to accommodate the initial phases of any development to the west of Stonehouse, it is expected that capacity improvements will be required to accommodate later phases. As a worst case this may require replacement of the existing pumping station and duplication/upsizing of the existing 1.3km rising main.</p> <p>STW confirmed that a project is ongoing to ensure this capacity at the Stonehouse pumping station. This will be sized accordingly to accommodate employment and residential allocations and completion will be phased to coincide with development.</p> <p>Subject to more detailed assessments, it is not envisaged that this will be a significant barrier to development in the area, but to avoid abortive investment clarity over the long term development numbers will be required to ensure long term pumping capacity is available.<sup>24</sup></p>
	<p>Low to medium potential impact on sewerage infrastructure (subject to hydraulic modelling) – larger developments (scenarios 2 and 3) will have more impact on capacity issues.</p>		

<sup>24</sup> Please note: comments based on potential for both residential and employment development to the West of Stonehouse, as presented in the Consultation Draft IDP.

Areas	Strategic Locations	Waste water treatment capacity	Sewage and drainage network capacity
	Stroud Valleys	<p>STW – Proposed sites located within Stanley Downton sewage treatment works catchment. Comparison of current dry weather flow against consented dry weather flow indicates there is reasonable spare capacity at this treatment works. Should additional capacity be required in order to accommodate future development above the existing capacity then STW do not envisage any issues as there are no land or other physical constraints preventing expansion.</p> <p>STW confirmed that a maintenance programme is underway in AMP6 which includes capacity upgrades to accommodate long term developments. Work planned for completion in 2017.</p>	<p>STW – There are significant hydraulic capacity issues in Stroud confirmed by known sewer flooding problems in the Wallbridge area and further downstream in the Dudbridge/Ebley areas. During periods of heavy rainfall the capacity of the main trunk sewer draining Stroud to Stanley Downton sewage treatment works is exceeded resulting in extensive flooding, predominantly to external open spaces but also affecting some property.</p> <p>STW are currently assessing strategic sewerage improvement options to address the sewer capacity issues in Stroud, but due to the extent of the expected improvement work it is envisaged that this work could take 3-5 years to complete. It is expected that all new development within Stroud will be built with separate foul and surface water drainage, and provided surface water drainage is managed sustainably and is not connected to the foul sewer, the additional foul only flows from 1,000 dwellings will only have a small detrimental impact on the known capacity issues in the main trunk sewer. Further detailed modelling will be required to assess the potential impacts of each development location but, as an interim arrangement, temporary measures may be required which only allow new development flows to be discharged during times of low flow in the main sewer.</p>
<p><b>STW - High potential impact on sewerage infrastructure – known severe flooding problems downstream in Stroud.</b></p>			
<b>Gloucester Urban Fringe</b>	Hunts Grove Extension	<p>STW – Proposed site located within Netheridge sewage treatment works catchment. Comparison of current measured dry weather flow against the consented dry weather flow indicates that there is reasonable spare capacity at this treatment works. Should additional treatment capacity be required in order to accommodate future development above the existing capacity then we do not envisage any issues as there are no land or other physical constraints preventing</p>	<p>This residential site is likely to require pumping due to the topography of the site. There are no known flooding problems downstream of this development but it will eventually drain to Quedgeley Main Pumping Station which pumps directly to Netheridge sewage treatment works. Capacity is subject to the capacity of the pumping stations. Subject to hydraulic modelling and confirmation of pumping capacity, provided the surface water is dealt with sustainably, no major capacity issues are envisaged although some localised upsizing may be required.</p>

Areas	Strategic Locations	Waste water treatment capacity	Sewage and drainage network capacity
	<p>Quedgeley East (employment allocation)</p>	<p>expansion.</p> <p>The ongoing STW sewerage project is only dealing with need from the development allocations to the south of Gloucester and STW are in discussions to ensure proposals align with development phasing.</p>	<p>Ground topography suggests this site will drain south west to the nearby pumping station before being pumped to Quedgeley Main Pumping Station. This pumps directly to Netheridge sewage treatment works. Capacity is subject to the capacity of the pumping stations. Subject to hydraulic modelling and confirmation of pumping capacity, provided the surface water is dealt with sustainably, no major capacity issues are envisaged although some localized upsizing may be required.</p>
<p>Low to medium potential impact on sewerage infrastructure (subject to hydraulic modelling) – larger developments (scenarios 2 and 3) will have more impact on capacity issues.</p>			

## 4.7 Information & Communications Technology (ICT)

### *Overview*

Securing high speed broadband has important implications for economic competitiveness and the ability of households to access the online services of other infrastructure and service providers.

Within Stroud District the majority of the local exchanges serving draft Local Plan allocations have now been upgraded to superfast broadband, or the upgrade is scheduled to occur by end 2014 (Berkeley). The Stonehouse exchange is now under evaluation by BT Openreach for upgrade. It is recommended that new developments are encouraged to provide fibre optic connections from the upgraded cabinets to premises from the outset. For all developments of 25 dwellings or more, the business case for implementing these connections is expected to be within reasonable limits of viability.

This will, however, leave the existing rural communities that fall into the ‘final third’ category in the UK that will suffer from below average internet speeds and a lack of competition between services. In order to combat this, the Borders Broadband initiative has secured £14.4 million from the Government towards rolling out fibre broadband in rural areas, which has been boosted with a further £7.5 million investment by Gloucestershire County Council and £6 million from Herefordshire County Council. The two county councils have now formed a non-profit making collaboration with BT Openreach called ‘Fastershire’, which has the aim of bringing fibre broadband to around 90% of homes by the end of 2016. The ‘Fastershire’ initiative will apply to locations in more rural areas, where there is typically not a viable business case to achieve broadband provision without public funding support.

It is understood that the case for upgrading the Lydney and Netherend exchanges that serve Lydney is currently under evaluation through the Fastershire Initiative.

### *Responsibilities for delivery*

Telecommunications cover a wide range of services including voice, audio visual, mobile telephone and internet. BT has a universal service obligation to provide telephone connections. A number of internet infrastructure providers, including BT Openreach, Cable & Wireless and Virgin Media, compete to provide connections to businesses and households. BT Openreach operates as a wholesale network access provider, meaning that other internet providers can ‘rent’ the fibre optic and copper cable provided when providing services to businesses and households.

Improving the provision of local broadband is an infrastructure priority for Gloucestershire. It forms an integral element of the County Council’s economic stimulus package – Grow Gloucestershire.

Gloucestershire’s Local Enterprise Partnership *GFirst*, Herefordshire Council, Gloucestershire County Council and BDUK (Broadband Delivery UK) manage an initiative called Borders Broadband, which aims to secure private investment in new fast broadband infrastructure for rural areas in Gloucestershire and

Herefordshire. This has led to the creation of *Fastershire*, a non-profit making collaboration by the two County Councils and BT Openreach.

### ***Assessment of infrastructure needs and current projects***

The provision of ICT infrastructure will have key implications for the economic competitiveness of Stroud District and the ability of households to access the online services of other infrastructure and service providers (e.g. library services, healthcare and education). This study has focussed on internet access as an important measure, and in particular the provision of high speed broadband connectivity.

### ***BT Openreach upgrades***

Internet infrastructure providers have been working on an on-going basis to upgrade the national broadband network. As an example, it is the aim of BT Openreach that by 2014 two-thirds of UK premises will have super-fast broadband (download speeds of up to 300Mbps), through the process of laying fibre optic cables over the current copper lines. The fibre to the Cabinet (FTTC) local exchange upgrades being undertaken by BT Openreach are capable of offering download speeds of up to 80Mbps and upload speeds of 20Mbps. Where a Fibre to the Premises (FTTP) connection is also installed, replacing the existing copper network between the local exchange and individual properties, download speeds of up to 300Mbps can be achieved. The actual internet speed achieved also depends on other factors, such as the length of the connection. From 2014, BT Openreach propose that they only provide FTTP connections to new homes.

The table below sets out whether the local exchange has been upgraded for areas within Stroud District where Local Plan allocations are proposed. This shows that a number of areas within Stroud District have benefitted from a recent upgrade and that other key growth areas, in particular Lydney, are currently being evaluated for an upgrade.

In order to ensure that new properties benefit from superfast broadband, it is recommended that developers are urged to liaise with internet infrastructure providers from an early stage and install FTTP connections when new properties are constructed. The County Council is consulting on proposals that may recommend the use of planning conditions to ensure new communications infrastructure will achieve Next-generation Access standards<sup>25</sup> (see '*Local Developer Guide- Infrastructure & Services with new development.*' Public Consultation Version, August 2013). For developments over a threshold of 25 dwellings, and which are served by an upgraded exchange, it is expected that the business case for providing FTTP infrastructure from 2014 will fall within acceptable limits of viability (subject to consideration of total development viability).

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<sup>25</sup> The UK Office of Communications (Ofcom) defines Next-generation Access (NGA) as super-fast broadband that provides a maximum download speed that is greater than 24Mbps.

Table 26 Status of super-fast broadband provision to exchanges in vicinity of proposed strategic locations for development

Stroud Sub-area	Strategic Locations and scenarios	Status of super-fast broadband provision <sup>26</sup>
Stroud South Vale	North East Cam	Local exchange at Cam now accepting orders.
	Sharpness	Upgrade of the local exchange at Berkeley scheduled to occur by end 2014.
	Severn Distribution Park	
Stroud and West	West of Stonehouse (1,350 dwellings)	Local exchange at Stonehouse currently under evaluation for upgrade.
	North of Stroudwater Industrial Estate	
	Stroud Valleys	Local exchanges at both Stroud and Brimscombe now accepting orders.
Gloucester Urban Fringe	Hunts Grove	Local exchange at Quedgeley now accepting orders.
	Quedgeley East	

Stonehouse is an important existing and proposed location for employment development within the District and therefore should be promoted as a priority for upgrade (this exchange is currently under evaluation for upgrade).

### ***Borders Broadband Project***

Taking account of the current programme of exchange upgrades to the main urban areas, and potential for new households to achieve superfast broadband connections from the outset, this will still leave the ‘final third’ of properties in rural areas that are hard-to-reach, or simply not commercially viable to connect with private funding alone.

Within the UK, £830 million of public funding has been set aside for Broadband Delivery UK (BDUK the UL Government’s broadband delivery authority) to address this challenge of poor coverage in rural areas. The Borders Broadband project covering Herefordshire and Gloucestershire is one of four initial pilots that have been set up, which secured £14.4 million from the Government towards rolling out fibre broadband in rural areas. This has been boosted with a further £7.5 million investment by Gloucestershire County Council and £6 million from Herefordshire County Council. The two county councils have now formed a non-profit making collaboration with BT Openreach called ‘Fastershire’, which has the aim of bringing fibre broadband to around 90% of homes by the end of 2016.

Industrial areas and business parks are a key priority for the provision of fibre broadband and the project should also benefit those premises that currently receive downstream speeds of less than 2Mbps. Ofcom currently believe that around 20% of premises in the counties receive less than 2Mbps but that percentage will reduce close to zero as a result of the Fastershire project<sup>27</sup>.

As well as securing an improved broadband infrastructure via the Borders Broadband project, new wireless technologies such as mobile 4G (Fourth Generation), LTE (Long-term Evolution) data services and TV white-space

<sup>26</sup> Source: <http://www.superfast-openreach.co.uk/where-and-when/> (accessed February 2014)

<sup>27</sup> Source: <http://www.fastershire.com/questions-and-answers?tabId=5149>

(technology that uses areas of the airwaves reserved for TV broadcasts) should become more available over time. These technologies may have a role in providing fast data services in rural areas in the future.

### ***Funding***

In addition to the Borders Broadband initiative, GFirst (the Local Enterprise Partnership for Gloucestershire) and the County Council has worked with other South West local authority partners and Peninsula Enterprise to secure European funding for a project which will provide a high-speed broadband business support programme. The programme will offer a series of awareness-raising events, specialist advice and support, to target and drive up demand, exploitation and growth of businesses in the eligible areas.



## 4.8 Open space, sport & recreation

This section covers the provision of a range of sports, leisure and amenity facilities including indoor facilities (swimming pools and sports halls); outdoor playing pitches; informal outdoor open space; childrens' play space; and accessible natural greenspace.

### Indoor sport facilities

#### *Responsibilities for delivery*

Stroud DC runs leisure centres throughout Dursley, Eastcombe, Stroud, Stonehouse and Wotton. There is also a large leisure centre at Stratford Park in Stroud that is operated by Sports and Leisure Managements Limited (SLM), under their brand 'Everyone Active'.

Active Gloucestershire is a company limited guarantee with charitable status, which is part of the national network of county sport and physical activity partnerships in England that works to increase participation in physical activity and sport.

#### *Assessment of infrastructure needs and costs*

Sport England have created the Sports Facility Calculator (SFC) to help local authorities quantify how much additional demand for key community sports facilities is generated by new development. The SFC covers swimming pools, sports halls and indoor bowling rinks as important indoor facilities (swimming pools and sports halls are considered by this study).

### Swimming Pools

#### *Baseline*

There are two swimming facilities that are open to the public located within Stroud District. Also of relevance is the GL1 Leisure Centre in central Gloucester, which would also be accessible from proposed development at Hunts Grove. Brief details of the swimming pools are provided below:

- Dursley Swimming Pool – an indoor 25m pool open 7 days a week;
- Stratford Park Leisure Centre, Stroud – indoor and outdoor swimming pools, open 7 days a week; and
- GL1, Gloucester – GL1 provides a complex of four swimming pools: an 8-lane 25m competition pool; a 4 lane 25m pool; a shallow pool for learning; and a children's fun pool.

To gain an indication of whether this level of provision is sufficient to meet the needs of the current population, it is possible to utilise the SFC. Sport England warn that, whilst the SFC can also be used to estimate the overall demand for sports facilities for the existing population in this way, there are dangers in how such figures are subsequently used for strategic gap analysis. For instance, the SFC does not take account of facility location compared to demand, the capacity and availability of facilities or the attractiveness of facilities.

Entering the current Stroud District population of 112,779 into the SFC produces a demand for around 5.7 pools (23 lanes), suggesting that the current level of provision is relatively low, particularly as the GL1 facility also serves the population of Gloucester City. A further more detailed assessment would be required to verify whether a shortfall exists, that would also take account of the availability of private pools.

### *Assessment of future need*

Utilising the Sport England SFC tool it is predicted that the revised development scenario could lead to additional demand for between 0.81 and 0.87 swimming pools (3.2 to 3.4 lanes).

This calculation is based on total population related to the proposed development allocations. This would include an element of population change as well as growth and on the basis that swimming pools typically serve wide catchment areas, demand may be slightly less. However, it is considered that demand is likely to be met through the provision of an existing facility and/or refurbishment or changes (e.g. increased opening) at existing facilities and therefore provision should be achievable.

The Sport England SFC tool already builds in demographic information for Stroud District and cost variations for Gloucestershire when assessing demand and estimating the capital cost of provision. Table 31 sets out the results of this preliminary assessment of need.

Table 27 Assessment of need for Swimming Pool provision and estimated cost.

Revised Development Scenario (2014-2031)	Dwellings		Population		Demand		Capital Cost	
	Low	High*	Low	High*	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>	<b>0.20</b>	<b>0.24</b>	<b>£ 671,818.82</b>	<b>£ 776,845.11</b>
<i>North East Cam</i>	450	750	981	1,635	0.05	0.08	£ 157,539.59	£ 262,565.95
<i>Sharpness Docks</i>	300	300	654	654	0.03	0.03	£ 105,026.39	£ 105,026.38
Committed Sites & Windfall	1,169	1,169	2,548	2,548	0.12	0.12	£ 409,252.84	£ 409,252.79
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>	<b>0.32</b>	<b>0.32</b>	<b>£ 1,059,016.12</b>	<b>£ 1,059,015.98</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943	0.14	0.14	£ 472,618.76	£ 472,618.70
<i>Stroud Valleys</i>	400	400	872	872	0.04	0.04	£ 140,035.19	£ 140,035.17
Committed Sites & Windfall	1,275	1,275	2,780	2,780	0.14	0.14	£ 446,362.17	£ 446,362.11
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>	<b>0.04</b>	<b>0.04</b>	<b>£ 121,130.44</b>	<b>£ 121,130.42</b>
Committed Sites & Windfall	346	346	754	754	0.04	0.04	£ 121,130.44	£ 121,130.42
<b>D. Gloucester Urban Fringe</b>	<b>2,360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>	<b>0.25</b>	<b>0.28</b>	<b>£ 826,207.62</b>	<b>£ 913,729.49</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635	0.05	0.08	£ 175,043.99	£ 262,565.95
Committed Sites & Windfall	1,860	1,860	4,055	4,055	0.20	0.20	£ 651,163.63	£ 651,163.54
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>	<b>0.81</b>	<b>0.87</b>	<b>£ 2,678,173.00</b>	<b>£ 2,870,721.00</b>
<b>Committed Sites &amp; Windfall</b>	4,650	4,650	10,137	10,137	0.49	0.49	£ 1,627,909.08	£ 1,627,908.86
<b>Allocations</b>	3,000	3,550	6,540	7,739	0.32	0.38	£ 1,050,263.92	£ 1,242,812.14
<b>Completions (2006-2014)</b>	3,264	3,264	7,116	7,116	0.35	0.35	£ 1,142,687.15	£ 1,142,686.99

Development within the Stroud Valleys and at North East Cam will be particularly well located with respect to existing facilities, however, it will be necessary to assess the extent of remaining capacity at these pools. Major developments at Hunts Grove and West Stonehouse are less well located in terms of access to existing facilities.

It is recommended therefore that further assessment and viability work is undertaken to understand whether new development within Stroud District and Gloucester City could support a new swimming pool development, potentially located in the Gloucester Urban Fringe area.

## Sports Halls

### *Baseline*

A review of the locations of existing principal leisure centres within Stroud District shows that proposed residential allocations at North East Cam and within the Stroud Valleys are relatively well related to these (see Table 32). For development at Hunts Grove, a journey to facilities at Stonehouse or central Gloucester would be necessary. Equally, in the cases of the smaller proposed development at Sharpness, longer journeys to access sports halls would be required.

Community centres in villages often fulfil the role of providing additional space for fitness and leisure activities, and in some instances provide sufficient space for badminton courts and indoor bowls etc. To provide an example, the programme of activities at Quedgeley Community Centre (within Gloucester City Council and close to Hunts Grove) includes martial arts, short mat bowls, slimming world and yoga.

Schools also contribute to the overall level of sports provision in an area, although the level of community access to school facilities can vary. A full audit of sports facilities and leisure programmes at schools and community centres is not available at this time, although section 4.1.1 of this report sets out brief details of community centre locations and facilities available.

Table 28 Leisure centres/sports halls serving Stroud District

Stroud Sub-area	Strategic Location	Leisure centres within settlements (or closest available)	Facilities
Stroud South Vale	North East Cam	Dursley Leisure Centre	Gym, fitness classes, indoor and outdoor courts (available for football, cricket, tennis and netball) and indoor swimming pool.
	Sharpness	Closest leisure centre at Dursley	
Stroud and West (SW)	West of Stonehouse	Maidenhill Sports and Dance Centre, Maidenhill School, Stonehouse	Sports hall, dance studio, venue fitness studio, floodlit netball court, floodlit 5-a-side football area, 4 x badminton courts, tennis courts, showering and changing facilities
	Stroud	Stratford Park Leisure Centre, Stratford Road,	52 station gym, group fitness classes, sauna and steam room, 6

Stroud Sub-area	Strategic Location	Leisure centres within settlements (or closest available)	Facilities
	Valleys	Stroud	court sports hall, astro turf pitch, 4 squash courts, 6 tennis courts, meeting and function rooms, indoor and outdoor sports halls.
		Thomas Keble Leisure Centre, Eastcombe, Stroud	4 badminton court sports hall, gymnasium, dance studio, The Venue Fitness Suite, netball court 6-aside area (no floodlights), 5 x badminton courts, 2 x tennis courts, 2 x table tennis tables, cricket nets, showering and changing.
Gloucester Urban Fringe (GUF)	Hunts Grove	GL1 Leisure Centre, Bruton Way, Gloucester	8 badminton court sports hall, gymnasium, fitness suite, spinning studio, studio, toning suite, spa and swimming pool.
		Proposed community centre linked to committed development	Community centre providing sufficient space for indoor sports (including badminton).
Other	N/A	Wotton Sports Centre, Katherine Lady Berkeley's School, Wotton-under-Edge	4 badminton court sports hall, gymnasium, The Venue Fitness Suite, outside floodlit football (tarmac), outside floodlit tennis and netball, 5 x badminton courts, 2 x squash courts, 4 x table tennis tables, cricket nets, showering and changing facilities.

### *Assessment of future need*

Utilising the Sport England SFC tool it is predicted that the revised development scenario could lead to demand for between 1.1 and 1.17 additional sports halls (equivalent to approximately 4.5 courts), as shown in Table 33. As with the swimming pool demand, this is based on total population at the development allocations which is likely to include some movement within the District.

However, demand for sports halls across the plan period from growth alone is estimated to be 1.1 halls and therefore new provision should adequately meet predicated demand from the revised development scenario.

Taking into account the review of existing facility locations, provision of a sports hall in the Hunts Grove area could form a priority. An alternative approach would be to facilitate improvements to existing leisure and community centres across the District.

### *Current projects*

No projects to provide new sports halls facilities have been identified to date.

Table 29 Assessment of need for Sports Hall provision and estimated cost.

Revised Development Scenario (2014-2031)	Dwellings		Population		Demand		Capital Cost	
	Low	High*	Low	High*	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>	<b>0.28</b>	<b>0.32</b>	<b>£ 763,295.17</b>	<b>£ 882,622.13</b>
<i>North East Cam</i>	450	750	981	1,635	0.06	0.11	£ 178,990.53	£ 298,317.53
<i>Sharpness Docks</i>	300	300	654	654	0.04	0.04	£ 119,327.02	£ 119,327.01
Committed Sites & Windfall	1,169	1,169	2,548	2,548	0.17	0.17	£ 464,977.62	£ 464,977.59
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>	<b>0.43</b>	<b>0.43</b>	<b>£ 1,203,214.11</b>	<b>£ 1,203,214.04</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943	0.19	0.19	£ 536,971.59	£ 536,971.55
<i>Stroud Valleys</i>	400	400	872	872	0.06	0.06	£ 159,102.69	£ 159,102.68
Committed Sites & Windfall	1,275	1,275	2,780	2,780	0.18	0.18	£ 507,139.83	£ 507,139.80
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>	<b>0.05</b>	<b>0.05</b>	<b>£ 137,623.83</b>	<b>£ 137,623.82</b>
Committed Sites & Windfall	346	346	754	754	0.05	0.05	£ 137,623.83	£ 137,623.82
<b>D. Gloucester Urban Fringe</b>	<b>2360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>	<b>0.34</b>	<b>0.37</b>	<b>£ 938,705.89</b>	<b>£ 1,038,145.01</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635	0.07	0.11	£ 198,878.37	£ 298,317.53
Committed Sites & Windfall	1,860	1,860	4,055	4,055	0.27	0.27	£ 739,827.52	£ 739,827.48
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>	<b>1.10</b>	<b>1.17</b>	<b>£ 3,042,839.00</b>	<b>£ 3,261,605.00</b>
<b>Committed Sites &amp; Windfall</b>	<b>4,650</b>	<b>4,650</b>	<b>10,137</b>	<b>10,137</b>	<b>0.67</b>	<b>0.66</b>	<b>£ 1,849,568.80</b>	<b>£ 1,849,568.69</b>
<b>Allocations</b>	<b>3,000</b>	<b>3,550</b>	<b>6,540</b>	<b>7,739</b>	<b>0.43</b>	<b>0.51</b>	<b>£ 1,193,270.20</b>	<b>£ 1,412,036.31</b>
<b>Completions (2006-2014)</b>	<b>3,264</b>	<b>3,264</b>	<b>7,116</b>	<b>7,116</b>	<b>0.47</b>	<b>0.47</b>	<b>£ 1,298,277.97</b>	<b>£ 1,298,277.89</b>

## Playing pitches & other outdoor sports

### *Responsibilities for delivery*

Responsibility for planning and managing playing pitches and outdoor sport facilities are shared between Stroud District Council, Everyone Active, education providers and community organisations.

### *Baseline*

Stroud DC is currently in the process of undertaking a survey that will update the audit of open space contained within “*Outdoor Playing Space, a survey of local provision and needs.*” (2004). The emerging results from this work, suggest that there are substantial existing shortfalls in playing pitch and outdoor sport provision within the Stroud Valleys and at Cam & Dursley. Smaller shortfalls are also evident in the Stonehouse and Gloucester Urban Fringe areas, while small surpluses have been recorded for the Cotswold Fringe (that would include Aston Down) and the Berkeley cluster area incorporating Sharpness.

### *Assessment of infrastructure needs & costs*

The Fields in Trust (FIT) Benchmark Standards for All Outdoor Sports, Playing Pitches and Informal Play Space and Children’s Play Space (2008) provide a means for gauging the appropriate level of provision of outdoor amenity space. FIT is the operating name of the National Playing Fields Association, the organisation whose recommendations on planning for and providing outdoor recreational facilities are known as the “Six Acre Standard”. In 2006 FIT commissioned a postal survey of local planning authorities throughout the UK to provide an evidence-based framework for recommended Benchmark Standards on open space provision, to succeed the Six Acre Standard.

The FIT Benchmark Standard differentiates between playing pitches (football, rugby, hockey, cricket) and space for other outdoor sports (e.g. bowling, tennis, athletics) and therefore the same distinction is made in the high level assessment below. Separate Urban, Rural and Overall Standards are also presented by FIT, reflecting the varying characteristics of local authorities that responded to the 2006 survey. For Stroud District the Overall Standard has been applied, taking account of the rural nature of the district and decision to locate larger proposed developments adjacent to existing larger settlements at Stroud, Stonehouse, Cam & Dursley and Gloucester. The standards applied to undertake a high level assessment of need arising from proposed new development are as follows:

- 1.2ha playing pitch provision per 1,000 population, with estimated capital cost based on the Sport England Planning Contributions Kitbag cost for a natural turf senior football pitch (£75,000 for a 7,697m<sup>2</sup> pitch, 2nd quarter 2012, so £9.75/m<sup>2</sup>).
- 0.4ha other outdoor sport provision per 1,000 population, with estimated capital cost based on Sport England Planning Contributions Kitbag costs for an outdoor bowling green, tennis courts and athletics track (average cost of 99.60/m<sup>2</sup> based on: bowling green at £68.75/m<sup>2</sup>; and tennis courts at £130.40/m<sup>2</sup>).<sup>28</sup>

<sup>28</sup> Source: Costs and facility areas based on Sport England Planning Contributions Kitbag (2<sup>nd</sup> quarter, 2012).

Utilising these benchmark standards shows that the demand for new playing pitches from the revised development scenario could be in the order of 20ha and 21.5ha, at an estimated cost of between **£1.95-2.1m**. This demand is shown in Table 34 and is based on population generated by the developments rather than growth alone.

With respect to facilities for other outdoor sports, demand is estimated to be in the order of between 6.7ha and 7.2ha, at an estimated cost of between £6.6-7.1m. This demand is shown in Table 35 and is based on population generated by the developments rather than growth alone.

On the basis that existing shortfalls in provision are identified for Stroud, Cam & Dursley and the Gloucester Urban Fringe, it will be important that new development makes sufficient allowance for its own population as a minimum.

### ***Current playing pitch and outdoor sports projects***

***Hunt's Grove Open Space provision*** - committed development provides for the following playing pitch provision:

- an all-weather pitch (91.4m x 55m) to Football Association artificial pitch guidelines (dated May 2005);
- a cricket pitch measuring 10,550sqm constructed to Cricket Board Guidelines (March 2007);
- grass sports pitches consisting of at least two senior pitches (114m x 72m) and two junior pitches (measuring 46m x 28m) and 4 mini pitches; and
- sports pavilion comprising a 330sqm single storey building designed and fitted out in accordance with Sport England guidelines.



Table 30 Assessment of demand for playing pitch provision and estimated capital cost

Revised Development Scenario (2014-2031)	Dwellings		Population		Demand		Capital Cost	
	Low	High*	Low	High*	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>	<b>5.02</b>	<b>5.80</b>	<b>£ 489,460.14</b>	<b>£ 565,978.14</b>
<i>North East Cam</i>	450	750	981	1,635	1.18	1.96	£ 114,777.00	£ 191,295.00
<i>Sharpness Docks</i>	300	300	654	654	0.78	0.78	£ 76,518.00	£ 76,518.00
Committed Sites & Windfall	1,169	1,169	2,548	2,548	3.06	3.06	£ 298,165.14	£ 298,165.14
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>	<b>7.91</b>	<b>7.91</b>	<b>£ 771,556.50</b>	<b>£ 771,556.50</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943	3.53	3.53	£ 344,331.00	£ 344,331.00
<i>Stroud Valleys</i>	400	400	872	872	1.05	1.05	£ 102,024.00	£ 102,024.00
Committed Sites & Windfall	1,275	1,275	2,780	2,780	3.34	3.34	£ 325,201.50	£ 325,201.50
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>	<b>0.91</b>	<b>0.91</b>	<b>£ 88,250.76</b>	<b>£ 88,250.76</b>
Committed Sites & Windfall	346	346	754	754	0.91	0.91	£ 88,250.76	£ 88,250.76
<b>D. Gloucester Urban Fringe</b>	<b>2,360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>	<b>6.17</b>	<b>6.83</b>	<b>£ 601,941.60</b>	<b>£ 665,706.60</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635	1.31	1.96	£ 127,530.00	£ 191,295.00
Committed Sites & Windfall	1,860	1,860	4,055	4,055	4.87	4.87	£ 474,411.60	£ 474,411.60
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>	<b>20.01</b>	<b>21.45</b>	<b>£ 1,951,209.00</b>	<b>£ 2,091,492.00</b>
<b>Committed Sites &amp; Windfall</b>	<b>4,650</b>	<b>4,650</b>	<b>10,137</b>	<b>10,137</b>	<b>12.16</b>	<b>12.16</b>	<b>£ 1,186,029.00</b>	<b>£ 1,186,029.00</b>
<b>Allocations</b>	<b>3,000</b>	<b>3,550</b>	<b>6,540</b>	<b>7,739</b>	<b>7.85</b>	<b>9.29</b>	<b>£ 765,180.00</b>	<b>£ 905,463.00</b>
<b>Completions (2006-2014)</b>	<b>3,264</b>	<b>3,264</b>	<b>7,116</b>	<b>7,116</b>	<b>8.54</b>	<b>8.54</b>	<b>£ 832,515.84</b>	<b>£ 832,515.84</b>

Table 31 Assessment of demand for outdoor space provision and estimated capital cost

Revised Development Scenario (2014-2031)	Dwellings		Population		Demand		Capital Cost	
	Low	High*	Low	High*	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>	<b>1.67</b>	<b>1.93</b>	<b>£ 1,666,674.53</b>	<b>£ 1,927,228.13</b>
<i>North East Cam</i>	450	750	981	1,635	0.39	0.65	£ 390,830.40	£ 651,384.00
<i>Sharpness Docks</i>	300	300	654	654	0.26	0.26	£ 260,553.60	£ 260,553.60
Committed Sites & Windfall	1,169	1,169	2,548	2,548	1.02	1.02	£ 1,015,290.53	£ 1,015,290.53
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>	<b>2.64</b>	<b>2.64</b>	<b>£ 2,627,248.80</b>	<b>£ 2,627,248.80</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943	1.18	1.18	£ 1,172,491.20	£ 1,172,491.20
<i>Stroud Valleys</i>	400	400	872	872	0.35	0.35	£ 347,404.80	£ 347,404.80
Committed Sites & Windfall	1,275	1,275	2,780	2,780	1.11	1.11	£ 1,107,352.80	£ 1,107,352.80
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>	<b>0.30</b>	<b>0.30</b>	<b>£ 300,505.15</b>	<b>£ 300,505.15</b>
Committed Sites & Windfall	346	346	754	754	0.30	0.30	£ 300,505.15	£ 300,505.15
<b>D. Gloucester Urban Fringe</b>	<b>2,360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>	<b>2.06</b>	<b>2.28</b>	<b>£ 2,049,688.32</b>	<b>£ 2,266,816.32</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635	0.44	0.65	£ 434,256.00	£ 651,384.00
Committed Sites & Windfall	1,860	1,860	4,055	4,055	1.62	1.62	£ 1,615,432.32	£ 1,615,432.32
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>	<b>6.67</b>	<b>7.15</b>	<b>£ 6,644,116.80</b>	<b>£ 7,121,798.40</b>
<b>Committed Sites &amp; Windfall</b>	4,650	4,650	10,137	10,137	4.05	4.05	£ 4,038,580.80	£ 4,038,580.80
<b>Allocations</b>	3,000	3,550	6,540	7,739	2.62	3.10	£ 2,605,536.00	£ 3,083,217.60
<b>Completions (2006-2014)</b>	3,264	3,264	7,116	7,116	2.85	2.85	£ 2,834,823.17	£ 2,834,823.17

## Recreational open space & accessible natural greenspace

### *Responsibilities for delivery*

Alongside formal outdoor sports facilities, it is also desirable to provide spaces for informal recreation. These include play spaces for children and recreational areas for young people, as well as parks and gardens. In many instances informal open spaces are owned and managed by Stroud District Council, although in some new developments these may be maintained by a management company.

Natural England promote the provision of natural and semi-natural open space alongside new development through the Accessible Natural Greenspace Standards (ANGSt). These areas are commonly transferred for management by third sector groups, such as Gloucestershire Wildlife Trust and the Wildfowl and Wetlands Trust. Within Stroud District, the Council is a lead participant in the Cotswold Canals Project that seeks to enhance semi-natural open space along the linear route through the Stroud Valleys.

### *Baseline*

Stroud DC is currently in the process of undertaking a survey that will update the audit of open space contained within “*Outdoor Playing Space, a survey of local provision and needs.*” (2004). The emerging results from this work, suggest that the largest shortfall in terms of equipped play areas for children occurs in the Stroud Valleys, although smaller shortfalls also occur at Cam & Dursley, Stonehouse and the Cotswold Fringe area (covering Aston Down). Small surpluses have been recorded for the Berkeley cluster area, incorporating Sharpness, and Gloucester Urban Fringe.

### *Assessment of infrastructure needs & costs*

Two sets of standards facilitate a high level assessment of open space provision and there is potential for some overlap between the two, as in some instances open space is designed to provide both recreation and nature conservation functions.

The national ***FIT Benchmark Standards*** (see introduction above in relation to Playing Pitches) includes provision for play with an emphasis on provision for children and young people, but does also include an allowance for ‘Informal Playing Space’ that could cater for a wider range of user groups. The FIT Benchmark Standards remain very similar to the ‘Six Acres Standard’ that informed extant Stroud Local Plan policy R5 and supporting Supplementary Planning Guidance (SPG) on “*Residential Development Outdoor Play Space Provision*” (November, 2000). Local Plan Policy R5 states:

**Policy R5** – “*Proposals for new residential development should provide appropriate public outdoor playing space in accordance with the adopted standard of 2.4 hectares [approx. 6 acres] per 1,000 population. Where achievement of this standard is unrealistic or inappropriate within the boundaries of a development site, a financial contribution will be sought in lieu of on-site provision...*”

Pending the results of more detailed assessment work based on recent audit results, this study utilises the FIT Benchmark Standards to undertake a high level assessment.

The Natural England *Accessible Natural Greenspace Standards (ANGSt)* seek to address the variability of access to natural greenspaces by promoting the provision of sites within easy reach of people’s homes. Natural England confirm that, in this context, natural does not necessarily mean the site has to be rare or notable enough to be designated. The table below sets out the FIT and ANGSt standards and indicates where there is potential for areas of informal open space to contribute to the objectives of both benchmarks.

Table 32 Overlap between FIT Benchmark Standards and Natural England Accessible Natural Greenspace Standards

FIT Benchmark Standards		Natural England ANGSt		Comment
Type	Standard	Type <sup>29</sup>	Standard	
Designated Children’s Playing Space	0.25Ha per 1,000 population	-	-	FIT set out guidelines for <sup>30</sup> : LAPs – located within 100m; LEAPs – located within 400m; and NEAPs – located within 1km.
Informal Playing Space	0.55Ha per 1,000 population	Local natural greenspace	Site of min. 2Ha within 300m	
		Neighbourhood natural greenspace	Site of min. 20Ha within 2km	
-	-	Parish Cluster natural greenspace	Site of 100Ha within 5km	-
-	-	District natural greenspace	Site of 500Ha within 10km	
-	-	Local Nature Reserves	1Ha per 1,000 population	

## Facilities for Children & Young People

A high level assessment of demand for Children’s playspace and provision for young people has been undertaken utilising the FIT Benchmark Standard of 0.25Ha per 1,000 population. An estimated capital cost for provision of £495,000/Ha has been derived from a 2008 play area build up, rebased to 2013. The results of this exercise, applying the revised development scenarios is set out in Table 37.

### *Current projects to provide facilities for Children & Young People*

<sup>29</sup> Natural England do not provide a title for each standard and therefore the Local, Neighbourhood, Parish and District level site types have been provided to give a sense of scale distribution.

<sup>30</sup> Local Areas for Plan (LAP), Local Equipped Areas for Play (LEAP) and Neighbourhood Equipped Areas for Play (NEAP).

**Hunts Grove Play Space** - The committed development for 1,750 dwellings at Hunt's Grove makes allowance for the following equipped play areas: 10 SLAPs (super area for play of 200sqm); 15 LAPs (local area of play), 2 LEAPs (local equipped area of play); and 3 NEAPs (neighbourhood equipped area of play).

## Informal playing & open space

Informal playing and amenity space is most commonly found in residential areas and includes informal recreation spaces, green spaces and village greens in and around housing. A high level assessment of demand for informal playing space has been undertaken utilising the FIT Benchmark Standard of 0.55Ha per 1,000 population. An estimated capital cost of £17,000/Ha has been applied based on 2010 data (rebased to 2013). The results of this exercise, applying the revised development scenario, is set out in Table 38.

### *Current informal open space projects*

**Hunts Grove** - Committed development at Hunt's Grove provides for a total of 26.75ha of public amenity open space, including the playing pitches recorded above, children's play space (see details below), and 1.2ha of serviced land to provide allotments, together with an area of land to implement a composting scheme.

## Local Accessible Natural Greenspace

### *Plans and strategies*

The following frameworks informing protection and enhancement of natural greenspace are available or currently being prepared:

**Gloucestershire Nature Map** – The Gloucestershire Local Biodiversity Partnership (now Local Nature Partnership) has developed a 50 year vision for delivering a new County framework for biodiversity conservation through a focus on Strategic Nature Areas (SNAs) which go to make up the Gloucestershire Nature Map. The SNAs identify where the greatest opportunities for habitat restoration and creation lie, enabling the efficient delivery of resources to where they will have the greatest positive conservation impact. The Nature Map can be viewed online at: <http://gloucestershirebiodiversity.net/actionplan/index.php>

**A Strategic Framework for Green Infrastructure in Gloucestershire (2014)** – This Framework presents the vision for Gloucestershire's green infrastructure, in that it is enhanced, promoted and managed, so that it can continue to contribute to the high quality natural and historic environment, health and well-being, economy, resilience to climate change and to a better quality of life for all.

The Framework identifies a key principle to “maximise opportunities to improve both strategic green infrastructure and more local green infrastructure, whenever change is being considered – from individual development proposals and open space improvements to landscape scale environmental projects and flood alleviation schemes”.

### *Assessment of demand for locally accessible natural greenspace*

Within consultation comments on the Draft Local Plan and submissions to the IDP process, Natural England raise concerns about the potentially significant effects of the Stroud Local Plan on European designated sites, namely the Severn Estuary and Rodborough Common. To provide further information:

- Severn Estuary – Natural England anticipate that the measures needed to protect the interests of the Severn Estuary European site at Sharpness can be provided on-site by the developer.
- Rodborough Common Special Area of Conservation (SAC) – It is expected that measures will be needed to address an increase in recreational use of the SAC, as set out in the National Trust Commons Management Plan. It may be appropriate that development within a certain distance of Rodborough Common contributes to the implementation of the plan through CIL payments or S106 planning obligations.

Natural England have begun discussions in relation to the potential need for contributions from major developments (over 10 dwellings) or the provision of on-site mitigation in order to protect the interests of the designated sites. These contributions would be requested from any such developments within a certain distance of the above designated sites.

Discussions have identified one possible solution to the development pressure on Rodborough Common which relates to the implementation of the National Trust Commons Management Plan. Such an approach would need to be funded, either through CIL or through S106 agreements.

In addition to these matters, the IDP seeks to provide a preliminary high level assessment of demand for the provision of accessible natural greenspace. The Natural England ANGSt for the provision of local greenspaces of 2Ha within 300m of new development has been applied for the purpose of this study. Based on an assumption that the occupants of homes within a circular area (300m radius; 30 dwellings per Ha) are able to access a 2Ha site, a standard of approximately 1Ha per 1,000 population results.<sup>31</sup>

The assessment of need in Table 39 is based on this standard of 1Ha per 1,000 population and an estimated capital cost of £240,000/Ha has been applied, derived from a semi-natural open space cost build up from a 2008 case study and Spons 2010 data (rebased to 2013).

### ***Current natural accessible greenspace projects***

Specific measures identified within the Rodborough Commons Management Plan are as follows:

- Installation of cattle grids;
- Car park and visitor management measures

With respect to development at Sharpness and the Severn Distribution Park, the following potential projects are identified (to be confirmed):

<sup>31</sup> Area of 300m radius circle = 282,780sqm or 28.3Ha. Assume density of 30 dwelling per Ha results in catchment of 848 dwellings. This equates to 1,950 people based on an average household size of 2.3 people (or approximately 1Ha per 1,000 people).

- ***Sharpness compensatory habitat*** – potential wildfowl off-site compensatory habitat provision

Table 33 Assessment of demand for play facilities for children and facilities for young people

Revised Development Scenario (2014-2031)	Dwellings		Population		Demand		Capital Cost	
	Low	High*	Low	High*	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>	<b>1.05</b>	<b>1.21</b>	<b>£ 517,698.23</b>	<b>£ 598,630.73</b>
<i>North East Cam</i>	450	750	981	1,635	0.25	0.41	£ 121,398.75	£ 202,331.25
<i>Sharpness Docks</i>	300	300	654	<b>654</b>	0.16	0.16	£ 80,932.50	£ 80,932.50
Committed Sites & Windfall	1,169	1,169	2,548	2,548	0.64	0.64	£ 315,366.98	£ 315,366.98
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>	<b>1.65</b>	<b>1.65</b>	<b>£ 816,069.38</b>	<b>£ 816,069.38</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943	0.74	0.74	£ 364,196.25	£ 364,196.25
<i>Stroud Valleys</i>	400	400	872	872	0.22	0.22	£ 107,910.00	£ 107,910.00
Committed Sites & Windfall	1,275	1,275	2,780	2,780	0.69	0.69	£ 343,963.13	£ 343,963.13
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>	<b>0.19</b>	<b>0.19</b>	<b>£ 93,342.15</b>	<b>£ 93,342.15</b>
Committed Sites & Windfall	346	346	754	754	0.19	0.19	£ 93,342.15	£ 93,342.15
<b>D. Gloucester Urban Fringe</b>	<b>2360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>	<b>1.29</b>	<b>1.42</b>	<b>£ 636,669.00</b>	<b>£ 704,112.75</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635	0.27	0.41	£ 134,887.50	£ 202,331.25
Committed Sites & Windfall	1,860	1,860	4,055	4,055	1.01	1.01	£ 501,781.50	£ 501,781.50
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>	<b>4.17</b>	<b>4.47</b>	<b>£ 2,063,778.75</b>	<b>£ 2,212,155.00</b>
<b>Committed Sites &amp; Windfall</b>	4,650	4,650	10,137	10,137	2.53	2.53	£ 1,254,453.75	£ 1,254,453.75
<b>Allocations</b>	3,000	3,550	6,540	7,739	1.64	1.93	£ 809,325.00	£ 957,701.25
<b>Completions (2006-2014)</b>	3,264	3,264	7,116	7,116	1.78	1.78	£ 880,545.60	£ 880,545.60



Table 34 Assessment of demand for informal recreational open space

Revised Development Scenario (2014-2031)	Dwellings		Population		Demand		Capital Cost	
	Low	High*	Low	High*	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>	<b>2.30</b>	<b>2.66</b>	<b>£ 39,114.98</b>	<b>£ 45,229.88</b>
<i>North East Cam</i>	450	750	981	1,635	0.54	0.90	£ 9,172.35	£ 15,287.25
<i>Sharpness Docks</i>	300	300	654	<b>654</b>	0.36	0.36	£ 6,114.90	£ 6,114.90
Committed Sites & Windfall	1,169	1,169	2,548	2,548	1.40	1.40	£ 23,827.73	£ 23,827.73
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>	<b>3.63</b>	<b>3.63</b>	<b>£ 61,658.58</b>	<b>£ 61,658.58</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943	1.62	1.62	£ 27,517.05	£ 27,517.05
<i>Stroud Valleys</i>	400	400	872	872	0.48	0.48	£ 8,153.20	£ 8,153.20
Committed Sites & Windfall	1,275	1,275	2,780	2,780	1.53	1.53	£ 25,988.33	£ 25,988.33
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>	<b>0.41</b>	<b>0.41</b>	<b>£ 7,052.52</b>	<b>£ 7,052.52</b>
Committed Sites & Windfall	346	346	754	754	0.41	0.41	£ 7,052.52	£ 7,052.52
<b>D. Gloucester Urban Fringe</b>	<b>2360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>	<b>2.83</b>	<b>3.13</b>	<b>£ 48,103.88</b>	<b>£ 53,199.63</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635	0.60	0.90	£ 10,191.50	£ 15,287.25
Committed Sites & Windfall	1,860	1,860	4,055	4,055	2.23	2.23	£ 37,912.38	£ 37,912.38
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>	<b>9.17</b>	<b>9.83</b>	<b>£ 155,930</b>	<b>£ 167,141</b>
<b>Committed Sites &amp; Windfall</b>	4,650	4,650	10,137	10,137	5.58	5.58	£ 94,780.95	£ 94,780.95
<b>Allocations</b>	3,000	3,550	6,540	7,739	3.60	4.26	£ 61,149.00	£ 72,359.65
<b>Completions (2006-2014)</b>	3,264	3,264	7,116	7,116	3.91	3.91	£ 66,530.11	£ 66,530.11

Table 35 Assessment of demand for accessible natural greenspace

Revised Development Scenario (2014-2031)	Dwellings		Population		Demand		Capital Cost	
	Low	High*	Low	High*	Low	High*	Low	High*
<b>A. Stroud South Vale</b>	<b>1,919</b>	<b>2,219</b>	<b>4,183</b>	<b>4,837</b>	<b>4.18</b>	<b>4.84</b>	<b>£ 1,004,020.80</b>	<b>£ 1,160,980.80</b>
<i>North East Cam</i>	450	750	981	1,635	0.98	1.64	£ 235,440.00	£ 392,400.00
<i>Sharpness Docks</i>	300	300	654	<b>654</b>	0.65	0.65	£ 156,960.00	£ 156,960.00
Committed Sites & Windfall	1,169	1,169	2,548	2,548	2.55	2.55	£ 611,620.80	£ 611,620.80
<b>B. Stroud &amp; West</b>	<b>3,025</b>	<b>3,025</b>	<b>6,595</b>	<b>6,595</b>	<b>6.59</b>	<b>6.59</b>	<b>£ 1,582,680.00</b>	<b>£ 1,582,680.00</b>
<i>West of Stonehouse</i>	1,350	1,350	2,943	2,943	2.94	2.94	£ 706,320.00	£ 706,320.00
<i>Stroud Valleys</i>	400	400	872	872	0.87	0.87	£ 209,280.00	£ 209,280.00
Committed Sites & Windfall	1,275	1,275	2,780	2,780	2.78	2.78	£ 667,080.00	£ 667,080.00
<b>C. Stroud &amp; East</b>	<b>346</b>	<b>346</b>	<b>754</b>	<b>754</b>	<b>0.75</b>	<b>0.75</b>	<b>£ 181,027.20</b>	<b>£ 181,027.20</b>
Committed Sites & Windfall	346	346	754	754	0.75	0.75	£ 181,027.20	£ 181,027.20
<b>D. Gloucester Urban Fringe</b>	<b>2,360</b>	<b>2,610</b>	<b>5,145</b>	<b>5,690</b>	<b>5.14</b>	<b>5.69</b>	<b>£ 1,234,752.00</b>	<b>£ 1,365,552.00</b>
<i>Hunts Grove Extension</i>	500	750	1,090	1,635	1.09	1.64	£ 261,600.00	£ 392,400.00
Committed Sites & Windfall	1,860	1,860	4,055	4,055	4.05	4.05	£ 973,152.00	£ 973,152.00
<b>Total Dwellings/Population</b>	<b>7,650</b>	<b>8,200</b>	<b>16,677</b>	<b>17,876</b>	<b>16.68</b>	<b>17.88</b>	<b>£ 4,002,480.00</b>	<b>£ 4,290,240.00</b>
<b>Committed Sites &amp; Windfall</b>	4,650	4,650	10,137	10,137	10.14	10.14	£ 2,432,880.00	£ 2,432,880.00
<b>Allocations</b>	3,000	3,550	6,540	7,739	6.54	7.74	£ 1,569,600.00	£ 1,857,360.00
<b>Completions (2006-2014)</b>	3,264	3,264	7,116	7,116	7.12	7.12	£ 1,707,724.80	£ 1,707,724.80

## The Cotswold Canals Restoration

### Overview

The Cotswold Canals Partnership's aim is to restore the Cotswold Canals to full navigation in the interests of conservation, biodiversity and local quality of life, and to use the restoration as a catalyst for wider social, economic and environmental regeneration in areas neighbouring the canals.

In addition to providing boating opportunities, by far the greatest usage of the restored canal will be by walkers and cyclists, whether for short or longer distances. The flat nature of towpaths also lends themselves to enjoyment by wheelchair users.

In the long term, the objective is to fully restore the Stroudwater Navigation and Thames and Severn Canals, known collectively as the Cotswold Canals, linking the Severn with the Thames, including the provision of a long-distance pedestrian and cycling route, the Thames and Severn Way.

The project to restore the Cotswold Canals through Stroud District is planned to be undertaken in the phases identified below:

Table 36 Cotswold Canals Project Phases

Phase	Description	Delivery Strategy	Infrastructure Cost	Timescale
1a	Ocean to Bowbridge Bridge	HLF main funder with matched funding from partners including Stroud DC and Cotswold Canals Trust	C £19m	To December 2015
1b	Saul to Ocean	HLF grant to be applied for with match funding from partners and developer contributions	C £20m	2015 - 2019
1c	Brimscombe Port	To be delivered in partnership with HCA using HCA funds, income from Brimscombe Port and third party funds including developer contributions	C £9m	2013 - 2020
1d	Bowbridge to Brimscombe Hill (excluding ironworks)	To be delivered by volunteers	C £500,000	2013 - 2016

### Progress and funding

The Cotswold Canals Partnership was formed in 2001 to build on the work already carried out by volunteers and to drive restoration plans forward. Members include: the Canal and River Trust, Cotswold Canals Trust, Stroud District Council, Homes and Communities Agency, Gloucestershire County Council, Wiltshire Council, Gloucestershire First, Gloucestershire Rural Community Council, Environment Agency, Gloucestershire Society for Industrial

Archaeology, Cotswold Water Park, Inland Waterways Association, Company of Proprietors of the Stroudwater Navigation, and Cotswold District Council.

Stroud District Council is leading restoration of the 6.6km length of canal that makes up Phase 1a. Work began in 2009 and is scheduled to be completed in 2015. In addition, Stroud District Council is also leading on the redevelopment of Brimscombe Port (Phase 1c).

Major funding has been obtained from national, regional and local public sources for Phase 1a with the Heritage Lottery Fund contributing £12.6m, Stroud District Council up to £3.7m and the Cotswold Canals Trust in excess of £750,000 resulting in a budget in excess of £19m. However, Stroud District Council are mindful of the need to establish and maintain a contingency fund using developer contributions with any surplus rolling forward into future phases of the project.

Taking into account the large total estimated cost for Phase 1b of £20m, the Partnership is currently focussed on gaining funding for two discrete schemes that relate to this phase of the work. These being:

- ***Stonehouse Ocean Railway Bridge*** – the canal is currently blocked in this location and £1.5million is required to provide the bridge.
- ***Thames and Severn Way between Saul and Chalford*** – upgrading the towpath (part of the Thames & Severn Way) would provide a safer route for walkers and cyclists. The works are estimated to cost £650,000.

Bids have been submitted to the Gloucestershire Local Transport Body for these schemes, but funds may also be sought through S106 Planning Obligations or a CIL.

A further important consideration is that of on-going maintenance of the canal. The Cotswold Canal Trust, Stroud Valleys Canal Company, and Company of Proprietors of Stroudwater Navigation have put forward a proposal that all future developments adjacent to the canal should make a perpetual annual contribution to canal maintenance (potentially secured through the planning process via S106 Planning Obligations).

The Cotswold Canals Project is a strategic priority for Stroud District Council and a significant part of the open space and sustainable transport network. It therefore forms an important element of infrastructure that future developer contributions could support.

## 4.9 Transport & Public Realm

### Responsibilities for delivery

Gloucestershire County Council is the Local Authority responsible for overall transport strategy and planning across the county. A range of further organisations are involved in the delivery of transport services for Stroud District, as summarised below:

#### Highways

**Highways Agency** - The Highways Agency is responsible for operating, maintaining and improving the Strategic Road Network (SRN), comprising motorways and strategic A roads, according to a forward programme set by Government. In Stroud, the SRN comprises

- Part of the M5 between the district's borders with South Gloucestershire and Tewkesbury Borough, including Junctions 12 and 13; and
- The northern part of the district is close to the A417 trunk road (which falls within Cotswold District and Tewkesbury Borough).

**Local Highways Authority** – Gloucestershire County Council (GCoC) is the local highways authority responsible for the maintaining and enhancing the local road network in Stroud District.

#### Rail

**Network Rail** - Network Rail are responsible for the maintenance and enhancement of rail infrastructure. Network Rail is also the landlord of virtually all stations on the network, although all the stations in Gloucestershire are leased to train operators.

**Train Operators** – Figure 6 shows the train operators that provide services to Gloucestershire. Within Stroud District, First Great Western operate rail services on the Swindon to Gloucester rail line, with stops at Stroud and Stonehouse; and the Bristol to Gloucester route with a stop at Cam & Dursley. First Great Western is responsible for the management and improvement of these stations.

#### Bus

**Gloucestershire County Council** – the County Council is responsible for administering bus route subsidies working in partnership with Stroud District Council and relevant bus network operators.

**Bus network operators** – The main bus service operator for Gloucestershire is Stagecoach West.

#### Cycling, walking and public realm

Gloucestershire County is responsible for forward planning of walking and cycling projects through the Local Transport Planning (LTP) process, and also has related responsibilities for maintaining and improving the Public Rights of Way network of footpaths and bridleways. Stroud District Council, Town and Parish Councils and a variety of community sector organisations (e.g. Cotswold Canals Trust).

## Sector plans & strategies

The following key sector plans and strategies are identified and have been referred to in this chapter.

**Highways Agency Business Plan 2014-2015** - This document sets out the HA priorities with Annex A detailing major schemes to be delivered during the period. No schemes are currently planned for the Strategic Road Network (SRN) in Gloucestershire within the plan.

**Highways Agency Route Strategies (RS) (2013)** – The aim of the Route Strategies is to set the long term highway investment strategy for the 5 year period from April 2015. In relation to Stroud, the M5 forms part of the Birmingham to Exeter RS. These with ultimately set out potential solutions and proposals, with a form of business case justification but are currently in the first stages, evidence base gathering.

**Gloucestershire Local Transport Plan 3 – 2011-26 Promoting a safe and sustainable transport system (LTP3)** - The vision for transport set out in this plan is to provide “...a safe and sustainable transport network within Gloucestershire”, where safe means a transport network that people feel safe and secure using and sustainable means a transport network that is both environmentally and financially sustainable.

The LTP3 sets out the importance of Gloucestershire’s transport system, explaining how the County Council can deliver a safe and sustainable transport system in Gloucestershire within the financial constraints that are likely to exist over the period covered by LTP3.

LTP3 has to address national transport priorities at the local level and Gloucestershire have aligned these to four main themes, which are:-

- A greener, healthier Gloucestershire
- Sustainable economic growth
- A safer, securer transport system
- Good access to services

The County Council are currently working on a review of the LTP, with the intention that an update will be published in 2015 covering a plan period to 2026.

**The Central Severn Vale Transport Study 2011-2026(Draft 2010)** – the CSVT is an important study feeding into LTP3, which examined the forecast impacts of planned developments until 2026, setting out multi-modal transport interventions to accommodate this development wherever possible, as well as addressing transport related problems and issues occurring today. The study was based on planned growth of 56,400 houses in Gloucestershire up to 2026, with 34,800 in the Central Severn Vale (CSV) area. Transport corridors from the Central Severn Vale to the town of Stroud were included in the study.

**The Network Rail Great Western Route Utilisation Strategy year (RUS)(March 2010)** – prepared by Network Rail this Strategy covers Gloucestershire and sets out the strategic vision for the future of the rail network across the Great Western region. Development of the strategy followed a well-established process. Initially, an analysis was carried out into the capacity and capability of the existing network

and train services taking into account major changes planned over the next 10 years. Future demand was then analysed with a number of “Gaps” identified and options to resolve these gaps appraised. Those which demonstrated the best value for money were included in the strategy. The RUS was based on forecasting of future passenger demand taking into account growth proposals set out in the Draft Regional Spatial Strategy (now abolished) and will therefore need to be updated in due course.

***The Stroud District Area Transport Strategy (Draft, 2010)*** – produced as part of the LTP process, specific policies for the Stroud area were established as set out in the table below:

Table 37 Stroud District Area Transport Strategy Objectives

National transport objectives	Stroud objectives
Support economic growth	Provide the transport infrastructure necessary to accommodate new development and the increasing population predicted for Stroud District. Support the local economy in Stroud District, by providing the transport and communications infrastructure necessary to support existing and new local businesses and provide access to employment for residents.
Reduce carbon emissions	Encourage the use of sustainable modes of transport in Stroud District for all means of travel.
Promote equality of opportunity	Provide access to services, jobs and local facilities for all Stroud District residents.
Contribute to better safety, security and health	Improve air quality and road safety in Stroud District. Make the transport network in the district of Stroud more resilient.
Improve quality of life and a healthy natural environment	Manage the negative impacts of traffic on local communities and the natural environment in Stroud District.

***Stroud Core Strategy, Preferred Strategy Consultation (Feb 2012)*** – The Preferred Strategy Objective 4 seeks to promote “*healthier alternatives to the use of the private car and seek to reduce CO<sub>2</sub> emissions by using new technologies and encouraging an integrated transport system to improve access to local goods and services.*”

***Stonehouse Design Statement, Supplementary Planning Advice (approved October 2005)*** – The approved Design Statement makes a number of recommendations regarding the maintenance of and provision of new walking and cycling links, including the establishment of routes from the town centre to the Cotswold Canal multi-user trail currently being provided.

## Infrastructure baseline

### Stroud

Stroud District is predominantly rural in nature, although approximately 60% of the District’s population live in urban areas. There are six distinct market towns, namely Berkeley, Dursley, Nailsworth, Stonehouse, Stroud and Wotton-under-Edge, which act focal points for the rural hinterland, providing a primary means

for work, school, shopping and leisure. At the same time, Stroud District experiences a significant outflow of commuters (based on 2001 census data), with data showing that 30% commute to Gloucester and 18% travelling to Bristol or Bath<sup>32</sup>.

In transport terms the vision for the area set out in the LTP Stroud Area Transport Strategy is centred on creating viable and self-sufficient communities, focussed around the key market towns in the district. This focus on self-sufficiency will be supported by strong sustainable accessibility links to key centres in Stroud, Gloucester and Cheltenham for wider employment opportunities.

Supporting the LTP Stroud Area vision, the Stroud District Core Strategy: Preferred Strategy Consultation (February 2012) sought to concentrate development within or adjacent to the district's larger settlements. Potential links to rail, other public transport systems and the strategic road network were all maximised by choosing to locate major employment growth at the larger settlement areas of Stroud, Cam and Stonehouse. Development in the Stroud Valleys was also identified on the basis that it could contribute funds to the restoration of the canals and towpaths, as well as potentially designing-in new links across the development sites.

The development scenarios now presented for IDP purposes take a similar approach, with the largest housing allocations shown at Stonehouse, North East Cam and the Stroud Valleys. Significant housing and employments allocations are also shown at the southern fringe of Gloucester at Hunt's Grove and Quedgeley East. Smaller housing allocations are included at

Some overarching issues relating to the existing transport infrastructure are summarised below:

**Highways** – Within Gloucestershire, there is over 3,000 miles of road, of which 80 miles are motorway or Trunk Road (managed by the Highways Agency) and 3,300 miles are local roads managed by the County Council.

With respect to usage, Figures 4 and 5 show All Vehicle Traffic Flows and HGV Traffic Flows respectively (based on 2009 data). These reveal that:

- The M5 is the busiest route in the county, carrying up to 90,000 vehicles a day and over 1,000 HGVs a day.
- The following A class roads are the busiest within the county (our underlining for emphasis):
  - the A417/A419 linking Gloucester and Cirencester with Swindon;
  - the A419 between M5 J13 and the Stroud;
  - the A40 that provides the direct link between Gloucester and Cheltenham (All Vehicles); and links to South Wales (via Ross-on-Wye) in the west and Oxford to the east (HGV traffic)
  - the A4109 between M5 J20 and Cheltenham; and
  - the M50 which links the M5 and Ross-on-Wye.

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<sup>32</sup> Local Transport Plan, Stroud District Area Transport Strategy (Draft, July 2010).



The A419, linking the M5 (Junction 13) with Stroud town centre is identified as one of the busiest routes in the county and it is therefore of importance that proposed development West of Stonehouse and within the Stroud Valleys west of the town centre would, in particular, add further traffic to this route.

Key issues for the highway network identified in the LTP3 are:

- highway maintenance and resilience to climate change in the future with limited budgets;
- highway capacity and traffic congestion;
- improving safety; and
- reducing disruption to the network from essential utility works.

**Rail** - Stroud District is served by two rail routes: Gloucester to Swindon, with rail stations at Stroud and Stonehouse; and Bristol to Gloucester, with a station at Cam & Dursley (see Figure 6 for extract from Network Rail map). The capacity of the Gloucester to Swindon route to relieve the A419 road link through modal shift is currently limited by frequency constraints for rail services on that route. If no action was taken, the single track between Kemble and Swindon would continue to constrain service frequencies to an hourly service only, reducing travel options from Gloucestershire to Swindon and London. As set out below, a Network Rail project for re-doubling of the line was recently completed.

The accessibility of the Cam & Dursley rail station has been identified as an issue, given that it is in an isolated rural location, 1.5 miles from Cam itself, and it is the only station in the District that provides direct services to Bristol.

Improved integration of rail and bus services is seen as an important objective. For instance, in Stroud town centre the bus station is located on the A46 at the lower part of the town centre. This is felt to be an accessible location for users and services, however, it is poorly integrated with the rail station in the town.

**Bus** – The Gloucestershire Local Bus Review identified nine strategic routes serving the Stroud area. Five of these are operated commercially (without public sector subsidy) and taking account of pressure on public finances, it is viewed as desirable that the others are moved towards fully commercial services where passenger numbers allow. These bus routes would also be the focus for investment with respect to improving service frequency and quality.

Table 38 Strategic Bus Routes serving Stroud District

Bus service	Status
Stroud – Cashes Green, Stroud	3 journeys/hour Monday – Saturday daytimes, commercial.
Stroud – France Lynch, Chalford	Hourly Monday – Saturday daytimes, commercial.
Stroud – Mason Road – Uplands, Stroud	Half hourly Monday – Saturday daytimes – mainly commercial on Mondays to Fridays
Stroud – Rodborough Hill – Kingscourt, Stroud	Infrequent service, partly subsidised Mondays to Saturdays
Stroud – Nailsworth - Wotton-under-Edge	Infrequent Monday to Saturday subsidised service
Forest Green, Nailsworth -	Hourly commercial service on Monday to Saturday

Bus service	Status
Stroud – Edge – Gloucester	with one evening journey in each direction subsidised
Stroud – Stonehouse – Kingsway – Gloucester	Monday to Saturday daytime services provided commercially, evenings and Sundays subsidised (including S106 contributions).
Forest Green, Nailsworth – Stroud – Cheltenham	Hourly daytime commercial Monday – Saturday services. Infrequent Sunday service subsidised.
Tetbury – Minchinhampton - Stroud	Subsidised, with potential to become fully commercial during current contract if <10% increase in patronage (two hourly service Mon to Sat)
Cirencester – Sapperton - Stroud	Subsidised with potential to become fully commercial during current contract if <20% increase in patronage (90 min service Mon to Sat, infrequent Sat service)
Stroud – Stonehouse - Dursley	Commercial Monday to Saturday day times. Every 20 minutes Stroud – Stonehouse, hourly extension to / from Dursley
Dursley - Gloucester	Hourly commercial service on Monday to Saturday day times. Infrequent subsidised service on Sundays.
Dursley – Sharpness - Berkeley - Thornbury	Infrequent subsidised service on Monday to Saturday daytimes.
Dursley – Wotton-under-Edge – Thornbury	2 hourly service on Mondays to Saturdays currently provided commercially but will change imminently.

### ***Walking & cycling***

The LTP3 highlights that measures to encourage walking and cycling can make important contributions to the LTP objectives of reduce CO<sup>2</sup> emissions, improving health and quality of life. Reducing the number of short trips that are currently made by car can also help reduce traffic congestion. Broad measures outline in the LTP3 to help encourage walking and cycling include:

- encourage schools to implement and review their travel plans;
- require developers to submit and fund travel plans; and
- support funding bids to improve cycling infrastructure, especially to schools and employment sites.

The Stroud LTP Area Strategy identifies that only 2% of the population aged 16-74 cycle to work, compared to a Gloucestershire average of 4.18%. It is acknowledged that promoting utility cycling is a challenge given the generally hilly terrain, but that there is scope within flatter development areas and via valley routes to increase cycle journeys.

An important objective of the emerging Draft Stroud Local Plan is to foster sustainable settlements with local services that are accessible by walking and cycling. There are clear synergies between providing walking and cycling improvements and the delivery of public realm improvements. For instance, the restoration of canal towpaths in the Stroud Valleys has the potential to reduce short car journeys, due to the availability of safe, off-road walking and cycling routes.

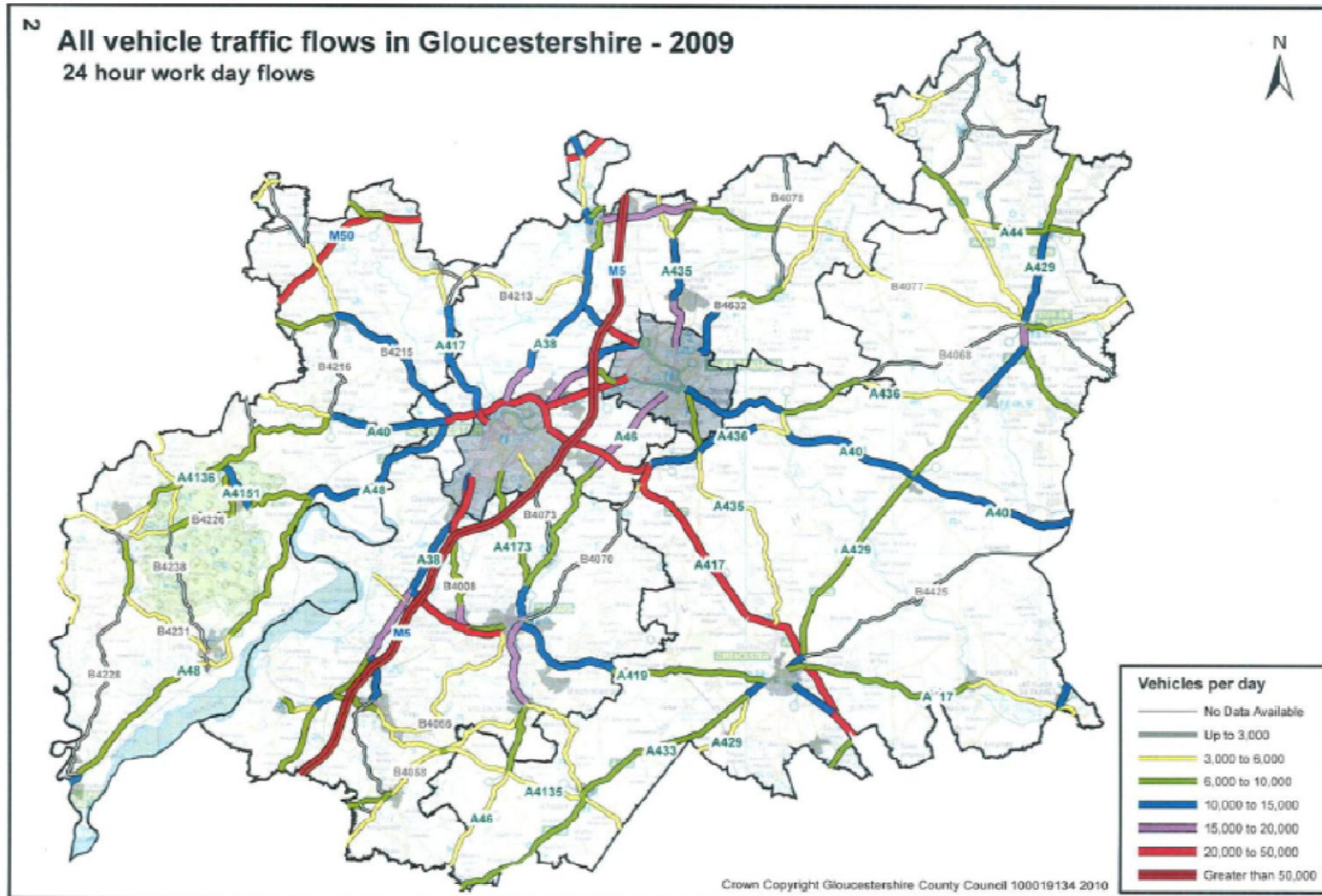


Figure 5 All vehicle traffic flows in Gloucestershire - 2009 (24 hour work day flows)

Source: Gloucestershire's Local Transport Plan 2011-26, page 22

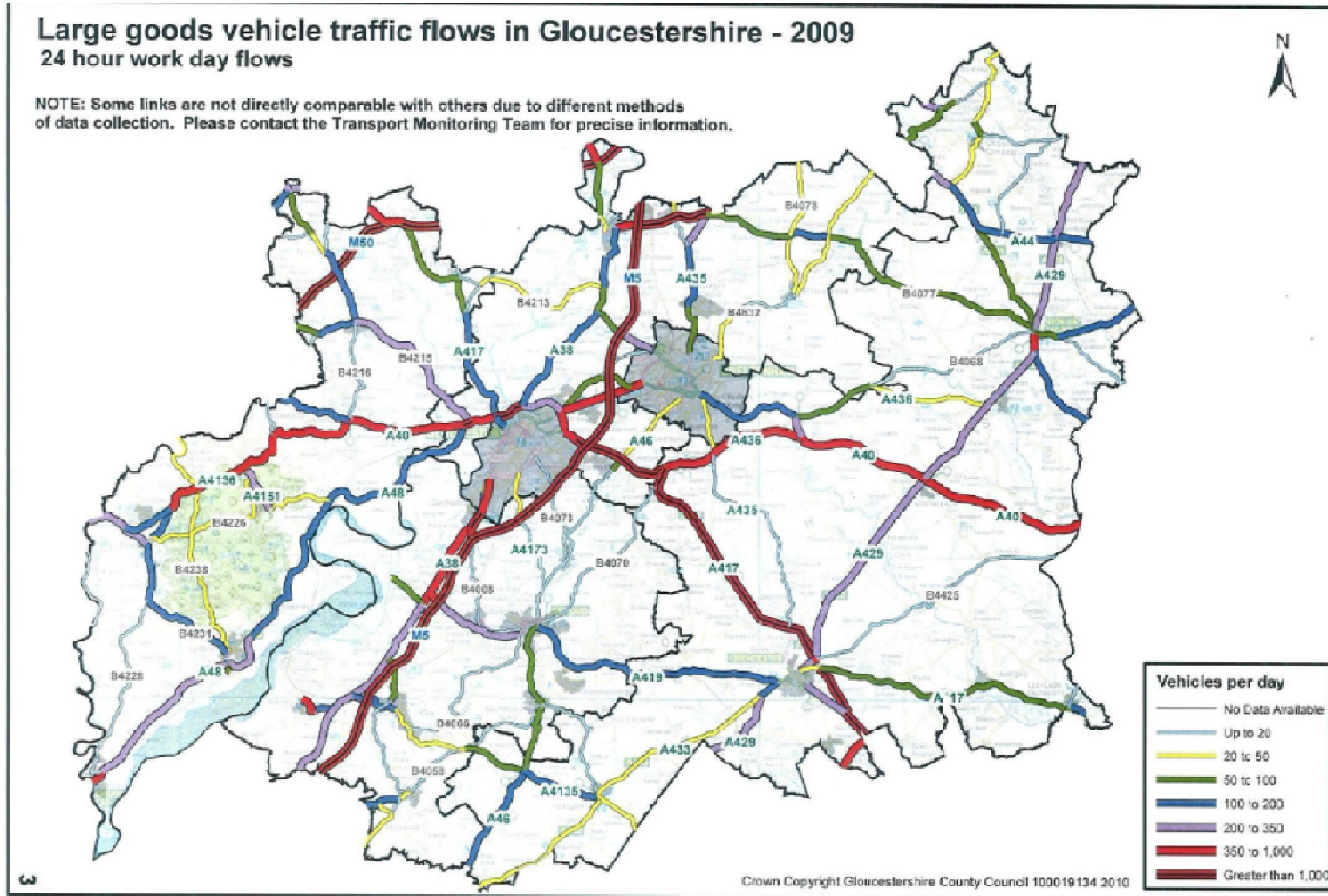


Figure 6 Large goods vehicle traffic flows in Gloucestershire – 2009 (24 hour work day flows)

Source: Gloucestershire’s Local Transport Plan 2011-26, page 29



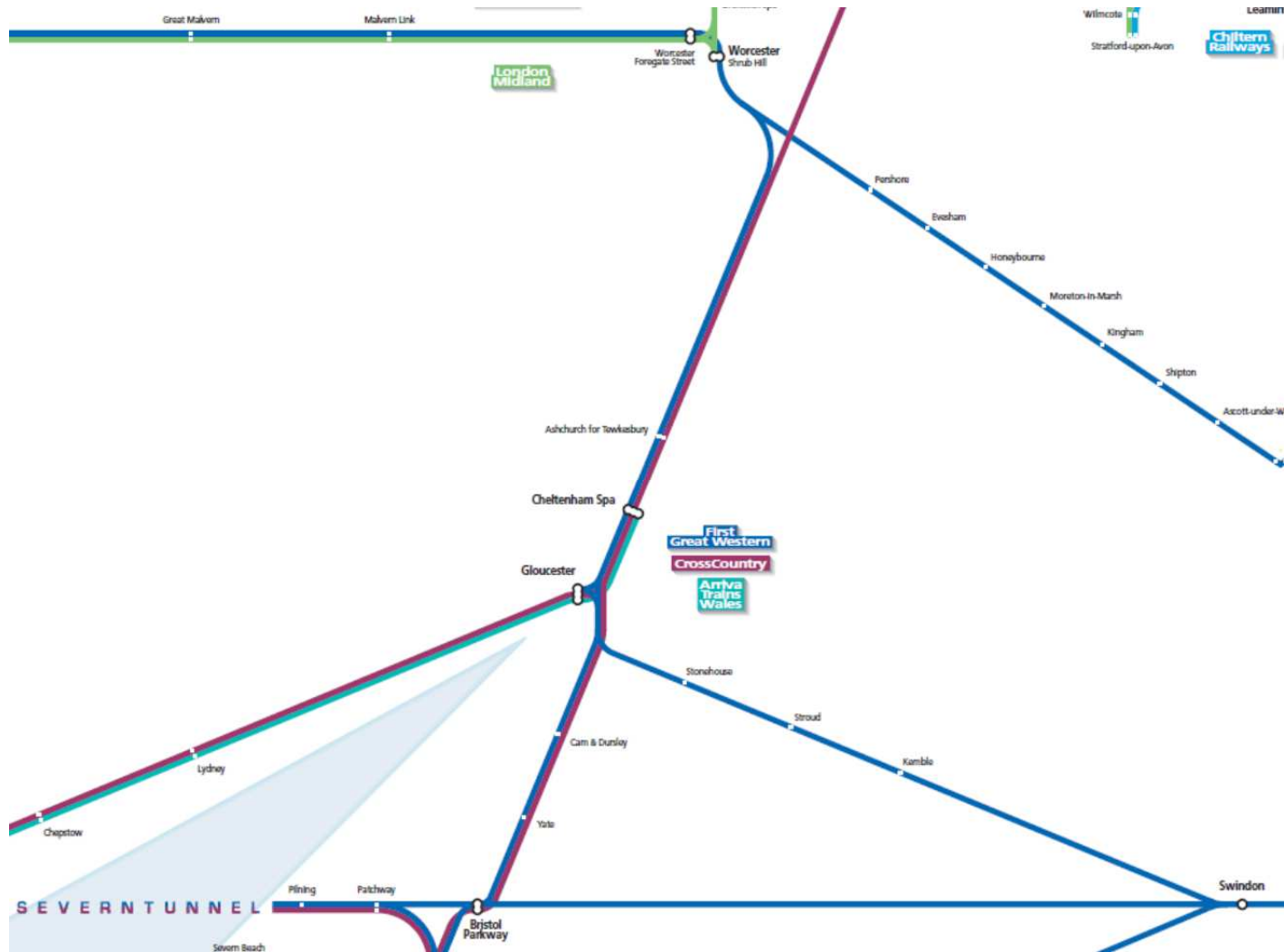


Figure 7 National Rail Network Operator Map (extract, Network Rail, March 2013)

## Assessment of Infrastructure Need

### Overview

Transport infrastructure planning is viewed as essential to ensuring spatially well located and planned new development and is key to delivery of the Stroud Local Plan. Principles that should underpin a spatial strategy, as recommended by Gloucestershire County Council, are as follows:

- Population density needs to be close to existing major transport corridors to provide the patronage needed to make public transport financially sustainable.
- Travel distances to employment and services should be minimised to encourage walking and cycling to reduce carbon emissions.
- Where permission is given for strategic development, the scale of that development will be sufficient for it to viably provide the funding for the infrastructure and services required to make the development sustainable.

A strategic highway modelling has been undertaken as part of the Stroud District Council Draft Transport Impact Assessment (March 2014)<sup>33</sup>. This modelling forecast growth in vehicle traffic flows through key junctions and links as a result of future housing and commercial developments in Stroud.

The following junctions were assessed as part of the model:

- A38 Cole Ave / A430 Bristol Rd / B4008
- Cross Keys Roundabout
- M5 Junction 12 (Northern Roundabout)
- M5 Junction 12 (Southern Roundabout)
- A419 / Oldends Ln
- A419 / Ebley Rd / Bath Rd
- A419 London Rd / Toadsmoor Rd
- A38 Bristol Rd / A4135 / St John's Rd
- B4066 / Alkington Ln
- A38 / Alkington Lane
- M5 Junction 13
- M5 Junction 14

The study includes impact analysis at each junction comparing cumulative development flows with 2031 future base year flows. Colour coded visualisation of capacity constraints at junctions are presented for Base Year 2014 and Design Year (2031) in extract Figure 7 below.

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<sup>33</sup> Source: Stroud District Council and Gloucestershire County Council, *Stroud District Council Local Development Plan Draft Transport Impact Assessment*, (27<sup>th</sup> March 2014)

Priority	Junction		Capacity Constraints	
			Base Year 2014 (based on site observations)	Design Year (2031) (based on site observations + development traffic flows)
1	3a	M5 Junction 12 (Northern Roundabout)	Green	Yellow
	3b	M5 Junction 12 (Southern Roundabout)	Green	Yellow
	10	M5 Junction 13*	Green	Yellow
	2	Cross Keys Roundabout**	Green	Yellow
	4	A419 / Oldends Ln	Green	Yellow
2	1	A38 Cole Ave / A430 Bristol Rd / B4008	Yellow	Yellow
3	11	M5 Junction 14	-	Yellow
4	5	A419 / Ebley Rd / Bath Rd	Green	Yellow
	7	A38 Bristol Rd / A4135 / St John's Rd	Green	Yellow
	9	A38 / Alkington Lane	Green	Yellow
5	6	A419 London Rd / Toadsmoor Rd	Green	Yellow
	8	B4066 / Alkington Ln	Green	Yellow

Note: the scale of capacity constraint for each junction is highlighted using a colour code  
 2014 (based on site observations) - Green = within capacity, Amber = operating at capacity and Red = over capacity  
 2032 (based on site observations and increase in development traffic) - Green = no issues, Amber = potential issues identified and Red = significant constraint identified  
 \* M5 Junction 13 – Junction operate within capacity but queuing back from downstream A419 / Grove Lane junction constrains Junction 13 westbound exit arm  
 \*\* Cross Key Roundabout – Main Northeastern & Southern arms through junction operate within capacity but western A38 arm operates beyond capacity

Figure 8 Summary of Junction Impact Analysis<sup>34</sup>

The implications of development proposals on the 11 junctions are summarised below by order of severity.

Junction 12 of the M5 is a teardrop shaped intersection with traffic signals. The cumulative development impact will be most notable on the northbound off slip and the southern B4008 arm. The southern B4008 arm is currently subject to only a single lane giveaway approach. The capacity of this junction could reach critical capacity by 2031. Further analysis would be necessary in order to determine what the potential mitigation measures should be.

Junction 13 of the M5 is a four arm grade separated roundabout. The cumulative development impact would be most notable on the southbound off slip and the two A419 arms. The potential mitigation measures could include full or partial signalisation of the roundabout, widening of the entry arms, widening of the A419 southern exit arm and junction improvements to the south at A419/Grove Lane to limit queuing back towards M5 Junction 13. There could be constraints to implementing the above mitigation as the junction is grade separated and therefore alteration or widening would likely be high cost.

The A38 Cole Ave / A430 Bristol Road / B4008 is a large signalised 4 arm crossroads at which the cumulative development impact will be most notable on the southern arm and then also the northern and eastern arms. Potential mitigation could include provision for a longer flare of the dedicated left turn from Cole

<sup>34</sup> Source: Stroud District Council and Gloucestershire County Council, *Stroud District Council Local Development Plan Draft Transport Impact Assessment*, (27<sup>th</sup> March 2014), Page 65

Avenue (East to South) to assist vehicle access. Third party land could limit any further expansion of this junction particularly in the east and north-west where pollution control drainage ponds are present.

The Cross Keys Roundabout is a 75m conventional roundabout junction. The cumulative development impacts would be most notable northern and southern arms (the main through route) which will in turn generate an even more noticeable impact on the western A38 arm where significant queues are already noted. Mitigation could include potential signalisation to give more priority to A38 western arm and a dedicated left turn to the A38 northern arm from B4008 western arm. However, there would be a number of barriers to implementation improvement schemes. A dedicated left turn to A38 northern arm from B4008 western arm - the tie-in would be close to the junction for the Quedgley West Business Park to the North of the junction and there could therefore be safety issues related to lane changes associated with this measure. A ditch present on the south-western edge of would increase costs associated with the potential mitigation and could prevent widening of the junction.

The A419 / Oldends Lane is a elongated 5 arm roundabout with a maximum diameter of 60m. The cumulative development impact at this junction will be most notable on the north to south A419 route and also the Oldends Lane access arm. However, the impact on Oldends Lane will depend heavily on the how sustainable the Stonehouse development becomes. There exists potential scope to lengthen the two lane approaches on both A419 approach arms. However, widening would be difficult, due to mature trees to the north and third party land and a watercourse to the south.

The Junction arrangement A419 / Ebley Rd / Bath Rd is a 50 meter diameter conventional four arm roundabout. The cumulative development impact will be most notable on the two A419 arms and the eastern B4008 arm. In order to mitigate the increase in traffic A longer flare could be provided on the western arm (A419) within the existing grass verge or by utilising part of the ghost island currently provided in the centre of the road. This would enable two lanes, one for 'right turn' movements and a second for 'left and straight ahead'. A longer flare could also be provided on other arms. The gyratory western approach arm could also be enlarged. There are some key constraints to the implementation of the aforementioned mitigation including, the presence of the Cotswolds Canal south of the junction with an existing bridge enabling the southern arm to connect to the junction. Any expansion of this arm would therefore require alterations to this structure.

A419 London Road / Toadsmoor Road is a three arm priority junction at which Churchill Road connects in close proximity to the junction from the north east. The cumulative development impact will be most notable on main A419 arms with minimal impact on the minor Toadsmoor Road arm. However, the impact generated on the main A419 link in combination with the existing constraints for larger vehicles to turn right out of Toadsmoor Road could generate a capacity constraint on the minor arm. Potential mitigation includes the signalisation of the junction. A vehicle activated queue loop system is recommended for the minor arm to only be triggered once vehicles are queuing. Further consideration of how to incorporate Churchill road would need to be undertaken. In addition, the potential impact on the eastbound bus stop located close to the junction would also need to be considered. It may be necessary to move the bus stop to the East of



the junction (there is currently sufficient grass verge to do this but this may impact on visibility). The key constraints at this location are the presence of a gas and electrical sub-station and a level difference down to the underpass on the eastern side of the carriage way.

The junction at A38 Bristol Rd / A4135 / St John's Road is a 50 meter diameter conventional four arm roundabout junction. At this junction the cumulative development impact would be most notable on the main arms of the A38 and A4135. The potential mitigation measures include signalling the junction and possible expansion of flares to the western and southern arms could be considered depending on capacity analysis results. The flare on the A4135 arm could also be lengthened. Provision of flares on the southern arm would mitigate the impact generated by the cumulative developments unless two wide exit lanes are introduced on the northern A38 arm to accommodate two ahead movements from the south. A further constraint is the size of the roundabout which limits the potential circulatory queuing space if the junction is signalised. Land is potentially available on all arms apart from Northeast arm, where an industrial estate borders the roundabout.

B4066/Alkington Lane is a three arm priority junction at which the cumulative development impacts will be most notable on the eastern B4066 arm and Alkington Lane. However, in terms of actual vehicle numbers the impact on this junction is relatively minimal. Several potential mitigation measures could be implemented including; resurfacing of carriageway, re-instatement of white lining and widening of minor arm to improve turning path / space of HGV's turning right into and left out of Alkington Lane. Additionally weight restrictions could be implemented on Alkington Lane to prevent use by HGV tankers and encourage more appropriate route via B4066. Potential widening of the minor arm would involve land take of private land (gardens) situated West of junction. Widening may also require the relocation of pylons for telephone & electricity along the southern verge of B4066.

A38 / Alkington Lane is a three arm priority junction located in close proximity to Wick Lane. The main A38 link will receive the most notable impact as a result of the cumulative development. In terms of vehicle numbers using the minor arm, the impact on this junction is expected to be relatively minimal. However, the increase in traffic using the A38 may impact on the ability for motorists to turn right out of Alkington Lane onto the A38. The existing poor condition of Alkington Lane should also be taken into account. Mitigation at this junction could include widening the minor arm to two lanes (one flare for each direction), additional street lighting and implementation of weight restriction on Alkington Lane to prevent use by HGV tankers. Land constraints exist on the northern verge of the minor arm and at the southern verge of the minor arm bordering Alkington Lane.

Locations of the Junctions categorised by priority within Figure 7 and described above are shown in Figure 8 below.

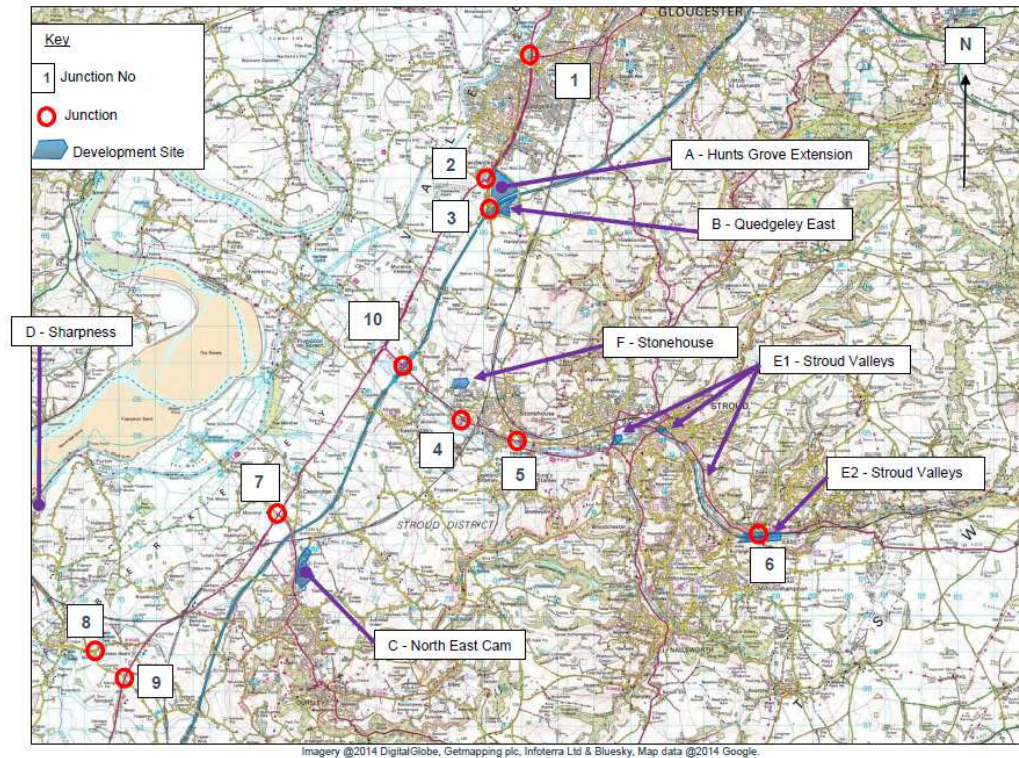


Figure 9 Location map of the junctions in Stroud and development sites<sup>35</sup>

Junctions 3, 10, 2 & 4 are identified as priority 1 junctions that are facing or by 2031 could face capacity constraints. The anticipated capacity constraints are a result of increased traffic on the strategic highways network and pressure from the cumulative development impacts.

In developing a programme for the delivery of infrastructure projects the first phase of the programme should encompass:

- Undertaking further detailed analysis work to identify appropriate mitigation measures and solutions at the priority sites.
- Progressing the identified mitigation measures in the in line with Stroud Draft Transport Impact Assessment.

These above schemes and mitigation measures should be considered as part of Community Infrastructure Levy (CIL) preparation, the identification of the infrastructure funding gap and the development of a Regulation 123 list.

## Strategic transport projects

The following infrastructure projects are located within and are of direct importance to development within Stroud District, but are also considered to be of strategic (county-wide importance):

- ***Birmingham to Exeter Route Strategy (April 2014)*** – Identifies the M5 Junctions 11A to 12 as a section of the SRN that experiences significant driver

<sup>35</sup> Source: Stroud District Council and Gloucestershire County Council, *Stroud District Council Local Development Plan Draft Transport Impact Assessment*, (27<sup>th</sup> March 2014), Page 65

delay. Work is proposed to provide Driver Information signage and is scheduled to take place during Q4 2014 and will be completed by March 2015.

- **Swindon to Kemble Rail Re-doubling** – This Network Rail RUS project will provide improved capacity and performance of the Gloucester-Swindon route through redoubling of the Swindon-Kemble section. The route includes stops at Stroud and Stonehouse stations. Costing in the region of £45million, work commenced in October 2011 and although delayed, was completed in Summer 2014.
- **Gloucester to Stroud Quality Bus Corridor** – The Gloucestershire LTP3 identified the development of a Quality Bus Corridor connecting Stroud with Gloucester via Brookthorpe. The project has an estimated cost of £12,610,000<sup>36</sup> and is scheduled for delivery between 2014 and 2026. Taking account of the proposed pattern of development across Stroud, it is considered that the route of a Gloucester to Stroud High Quality Bus corridor should be reviewed, on the basis that the route could potentially link new development in the Stroud Valleys, at West of Stonehouse and Hunt's Grove. The details of the project need to be refined in partnership with the County Council, but may encompass bus priority measures, improved bus stops, and increased service frequencies (see Smart Card ticketing and Real Time Passenger Information also).
- **Public Transport Smart Card ticketing** – the introduction of Smart Card ticketing as part of the SW Smart Card Project. The estimated cost for introducing Smart Cards across the Central Severn Vale Transport (CSV T) area, which includes parts of Stroud District, is £2,020,000 with roll-out scheduled for the period 2019-2026.
- **Bus Service Real Time Passenger Information (RTPI) expansion and electronic bus priority** – extend use of these technologies to improve the user experience and punctuality of bus services. The estimated cost for implementation across the CSV T area is £5,740,000, with implementation scheduled for the period 2011-2026.

## 4.9.1 Stroud South Vale

### North East Cam

The revised development scenario for North East Cam provides for housing development of between 450 and 750 dwellings. The Highways Agency have provided an initial commentary advising that there is concern about the levels of out-commuting and the impact on Junctions 13 and 14 of the M5 would need to be modelled to understand what mitigation would be required.

- **Highways** – It is expected that strategic development in this location (in combination with the committed employment development at Land to the South of Draycott Mills) would deliver two access points to existing highways: a southern access from A4135; and a northern access to Box Road.

<sup>36</sup> Based on CSV T Study (Draft 2010) estimated cost for six bus corridors of £75,660,000, with equal cost per corridor assumed.

Both of these access points will necessitate the provision of bridges over the River Cam.

- **Rail** – The strategic development site is located between the existing settlement of Cam and the Cam & Dursley Railway Station, providing access to train services to Gloucester and Bristol. There are proposals to improve Park & Ride facilities at the station, including a larger car park and provision of cycle parking.
- **Bus** – Strategic bus routes would connect the development with Dursley, Stroud and Gloucester. Improvements to bus frequencies, quality (e.g. improved bus shelters and Real Time Passenger Information) and contributions to bus subsidies may be sought in relation to new development.

Strategic Bus Route	Comment on service
Stroud – Stonehouse - Dursley	Commercial Monday to Saturday day times. Every 20 minutes Stroud – Stonehouse, hourly extension to / from Dursley
Dursley - Gloucester	Hourly commercial service on Monday to Saturday day times. Infrequent subsidised service on Sundays.

- **Walking and Cycling** – Development could support the completion of the Cam and Dursley Greenway cycle and pedestrian route. The Greenway would utilise the disused railway line between Dursley and Box Road, Cam and link the two settlements to the railway station.

## Sharpness

The revised development scenario for Sharpness provides for housing development of 300 dwellings. There is also a strategic employment allocation of 17.7ha, comprising an extension to the Severn Distribution Park.

In their comments, the Highways Agency note that housing would be fairly distant from the rest of the district, with travel required to access service and facilities. The HA feel that the location lacks the range of facilities and public transport which would be expected for growth locations.

- **Highways** – It is expected that highways requirements will primarily relate to the creation of segregated access, including re-opening access from Oldminster Road and reinstating the bridge crossing.
- **Rail** – There is a freight-only rail link connecting Sharpness Dock with the Bristol to Gloucester mainline, which is currently utilised on an infrequent basis. The nearest passenger station is a significant distance away at Cam & Dursley, so the new development would not be well connected by rail.
- **Bus** – A strategic bus routes would connect the development with Dursley, Berkeley and Thornbury (South Gloucestershire). Improvements to bus frequencies, quality (e.g. improvements to bus shelters and provision of Real Time Passenger Information) and contributions to bus subsidies may be sought in relation to new development.

Strategic Bus Route	Comment on service
Dursley – Sharpness - Berkeley - Thornbury	Infrequent subsidised service on Monday to Saturday daytimes.



- **Walking and Cycling** – A specific requirement for the development will be to provide a safe pavement from the site linking with the existing pavement on Oldminster Road.

## Stroud and West

### West of Stonehouse

The revised development scenario for Stonehouse provides for housing development of up to 1,350 dwellings. There is also a strategic employment allocation for 9.4ha to the north of Stroudwater Industrial Estate.

The Highways Agency have provide initial comments, advising that the Agency is concerned about potential levels of out-commuting to Gloucester/Cheltenham. The HA conclude that this large development, located close to M5 Junction 13 has the potential to have direct impacts on the SRN and request a transport evidence base to explore these potential impacts.

- **Highways** – Development to the west of Stonehouse would directly impact on the A419 principal route between the M5 Junction 13 and the centre of Stroud, which is one of the most heavily trafficked routes in the county. It is therefore closely linked with a County Council major scheme for A419 corridor improvements between M5 Junction 13 and Stroud town centre (estimated capital cost of £3.5mil).

Reference has also been made to the potential provision of a bridge over the railway linking the strategic development location with the B4008 north of Stonehouse. This may make use of or replace the existing Black Bridge (north of Stagholt Farm), but a northern access bridge is not considered to be fundamental to the delivery of development West of Stonehouse at this stage.

- **Rail** – There is an existing Stonehouse railway station providing access to train services to Swindon (via Stroud and Kemble) and Gloucester. There are three further proposals to improve rail facilities at Stonehouse:
  - Firstly, the LTP3 proposes Stonehouse Railway Station interchange improvements.
  - Secondly, the Stroud Local Plan 2005 safeguards land for the provision of a ‘halt’ station on the Bristol to Cheltenham line (Policy TR9). It is understood that the local community have submitted a bid for funding to the County to take this scheme forward. Contributions towards provision of the halt may be sought in relation to new development.
  - Secondly, a more ambitious proposal is for the relocation of Stonehouse station further north along Gloucester Road (B4008), which would facilitate access to both rail lines. Based on the estimated cost in the LTP3 of providing a Hunt’s Grove station, a new Stonehouse station would cost around £15.7mil. The delivery of the relocated station is not considered to be fundamental to development progressing at the West of Stonehouse location.
- **Bus** – Strategic bus routes would connect the development with Dursley, Stroud and Gloucester. Improvements to bus frequencies, quality (e.g. improvements to bus shelters and provision of Real Time Passenger

Information) and contributions to bus subsidies may be sought in relation to new development.

Strategic Bus Route	Comment on service
Stroud – Stonehouse – Kingsway – Gloucester	Monday to Saturday daytime services provided commercially, evenings and Sundays subsidised (including S106 contributions).
Stroud – Stonehouse - Dursley	Commercial Monday to Saturday day times. Every 20 minutes Stroud – Stonehouse, hourly extension to / from Dursley

- **Walking and Cycling** – The creation of walking and cycling links from the strategic development into the town centre of Stonehouse, across the railway lines, will be fundamental to delivering a proposal that integrates with the existing town. Current provision includes: an underpass at Stagholt Farm; two level crossings on Oldends Lane; and a footbridge linking the Stroudwater Industrial Estate with Midlands Road. Measures to facilitate walking and cycling access to the strategic development location could include:
  - Enhancement of underpass at Stagholt Farm to provide a safe and convenient northern access route.
  - A cycle and pedestrian route traversing the site that connects the village of Nupend with Stonehouse via the existing level crossings at Oldends Lane. This may involve the provision of a cycle and pedestrian crossing over one or both rail lines, with an estimated capital cost of £2million per bridge.
  - To facilitate improved walking and cycling links between the strategic development and south Stonehouse and Stroud, contributions towards the Cotswold Canal Project may also be sought. This may involve the establishment of a safe and attractive pedestrian and cycle link between the new development and canal.

The Stonehouse Design Statement recommends that “new industrial areas are laid out so as to allow permeability within the areas and to enhance walking and cycle links into Stonehouse and onto the National Cycle Network” (page 39).

## Stroud Valleys

The revised development scenario for the Stroud Valleys provide for housing development of 400 dwellings. Option sites for development are: to the west of Stroud town centre at Dudbridge and Wallbridge; to the east of Stroud town centre at Brimscombe & Thrupp; and Callowell Farm and Grange fields, Uplands to the north of the town. As these sites are spread over a large area, the transport implications are considered separately below:

### Dudbridge and Wallbridge

- **Highways** – Traffic associated with housing sites located around Dudbridge and to the west of Stroud Town Centre would directly impact on the A419 principal route between the M5 Junction 13 and centre of Stroud, which is one of the most heavily trafficked routes in the county. Potential infrastructure projects to facilitate development in this location are:

- A County Council major scheme for A419 corridor improvements between M5 Junction 13 and Stroud town centre (estimated capital cost of £3.5mil).
- A scheme to mitigate congestion at the Cairncross Roundabout.
- A scheme to mitigate congestion on Merrywalks.
- **Rail** – Development sites at Dudbridge and Wallbridge are located in relatively close proximity to Stroud railway station. The Stroud Public Realm Strategy proposes improvements to Station Square as an important entrance point to the town and the County Council have identified a Stroud Station Interchange improvements project within the LTP3.
- **Bus** – The majority of Strategic bus routes in the District serve Stroud providing transport within the town and further afield to Dursley and Gloucester. Improvements to bus frequencies, quality (e.g. improvements to bus shelters and provision of Real Time Passenger Information) and contributions to bus subsidies may be sought in relation to new development.

Strategic Bus Route	Comment on service
Stroud – Cashes Green, Stroud	3 journeys/hour Monday – Saturday daytimes, commercial.
Stroud – France Lynch, Chalford	Hourly Monday – Saturday daytimes, commercial.
Stroud – Mason Road – Uplands, Stroud	Half hourly Monday – Saturday daytimes – mainly commercial on Mondays to Fridays
Stroud – Rodborough Hill – Kingscourt, Stroud	Infrequent service, partly subsidised Mondays to Saturdays
Stroud – Nailsworth - Wotton-under-Edge	Infrequent Monday to Saturday subsidised service
Forest Green, Nailsworth - Stroud – Edge – Gloucester	Hourly commercial service on Monday to Saturday with one evening journey in each direction subsidised
Stroud – Stonehouse – Kingsway – Gloucester	Monday to Saturday daytime services provided commercially, evenings and Sundays subsidised (including S106 contributions).
Forest Green, Nailsworth – Stroud – Cheltenham	Hourly daytime commercial Monday – Saturday services. Infrequent Sunday service subsidised.
Tetbury – Minchinhampton - Stroud	Subsidised, with potential to become fully commercial during current contract if <10% increase in patronage (two hourly service Mon to Sat)
Cirencester – Sapperton – Stroud	Subsidised with potential to become fully commercial during current contract if <20% increase in patronage (90 min service Mon to Sat, infrequent Sat service)
Stroud – Stonehouse - Dursley	Commercial Monday to Saturday day times. Every 20 minutes Stroud – Stonehouse, hourly extension to / from Dursley

- **Walking and Cycling** – Housing sites within the Dudbridge and Wallbridge area are located within the Cotswold Canal corridor and contributions may be sought towards the multi-user trail that provides safe and attractive links to the town and other nearby settlements.

The Stroud Public Realm Strategy identifies a comprehensive package of public realm enhancements within the town centre. Development within the Dudbridge and Wallbridge area would benefit from the proposed improvements to the public realm at the Wallbridge, Cairncross roundabout and Rowcroft town gateway and approach areas (page 69).

### Brimscombe and Thrupp

- **Highways** – Traffic associated with housing sites to the east of Stroud would place additional pressure on the A419 corridor through the area, including the heavily congested area between the M5 Junction 13 and centre of Stroud. Potential infrastructure projects to mitigate impacts are listed in the Dudbridge and Wallbridge section above.

Gloucestershire County Council have identified a further highways scheme involving improvements to the junction of the A419 with Toadsmoor Road, located to the east of Brimscombe.

The Cotswold Canals Brimscombe Area Action Plan identifies that access could be an important issue with a multiplicity watercourses requiring bridges that would increase construction costs, coupled with a limited amount of developable land.

- **Rail** – Development sites at Thrupp and Brimscombe are located a greater distance from Stroud railway station and as a result there would be a greater reliance on bus services for public transport.
- **Bus** – As identified above, Stroud is well served by strategic bus routes, but there are fewer services that are directly accessible to the east of the town at Brimscombe and Thrupp. Improvements to bus frequencies, quality (e.g. improvements to bus shelters and provision of Real Time Passenger Information) and contributions to bus subsidies may be sought in relation to new development.

Strategic Bus Route	Comment on service
Stroud – France Lynch, Chalford	Hourly Monday – Saturday daytimes, commercial.
Cirencester – Sapperton – Stroud	Subsidised with potential to become fully commercial during current contract if <20% increase in patronage (90 min service Mon to Sat, infrequent Sat service)

- **Walking and Cycling** – Housing sites within the Brimscombe and Thrupp area are located within the Cotswold Canal corridor and contributions may be sought towards the multi-user trail that provides safe and attractive links to Stroud town centre and other nearby settlements.

### Grange fields and Callowell Farm

- **Highways** – Traffic associated with housing sites to the north of Stroud would place additional pressure on the A419 corridor through the area, including the heavily congested area between the M5 Junction 13 and centre of Stroud. Potential infrastructure projects to mitigate impacts are listed in the Dudbridge and Wallbridge section above.
- **Rail** – Development sites at Dudbridge and Wallbridge are located in relatively close proximity to Stroud railway station. The Stroud Public Realm



Strategy proposes improvements to Station Square as an important entrance point to the town and the County Council have identified a Stroud Station Interchange improvements project within the LTP3.

- **Bus** – As identified above, Stroud is well served by strategic bus routes and further consideration would need to be given to how bus services would be extended to serve development sites. Strategic routes that serve areas in close proximity to the development sites are listed in the table below. Improvements to bus frequencies, quality (e.g. improvements to bus shelters and provision of Real Time Passenger Information) and contributions to bus subsidies may be sought in relation to new development.

Strategic Bus Route	Comment on service
Stroud – Cashes Green, Stroud	3 journeys/hour Monday – Saturday daytimes, commercial.
Stroud – Mason Road – Uplands, Stroud	Half hourly Monday – Saturday daytimes – mainly commercial on Mondays to Fridays
Forest Green, Nailsworth - Stroud – Edge – Gloucester	Hourly commercial service on Monday to Saturday with one evening journey in each direction subsidised

- **Walking and Cycling** – The Stroud Public Realm Strategy identifies a series of public realm enhancements that would encourage walking and cycling for short trips to the town centre. An update on priority schemes and estimated costs is to be provided to inform the next version of the IDP.

## Stroud and East

The revised development scenario for Stroud and East provides for development of 346 dwellings, all of which are committed.

The Highways Agency have provided an initial commentary advising that this is an isolated location, outside any settlement, with a less than hourly bus service. As a result there would be a high reliance on car travel.

- **Highways** – Access to the site would be from Cirencester Road onto the A419. As development would result in additional traffic on the A419 route, a contribution to off-site highway improvements may be sought.
- **Rail** – There is very limited access to rail services (travel to Stroud railway station would be necessary) or linking bus services and therefore development in this location would not support sustainable modes of travel.
- **Bus** – Options for providing bus services to Aston Down are not clear and would require further investigation. The level of development proposed is insufficient to support the provision of significant improvements to the existing infrequent bus service.
- **Walking and Cycling** – No walking and cycling routes relating specifically to the site have been identified.

## Gloucester Urban Fringe

### Hunt's Grove & Quedgeley East

The revised development scenario for Hunt's Grove provide for housing development of between 500-750 dwellings. There is also a strategic employment allocation of 13ha at Quedgeley East.

Within their initial comments, the Highways Agency advise that they would need to see traffic modelling of impact on J12 to understand what mitigation would be required.

- **Highways** – Development at Hunt's Grove and Quedgeley East would access onto the B4008/A38 trunk road that links M5 Junction 12 with Gloucester City Centre. Potential infrastructure projects to facilitate development in this location are:
  - M5 Junction 12 (second phase) improvement - Improvement of junction layout and further signalisation, over and above scheme planned in the medium term and now completed (introduction of dog bone layout with some signalisation).
  - B4008/A38 Cross Keys Roundabout signalisation
  - A38 Waterwalls roundabout capacity improvements

The Highways Agency will seek to clarify access arrangements for the Quedgeley East employment site in due course.

- **Rail** – Provision of a new railway station south of Gloucester at Hunt's Growth is proposed by the LTP3. The estimated capital cost of this project is £15,740,000 with delivery scheduled late in the plan period, between 2019 and 2026. The provision of a new railway station is not considered to be fundamental to development progressing in this location.
- **Bus** – Strategic bus routes would connect the development with Dursley, Stroud and Gloucester. Improvements to bus frequencies, quality (e.g. improvements to bus shelters and provision of Real Time Passenger Information) and contributions to bus subsidies may be sought in relation to new development.

Strategic Bus Route	Comment on service
Stroud – Stonehouse – Kingsway – Gloucester	Monday to Saturday daytime services provided commercially, evenings and Sundays subsidised (including S106 contributions).
Dursley - Gloucester	Hourly commercial service on Monday to Saturday day times. Infrequent subsidised service on Sundays.

In terms of enhancing the reliability of travel by bus, Gloucestershire County Council have identified a major highways and public transport scheme that would involve widening of the Gloucester South West Bypass and incorporation of bus priority measures. The County Council have also expressed interest in relocating a south Gloucester Park & Ride site to Hunt's Grove.

- **Walking and Cycling** – No walking and cycling routes relating specifically to the site have been identified to date.

## Estimated project costs

At this stage it is expected that the cost of site-specific transport improvements will be met by developers and funded through either S106 Planning Obligations or the CIL.

This study does not therefore include site-specific transport costs in the analysis of potential developer contributions in chapter 7. It does however include a budget for the following projects that would deliver off-site transport improvements, and which assist in appraising the viability of delivering transport improvements across Stroud:

- **Bus services** – The Gloucestershire LTP3 identified the development of a Quality Bus Corridor connecting Stroud with Gloucester. The project has an estimated cost of £12,610,000 and is scheduled for delivery between 2014 and 2026. This costed project is included within the calculation of total infrastructure costs to inform viability assessment, while acknowledging that further work is required to assess the optimal distribution of funds to deliver high quality bus services serving new development.
- **Cycle paths** – the table below identifies two key cycle scheme routes for Stroud District. Gloucestershire County Council has advised that the pure build cost for a segregated cycling facility would be around £100,000 per km (additional engineering complexities, topography, land purchase etc. may add to this).

Table 39 Stroud District cycle schemes

Cycle Path Scheme	Comment	Estimated length (km)	Estimated capital cost
Cam and Dursley Greenway	Approximate distance measurement based on route set out in the Stroud Local Plan Proposals Map 2005	5.0km	£500,000
Saul Junction to Chalford canal towpath upgrade	Estimated cost for towpath upgrade to facilitate walking and cycling provided by Cotswold Canals project.	N/A	£650,000
<b>Total</b>			<b>£1,150,000</b>

- **Highways** – A major scheme for highways corridor improvements on the A419 between M5 Junction 13 and Stroud town centre has been identified as a priority by the County Council. Four schemes along the route comprise: Chipmans Platt roundabout, enlargement of A419 east and westbound entries; Oldends Lane roundabout, signalisation with segregated left turning lane on eastbound entry and combined Bond's Mill and Sperry road entry; Downtown Road signal timing modifications and Toucan crossing provision; and Horsetrough Roundabout signalisation. An estimated cost of £3.5mil is based on the midpoint of a County Council £2 - £5mil cost banding.

## Funding sources

Funding sources and programmes relevant to the delivery of transport schemes include:

### ***Local Pinch Point Fund***

As part of the 2012 Autumn Statement, the Government announced the creation of a Local Pinch Point Fund worth £170million to remove bottlenecks on the local highway network that are impeding growth. The fund reflects the government’s commitment to supporting economic growth by tackling barriers on the local highway network that may be restricting the movement of goods and people. The fund is aimed at those schemes that can be delivered quickly with immediate impact. The department’s funding contribution (in the form of capital) is only available in 2013 to 2014 and 2014 to 2015.

### ***Local Transport Body***

From April 2015, the DfT is proposing to devolve major scheme transport funding to a Local Transport Body (LTB) covering the whole of Gloucestershire and made up of GCC, the Local Enterprise Partnership and Leadership Gloucestershire. Gloucestershire County Council and others will be able to put forward any eligible scheme with a capital value of over £0.5million, and the LTB will prioritise these for funding. The £5million threshold for major schemes will no longer apply; and the DfT will no longer approve individual schemes for funding, but still retains an “assurance” role of ensuring that LTBs are delivering value for money schemes.

Gloucestershire could receive around £15million of devolved funding for the period April 2015 to March 2019, though this has not been officially announced and would, in any case, need to be confirmed by the next Comprehensive Spending Review.

### ***Investing in Britain’s Future (June 2013)***

The Government’s recent publication introduces a series of road spending priorities and measures. Those of potential relevance to Gloucestershire include:

- The Government will repair the national road network, investing over 4billion by 2021-21 to enable the Highways Agency to repair and renew the national road network, including resurfacing 80% of the SRN.
- The Government will also support LAs to repair the local road network, investing nearly £6billion over the next Parliament to tackle the significant maintenance backlog.
- The Government will also begin to upgrade the majority of the national non-motorway network managed by the Highways Agency, with a large proportion moved to dual-lane and grade-separated road standard to ensure free-flowing traffic nationwide.

## **4.10 Waste**

### ***Overview***

Taking account of long term projects of waste creation, the adopted Gloucestershire Waste Core Strategy identifies five strategic sites within the county with the potential to accommodate re-modelled, alternative and/or new waste management facilities over the timeframe of the plan. Two of these strategic sites, Javelin Park and Land at Moreton Valance, are located in Stroud District.

An application for an Energy from Waste facility at Javelin Park, a project of county-wide importance, was refused planning permission during March 2013. The applicant has submitted an appeal and an update on this project will be provided in a future revision of the IDP later in 2013.

In seeking to combat the challenges of changing patterns of commercial and household consumption, recycling and waste generation, further local waste infrastructure within Stroud District may also prove necessary. Developers are advised to provide additional space within proposals to facilitate recycling by households and the need for increased capacity at Household Recycling Centres serving Stroud District will be kept under review.

### ***Responsibilities for delivery***

The Gloucestershire Waste Partnership (GWP) consists of the six district and borough councils within Gloucestershire and the County Council. A Partnership Agreement and Terms of Reference was produced in 2009 to strengthen the two tiers of waste management in the county. It's vision is to 'develop partnership working and sustainable waste management in Gloucestershire.' In broad terms, the responsibilities of the two tiers of Councils are:

- ***Gloucestershire County Council*** – responsibility for preparation of the Minerals and Waste Local Development Framework (LDF) and the management of waste disposal.
- ***Stroud District Council*** – responsibility for managing the collection of waste from households and businesses.

### ***Plans and strategies***

***Minerals and Waste Local Development Framework (LDF)*** - At the present time Gloucestershire County Council is preparing a countywide Waste (& Minerals) Development Plan. This includes the Waste Core Strategy that was adopted on 21<sup>st</sup> November 2012 (covering the period to 2027) and now forms part of the Development Plan

***Waste Minimisation in Development Projects Supplementary Planning Document (SPD)(September 2006)*** – The SPD provides guidance on how waste, generated during the construction and occupation of new developments, can be effectively minimised with smarter use of construction materials and increased recycling. Proposals for major development are expected to be accompanied by a Waste Minimisation Statement. The County Council have highlighted that people need more space within dwellings to enable re-cycling and this should be considered in the design of new development.

### ***Baseline and Assessment of Infrastructure Needs***

The table below displays the current capacity by waste process method in Gloucestershire.

Table 40 Total waste management capacity Gloucestershire (2011)

Management/Process Method	Operational Capacity in Tonnes
Recycling	110,000t
Of which composting/AD is	79,000t

Residual Waste Treatment	No operational capacity – all residual currently goes to 2 Cory operated landfills
C&D Waste recycling	-
Non-hazardous. Landfill	3,205,000m3 C&D recycling
Inert Landfill	-

This operational capacity is provided through a range of waste facilities in Gloucestershire. There are three non-hazardous landfill sites in Gloucestershire: Hempsted at Gloucester; and Wingmoor Farm (West) and Wingmoor Farm (East) close to Bishop's Cleeve North West of Cheltenham. A hazardous landfill site is provided at Wingmoor Farm (East). There are also nineteen inert landfill /restoration sites across the County receiving construction and demolition (C&D) waste.

Existing Household Recycling Centre (HRC) waste management sites serving Stroud District are:

- **Pyke quarry HRC** – located near Horsely on the B4058 Wotton-under-Edge Road.
- **Hempsted HRC** – located 1 mile west of Gloucester Docks.

#### ***Assessment of infrastructure needs and waste projects***

The Waste Core Strategy assumes that Municipal Solid Waste (MSW) in Gloucestershire will increase to some 359,600 tonnes per annum due to a combination of population growth and growth in waste per head. In Gloucestershire, each person generated 414kg of municipal waste in 1995 and 504kg in 2009/10. This increase in waste tonnes is primarily due to, growth in household consumption, changes to waste collection systems and an increase in household numbers. Short-term fluctuations in waste tonnage can result from other factors including the wider economic circumstances and changes to service charges.<sup>37</sup>

Based on projected increases in MSW and other waste streams, the Waste Core Strategy identifies an on-going need to develop new waste facilities in the county. An overarching objective of the Waste Core Strategy is to enable diversion from landfill use, in response to the national policy of tackling climate change through more sustainable waste alternatives.

In order to meet the projected demand for waste management, the Waste Core Strategy identifies the following locations with the potential to accommodate re-modelled, alternative and / or new waste management facilities over the timeframe of the plan. Two of these strategic sites, Javelin Park and Land at Moreton Valance, are located in Stroud District:

- **Wingmoor Farm East** - This 2.8 hectare site is located to the west of Bishop's Cleeve, five miles north of Cheltenham on the Stoke Road leading from the A435 to Stoke Orchard. It forms part of the Wingmoor Farm (East) landfill, recycling and quarry complex. The site is not currently in active use and its

<sup>37</sup> Gloucestershire County Council Waste Core Strategy Topic Paper 2 – Whether the statistical basis for the CS is robust and justifies the vision and the strategic objectives (January 2012).

availability for a strategic waste recovery facility has been confirmed by the site operator Grundon Waste Management.

- **The Park** - This 6.8 hectare site, often referred to as ‘The Park’ is located two miles west of Bishop’s Cleeve and five miles north of Cheltenham, off Stoke Road, south of Stoke Orchard. It adjoins Wingmoor Farm West which is also allocated (see below). The site comprises a number of former aeroplane hangars converted to industrial units including waste management processes and other, as yet unimplemented waste management planning permissions. The site is owned by Wellington Park Properties Ltd.
- **Wingmoor Farm West (Sites A&B)** - This 4.0 hectare site is located two miles west of Bishops Cleeve and five miles north of Cheltenham, off Stoke Road, south of Stoke Orchard. It adjoins 'The Park' (see above). The site includes an area of concrete hard-standing currently used as a Household Recycling Centre (HRC) and other land within the curtilage of the landfill planning permission. The site is owned by Cory Environmental Ltd.
- **Javelin Park** - This 5 hectare site comprises part of the former Moreton Valence Airfield and is located immediately to the south of Junction 12 of the M5 between the M5 and the B4008. The site is currently vacant and owned by Gloucestershire County Council.
- **Land at Moreton Valence** - This 7 hectare site is located between the M5 and A38 to the north-east of Moreton Valence. The site is partly used for light industrial and waste management. The operators of the site, Smiths (Gloucester) Ltd. have confirmed that the site is available for strategic waste management use.

During March 2013 Gloucestershire County Council considered a planning application for a £500million Energy from Waste facility at Javelin Park in Stroud District, a proposal submitted by Urbaser Balfour Beatty. The proposed facility would help to divert over 92% of Gloucestershire’s residual waste from landfill (waste left following recycling), however the application was refused planning permission and an appeal to the Planning Inspectorate has now been submitted. A further update on this project of county-wide importance will be provided in the IDP Refresh later in 2013.

With respect to potential projects with Stroud District, the County Council have advised that Household Recycling Centres (HRCs) are reaching capacity and therefore the need for additional capacity at Pyke Quarry and Hempsted will need to be kept under review.



## 5 Summary by infrastructure sector

### 5.1 Introduction

This section provides a summary of the assessment of infrastructure needs and key infrastructure projects under each of the sectors. Summary tables outlining current and emerging projects have been extracted from a dataset (Project Tracker) which accompanies this report.

The Project Tracker provides a more detailed overview of the key information surrounding specific infrastructure projects; including projected delivery timescales and the projects relation to development locations.

#### Libraries

The district wide development allocations and committed developments are expected to result in demand for between 516 and 554sqm of library space with an approximate capital cost of between £1.8m and £1.9m.

It is likely that library provision across the Stroud will be made in-line with the recommendations of the Council's review of assets with a focus on community run libraries, co-location with other services and on-line or virtual library services.

The current and emerging infrastructure projects for this sector are shown in the summary table below.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Library - County Council Virtual Library	Gloucestershire County Council aims to continue with the expansion of services available through its own virtual library which means wherever the internet is available anyone will be able to use these digital services 24/7.	Gloucestershire County Council	Project	Place-making
Library - Sharpness Library provision	Potential for development at Sharpness to support improvements at the Berkeley Community Library, and/or the existing Mobile Library service stop.	Gloucestershire County Council	Idea	Place-making

#### Community Centres

The district wide development allocations and committed developments are expected to result in demand for between 2,689 and 2,883sqm of community centre space at an approximate capital cost of between £4m and £4.3m.

The current and emerging projects identified for community facilities across the Stroud area are summarised in the following table.



Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Community Centre - Hunt's Grove Community Centre	Committed development at Hunt's Grove provides for a community centre.	Crest Nicholson	Project	Development
Community Centre - Stonehouse Youth Centre replacement	The provision of a new youth building has become a reality, the Unite Modular Building Company donated six of their modules to the Town Council. Planning permission has been granted. The Town Council has committed £60,000 to this project, but is looking for local residents with building skills to come forward.	Stonehouse Town Council	Project	Place-making

## Youth Support Services

The district wide development allocations and committed developments are expected to result in youth service costs of between £518,000-555,000 over an eight year period.

Alongside the need to provide additional youth support services, the IDP recognises that future developments can contribute to youth development through other aspects including:

- Opportunity to provide training, apprenticeships and employment through working with contractors;
- Ensure facilities for young people are brought forward early in the construction programme of any new development;
- Allocate costs for a community development/youth worker officer where developments are of a sufficient strategic nature.

## Education – Early Years

The district wide development allocations and committed developments are projected to result in a demand for between 571 and 612 early year education places at a capital cost of between £6.7-7.2m.

No projects to provide new early years education facilities have been identified to date.

## Education – Primary Education

The district wide development allocations and committed developments are projected to result in a demand for between 2,124 and 2,277 primary education places at a capital cost of between £24.8-26.6m.

The current and emerging infrastructure projects for this sector are shown in the summary table below.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Primary Education - Hunts Grove New Primary School	The Hunt's Grove planning permission for 1,750 dwellings provides for a new primary school on a 2Ha site within the application area.	Gloucestershire County Council	Project	Development

## Education – Secondary Education

The district wide development allocations and committed developments are projected to result in a demand for between 1,209 and 1,293 secondary education places (including sixth form) at a capital cost of between £21.5m and £23.1m.

No projects to provide new secondary education facilities have been identified to date.

## Further Education

The district wide development allocations and committed developments are projected to result in a demand for between 115 and 123 Further education places at a capital cost of between £1.7m and £1.9m.

The current and emerging infrastructure projects for this sector are shown in the summary table below.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Stroud College Sports Centre	It is understood that South Gloucestershire and Stroud College are planning a new sports centre and classrooms at its Stroud campus which may bring increased local capacity.	Stroud College / South Gloucestershire	Project	County

## Emergency Services – Ambulance

No major projects were identified for the Ambulance Service within the Stroud District Council area. A number of service requirements were however identified, largely relating to 'Standby Points', a small space with a rest area, desk, kitchen and access to a toilet with associated parking.

Table 41 Ambulance Trust Projects

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
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Ambulance - Brimscombe & Thrupp Facilitated Standby Point	Brimscombe and Thrupp are not achievable within 8 minutes from any ambulance station; a facilitated standby point will be required in this area in relation to new development.	South West Ambulance Service NHS Foundation Trust	Proposal	Development
Ambulance - Dursley Co-Responder Scheme	Investment in a Dursley Co-Responder scheme would assist with responses arising at the proposed North East Cam development area.	South West Ambulance Service NHS Foundation Trust	Proposal	Development
Ambulance - Grange Fields and Callowell Farm Facilitated Standby Point	Cheapside is not achievable within 8 minutes from any ambulance station; a facilitated standby point will be required in this area in relation to new development.	South West Ambulance Service NHS Foundation Trust	Proposal	Development
Ambulance - Sharpness Community Responder Scheme	Sharpness cannot be reached within acceptable time limits from current stations or standby points. It is recommended that a community responder scheme is established in this area.	South West Ambulance Service NHS Foundation Trust	Proposal	Development
Ambulance - Stonehouse Facilitated Standpoint Point	Responding to incidents at Stonehouse is not achievable within 8 minutes from any ambulance station; a facilitated standby point will be required in this area in relation to new development.	South West Ambulance Service NHS Foundation Trust	Proposal	Development

As part of the refresh (Oct 2014) the Ambulance Trust did not identify any further projects above those identified in Table 47.

## Emergency Services – Fire and Rescue Services

No further major infrastructure is anticipated as a result of the proposed growth.

## Emergency Services – Police

Gloucestershire Constabulary has concluded that the proposed level of growth in the Stroud District will not significantly increase demand for police services and place pressure on Gloucestershire. The Constabulary have confirmed they currently have no plans to dispose of police stations in the Stroud District.

Nevertheless, the police service has seen substantial budget reductions consequently The Constabulary and its Local Area Commanders have identified

levels of additional infrastructure necessary to support the levels of growth proposed which link to growth proposed in Stroud. These are summarised in the table below.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Police - Gloucestershire new Central Custody Suite	The new central custody suite in Gloucestershire is one of the central specialist facilities utilised by Neighbourhood Policing Teams in Stroud District. The new facility will be located close to Police Headquarters in Waterwells, Gloucester.	Gloucestershire Constabulary	Project	County
Police - New Non-Property Infrastructure	Planned new growth in Stroud District has been identified to require the setting up of 20 new Police Officer and staff posts. The estimated costs allow for: uniform and protective equipment; patrol car; cost of recruitment; training; IT equipment; furniture.	Gloucestershire Constabulary	Project	District
Police - Stroud Police Station Refurbishment and Upgrade	Stroud Police Station is well situated but is very out of date and requires upgrading to make it fit for purpose in the future.	Gloucestershire Constabulary	Project	District

## Energy

A number of requirements were identified in order to upgrade the electricity transmission network and the gas distribution network around the proposed development locations.

Western Power Distribution have a number of current programmes which would see upgrade works leading to capacity to connect strategic developments. However, this is dependent on the final end demand from the development sites and the capacity at time of application.

Wales and West Utilities have identified where reinforcements would be required for some of the proposed development allocations. However in the case of some areas WWU have stated that further more detailed information is required to judge capacity or whether reinforcements to infrastructure will be necessary.

The current and emerging infrastructure projects for this sector are shown in the summary table below.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
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Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Electricity Distribution - Hardwicke new Primary Substation and 11kV connection	The primary substation (Tuffley PSS) is near capacity. WPD have made provision to install an additional PSS in the Hardwicke area, but progression of this scheme depends on load growth in the area, including proposed development at Hunts Grove and Quedgeley East. The developments will probably necessitate an additional 11kV circuit from Tuffley PSS, along with associated 11kV infrastructure to connect new development.	Western Power Distribution	Proposal	Development
Electricity Distribution - North East Cam to Dursley Primary Sub Station 11kV connection	The anticipated demand for the NE Cam site is 1.5MVA. The primary substation (Dursley PSS) adjacent to the proposed site currently has ample capacity to accommodate the proposed development. This development will probably necessitate two new 11kV circuits from Dursley PSS, along with associated 11kV infrastructure.	Western Power Distribution	Proposal	Development
Electricity Distribution - Sharpness to Ryeford BSP 33kV connection	The primary substation (Berkeley) adjacent to the proposed residential and employment development at Sharpness and the Severn Distribution Park is nearing full capacity. Should all proposed development come forward then the schemes may necessitate installation of a new 33kV circuit back to Ryeford BSP some 15km away.	Western Power Distribution	Proposal	Development
Electricity Distribution - Stroud Valleys new Brimscombe Primary Substation and 11kV connection	The primary substation (Dudbridge PSS) is near capacity. WPD have made provision to install an additional PSS in the Brimscombe area, but progression of this scheme depends on load growth in the area. The development will probably necessitate an additional 11kV circuit from Dudbridge PSS, along with	Western Power Distribution	Proposal	Development

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
	associated 11kV infrastructure to connect new development.			
Energy from Waste - Javelin Park new Energy form Waste facility	During March 2013 Gloucestershire Council considered a planning application for a £500million Energy from Waste facility at Javelin Park. The application has been refused planning permission and an appeal to the Planning Inspectorate has been submitted.	Urbaser Balfour Beatty	Proposal	County
Gas Distribution - Hunts Grove Gas connection	There is an existing medium pressure mains available in Waterwell Business Park. There is also a low pressure mains to the west of the site, but reinforcement of this would be required to support the number of dwellings proposed at Hunts Grove.	Western Power Distribution	Proposal	Development
Renewable Energy - Wind Turbine North of Sharpness Docks	Wind energy development comprising of one wind turbine with a maximum overall height of up to 122m.	PFR (Sharpness Docks) Limited	Proposal	Development

## Healthcare – General Practitioners (GPs)

The district wide development allocations and committed developments are projected to result in a demand for between 9 and 10GPs at a capital cost of between £2.8m and £3m.

The current and emerging infrastructure projects for this sector are shown in the summary table below.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Primary Healthcare - Hunts Grove New GP Surgery	Committed development at Hunts Grove provides a site of 0.2Ha, providing for the construction of a doctor's surgery.	Gloucestershire Clinical Commissioning Group	Project	Development

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Primary Healthcare - Minchinhampton Surgery Relocation	It is understood that the Surgery at Minchinhampton is investigating options for relocation to new premises. This may provide the option to expand to cater for new development.	Minchinhampton Surgery	Proposal	Development
Primary Healthcare - Orchard Medical Practice Expansion	Expansion of premises at the existing site, together with associated facilities such as parking. The practice has been in contact with Gloucestershire Clinical Commissioning Group around potential funding mechanisms.	Orchard Medical Centre	Proposal	Development

## Healthcare – Dentists

The district wide development allocations and committed developments are projected to result in a demand for between 8 and 9 Dentists at a capital cost of between £1.5-1.6m.

No current projects to provide dental surgeries have been identified within the District to date.

## Healthcare – Secondary

The district wide development allocations and committed developments are projected to result in a demand for between 30 and 32 acute bed spaces at a capital cost of between £2.5-2.7m.

No current projects to provide secondary (Acute) healthcare facilities have been identified within the District to date.

## Flood Management, Water Supply and Wastewater

The review has highlighted a number of site specific mitigation measures in relation to flood risk which should be considered during site specific flood risk assessments. A number of more strategic drainage infrastructure improvements have also been identified along with approximate timescales and cost.

Specifically in relation to sewerage infrastructure, the review highlights those strategic locations which are likely to require most investment.

The current and emerging infrastructure projects for this sector are shown in the summary table below.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
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Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Flood Risk - Arlingham Severn Estuary flood risk management measures	Arlingham is identified as a location where flood risk management in the future may involve: working in partnership to improve defences, explore options for managed realignment, and/or properties are made more resilient to flooding.	Environment Agency	Proposal	District
Flood Risk - Cam Investigation and Mitigation Measures	Surface water mapping predicts a significant flood risk due to surface runoff. There are also properties adjacent to the River Cam that may be at risk from surface water and fluvial flooding. An investigation is planned for 2014/15 to confirm extent of flood risk and suitable mitigation measures.	Gloucestershire County Council		
Flood Risk - Elmore Severn Estuary flood risk management measures	Elmore is identified as a location where flood risk management in the future may involve: working in partnership to improve defences, explore options for managed realignment, and/or properties are made more resilient to flooding.	Environment Agency	Proposal	District
Flood Risk - Longney Severn Estuary flood risk management measures	Longney is identified as a location where flood risk management in the future may involve: working in partnership to improve defences, explore options for managed realignment, and/or properties are made more resilient to flooding.	Environment Agency	Proposal	District



Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Flood Risk - Stroud Flood Risk Property-Level Protection	Project to offer Property-Level Protection to residents adjacent to Slad Brook. There are a number of other 'clusters' of flooding in Stroud (e.g. Devereaux Crescent) which need to be investigated to identify flood alleviation schemes.	Environment Agency	Proposal	Development
Wastewater - Sharpness sewerage network capacity improvements	Sewerage network at Sharpness has limited capacity and a range of capacity improvements to the public sewer system will be necessary to accommodate development of the scale proposed.	Wessex Water		
Wastewater - Stroud strategic sewerage improvements	Severn Trent Water are currently assessing strategic sewerage improvement options to address the sewer capacity issues in Stroud, but due to the extent of the expected improvement work it is envisaged that this work could take 3-5 years to complete.	Severn Trent Water	Proposal	Development

## Information and Communications Technology

Within the Stroud area, telecommunication exchanges within the urban areas have been upgraded to super-fast broadband and where this has not yet been undertaken, it is scheduled for upgrade in the near future as part of BT's Openreach project (Table 32 summarises the status of superfast broad band provision).

## Open Space, Sport and Recreation – Swimming Pools

The district wide development allocations and committed developments are expected to result in demand for between 0.81 and 0.87 Pools at an approximate capital cost of between £2.7-2.9m.

No current projects to provide swimming facilities have been identified within the District to date.

## Open Space, Sport and Recreation – Sports Halls

The district wide development allocations and committed developments are expected to result in demand for between 1.1 and 1.17 sports halls at an approximate capital cost of between £3-3.3m.

The current and emerging projects identified for sports halls across the Stroud area are summarised in the following table.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Sports Pavillion - Hunts Grove new sports pavillion	Committed development at Hunts Grove provides for 330sqm single storey sports pavillion designed and fitted out in accordance with Sport England guidelines	Crest Nicholson	Project	Development

## Open Space, Sport and Recreation – Playing Pitches

The district wide development allocations and committed developments are expected to result in demand for between 20ha and 21.5ha of playing pitches at an approximate capital cost of between £1.95-2.1m

The current and emerging projects identified for playing pitches across the Stroud area are summarised in the following table.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Playing Pitches - Hunts Grove new all-weather pitch.	Committed development at Hunts Groves provides for an all-weather pitch (91.4m x 55m) to Football Association guidelines (dated May 2005).	Crest Nicholson	Project	Development
Playing Pitches - Hunts Grove new cricket pitch	Committed development at Hunts Grove provides for a new cricket pitch of 10,550sqm constructed to Cricket Board Guidelines (dated March 2007)	Crest Nicholson	Project	Development
Playing Pitches - Hunts Grove new grass sport pitches	Committed development at Hunts Grove provides for grass sports pitches consisting of at least two senior pitches (114m x 72m) and two junior pitches (measuring 46m x 28m) and 4 mini pitches	Crest Nicholson	Project	Development

## Open Space, Sport and Recreation – Other Outdoor Sports

The district wide development allocations and committed developments are expected to result in demand for between 6.7 and 7.2ha of outdoor space which has an approximate capital cost of between £6.6-7.1m.

No current projects to provide other outdoor sports spaces have been identified within the District to date.

## Open Space, Sport and Recreation – Children & Young People

The district wide development allocations and committed developments are expected to result in demand for between 4.2ha and 4.5ha of play space for children, at an approximate capital cost of between £2.1-2.2m.

The current and emerging infrastructure projects for this sector are shown in the summary table below.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Play Space - Hunts Grove new Local Areas of Play (LAPs)	Committed development at Hunts Grove provides for 15 new Local Areas of Play (LAPs)	Crest Nicholson	Project	Development
Play Space - Hunts Grove new Local Equipped Areas of Play (LEAP)	Committed development at Hunts Grove provides for 2 new Local Equipped Areas of Play (LEAP)	Crest Nicholson	Project	Development
Play Space - Hunts Grove new Neighbourhood Equipped Area of Play (NEAP)	Committed development at Hunts Grove provides for 3 new Neighbourhood Equipped Areas of Play (NEAPs)	Crest Nicholson	Project	Development
Play Space - Hunts Grove new Super Areas for Play (SAPs)	Committed development at Hunts Grove provides for 10 new Super Areas for Play (SAPs) of 200sqm each	Crest Nicholson	Project	Development

## Open Space, Sport and Recreation – Informal Play & Open Space

The district wide development allocations and committed developments are expected to result in demand for between 9.2ha and 9.8ha of informal open space, which has an approximate capital cost of between £155,930-167,141.

No current projects to provide informal play and open space have been identified within the District to date.

## Open Space, Sport and Recreation – Natural Greenspace

The district wide development allocations and committed developments are expected to result in demand for between 16.7ha and 17.9ha of natural greenspace, which has an approximate capital cost of between £4-4.3m.

The current and emerging infrastructure projects for this sector are shown in the summary table below.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Accessible Natural Greenspace - Cotswold Canal Project Stonehouse Ocean Railway Bridge	Phase 1b of the Cotswold Canal Project has a total estimated cost of £20m. The partnership is currently focussing on gaining funding for two discrete schemes. One of these is the Stonehouse Ocean Railway Bridge - the canal is currently blocked in this location and £1.5mil is required to provide the bridge.	Cotswolds Canal Partnership	Project	District
Accessible Natural Greenspace - Cotswold Canal Project Thames and Severn Way between Saul and Chalford	Phase 1b of the Cotswold Canal Project has a total estimated cost of £20m. The partnership is currently focussing on gaining funding for two discrete schemes. One of these comprises the upgrading of the towpath (part of the Thames & Severn Way) which would provide a safer route for walkers and cyclists.	Cotswolds Canal Partnership	Project	District

## Transport and Public Realm

Transport modelling undertaken for the Stroud area has identified a number of strategic projects as a result of the proposed development scenario. These projects should be prioritised in order to enable and accommodate new development proposals.

No costing was provided alongside these projects and therefore overall likely capital cost cannot be assessed at this stage.

The current and emerging infrastructure projects for this sector are shown in the summary table below.

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Bus - Bus Service Real Time Passenger Information (RTPI) expansion and electronic bus priority	Extension of Bus service Real Time Passenger Information (RTPI) and Public Transport Priority (PTP). The estimated cost for implementation across the Central Severn Vale Transport (CSVT) area, which includes parts of Stroud District, is £5,740,000 with roll-out scheduled for the period	Gloucestershire County Council	Proposal	County

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
	2019-2026.			
Bus - Cirencester - Sapperton - Stroud strategic bus service improvements	Improvements to bus frequencies, quality (e.g. improved bus shelters and Real Time Passenger Information) and contributions to bus subsidies may be sought in relation to new development.	Gloucestershire County Council	Proposal	Development
Bus - Dursley - Gloucester strategic bus service improvements	Improvements to bus frequencies, quality (e.g. improved bus shelters and Real Time Passenger Information) and contributions to bus subsidies may be sought in relation to new development.	Gloucestershire County Council	Proposal	Development
Bus - Dursley - Sharpness - Berkeley - Thornbury strategic bus service improvements	Improvements to bus frequencies, quality (e.g. improved bus shelters and Real Time Passenger Information) and contributions to bus subsidies may be sought in relation to new development.	Gloucestershire County Council	Proposal	Development
Bus - Gloucester to Stroud Quality Bus Corridor	Development of a Quality Bus Corridor connecting Stroud with Gloucester via Brookthorpe. The project has an estimated cost of £12,610,000 and is scheduled for delivery between 2014 and 2026.	Gloucestershire County Council	Proposal	District
Bus - Stroud - France Lynch - Chalford strategic bus service improvements	Improvements to bus frequencies, quality (e.g. improved bus shelters and Real Time Passenger Information) and contributions to bus subsidies may be sought in relation to new development	Gloucestershire County Council	Proposal	Development

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Bus - Stroud - Stonehouse - Dursley strategic bus route improvements	Improvements to bus frequencies, quality (e.g. improved bus shelters and Real Time Passenger Information) and contributions to bus subsidies may be sought in relation to new development	Gloucestershire County Council	Proposal	Development
Highways - A38 Waterwells roundabout capacity improvements		Gloucestershire County Council	Proposal	Development
Highways - A4135/B4058 improvements to accident hotspot		Gloucestershire County Council	Proposal	District
Highways - A4135/Box Road junction improvements	In representations on the Draft Stroud Local Plan Cam Parish Council have raised that the A4135/Box Road junction (providing access to Cam & Dursley station) is locally acknowledged to be dangerous, particularly for cyclists. Improvements to the junction are proposed.	Gloucestershire County Council	Proposal	Development
Highways - A419 Stroud to M5 Junction 13 corridor improvements	Four schemes along route comprise: Chipmans Platt roundabout, enlargement of A419 east and westbound entries; Oldends Lane roundabout, signalisation with segregated left turning lane on eastbound entry and combined Bond's Mill and Sperry road entry; Downtown Road signal timing modifications and Toucan crossing provision; and Horsetrough Roundabout signalisation. Estimated cost based on midway of £2 - £5mil cost banding.	Gloucestershire County Council	Project	District
Highways - B4008/A38 Cross Keys Roundabout signalisation		Gloucestershire County Council	Proposal	Development

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Highways - District - Weather resilience on hills	Highway weather resilience measures on hills within Stroud District	Gloucestershire County Council	Proposal	District
Highways - Gloucester South West Bypass widening and bus priority		Gloucestershire County Council	Proposal	Development
Highways - LED Street Lighting Replacement	The project aims to make the street lighting assets of Gloucestershire County Council (GCC) more sustainable. Estimated costs are £6.9mil for Gloucester & Cheltenham; £10.6mil if market towns included; and £13.6mil for whole estate.	Gloucestershire County Council	Project	County
Highways - M5 Junction 12 (second phase) improvement	Proposal for improvement of junction layout and further signalisation, over and above the introduction of the first phase scheme involving introduction of a dog bone layout with some signalisation.	Gloucestershire County Council	Proposal	County
Highways - NE Cam northern access bridge and road	Development proposals for NE Cam are expected to deliver two access points to existing highways, one of which comprises a northern access road and bridge over the River Cam linking to Box Road.	NE Cam site developer	Proposal	Development
Highways - NE Cam southern access bridge and road	Development proposals for NE Cam are expected to deliver two access points to existing highways, one of which comprises a southern access road and bridge over the River Cam linking to the A4135.	NE Cam site developer	Proposal	Development
Highways - Sharpness A38 access enhancements	A38 access enhancements around Sharpness.	Gloucestershire County Council	Proposal	Development
Highways - Sharpness access and bridge reinstatement	It is expected that highways requirements for the proposed development will primarily relate to the creation of a segregated access, including re-opening access from Oldminster Road and	Sharpness site developer	Proposal	Development

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
	reinstating the bridge crossing.			
Highways - Stroud Valleys A419/Toadsmoor Road junction improvement	Gloucestershire County Council have identified a highway scheme involving improvements to the junction of the A419 with Toadsmoor Road, located to the east of Brimscombe.	Gloucestershire County Council	Proposal	Development
Highways - Stroud, Cairncross roundabouts congestion mitigation		Gloucestershire County Council	Proposal	Development
Highways - Stroud, Merrywalks congestion mitigation		Gloucestershire County Council	Proposal	Development
Multi-modal - Improved parking provision at Cam & Dursley railway station	There are proposals to improve Park & Ride facilities at the station, including expansion of the car park and provision of cycle parking.	Gloucestershire County Council	Proposal	District
Multi-modal - Stonehouse Railway Station interchange improvements	The LTP3 proposes interchange improvements at Stonehouse Railway Station.	Gloucestershire County Council	Proposal	District
Multi-modal - Stroud Railway Station interchange and Station Square improvements	The Stroud Public Realm Strategy proposes improvements to Station Square as an important entrance point to the town and the County Council have identified a Stroud Station Interchange improvements project within the LTP3.	Gloucestershire County Council	Proposal	District
Public Transport - Smart Card Ticketing	The introduction of Smart Card ticketing as part of the SW Smart Card Project. The estimated cost for introducing Smart Cards across the Central Severn Vale Transport (CSVT) area which includes parts of Stroud District as well as the JCS area, is £2,200,000,	Gloucestershire County Council	Proposal	County



Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
	with implementation scheduled for the period 2011 - 2026.			
Rail - Hunts Grove new railway station	Provision of a new railway station south of Gloucester at Hunts Grove is proposed by the LTP3. The estimated capital cost of this project is £15,740,000 with delivery scheduled for late in the plan period, between 2019 and 2026.	Gloucestershire County Council	Bottom draw	County
Rail - Stonehouse Halt on Bristol to Cheltenham route	The adopted Stroud Local Plan (2005) safeguards land for the provision of a 'halt' station on the Bristol to Cheltenham line (Policy TR9). It is understood that the local community have submitted a bid for funding to the County to take this scheme forward. Contributions towards provision of the halt may be sought in relation to new development.	Gloucestershire County Council	Proposal	Development
Rail - Stonehouse Railway Station relocation	Proposal for the relocation of Stonehouse station to the north along Gloucester Road which would facilitate access to the Swindon - Gloucester and Bristol - Cheltenham railway lines. Stonehouse station would cost around £15.7mil.	Gloucestershire County Council	Proposal	District
Rail - Swindon to Kemble Re-doubling	The project will provide improved capacity and performance on the Gloucester to Swindon route, which includes stops at the Stroud and Stonehouse stations. Costing in the region of £45million, work commenced in October 2011 and is due to be completed in 2014.	Network Rail	Project	County

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
Walking & Cycling - A4135 railway bridge pedestrian and cyclist safety improvements	Cam Parish Council have raised that the closest primary school to the proposed new development at NE Cam is at Slimbridge. Currently on the footway on the bridge is considered far too narrow to form a safe pedestrian or cycle route. Improvements to the bridge are required to effect a safe cycling and pedestrian route.	Gloucestershire County Council	Proposal	Development
Walking & Cycling - Cam & Dursley Greenway cycle and pedestrian route	The Greenway cycle and pedestrian route would utilise the disused railway line between Dursley and Box Road, Cam and link the two settlements to the railway station. The estimated cost of the project is based on an estimated length of 5km, with a capital cost of £100,000/km applied.	Gloucestershire County Council	Project	Development
Walking & Cycling - Sharpness to Oldminster Road pavement provision	A specific requirement for the Sharpness development will be to provide a safe pavement from the site linking with the existing pavement on Oldminster Road.	Sharpness site developer	Proposal	Development
Walking & Cycling - Stonehouse to Cotswold Canal link	To facilitate improved walking and cycling links between the strategic development and south Stonehouse and Stroud, contributions towards the Cotswold Canal Project may be sought. This may involve the establishment of a safe and attractive pedestrian and cycle link between the new development and the canal.	West of Stonehouse site developer	Proposal	Development
Walking & Cycling - Stonehouse to Nupend walking and cycling route	Development to the west of Stonehouse should seek to facilitate a multi-user route between the village of Nupend and Stonehouse, via the existing level crossings at Oldends Lane. This may involve the provision of a cycle and pedestrian crossing over	West of Stonehouse site developer	Proposal	Development

Project Title	Project Description	Lead Organisation	Project Status	Project Priority Level
	one or both rail lines, with an estimated capital cost of £2mil per bridge.			
A417/A419 The Missing Link.	The A417/A419 from M4 J15 to the M5 J11a is part of the DfT's Strategic Road Network. This 5km section is the only section of single carriageway at the Cheltenham end of the 50km A417/A419 route linking the M4 at J15 near Swindon to J11a of the M5 near Cheltenham.	Highways Agency / Gloucestershire County Council	Proposal	Regional

## Waste

A number of potential new waste management facilities have been identified in order to cope with likely increases in waste streams from population growth. Two of these strategic sites, Javelin Park and Land at Moreton Valance, are located in Stroud District.

Alongside these sites the County Council have advised that Household Recycling Centres (HRCs) are reaching capacity and therefore the need for additional capacity at Pyke Quarry and Hempsted will need to be reviewed.

## 6 Summary of Infrastructure by Strategic Location

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The previous chapter sets out an assessment of infrastructure requirements by sector. The purpose of this chapter is to assemble this information for each of the Stroud sub-areas and strategic locations for development, to present a summary view of the key infrastructure demands projected to arise as a result of revised allocations. This chapter also sets out a preliminary list of projects that could be considered of strategic importance.

Bearing in mind that public finances and development viability will place a limit on the funding that can be raised towards infrastructure, it is likely to be necessary for the Council to make difficult decisions about the types of infrastructure and specific projects that should be first in order to receive funding. This chapter therefore seeks to identify those infrastructure projects which have emerged as potential priorities for each area, during the course of undertaking this study.

In some cases stakeholders have also indicated where delivery of infrastructure could extend over longer periods of time (3 or more years) and could therefore influence the phasing of infrastructure provision.

Further commentary on the prioritisation of infrastructure projects is provided in the chapter on 'Infrastructure Funding: development viability, S106 and the Community Infrastructure Levy' (chapter 7).

### 6.1 Strategic Infrastructure Projects

Through the process of collating information on infrastructure projects and assessing the demands of new development, a number of projects have been identified that are considered to be of potential strategic importance. These include projects that either: serve a county-wide purpose; are cross-boundary in their location or function, and therefore prompt joint-working by borough, city and/or district authorities; or are considered to be of great importance for facilitating development at two or more strategic locations within Stroud District.

Potential strategic projects identified through the process to date are:

- **Gloucester to Stroud Quality Bus Corridor** – The Gloucestershire LTP3 identified the development of a Quality Bus Corridor connecting Stroud with Gloucester via Brookthorpe. The project has an estimated cost of £12,610,000<sup>38</sup> and is scheduled for delivery between 2014 and 2026. Taking account of the proposed pattern of development across Stroud, there is potential for the route of a Gloucester to Stroud High Quality Bus corridor to be reviewed, on the basis that it could potentially link new development in the Stroud Valleys, at West of Stonehouse and Hunt's Grove. The details of the project need to be refined in partnership with the County Council, but may encompass bus priority measures, improved bus stops, and increased service frequencies (see Smart Card ticketing and Real Time Passenger Information also). Consideration should also be given to whether a high quality bus corridor on the Dursley to Stroud route could be delivered.

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<sup>38</sup> Based on CSVT Study (Draft 2010) estimated cost for six bus corridors of £75,660,000, with equal cost per corridor assumed.

- **Public Transport Smart Card ticketing** – the introduction of Smart Card ticketing as part of the SW Smart Card Project. The estimated cost for introducing Smart Cards across the Central Severn Vale Transport (CSVT) area, which includes parts of Stroud District, is £2,020,000 with roll-out scheduled for the period 2019-2026.
- **Bus Service Real Time Passenger Information (RTPI) expansion and electronic bus priority** – extend use of these technologies to improve the user experience and punctuality of bus services. The estimated cost for implementation across the CSVT area is £5,740,000, with implementation scheduled for the period 2011-2026.
- **A419 Highway Corridor Improvements** - A priority highways scheme identified by the County Council involves a series of improvements between M5 Junction 13 and Stroud town centre. The following schemes would help facilitate development at Stonehouse and in the Stroud Valleys and would be of wider benefit for the District given the importance of this route: Chipmans Platt roundabout, enlargement of A419 east and westbound entries; Oldends Lane roundabout, signalisation with segregated left turning lane on eastbound entry and combined Bond's Mill and Sperry road entry; Downtown Road signal timing modifications and Toucan crossing provision; and Horsetrough Roundabout signalisation. This scheme is expected to cost between £2mil and £5mil. There are also schemes to mitigate congestion at the Cairncross roundabout and on Merrywalks in Stroud that relate well to the major scheme proposal.
- **Cotswold Canals Project** – Delivery of this major regeneration project that delivers walking and cycling benefits and accessible semi-natural greenspace is a strategic priority for the Council. This project links directly to development in the Stroud Valleys and West of Stonehouse, but is also of wider benefit to residents of the District and visitors.
- **Secondary Education and Further Education (including sixth form)** – Based on the application of high level standards, development would result in demand for between 1,207 and 1,293 secondary school places including post 16 sixth form). A large new secondary school typically provides around 1,050 places, however further assessment work will be required to determine the most appropriate form of new provision, taking into account the distribution of development and patterns of parent/pupil choice. Similarly, demand for between 115 and 123 further education places (post 16 infrastructure) is predicted and further consideration needs to be given to the best means for accommodating growth.
- **Stroud Police Station Upgrade, Police staff and equipment** – Stroud Police Station is well situated but is very out of date and requires upgrading. The Constabulary seeks developer contributions towards the cost of the project, together with contributions towards the setting up of 20 new Police Officer and staff posts.
- **Quedgeley Police Central Custody Suite** – This new facility to be located in Waterwells, Quedgeley, has been designed so as to provide additional capacity for planned growth across the County.
- **Hospital Bedspaces** – Applying a high level standard, it is predicted that proposed development would generate demand for between 30 and 32 acute and general care bedspaces. This needs to be seen in the context of significant

development proposals for the Joint Core Strategy (JCS) area of Cheltenham, Gloucester and Tewkesbury, which could further place substantial demands upon the capacity of the Cheltenham General Hospital and Gloucestershire Royal Hospital. A cumulative assessment will be progressed through the process of preparing the JCS IDP.

- ***New Sports Hall and Swimming Pool*** – It is recommended that the demand for and viability of providing a new sports centre and swimming pool in the District is investigated. This may be located in the Gloucester Urban Fringe area (in cooperation with Gloucester City Council), serving new development at Hunt's Grove and adjoining urban areas.

## 6.2 Stroud South Vale

### North East Cam

Cam and Dursley adjoin each other and make up the District's second largest population (after the Stroud Valleys), providing a focus for jobs and services in the southern part of the District. The local community at Cam and Dursley have produced a Community Plan 2020 and the priorities within the plan are reflected in the commentary below.

The revised development scenario for North East Cam provides for between 450 and 750 residential dwellings. Important infrastructure projects to unlock the site will be the delivery of two access points to existing highways, undertaken in combination with the committed employment development at Land to the South of Draycott Mills. As both of these accesses will require bridges over the river, the higher proposed development quantum is likely to assist in improving site viability and the delivery of social and community infrastructure.

The refresh IDP has not identified any infrastructure constraints that would restrict delivery of this level of growth at North East Cam within the indicative phasing timescales.

Specific comments by sector are set out below:

- ***Primary education*** – Larger scale development at this location may require new local primary-level infrastructure. This is due in part to topographic challenges associated with the proximity of the prospective development area and the location of existing local provision.
- ***Further education*** – One of the Community Plan objectives is to expand lifelong learning opportunities in the area, potentially through South Gloucestershire and Stroud (SGS) College provision of skills based courses locally. Opportunities could be explored to provide appropriate accommodation on-site to facilitate this, such as evening courses within a primary school or community centre building.
- ***Ambulance*** – Investment in a Dursley Co-Responder scheme would assist with responses in this area.
- ***Electricity connection*** - The primary substation (Dursley PSS) adjacent to the proposed site currently has ample capacity to accommodate the proposed development. This development will probably necessitate two new 11kV circuits from Dursley PSS, along with associated 11kV infrastructure.

With the proposed domestic development, capacity is limited and therefore upstream reinforcement would be required for any employment development. This is likely to take around 12-18 months and cost will be apportioned between WPD and the developer.

- **Primary healthcare** – The Orchard Medical practice has a high degree of confidence that it would be able to expand to accommodate demand from proposed development at NE Cam. This would entail investment in the expansion of premises at the existing site, together with associated facilities such as parking. The practice has been in contact with the PCT/CCG around potential funding mechanisms.
- **District heat networks** - Cam & Dursley are identified as locations that could potentially have sufficient demand intensity, along with ‘anchor loads’, that could make district heating networks fuelled by low carbon fuels viable. An emerging objective of the Community Plan is to create a more sustainable community, suggesting that a range of energy efficiency and low carbon energy options should be explored.
- **Flood risk management** – Surface water mapping indicates a significant risk of flooding due to surface runoff in the Cam area. A site-specific Flood Risk Assessment should be completed and ensure the implications of new development (including new bridges) are taken into account and appropriate mitigation measures are identified. For the development allocation itself, it is expected that surface water attenuation facilities will be required to serve discrete areas of development.
- **Sewage and Drainage** – Subject to hydraulic modelling no sewerage capacity issues are envisaged, provided surface water is not connected to the foul sewers.
- **Waste Water Treatment** - Additional capacity required in order to accommodate future development. Work planned as part of AMP6 programme following which no capacity issues anticipated.
- **Sport, open space and recreation** – development will be expected to provide on-site facilities (in line with national and local standards), or contribute to nearby provision of: playing pitches, space for other outdoor sports, informal open space, equipped play space for children and young people and accessible natural green space. A Community Plan objective is for the provision of leisure and recreation facilities targeted at young people, based on a concern there are currently insufficient opportunities for young people.
- **Highways** – it is expected that two access points should be provided to the site, both of which will require bridges over the River Cam: a southern access from A4135; and a northern access to Box Road. Contributions towards off-site highways improvements may also be necessary.
- **Public transport** – development at NE Cam could help facilitate proposed improvements at Cam railway station, together with improvements to two strategic bus routes: Stroud – Stonehouse – Dursley; and Dursley – Gloucester.
- **Walking and cycling** – development at NE Cam could support the completion of the Cam and Dursley Greenway cycle and pedestrian route.

## Sharpness Docks

Sharpness Docks is considered to be an under-utilised resource within the District and the Local Plan proposal has the ability to create new employment opportunities based upon tourism and leisure uses to the north of the Docks, employment allocations within the South Docks area, and an allocation for between 300 new homes to the north east of the Docks. The historic town of Berkeley is located nearby and acts as the local service centre, although the Vale of Berkeley Secondary School and Berkeley Hospital have closed in recent years. Development at Sharpness could therefore help to support the retention of services in the Vale of Berkeley.

The revised development scenario for Sharpness provides for housing development of 300 dwellings. There is also a strategic employment allocation of 9ha, comprising an extension to the Severn Distribution Park. Indicative phasing for the Stroud South Vale area and Sharpness shows development spread over the period 2017 to 2031. Significant investment in site remediation will be required to enable the residential development, as well as the creation of segregated access arrangements, by re-opening access from Oldminster Road and reinstating the bridge crossing. Reinforcement of the electricity distribution grid, wastewater treatment plants and sewerage capacity may also be necessary. These factors may impact on the speed the development can be brought forward, as well as commercial viability and the ability of the developer to contribute towards other necessary infrastructure improvements. Further consultation with the developer and infrastructure providers will be beneficial in setting out a realistic delivery schedule.

Summary comments by sector are set out below:

- **Library** – development at Sharpness has the potential to support usage and contribute to the operation of the Berkeley Community Library that was recently transferred to community management, as well as usage of the Mobile Library service.
- **Ambulance** – It is recommended that a community responder schemes is established in this area, given the distance from existing stations.
- **Primary healthcare** – It is anticipated that Marybrook Medical Centre would have capacity to cater for the relatively modest levels of development proposed, but this would need to be kept under review.
- **Electricity connection** - The primary substation, Berkeley 33/11kV is nearing full capacity, therefore accommodation of proposed residential development can be accepted at the moment with minimal works, but significant load growth in the area, coupled with the Severn Distribution Park proposals may necessitate installation of a new 33kV circuit back to Ryeford BSP some 15km away. This is likely to take around 3-4 years, depending on wayleave negotiations.
- **Waste Water Treatment** – No capacity improvements required before 2020. Necessary works to accommodate catchment growth beyond 2020 to be established during 2019. WW raised concerns over a need to safeguard an area for future expansion of the STW in this area.
- **Sewage and Drainage** – A range of capacity improvements to the public sewer system will be necessary to accommodate development. WW indicate



that foul water disposal constraints at the local pumping station could be overcome by pumping directly to the downstream local pumping station which has greater capacity.

- ***Sport, open space and recreation*** – development will be expected to provide on-site (in line with national and local standards), or contribute to nearby provision of: playing pitches, space for other outdoor sports, informal open space, equipped play space for children and young people and accessible natural green space.
- ***Highways*** – it is expected that highways requirements will primarily relate to the creation of segregated access, including re-opening access from Oldminster Road and reinstating the bridge crossing.
- ***Public transport*** – development at Sharpness would benefit from improvements to the frequency of the Dursley – Sharpness – Berkeley – Thornbury bus routes.
- ***Walking and cycling*** – there is a requirement to provide a safe pavement linking the site to the existing pavement on Oldminster Road.

## 6.3 Stroud & West

### West of Stonehouse

The revised development scenario includes for 1,350 dwellings for West of Stonehouse as well as a strategic employment allocation to the north of Stroudwater Industrial Estate. It is considered that residential development in the range 1,375 to 2,000 dwellings would be more likely to trigger and facilitate the community, education and healthcare provision that would realise the vision for a vibrant new community. Furthermore, a higher quantum of development could help facilitate significant improvements in transport provision, including: the major scheme for the A419; a high quality bus corridor between Stroud and Gloucester (via Stonehouse); and the Cotswold Canals project.

Indicative phasing for the West of Stonehouse shows development spread over the period 2017 to 2031 (with only a small number of dwellings, 50-10, within the period 2013 – 2017). The IDP has not identified any infrastructure projects that would suggest substantial delays to delivery, although further assessment work may influence site phasing in relation to off-site highways improvements and the reinforcement of the wastewater network.

Stonehouse Town Council have prepared a Design Statement that should influence the design of development, and there may be potential for the development to contribute to the achievement of enhanced walking and cycling links and public realm improvements identified in the document.

Further summary comments by sector are set out below:

- ***Libraries*** – there are currently limited opening hours at the existing Stonehouse library, so the additional demand for service created by the development could justify improvements.
- ***Community centre*** – The larger development scenarios for this location are of a scale that could trigger provision of an on-site community centre, although

an alternative could be for the development to support the on-going Stonehouse Youth Centre project.

- **Community development officer** – The larger development scenarios may trigger the need for a community development officer.
- **Primary education** – Larger scale development at this location is likely to require new local primary-level infrastructure. This is due in part to accessibility issues for existing provision in this locality.
- **Ambulance** – A facilitated Standby Point will be required in this area.
- **Primary healthcare** – The higher growth scenario would prompt an investigation of options that could include a new branch surgery or amalgamation of existing practices within a larger healthcentre providing increased capacity.
- **Electricity connection** - The primary substation (Ryeford/Netherhills PSS) adjacent to the proposed site currently has ample capacity to accommodate the proposed development.
- **District Heat Networks** - Stonehouse is identified as a location that could potentially have sufficient demand intensity, along with ‘anchor loads’, that could make district heating networks fuelled by low carbon fuels viable.
- **Flood risk management** – It has been highlighted during consultation that there are complex interactions between the River Frome and Cotswold Canal that will need to be considered during the preparation of a Site-Specific Flood Risk Assessment.
- **Waste Water Treatment** – The Stonehouse sewerage network is pumped to Stanley Downton STW which is currently undergoing a programme of upgrade and maintenance. This will include capacity upgrades to accommodate the long term growth and is due for completion in 2017.
- **Sewage and Drainage** - Anticipated that capacity improvements will be required to accommodate later phases. As a worst case this may require replacement of the existing pumping station and duplication/upsizing of the existing 1.3km rising main.
- **Sport, open space and recreation** – development will be expected to provide on-site (in line with national and local standards), or contribute to nearby provision of: playing pitches, space for other outdoor sports, informal open space, equipped play space for children and young people and accessible natural green space.
- **Highways** – development would impact on the A419 principal route between the M5 Junction 13 and the centre of Stroud, and therefore contributions may be sought towards a County Council major scheme for A419 corridor improvements, as well as schemes to mitigate congestion at the Cairncross roundabout and on Merrywalks within the town of Stroud.
- **Public transport** – there are a series of options for rail station improvements or new provision, but these are not considered fundamental to the delivery of development at this time. The priority is therefore likely to be the improvement of strategic bus routes as follows: Stroud – Stonehouse – Gloucester; and Stroud – Stonehouse – Dursley.

- **Walking and cycling** – the provision of safe and attractive pedestrian and cycle links to the centre of Stonehouse are a priority for this site; and there is also potential to contribute towards the Cotswold Canals Project as a scheme that facilitates walking and cycling in the locality.

## Stroud Valleys

An important driver for allocating development within the Stroud Valleys is to regenerate the industrial valley bottoms and contribute to the restoration of the Cotswold Canals. The Council's Vision is that this will provide a new lease of life for the valley's rich architectural heritage, provide a home for thriving businesses and people, and an improved environment that boosts tourism and conserves and enhances habitats.

The revised development scenario for the Stroud Valleys identifies development of 400 dwellings on a number of option sites, including sites to the west of Stroud town centre at Dudbridge and Wallbridge; to the east of Stroud town centre at Brimscombe & Thrupp; and Callowell Farm and Grange fields, Uplands to the north of the town.

Brownfield developments at Dudbridge and Wallbridge, and further east at Brimscombe and Thrupp, would directly contribute to Stroud District Council objectives to regenerate the Cotswold Canal corridor. However, due to typically lower development viability for brownfield land, the potential for further contributions towards the provision of on or off-site transport, community and social infrastructure will be more limited. Improved viability at the greenfield development sites at Callowell Farm and Grange Fields may facilitate contributions (whether 'in kind' or financial as appropriate) towards addressing infrastructure priorities within Stroud. These may include: contributions towards the transport and public realm improvements identify by the County Council and within the Stroud Public Realm Strategy; and/or helping to address the identified shortfall in the provision of open space for sport and recreation.

One important factor within the Stroud Valleys in relation to development phasing is the current maintenance project which is being undertaken by Severn Trent Water (STW). This project focusses on maintenance work on the Stanley Down sewerage treatment works in AMP6 which will include capacity upgrades to accommodate for longer term growth. The work is due to be completed in 2017 but STW have advised that there is sufficient capacity to accommodate short term

Further summary comments by sector are set out below:

- **Primary education** – Very careful consideration will need to be taken when assessing individual development sites situated along the Stroud Valleys. Overly simplistic radial proximity assessments will not be sufficient on their own and will require further detailed accessibility work to determine a more realistic view of which local schools may be impacted by new development, both individually and cumulatively over time.
- **Ambulance** – Development option sites at Brimscombe, Thrupp, Grange Fields and Callowell Fields are not accessible within 8 minutes from Stroud Ambulance Station, so facilitated Standby Points would be required in these areas.

- **Primary healthcare** – Locking Hill surgery is investigating options for relocation, which may provide an opportunity to expand capacity to cater for increases in demand in the higher growth scenario.
- **Electricity connection** – The primary substation (Dudbridge PSS) is near capacity. WPD have made provision to install an additional primary substation in the Brimscombe area, but progression on this scheme depends on load growth in the area. The development will probably necessitate an additional 11kV circuit from Dudbridge PSS, along with associated 11kV infrastructure to suit the developments.
- **District Heat Networks** – Stroud is identified as a location that could potentially have sufficient demand intensity, along with ‘anchor loads’, that could make district heating networks fuelled by low carbon fuels viable.
- **Flood risk** – The Environment Agency progressing a scheme to offer Property-Level Protection to residents adjacent to Slad Brook. There are a number of other ‘clusters’ of flooding in Stroud, which needs to be investigated in further detail to identify flood alleviation schemes.

Proposals are generally expected to include allocation and safeguarding of open space for flood storage. Specific mitigation projects have been identified as Brimscombe Mill, Brimscombe Port and Wimberley Mills.

- **Waste Water Treatment** - The Stroud Valleys sewerage network is pumped to Stanley Downton STW which is currently undergoing a programme of upgrade and maintenance. This will include capacity upgrades to accommodate the long term growth and is due for completion in 2017.
- **Sewage and Drainage** – Significant hydraulic capacity issues in Stroud with known sewer flooding problems. STW assessing improvement options but work could take 3-5 years. STW expect all new development within Stroud will be built with separate foul and surface water drainage with surface water drainage not connected to the foul sewer.
- **Sport, open space and recreation** – development will be expected to provide on-site (in line with national and local standards), or contribute to nearby provision of: playing pitches, space for other outdoor sports, informal open space, equipped play space for children and young people and accessible natural green space. Emerging work on existing provision suggests there could be a significant shortfall in provision against national benchmark standards.
- **Highways** – in addition to on-site measures and provision of access, development in the Stroud Valleys may be expected to contribute to off-site highways improvements including: a County Council major scheme for A419 corridor improvements between M5 Junction 13 and Stroud town centre; as well as schemes to mitigate congestion at the Cairncross roundabout and on Merrywalks.
- **Public transport** – Stroud is served by eleven strategic bus routes and it possible that contributions towards the improvement of one or more of these routes would be sought in relation to development, depending on the location of preferred sites. There is also a proposal within the Local Transport Plan to improve interchange facilities at Stroud station.

- **Walking and cycling** – it is a Stroud DC priority to restore and regenerate the Cotswold Canals and all development within the Stroud Valleys could be expected to contribute towards this aim, whether through on-site regeneration and/or off-site contributions. The Stroud Public Realm Strategy identifies a series of further public realm improvements that may be pursued, subject to further appraisal of funding options.

## 6.4 Stroud & East

The revised development scenario identifies development of 346 dwellings, all of which are committed or windfall sites. A certain level of contribution will therefore have already been negotiated on this proposed development and Stroud DC should consider the information within the Cost Tracker to draw comparison between contributions agreed and benchmarks, prior to prioritising funds.

## 6.5 Gloucester Urban Fringe

### Hunts Grove Extension

There is an existing planning permission in place for 1,750 new homes (granted in 2008) and the revised development scenario outlines an extension to this permission of between 500 and 750 dwellings. This would result in an overall development of between 2,250 and 2,500 new homes. Within the Gloucester Urban Fringe sub area there is also a strategic employment allocation at Quedgeley East, located to the south on the opposite side of the M5 motorway.

The Council's Vision for the Hunt's Grove area is to deliver a new neighbourhood community centre, primary school and significant improvements to transport infrastructure. As set out in the transport section, proposals include a Park & Ride facility. Provision of formal and informal open space and improved 'green links' for walkers and cyclists are viewed as crucial to the character and quality of the development.

Indicative phasing within the IDP development scenarios suggests that development would come forward throughout the plan period, taking into account commitments and the proposed new allocation. This IDP study has not identified any factors that would be expected to disrupt phased delivery of the site.

Further summary comments by sector are set out below:

- **Community Centre** - Committed development at Hunt's Grove provides for a community centre comprising a main hall, children's room, craft room, meeting room/parish office, informal seating area/display space, meeting room, office and café/kitchen. The Council may seek to review the type of provision taking account of the scale of committed and further proposed development.
- **Primary education** – It is likely that a larger development in this location will require a reassessment of education requirements, which may result in revised on-site provision, particularly for primary education.
- **Primary healthcare** – Committed development at Hunt's Grove makes allowance to provide for a site for the construction of a doctor's surgery of 0.2ha. The capacity of the new proposed doctor's surgery will need to be

reassessed taking account of the additional proposed development for Hunt's Grove.

- **Electricity connection** – The primary substation (Tuffley PSS) adjacent to the site is near capacity. WPD have made provision to install an additional primary substation at Hardwicke, but progression of this scheme depends on load growth in the area. This development will probably necessitate two new 11kV circuits from Tuffley PSS, along with associated 11kV infrastructure to suit the development.
- **District Heat Networks** - Quedgeley is identified as a location that potentially has sufficient demand intensity, along with 'anchor loads', that could make district heating networks fuelled by low carbon fuels viable.
- **Flood risk** – Recommended that areas identified and allocated as open space for flood storage. Culvert maintenance strategy required to periodically clear culverts.
- **Waste Water Treatment** - The site is within the Netheridge STW Catchment which has reasonable spare capacity.
- **Sewage and Drainage** - Topography suggests site will drain south west and will eventually drain to Quedgeley Main Pumping Station. Provided surface water is dealt with sustainably, no major capacity issues are envisaged, although some local upsizing may be required.
- **Sport, open space and recreation** – development will be expected to provide on-site (in line with national and local standards), or contribute to nearby provision of: playing pitches, space for other outdoor sports, informal open space, equipped play space for children and young people and accessible natural green space. It is noted that committed development provides for open space for sport and recreation, as well as a sports pavilion.
- **Highways** – development at Hunt's Grove and East Quedgeley would impact upon the B4008/A38 trunk road that links M5 Junction 12 with Gloucester City Centre. As a result it is possible that development could contribute towards: M5 Junction 12 improvements (second phase); signalisation of the B4008/A38 Cross Keys Roundabout; and A38 Waterwalls capacity improvements.
- **Public transport** – development at Hunt's Grove and east Quedgeley could support improvements to two strategic bus routes: Stroud – Stonehouse – Gloucester; and Dursley – Gloucester.
- **Walking and Cycling** – No walking and cycling routes relating specifically to the site have been identified to date.

## 7 Infrastructure funding: development viability, S106 and the Community Infrastructure Levy (CIL)

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### 7.1 Introduction

A source of infrastructure funding over which the Council has a significant degree of local discretion is developer contributions, which are currently collected by the Local Planning Authority (LPA) through Planning Obligations, also known as Section 106 agreements. Stroud District Council intends to introduce a Community Infrastructure Levy (CIL) by April 2015, a new tool for collecting financial contributions towards infrastructure that can be utilised alongside Section 106 Agreements. These mechanisms will enable a contribution towards necessary infrastructure to be collected from new development taking place in the District.

This chapter of the Delivery Strategy sets out the following:

- background to the use of planning obligations and CIL;
- development viability considerations;
- a summary table of estimated infrastructure costs; and
- an estimate of the infrastructure funding gap.

### 7.2 Section 106 Planning Obligation and CIL

#### S106 Planning Obligations

Planning Obligations are enabled by Section 106 (S106) of the Town and Country Planning Act and negotiated based on guidance in paragraphs 204 and 205 of the National Planning Policy Framework (NPPF, March 2012), as reproduced here:

*“204. Planning obligations should only be sought where they meet all of the following tests:*

- *necessary to make the development acceptable in planning terms;*
- *directly related to the development; and*
- *fairly and reasonably related in scale and kind to the development.*

*205. Where obligations are being sought or revised, local planning authorities should take account of changes in market conditions over time and, wherever appropriate, be sufficiently flexible to prevent planned development being stalled.”*

A key benefit of developer contributions secured through S106 Planning Obligations is their flexibility, which allows finance to be directed to meet local priorities across a wide range of infrastructure types, where it can be demonstrated that the infrastructure requirement directly relates to a proposed development.

Financial contributions to infrastructure secured through S106 Planning Obligations from different sites can be pooled in some circumstances, allowing



for the creation of standard charges or tariffs. However, CIL Regulation 123 limits the number of planning obligations from separate developments that can be used to provide funding for a particular project or type of infrastructure to a maximum of five.

S106 Planning Obligations can also be used to secure ‘in kind’ provision of infrastructure by a developer, such as the provision of a site and construction of a facility rather than a financial contribution.

## Community Infrastructure Levy

The Government has introduced a complementary mechanism for securing finance, the Community Infrastructure Levy (CIL). The CIL is a new levy that Local Authorities can choose to charge on new developments in their area. The money can then be used to support development by funding infrastructure that the Council and local communities want. S106 Planning Obligations and the CIL can be used in parallel by a Council, but their use should not overlap with respect to specific infrastructure projects or types (i.e. there should be no double-charging). It is intended that CIL will provide the main means for the ‘pooling’ of funds from development to finance infrastructure.

Part 11, Section 205 (1) and (2) of the Planning Act 2008 makes provision for the imposition of CIL in England and Wales:

*“The Secretary of State may with the consent of the Treasury make regulations providing for the imposition of a charge to be known as Community Infrastructure Levy (CIL)”.*

*“In making the regulations the Secretary of State shall aim to ensure that the overall purpose of CIL is to ensure that costs incurred in providing infrastructure to support the development of an area can be funded (wholly or partly) by owners or developers of land”.*

The Community Infrastructure Levy Regulations 2010 made the first use of these powers and came into effect in April 2010 and were amended by the Coalition Government in April 2011.

Further amendments set out in the Localism Act 2011 require local authorities to pass a meaningful proportion of CIL receipts to local neighbourhoods, as Neighbourhood Funds. The Government has confirmed that Neighbourhoods that take a proactive approach by drawing up a Neighbourhood Development Plan, and securing the consent of local people in a referendum, will receive 25% of the revenues from the Community Infrastructure Levy arising from development. This cash boost will be paid directly to the parish and town councils and can be used to back the community’s priorities for example to re-roof a village hall, refurbish a municipal pool or take over a community pub. Neighbourhoods without a Neighbourhood Development Plan, but where the levy is still charged, will still receive a capped 15% share of the levy revenue arising from development in their area.

Statutory CIL guidance published in December 2012 seeks to prevent Councils from setting high CIL rates that are unrealistic taking into account development viability. The guidance also seeks to provide more flexibility in the application of



CIL, recognising that it can be necessary to set lower rates for strategic sites and to allow the use of the exceptions process.

In April 2013 CLG published consultation on additional proposed changes to the CIL Regulations, setting out potential amendments that would address principal structural problems and further respond to concerns over CIL rates being set too high, potentially stifling a recovery in the construction industry. During October 2013 the Government published its response to the consultation, proposing the following key changes:

- An extension of the date from 2014 to 2015 for the pooling of S106 so that more time can be taken by Local Authorities to introduce the CIL and get it right.
- Allowing payment of CIL ‘in kind’ with direct provision of infrastructure by a developer, as well as land.
- People building or extending their own homes.

## 7.3 Development viability

### Demonstrating whole plan viability

When utilising S106 Planning Obligations and establishing a CIL, Local Authorities must ensure that they do not threaten the overall viability of development and the local development plan as a whole, taking account of other policy initiatives such as affordable housing provision. The NPPF states that:

*“Pursuing sustainable development requires careful attention to viability and costs in plan-making and decision-making... To ensure viability, the costs of any requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements [e.g. environmental performance standards for new development] should, when taking account of the normal cost of development and mitigation, provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable” (paragraph 173).*

The CIL guidance highlights the importance of Regulation 14, which requires that a charging authority, in setting levy rates, *“must aim to strike what appears to be an appropriate balance between”* the desirability of funding infrastructure from the levy and *“the potential effects (taken as a whole) of the imposition of CIL on the economic viability of development across its area.”*

### Stroud District Viability Studies

A Stroud DC *“Community Infrastructure Levy Development Appraisal Study”* was completed in August 2012. The study assumed that the Council’s extant policy for 30% affordable housing provision on sites of 15 or more dwellings would apply. Residential CIL rates recommended by the study are set out in Table 46 below. As the CIL is charged by unit of floorspace, an average semi-

detached house size of 87sqm has been assumed for the purpose of this study to give a sense of financial contributions per dwelling.<sup>39</sup>

Table 42 CIL Development Appraisal Study recommended rates

Development type	Recommended CIL Rate	CIL Rate per Semi-detached dwelling
Urban residential development (lower rate recommended for: Brimscombe, Dursley, Nailsworth, North Woodchester, South Woodchester, Stonehouse and Stroud)	£80/sqm	£6,560
Rural residential development	£120/sqm	£9,840
Residential Institutions, Nursing and Sheltered Housing	£50/sqm	N/A
Office, Industrial and Warehousing	Nil rate	N/A
Retail (town centre development proposals and retail warehouses only)	£120/sqm	N/A
Hotel	£80/sqm	N/A

More recently, a ‘*Local Plan Viability Study*’ was completed on behalf of the Council (August 2013). The primary purpose of the study was to provide an assessment of the impact on viability of the policies in the emerging Local Plan, and to ensure that the combined impact of the policies does not render development un-viable to the extent that the delivery of the Plan is prejudiced. The study therefore took into account policies on environmental standards, a range of affordable housing provision scenarios, and assumptions on S106/CIL payments towards infrastructure.

The Local Plan Viability Study points to an advantage of the current S106 Planning Obligation regime, whereby the delivery of site specific infrastructure largely falls to the developer of the site. This means the developer has control of the process and can carry out improvements that are required to enable a scheme to come forward. It goes on therefore to highlight the danger of an approach whereby CIL is set at the upper limit of viability, which could have the effect of preventing site-specific infrastructure being delivered or prevent schemes from being brought forward by developers.

Taking into account the results of residual valuations on a range of sample sites across the District, the Viability Study goes on to recommend that CIL is set at no more than rates for non-strategic sites (e.g. the 750 dispersal / windfall sites) as set out in Table 47.

Table 43 Maximum rates of CIL assuming *de minimis* use of S106

Development Type	Maximum Rate of CIL
Residential – Stroud Valleys	£0/m <sup>2</sup>
Residential – All other areas	£120/ m <sup>2</sup>

<sup>39</sup> Size of semi-detached house based on Zoopla.co.uk ‘Area Stats’ for Gloucestershire.

## 7.4 Stroud CIL Preliminary Draft Charging Schedule

Stroud District Council is currently consulting on its CIL Preliminary Draft Charging Schedule which sets out the rates that certain forms of development will pay. The proposed CIL rates have been informed by the viability studies described above and may change as a result of the consultation process.

The consultation is the first formal stage of the Council's preparation of a CIL Charging Schedule and will run from February to April 2014.

Table 48 below sets out the recommended CIL rates for different land uses and different areas.

Table 44 Preliminary Draft Charging Schedule CIL Rates

Type of Development	CIL Rates £ per square metre New additional floorspace
Residential (including older peoples housing) – Sites within the Stroud Valley area	£0/m <sup>2</sup>
Residential (including older peoples housing) – Strategic sites identified in the Local Plan	£0/m <sup>2</sup> (on the basis that developers are required to meet their own site infrastructure costs and these costs are as set out in the Local Plan Viability Study)
Residential (including older peoples housing) – All other sites	£80/m <sup>2</sup>

## 7.5 Total estimated infrastructure costs and funding gap

Bearing in mind that viability places limits on the finance that can be raised for infrastructure through developer contributions, it may be necessary for the Council to make difficult decisions about the types of infrastructure and specific projects that should be prioritised to receive funding through S106 and CIL mechanisms.

The table below provides a summary of estimated infrastructure costs per dwelling that could form the basis for a CIL charging schedule. Estimated infrastructure costs for Population Scenarios 1 and 2 are shown where appropriate. As described in section 3.4, Scenario 2 (based on the projected average household size within the district in 2021) helps to indicate the higher levels of infrastructure demand that could arise where a larger proportion of family dwellings are provided on a specific site. For the purpose of estimating total additional demand for infrastructure at a District-wide level, it is suggested that applying Scenario 1 (based on projected total population growth within Stroud District) is a more reasonable approach.

When interpreting the information it is important to note the following qualifying points:

- There are a number of infrastructure sectors and categories where costs have not been included, as explained in Table 50. This includes site specific transport and flood risk management infrastructure that cannot be determined until detailed assessments have been undertaken.
- Major projects that are already fully funded are not included, such as the Cotswold Canals Project Phase 1a – Stonehouse Ocean to Brimscombe Report.
- When setting a CIL, it will be important to consider what infrastructure costs can be fairly be attributed to new development.

Even when these exclusions are allowed for, the total estimated cost of infrastructure to support development amounts to approximately **£206m**. When taken into consideration alongside existing funding this leaves a funding gap of approximately **£78m**. Consideration must also be given to likely CIL contributions from commercial/employment development which may reduce this figure further.

There are 750 dwellings (dispersal / windfall) proposed under the IDP development scenario that could be subject to CIL charges. For the purposes of this study an average floorspace of 87sqm per dwelling is assumed to give total development area of 65,250sqm. Applying the Preliminary Draft Changing Schedule CIL rate of £80 per sqm results in a CIL revenue of £5,220,000.

This highlights the need for the Council to undertake a process of prioritisation of infrastructure that should benefit from developer contributions, taking account of the availability of funding from other sources. Further factors that will or could limit the total finance available through S106 Planning Obligations or the CIL include: certain sites may be excluded from the CIL on viability grounds; and Social Housing Relief can be claimed where affordable housing is delivered.

Table 45 Infrastructure Levy Funding Gap Table

Infrastructure Category	Infrastructure Type	Revised Development Scenario (Low)		Revised Development Scenario (High)		Comment	Existing funding		Existing S106 Amount	Estimated funding gap (Low)	Estimated funding gap (High)
		Cost per dwelling	Plan total	Cost per dwelling	Plan total		Type / description	Amount			
Community & Culture	Community Centre	£527	£4,033,749.38	£527	£4,323,757.50	Cost based on Shaping Neighbourhoods and Sport England Village Hall Design Guide				£4,033,749	£4,323,758
	Library	£236	£1,807,000.00	£236	£1,937,000	Cost based on Arts Council recommended standard				£1,807,000	£1,937,000
	Youth Support Services	£68	£518,000.00	£68	£555,000	Based on standard provided by Gloucestershire County Council				£518,000	£555,000
	Sub-total	£831	£6,358,749	£831	£6,815,758			£ -	£ -	£6,358,749	£6,815,758
Education	Early Years	£872	£6,670,000	£872	£7,150,000	Based on standards provided by Gloucestershire County Council	Department for Education Basic Needs Allocation (2013-14) of £9,833,634. Assume 18.8% allocated to Stroud in line with proportion of county total population living in Stroud and equivalent payments over 18 year plan period.				
	Primary	£3,243	£24,810,000	£3,243	£26,590,000						
	Secondary	£2,813	£21,520,000	£2,812	£23,060,000						
	Further	£227	£1,740,000	£227	£1,860,000						
	Sub-total	£7,156	£54,740,000	£7,154	£58,660,000				£33,277,017		£21,462,983
Emergency Services	Fire & Rescue Service					Developer on-site provision of fire hydrants and sprinkler systems where necessary.	Site specific measures to be agreed with developer and captured within S106 as appropriate.				

	Ambulance Service					Developer on-site provision of stand-by points and other facilities where necessary.	Site specific measures to be agreed with developer and captured within S106 as appropriate.				
	Police (Property)		£11,900,000		£11,900,000					£11,900,000	£11,900,000
	Police (Non-Property)	£87	£668,610	£87	£716,680	Cost per dwelling based on Police ACPO methodology.	Police representation to IDP highlights reliance on developer contributions to respond to increasing demand on services.			£668,610	£716,680
Energy	Generation					No estimated cost information available.	Infrastructure funded by consumer rates; and/or developer connection charges as appropriate.				
	Transmission					No estimated cost information available.	Infrastructure funded by consumer rates; and/or developer connection charges as appropriate.				
Flood risk, water and wastewater	Flood Risk Management	£131	£1,000,000	£122	£1,000,000	Capital cost based on Slad Brook Property-level Protection Scheme. All flood risk management projects are yet to be confirmed and costed.	Assumed that site specific measures will be agreed with and delivered by site developers.	£0	£0	£1,000,000	£1,000,000
	Water supply and wastewater						Infrastructure funded through Asset Management process, consumer rates and developer connection charges.				
Healthcare	Doctors	£363	£2,779,500	£363	£2,979,333	Based on average patient list size				£2,779,500	£2,979,333
	Dentists	£198	£1,517,607	£198	£1,626,716	Based on average patient				£1,517,607	£1,626,716

					list size						
	Secondary healthcare	£330	£2,523,230	£330	£2,704,639	Based on average no. beds per head of population.	Gloucestershire NHS Hospitals Trust has indicated it will not require S106/CIL monies. Gloucestershire Care Services Trust may however seek contributions.			£2,523,230	£2,704,639
	Sub-total	£892	£6,820,337	£892	£7,310,688		Department for Health Better Care Fund of £3.8bil allows for a £354mil capital funding for 2014/15, of which £220mil is a Disabled Facilities Grant, leaving a remaining balance of £134mil (0.0035%). The Gloucestershire 2015/16 BCF allocation is £39,948,000, of which only around £139,818 is capital funding. Assume 18.8% allocated to Stroud in line with proportion of county total population living in Stroud and equivalent payments over 18 year plan period.	£473,144	£0	£6,347,193	£6,837,544
ICT	Broadband					BT Openreach adopting approach of developer provision of fibre to the door in new development.	Fastershire programme in place to facilitate broadband infrastructure in rural areas.				
Sport, recreation and	Swimming	£350	£2,678,173	£350	£2,870,721	Based on Sport England Sports Facility Calculator				£2,678,173	£2,870,721

open space	Sports hall	£398	£3,042,839	£398	£3,261,605	Based on Sport England Sports Facility Calculator				£3,042,839	£3,261,605
	Playing pitches	£255	£1,951,209	£255	£2,091,492	Based on Fields in Trust Benchmark Standards				£1,951,209	£2,091,492
	Other outdoor sports	£869	£6,644,116.80	£869	£7,121,798.40	Based on Fields in Trust Benchmark Standards				£6,644,117	£7,121,798
	Childrens Playspace	£270	£2,063,778.75	£270	£2,212,155	Based on Fields in Trust Benchmark Standards				£2,063,779	£2,212,155
	Informal open space	£20	£155,930	£20	£167,141	Based on Fields in Trust Benchmark Standards				£155,930	£167,141
	Accessible natural greenspace	£523	£4,002,480	£523	£4,290,240	Based on Natural England Accessible Natural Greenspace Standard				£4,002,480	£4,290,240
	Sub-total	£2,685	£20,538,527	£2,685	£22,015,152					£20,538,527	£22,015,152
	Cotswold Canals Project	£281.05	£2,150,000	£262.20	£2,150,000	Costed schemes: Stonehouse Ocean Railway Bridge (£1.5mil) and Saul Chalford Towpath Upgrade (£650,000)				£2,150,000	£2,150,000
Transport and public realm	Highways	£457.52	£3,500,000	£426.83	£3,500,000	To be updated	To be confirmed			£3,500,000	£3,500,000
	Bus Services	£1,647.06	£12,600,000	£1,536.59	£12,600,000	To be updated	To be confirmed			£12,600,000	£12,600,000
	Cycle and walking	£45.75	£350,000	£42.68	£350,000	To be updated	To be confirmed			£350,000	£350,000
	Site-specific transport mitigation and access										
	Sub-total	£2,150.33	£16,450,000.00	£2,006.10	£16,450,000					£16,450,000	£16,450,000



Waste	Javelin Park Energy from Waste facility		£94,000,000		£94,000,000	Project cost based on proportion of total £500mil project cost, based on Stroud population is 18.8% of county total.	Waste infrastructure to be funded by private investment and Council Tax revenue.	£94,000,000	£0	£0	£0
Totals		£13,932	£214,626,223	£13,777	£221,018,278			£127,750,161	£0	£86,876,062	£93,268,116

## 8 Infrastructure funding: alternative funding sources

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As finance for infrastructure provision through developer contributions is expected to be over-subscribed it will be necessary to pursue alternative funding sources wherever possible. Funding sources specific to different sectors are presented throughout the relevant sections in chapter 4. This chapter provides an introduction to further funding sources that can apply to a range of different infrastructure project types.

### Investing in Britain's Future

Published during June 2013, 'Investing in Britain's Future' sets out the Government's commitment to invest £50billion of capital investment in 2015-16 and over £300billion of capital spending guaranteed to end of the decade.<sup>40</sup> Investing in Britain's Future sets out key spending commitments for the following sectors: roads, rail, energy, science and innovation, housing and digital communications; as well as long term approaches in other sectors and approaches for local growth.

Where applicable to Gloucestershire, important spending commitments for each sector are set out in chapter 4. With respect to devolved finance for infrastructure investment, the Government has decided to grant economic power to Local Enterprise Partnerships (LEPs) through the creation of a Single Local Growth Fund and Growth Deals. Important headlines of the proposals can be summarised as follows:

- creation of a Single Local Growth Fund (SLGF) with over £2billion of budgets nationally in the years to 2021;
- a further commitment of £5billion of transport funding in the SLGF from 2016-17 to 2020-21 to enable long-term planning of priority infrastructure while also committing to maintain the SLGF at a total of at least £2billion each year in the next Parliament;
- giving LEPs responsibility for how £5.3billion of EU Structural and Investment Funds is spent;
- the Government will increase the Local Infrastructure Fund (LIF) by a further £50million in 2014-15 to ensure that Enterprise Zones have the infrastructure they need to attract business;
- the Spending Round announces £300mil funding a year for a refocused Regional Growth Fund (RGF) in both 2015-16 and 2016-17 to support projects and programmes to create economic growth and sustain private sector employment.

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<sup>40</sup> Source:

[http://www.conservatives.com/News/News\\_stories/2013/06/Investing\\_in\\_Britains\\_future.aspx](http://www.conservatives.com/News/News_stories/2013/06/Investing_in_Britains_future.aspx)

## New Homes Bonus & Business Rate Retention

The Government has put in place local financial incentives for the delivery of growth in the form of the New Homes Bonus, and now plans to sharpen these incentives.

The New Homes Bonus match funds the additional council tax raised for new homes and properties brought back into use, with an additional amount for affordable homes. Until recently, increased housing in communities has meant increased strain on public services and reduced amenities. The New Homes Bonus introduced in April 2011 by CLG removed this disincentive by providing local authorities with the means to mitigate the strain the increased population causes.

CLG set aside almost £1 billion over the Comprehensive Spending Review period for the scheme, including nearly £200 million in 2011-12 and £250 million for each of the following three years. The Bonus is intended to be a permanent feature of the local government finance system. Reforms set out within 'Investing in Britain's Future' involve the pooling of £400million from the New Homes Bonus within Local Enterprise Partnership areas, to support strategic housing and economic development priorities.

From April 2013, Local Authorities in England will be able to retain half of the business rates that are raised locally, providing a further incentive to deliver development.

## Gloucestershire Infrastructure Investment Fund

The Gloucestershire Local Enterprise Partnership (LEP) Strategic Economic Plan (SEP) sets a target £406.36m worth of funding to be sort from the Government to achieve economic growth targets. The funding will be enhanced by further resources from local business and non-SEP public sources.

Funding has already been secured for a number of exciting regeneration schemes progressing in the county with the aim to stimulate growth and create jobs this includes £20 million investment in the Stroud canals project.

Gloucestershire (LEP) and the County Council have secured £8.4million from Government, through the Growing Places initiative, to form the Gloucestershire Infrastructure Investment Fund (GIIF).

In a context of constrained development finance and sluggish economic performance, the Growing Places Fund is one of the major Government initiatives to get stalled development proposals up and running. The creation of the fund follows on from previous initiatives that have included the provision of expert brokers for Councils to renegotiate S106 Planning Obligation agreements for moth-balled sites.

Three overriding objectives have been announced for the Growing Places Fund<sup>41</sup>:

- to generate economic activity in the short term by addressing immediate infrastructure and site constraints and promote the delivery of jobs and housing;

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<sup>41</sup> Communities & Local Government & Department for Transport 'Growing Places Fund, Prospectus' (November 2011)

- to allow local enterprise partnerships to prioritise the infrastructure they need, empowering them to deliver economic strategies; and
- to establish sustainable revolving funds so that funding can be reinvested to unlock further development, and leverage private investment.

The Government places great emphasis on use of the fund to maximise development in a short time horizon, advising that “to get economic activity going we envisage that funding being directed towards stalled sites, given that these are likely to progress quickly once capital is injected.”(Prospectus, paragraph 9) Nevertheless, the Government also states that the fund is intended to put local areas in the driving seat, taking decisions on local priorities in investment.

To date, the Gloucestershire LEP has shortlisted five projects for potential major investment through the GIIF<sup>42</sup>:

- Flood defence scheme for Gloucester City Football Club new stadium and associated commercial accommodation and workshops.
- Highways infrastructure to serve a mixed use housing and employment development East of Lydney.
- Site clearance works at the Gloucester Greater Blackfriars regeneration masterplan area.
- Development of hangars and the reinforcement of infrastructure at Gloucestershire Airport.
- The delivery of the Cinderford Northern Quarter Relief Road to enable the regeneration and development of a former coalmining area.

There are currently no candidate schemes for the GIIF within Stroud District, but the Council may wish to further pursue this option where early delivery would be beneficial, ahead of a process of recouping costs from developer contributions and other sources such as the New Homes Bonus.

## Further financing mechanisms

### Council Tax

Local authorities are responsible for setting their budgets for the year and determining how much of the cost of a service or capital project will be met through council tax. Stroud DC do, therefore, have some discretion over whether rates should be increased to deliver certain projects or service objectives, although the Council will also be under pressure to keep tax increases within acceptable limits. Should outright increases to council tax be considered unacceptable, the ‘ring-fencing’ of funds for a high profile priority project or ‘one-off levy’ may provide a vehicle for generating political support if a particular project is considered to be of fundamental importance for the District.

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<sup>42</sup> Source: <http://www.lepnetwork.org.uk/five-investments-projects-to-boost-cash-for-gloucestershire-lep.html>

## Public Works Loan Board (PWLB)

For larger scale projects, for local authorities, Internal Drainage Boards (and a small number of other bodies such as parish councils), the Public Works Loans Board provides a source of loans. The PWLB is a statutory body operating within the UK Debt Management Office (a department of the UK Treasury Office). The PWLB is responsible for lending money to local authorities, as well as collecting the repayments. If a local authority has its application accepted it may raise long-term funding and pay back the loan made by the PWLB at advantageous interest rates. At present nearly all borrowers are local authorities requiring loans for capital purposes.

‘Investing in Britain’s Future’ announces that from 1 November, LEPs will have access to cheaper borrowing through the PWLB for local priority infrastructure projects up to a total of £1.5billion borrowing (excluding London).

## Prudential Borrowing

Prior to April 2004, limits on the amounts local authorities were able to borrow for capital expenditure were determined by the Government. There is now greater flexibility for local authorities to invest. Prudential borrowing allows local authorities to borrow at a rate which is typically preferential to that available in the commercial capital market.

Prudential borrowing allows local authorities more scope to borrow money for infrastructure and regeneration projects. Funding from this source has the advantage of not being associated with the restrictive conditions which are typically attached to grant forms of funding.

## Tax Incremental Financing

TIF allows local authorities to raise money for infrastructure by borrowing against the increased business rate revenues that would be generated by development. The 2012 Budget promised investment towards TIF projects for larger scale projects in core cities. At this stage TIF is only proposed in the Core Cities but may become available to other areas in the future.

## Asset backed financing

Local Asset-Backed Vehicles (LABVs) are arrangements where local authority assets are used to lever long-term investment from the private sector to fund development projects. They are designed to:

- bring together public and private sector partners in order to pool finance, land, planning powers and expertise;
- deliver an acceptable balance of risk and return for partners; and
- support strategic planning and delivery of projects

This approach is best suited to those cities or regions that can identify a portfolio of assets, a pipeline of regeneration projects and suitable institutional investors, offering a route to unlock additional private sector investment. They have been mainly used for regeneration and housing programmes.

## Private Sector Finance

The use of private finance vehicles has become a frequent means of funding infrastructure projects that have traditionally been delivered by the public sector. Public Private Partnerships have proved popular in recent times as they are a mechanism to attract the finance (and skills) from the private sector whilst delivering a public service effectively. The most important value for money-drivers are the transfer of risk, the output based specification, the long-term nature of contracts, the performance measures, the increased competition and the private sector management. Other important advantages of Public Private Partnerships typically include the quicker delivery of projects, improved incentives to market forces, cost efficiencies, broad support for Public Private Partnerships and improved cost calculations by the public sector.

There are some disadvantages, the most notable of which is the high initial cost of establishing the various alliances. These costs tend to be higher than would normally be incurred due to the complexity of the relations between the diverse actors and because of the typical long duration of these relations. In addition, it should be recognised that private sector investors are likely to want to see a return in the short to medium term. Investment cycles may also vary for each organisation and business sector involved. The timing and management of investment returns is therefore an issue which needs to be carefully considered and discussed up front.

## Big Lottery Funding & Heritage Lottery Funding

The BIG Lottery Fund distributes funds raised by the National Lottery. The majority of the funds are allocated to voluntary and community organisations though some funding also goes to local authorities and statutory bodies.

The Heritage Lottery Fund invests around £375m a year on projects which make a lasting impact on the UK's heritage. This can include a broad range of projects including museums, parks, historic places and the natural environment.

The Heritage Lottery Fund runs a number of different grant programmes. For example the Heritage Grant (grants above £100,000), and Parks for People (grants from £250,000 to £2,000,000).

Stroud District Council, working in partnership with other organisations, has a good track record of securing funds through this route. The Cotswold Canals Project was awarded £11.9mil in January 2006.

## 9 Governance & capacity for delivery

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Delivery of planned development and the Vision for Stroud District will rely upon a wide range of public, private and community sector organisations working together effectively and efficiently. Stroud DC have an important leadership role to play in this process and it is intended that this IDP will assist by drawing together relevant information and provide impetus for project planning and pursuing the necessary funding. This chapter of the report considers the organisational and resourcing measures for consideration by the Council that could enhance cross-sectoral working.

### Infrastructure planning as a ‘live’ process

It is recommended that infrastructure planning and delivery is viewed as an iterative process, requiring regular (potentially annual) updates of the IDP. Infrastructure and service providers are all engaged in their own strategy and business planning processes, meaning that information comes forward at different rates and varying levels of detail. For many sectors, the initial assessment of infrastructure requirements and capital costs set out in this study are high level estimates based on standards of provision. This means that project details, costs and timescales for provision will need to be refined over time.

Tracking progress, understanding phasing implications and assessing the deliverability of multiple projects in this context is challenging. In order to assist with this task, the Infrastructure Project Tracker issued alongside this report will help enable the Council to store and review information on the costs, funding strategies and programming of infrastructure projects.

### Governance for infrastructure planning

The establishment of an Infrastructure Planning Group is proposed to help ensure that lines of communication between the District Council and service providers continue to be strengthened. Careful preparatory work will be required to ensure that the role of the group is well defined and the frequency of meetings/activities is realistic given resource pressures on participants. Further important considerations include the geographical scope of the group and need to avoid duplication with existing forums for partnership working. These matters are explored in further detail below.

### The role of the Infrastructure Planning Group

Suggested roles and activities for the Infrastructure Planning Group include:

- Updates to and approval of the IDP and Project Tracker as a ‘live’ process – ongoing input and verification by infrastructure and service providers will improve the accuracy and outcomes of the process.
- Meetings and workshops focussed on particular issues or strategic sites that demand cross-sectoral working.
- Updates and information sharing by the local planning authority on development sites expected to come forward in the short and medium term.

- Monitoring of Local Plan policies relating to infrastructure.

## Relationship of Infrastructure Planning Group with existing forums

The concept of partnership working amongst infrastructure and service providers is hardly new and Stroud District Local Strategic Partnership was established in 2002. Membership of the LSP includes Gloucestershire Police, Gloucestershire County Council, Job Centre Plus, NHS Gloucestershire, South Gloucestershire and Stroud College, as well representatives of business, the third sector and District Council.

A key action identified within the Stroud District Council Corporate Delivery Strategy 2012/13 is to ‘work with our Local Strategic Partnership on reviewing the Sustainable Communities Partnership.’ With this task in mind, the LSP may provide an appropriate forum for discussing infrastructure priorities within the District, informing both the delivery of the Local Plan and an update of the Sustainable Communities Strategy. There is already good representation of infrastructure providers within the LSP and membership could be reviewed, with the Infrastructure Planning Group function subsumed within the LSP preventing duplication of groups.



## 10 Conclusions

Realisation of the Local Plan Vision and Development Strategy for Stroud District will be dependent on the timely delivery of a wide range of infrastructure. This Infrastructure Delivery Plan (IDP), prepared on behalf of Stroud District Council, provides an assessment of the transport, utilities, community and green infrastructure and services that will be required to support development. The IDP was prepared in consultation with the organisations responsible for the provision of infrastructure and will be updated to support submission of the Local Plan, to take account of consultation responses and new information. The main conclusions of the Consultation Draft IDP (July 2013) and recommended actions are set out below.

### Strategic Infrastructure Projects

Through the process of collating information on infrastructure projects and assessing the demands of new development, a number of projects of potential strategic importance have been identified for consideration by the Council. These include projects of county-wide and cross-boundary importance, as well as infrastructure of great importance for facilitating development at two or more strategic locations with Stroud District:

- **Transport** – candidate strategic projects are: the provision of high quality and high frequency bus services on strategic routes between Stroud town and Gloucester and within Stroud District; and A419 Highway corridor improvements between M5 Junction 13 and Stroud town centre.
- **Cotswold Canals Project** – delivery of this major regeneration project that delivers walking and cycling benefits and accessible open space is a strategic priority for the Council.
- **Secondary Education** – proposed development could generate demand for between 1,225 and 1,798 secondary school places across the District. Further assessment work is required to assess capacity and demand in more detail and recommend the best means for accommodating students.
- **Hospital capacity** – Applying a high level standard, it is predicted that development would generate demand for between 28 and 41 hospital bedspaces, with potential implications for existing facilities in Stroud, Cheltenham and Gloucester.
- **Police stations and custody suites** – Gloucestershire Constabulary has highlighted the need to refurbish Stroud police station, and provide a new custody suite at Quedgeley that would serve the whole county.
- **Swimming pool and leisure** – Application of Sports England appraisal tools indicates that the provision of new swimming pool and sports hall facilities to support new development is required. The need for and viability of new facilities should be assessed in further detail.

### Infrastructure for Strategic Locations

IDP assessment work has focussed on strategic locations for development and has involved the testing of three development scenarios, to inform the development

strategy within the Pre-Submission Draft Local Plan. Important infrastructure issues and priorities emerging for each of the Strategic Locations for development are summarised here:

- **North East Cam (housing)** – development at North East Cam could help to facilitate improvements at Cam station and the delivery of the Cam and Dursley Greenway cycle and pedestrian route.
- **Sharpness (housing and employment)** – proposals for housing at Sharpness could help support regeneration of the Docks, but comparatively high highways access and utility connection costs may limit the scope for contributions towards social and community infrastructure, given the scale of development envisaged (300 dwellings). Reinforcement of the electricity distribution grid, wastewater treatment plant and sewerage capacity may be necessary, with related development viability and phasing implications. New housing at Sharpness could support existing community facilities and services in Berkeley. Wessex Water have requested further consultation, as proposed employment development at Sharpness adjoins existing sewage treatment works and odour nuisance could be an issue.
- **Stroud Valleys (housing)** – A key project for the Stroud Valleys comprises a proposal by Severn Trent Water to implement strategic sewer improvements, to alleviate existing flooding problems. Severn Trent have advised, however, that the levels of development proposed in the development scenarios (200, 500 or 800 dwellings) are unlikely to worsen conditions and that temporary solutions to store sewage may be possible, if necessary. Brownfield development proposals at Dudbridge & Wallbridge and Thrupp and Brimscombe would contribute directly to the Cotswold Canals Project, while greenfield development options at Callowell Farm and Grange Fields may benefit from improved development viability and therefore be better placed to contribute to investment in other forms of priority infrastructure in the Stroud area.
- **Hunt’s Grove and Quedgeley East (housing and employment)** – There is an existing planning permission for 1,750 homes at Hunt’s Grove, so taking into account the IDP development scenario (500 dwellings), total development could lead to 2,250. Committed development provides for the delivery of significant community infrastructure, including primary education provision, a site for a doctor’s surgery and a community centre. Increases to the number of dwellings proposed will prompt a reassessment of the capacity of community and social infrastructure provision. Development at Hunt’s Grove and Quedgeley East may help facilitate the provision of a high quality bus corridor between Stroud and Gloucester and a Park & Ride site, although further assessment and options appraisal would be required.

## Stroud Core Infrastructure

While further assessment work is required to understand infrastructure requirements at each of the strategic locations in more detail, it is concluded that there is reasonable prospect of provision of “Core Infrastructure” projects, based on the information currently available. Core Infrastructure projects are those that are considered to be of fundamental importance for supporting the delivery of the Stroud Local Plan, such as transport, flood risk, utilities, education, healthcare and the emergency services. This assertion is based on the following:

- Preparation of the IDP has not identified any major infrastructure projects fundamental to the delivery of development that are of unusual complexity, have very high capital costs or that are overly reliant on uncertain external funding sources.
- Preliminary development viability work indicates that developer contributions would be available to assist in funding projects that are fundamental to the delivery of new developments.

### Developer contributions and Community Infrastructure Levy

Financing the construction, operation and maintenance of infrastructure will depend on a series of funding sources including grants, loans, taxations, levies and rates. Developer contributions will form an important component of the overall funding package and the Council will seek to utilise Section 106 Planning Obligations and a Community Infrastructure Levy (CIL), as appropriate, to ensure that development is acceptable in planning terms and that infrastructure is provided to support the development of the area.

The IDP estimates a funding gap of approximately **£78,344,687**. This figure excludes projects that are already funded or are typically funded in other ways, as well as site specific requirements for transport and flood risk management that have yet to be assessed in detail.

Preliminary viability assessment work suggests that developer contributions of around £6,090 to £6,560 per dwelling may be feasible, indicating that while prioritisation of infrastructure is likely to be necessary, there is reasonable prospect of provision of Core Infrastructure of fundamental importance to supporting development. A CIL will be informed by further detailed viability assessment that will take account of the Council policy aim that 30% of new dwellings should be affordable, to ensure that the overall plan is viable.

### Place-making infrastructure

While there is a necessary emphasis on the delivery of “Core Infrastructure” required to enable development, it is also of great importance to the Council that “Place-making” infrastructure is provided to realise the Vision of a District that enjoys a high quality of life within vibrant and diverse communities, and where historic and cultural heritage is nurtured, from arts and crafts through to the Cotswold Canal and wool and cloth mills.

Developer contributions towards community infrastructure may therefore be sought for projects including: libraries, community centres, cultural facilities, sports and recreation facilities, open space and enhanced public realm. Once a CIL is in place, the Neighbourhood Fund mechanism introduced by Government would enable local communities to decide what community, recreation and leisure and environmental projects they wish to pursue. This would allow local communities to determine their own priorities, taking account of existing levels of provision and priorities in each location.

## Nationally Significant Infrastructure Projects (NSIP)

The prospect of any Nationally Significant Infrastructure Projects (NSIPs) coming forward in the Stroud District has also been reviewed through the IDP work. There are currently no projects within Stroud District registered with the Planning Inspectorate, although proposals for the construction of a new nuclear power station at Oldbury in South Gloucestershire may have implications for the south west of Stroud District.

## **Appendix A**

### **Location of Strategic Allocations**



## **Appendix B**

### **Transmission Network Map**





## Appendix C

### List of Responsibilities

