




Stroud District Council
Infrastructure Delivery Plan
Consultation Draft

4-05

Issue | 17 July 2013



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.

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1 Introduction

1.1 Purpose of the Infrastructure Delivery Plan (IDP)

The objective 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 Stroud Local Plan. In doing so the study fulfils the following roles:

- Provides evidence base supporting the preparation of the Local Plan. This version of the IDP has been prepared for publication alongside the Pre-Submission Draft Stroud Local Plan that sets out the overall level of housing and employment development to be allocated within different parts of the District, along with development management policies. For each sub-area and strategic location for development within Stroud, the study seeks to identify what local infrastructure requirements and priorities may be and whether there is a reasonable prospect of provision of the necessary infrastructure. The process of preparing the IDP has also played a role in informing the levels of development allocated within different parts of the District.
- The IDP presents sources of funding that could be pursued to assist with the delivery of infrastructure, including initial recommendations relating to developer contributions towards infrastructure through Section 106 Planning Obligations and the Community Infrastructure Levy (CIL). By presenting a list of infrastructure needs, estimated costs and responsibilities for delivery, the IDP provides evidence supporting the preparation of a CIL.
- In line with national guidance, the study seeks to identify whether any Nationally Significant Infrastructure Projects (NSIPs), as defined in the Planning Act 2008 are expected to come forward in Stroud District.

Setting out a coherent plan for projected housing and employment growth is an important role of the Stroud Local Plan. However emerging Local Plan policy also sets out an overall Vision for the District of:

- A rural District that is modern, innovative and committed 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.
- Enjoy 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 constraints and opportunities in each area, and which may inform infrastructure priorities in certain locations. Through the preparation of an IDP the District Council seeks to collate information on the projects that will foster the achievement of these visions, such as the provision of decentralised

energy generation, the improvement of sustainable transport links between settlements, and the community facilities and services required to support new development.

This Interim Version of the IDP was prepared between March 2013 and June 2013 and further ‘refresh’ versions of the IDP will be prepared, taking account of consultation comments on the Pre-Submission Draft Local Plan and updates provided by the organisations responsible for the provision of infrastructure.

Preparation of the Consultation Draft 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 provides for 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 for each sub-area and ‘Strategic Location’ for development within Stroud District.
- Chapter 6 sets out an initial view on the level of developer contributions towards infrastructure that may be viable and recommendations for the establishment of a Community Infrastructure Levy (CIL).
- Chapter 7 reviews other potential funding sources that could be pursued to help deliver priority infrastructure projects.
- Chapter 8 considers next steps and governance arrangements that could help facilitate a collaborative, iterative approach to infrastructure planning and delivery.
- Chapter 9 presents conclusions.

2 Methodology

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

2.2.1 Summary of IDP Methodology & 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 below and explained in further detail in the subsequent sections.

2.3 Stage 1 – Development Vision, Scenarios & IDP Governance

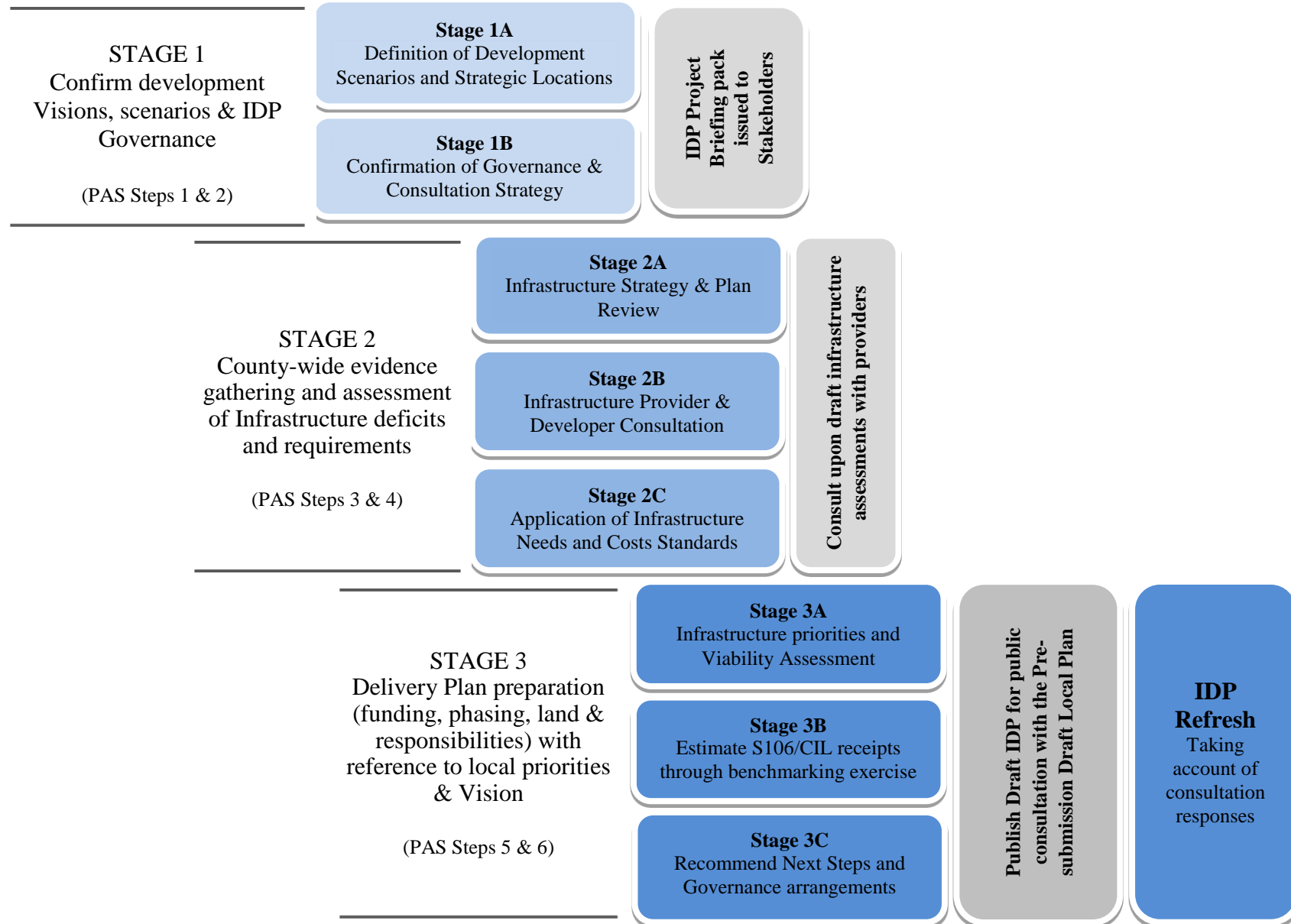
2.3.1 Stage 1A – Definition of Development Scenarios and Strategies Locations

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 1 - Infrastructure Delivery Plan Study Stages



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2.3.2 Stage 1B – Establish Governance arrangements and Consultation Strategy

The County Planning Officers Group (CPOG) has met on a monthly 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 will also be kept informed of emerging results and recommendations by a variety of means, as set out in the table below.

The publication of this Consultation Draft IDP provides an important opportunity for comment by all parties.

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 & 3B)
	Issue of draft IDP outputs for comment (end Stage 2)
	Formal consultation on Draft IDP with Pre-Submission Draft Stroud Local Plan
Developers (Strategic Locations)	Formal consultation on Draft IDP with Pre-Submission Draft Stroud Local Plan
Council Members	Formal consultation on Draft IDP with Pre-Submission Draft Stroud Local Plan
Local Community	Formal consultation on Draft IDP with Pre-Submission Draft Stroud Local Plan

2.4 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. In some cases the Council has used agreed assessment standards to supplement and update the information available from infrastructure providers (see Stage 2C for further explanation).

2.4.1 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.

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

Telecoms and meetings were arranged with individual infrastructure and service providers to discuss the outcomes of the document review and understand whether further feedback could be provided in relation to the Local Plan development scenarios set out in the Infrastructure Briefing Pack. 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.

Where further infrastructure assessment work was proposed to inform the IDP, the methodology for undertaking this work was also agreed with the relevant organisation. As far as possible, draft IDP assessments have been circulated for agreement with infrastructure providers.

2.4.3 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 provision 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. It should be noted that the application of these high level standards allows for an estimate of infrastructure requirements only and in each case it is likely that the assessment will be refined as further information on existing local facilities and the details of proposed developments (such as dwelling mix and size) becomes available.

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.

2.4.4 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

2.5 Stage 3 – Delivery Plan preparation

2.5.1 Stage 3A –Infrastructure Priorities and Viability Assessment by sub-area and strategic location

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.

2.5.2 Stage 3B – Estimate S106 Planning Obligation / CIL receipts

To inform the Viability Assessment of infrastructure project delivery, it was important to understand the scale of developer contributions towards infrastructure that may come forward via S106 Planning Obligations and/or a CIL. Information from the following two sources informed a judgement about estimated contributions:

- The Community Infrastructure Levy Development Appraisal Study (Christopher Marsh & Co Ltd (2011) provided the basis for estimating

potential total receipts, however, the Council has commissioned a further Viability Assessment so the conclusions will need to be updated in due course.

- A review of proposed and established CIL rates in other Local Authority areas was undertaken, taking market rates into account.

Further details of the methodology and outcomes of this stage are set out at chapter 7.

2.5.3 Stage 3C –Recommend Next Steps and 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.

2.6 IDP Refresh

Once representations have been received on the Pre-Submission Draft Stroud Local Plan and supporting Interim Version IDP, the Council will provide responses to comments and the IDP will be updated accordingly. The refresh of the IDP will also provide the opportunity for any updates, in terms of Government legislation and new information from infrastructure providers, to be reflected in the final version supporting a Submission Local Plan.

3 Local context for the IDP

Stroud District has a population of 112,779 (2011¹) and is one of the six districts that make up Gloucestershire. It shares a southern boundary with the South Gloucestershire Unitary authority. The district is predominantly rural in nature, with the towns of Stroud, Stonehouse, Cam and Dursley providing the main service centres within the District. Proximity to Gloucester and Cheltenham to the north, and Bristol to the south, have an important influence on travel patterns for work and access to services.

The summary of strategy and planning documents for Stroud District gives an appreciation of priority matters for the area.

3.1 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.

¹ MAIDeN 'Stroud District Profile'

3.2 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 8 of this report.

3.3 Stroud Local Plan

The extant Local Plan 2005 will be superseded by the new Local Plan scheduled for adoption end of 2014/early 2015. The District Council has pursued an assessment of several alternative strategies for development and the IDP itself seeks feedback from infrastructure and services providers on three development scenarios. The stages of consultation undertaken to date are summarised below:

Core Strategy Consultation: Alternative Strategies for shaping the future of Stroud District (February – March 2010)

During the spring 2010, Stroud District Council consulted upon seven alternative strategies for distributing housing and employment development within the District:

- A. Concentrated Growth Point Strategy – with 2,000 dwellings concentrated at either Cam, Eastington, or west of Stonehouse.
- B. Concentrated Development Strategy – with 1,000 dwellings concentrated at two of the following settlements: Cam, Eastington, west of Stonehouse, Brimscombe or Whitminster.
- C. Cluster Strategy – 200 to 250 dwellings at 8 settlements, boosting local service centres that serve a rural hinterland.
- D. Stroud Valleys Strategy – Three 200 dwellings sites and the remaining 1,400 to be found through a variety of smaller sites within the Stroud Valleys (with a degree of focus upon canal corridor regeneration sites).
- E. Town and Country Combination Strategy – One site of 1,000 dwellings at either Cam, Eastington, Brimscombe, West of Stonehouse or Whitminster;

and at least 10 sites of 100 dwellings or less, dispersed across the District to support smaller towns and larger villages.

- F. Rural Communities Strategy – Focussing on a wide range of small sites. At least 40 sites of 10 to 50 dwellings, distributed amongst the District’s parishes.
- G. Dispersal Strategy – Dispersal Strategy with at least 25 sites spread across a wide range of the District’s parishes, each site between 50 to 100 dwellings.

The findings of the public consultation indicated that three strategies were more popular than others: Strategy A – the Concentrated Growth Strategy; B – the Concentrated Development Strategy; and D – the Stroud Valleys Strategy.

Core Strategy Consultation: A Preferred Strategy for shaping the future of Stroud District (February – March 2012)

Taking this feedback into account the Council launched a further public consultation on a Preferred Strategy during the spring 2012. The Preferred Strategy is based on development at six main locations:

- Stroud Valleys – 300 to 800 homes and up to 1,600 jobs
- North East of Cam – 200 to 500 homes and up to 1,500 jobs
- West of Stonehouse – 1,000 to 1,500 homes and up to 3,000 jobs
- Hunts Grove extension – 500 to 750 homes
- Aston Down - intensification of employment offer plus 100 – 200 homes
- Sharpness/Newtown - intensification of employment offer plus 200 – 250 homes

Local Plan Policies Consultation (March – May 2013)

During March the Council commenced consultation on Local Plan policies, which includes a draft policy on development contributions to services, community facilities and infrastructure (Core Policy 6), along with sector specific policies on sustainable transport measures (Core Policy 13 and Delivery Policies EI12, EI13, EI14, EI15 and EI16) and promoting sport, leisure and recreation infrastructure (Delivery Policy EI11).

3.4 Infrastructure Delivery Plan Development Scenarios

As the Council move towards defining the development allocations with the Local Plan, the Infrastructure Delivery Plan provides an element of the evidence base informing a view on how much development should take place in each location. In particular, it was determined at a Council Planning Advisory Panel (PAP) Meeting on the 5th of March that the implications of larger strategic housing allocations at West of Stonehouse and North East Cam should be tested.

Three development scenarios were therefore presented to infrastructure providers for comment, as presented in the table below. Scenario 1 assumes that 6,806 dwellings are developed across the district, taking into account committed sites and a restrained figure for windfall development. Scenarios 2 and 3 assume the development of 8,397 and 9,989 dwellings respectively, with incremental increases in dwelling allocations at strategic locations, but with more substantial

increases at the land West of Stonehouse and the Stroud Valleys. Scenarios 2 and 3 also assume higher amounts of windfall development.

Maps of the development scenarios, and a more detailed breakdown of the dwelling figures including committed sites, is provided at Appendix A.

Table 3 - Development Scenarios tested through the IDP process

Areas	Strategic Locations	Scenario 1 (dwellings)	Scenario 2 (dwellings)	Scenario 3 (dwellings)	
Stroud District	All sites	6,806	8,397	9,989	
Stroud South Vale	All sites	1,612	1,997	2,380	
	North East Cam	400	675	950	
	Sharpness	200	225	250	
Stroud & West	All sites	2,239	3,253	4,275	
	West of Stonehouse	750	1,375	2,000	
	Stroud Valleys (comprising site options in the locations listed)	Dudbridge to Wallbridge	200	500	800
		Brimcombe & Thrupp			
Grange fields and/or Callowell Farm					
Stroud & East	All sites	537	593	648	
	Aston Down	200	200	200	
Gloucester Urban Fringe	All sites	2,418	2,554	2,686	
	Hunt's Grove Extension (additional to committed development for 1,750 dwellings – see note below)	500	625	750	

Of importance with respect to the development scenarios for Hunt's Grove is that the proposals for 500, 625 or 750 dwellings would comprise an extension to a committed development of 1,750 dwellings with a business and local centre. This would take the theoretical total of new development to 2,500 dwellings. A S106 Planning Obligation attached to the planning permission provides for a range of infrastructure provision, and this is taken into account where relevant throughout this study.

With respect to employment development, the following three areas of search for strategic sites, recommended in the 2013 Stroud Employment Land Study, are being considered during the infrastructure planning process:

- Quedgeley East (13ha);
- North of Stroudwater Industrial Estate, Stonehouse (17ha); and
- An extension to the Severn Distribution Park, Sharpness (9ha).

3.5 Local Plan – supplementary documents

The current Stroud Local Plan (2005) is supported by a number of supplementary documents. Those that will be of particular relevance and importance for the preparation of the IDP are as follows:

- ***Outdoor Play Space Provision Supplementary Planning Guidance*** (SPG)(November 2000)
- ***Outdoor Playing Space Provision Survey*** (SPG)(2004)
- ***Stroud Town Centre Public Realm Strategy*** – Supplementary Planning Advice (SPA) (January 2009)
- ***Stonehouse Design Statement*** SPA (November 2005)

3.6 Community and 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 4 - Community Plans and Neighbourhood Plans relating to proposed strategic locations for development

Areas	Strategic Locations	Community Plan	Neighbourhood Plan
Stroud South Vale	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
Stroud & West	West of Stonehouse	Stonehouse Town Council have produced a Community Plan and	None proposed to date

		Eastington Parish Council are in the process of producing one.	
	Stroud Valleys	Dudbridge to Wallbridge	Stroud Town Council has prepared a Community Plan
		Brimscombe & Thrupp	Brimscombe & Thrupp Parish Plan 2011 - 2016
		Grange fields and/or Callowell Farm	Stroud Town Council has prepared a Community Plan
Stroud & East	Aston Down	Minchinhampton Parish Council has prepared a Community Plan	None proposed to date
Gloucester Urban Fringe	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 Infrastructure assessment by sector

4.1 Community and culture

4.1.1 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”.

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 around £1.78million and £2.6million, depending on final housing figures.

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 and 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 Hunt's Grove. The libraries are listed below²:

- 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)
- 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

² Source: <http://www.gloucestershire.gov.uk/libraries> (accessed April 2013)

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 1st 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 and 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 30m² of Library space per 1000 people. An estimated capital cost of £3,500/m² is given for England based on 2009/10 prices. Rebasing this estimated cost for 2013³ and a Gloucestershire location results in a capital cost of £3839/ m², rounded to £3,800/ m².

An assessment of library space to support new development per settlement based on this standard is set out in the table below:

³ BCIS Online – costs rebased to Q2 2013

Table 5 - Assessment of need for libraries

Libraries (floorspace m²)					
Stroud Sub-area	Strategic location for development	Dwellings	Pop'n	Local Plan	
				Demand (m²)	Estimated Capital Cost
Scenario 1		6,806	15654	469.61	£1,784,533
Stroud South Vale (SSV)	Windfalls	168	386	11.59	£44,050
	North East Cam	400	920	27.60	£104,880
	Sharpness	200	460	13.80	£52,440
Stroud and West (SW)	Windfalls	187	430	12.90	£49,031
	West of Stonehouse	750	1725	51.75	£196,650
	Stroud Valleys	200	460	13.80	£52,440
Stroud and East (SE)	Windfalls	110	253	7.59	£28,842
	Aston Down	1,907	4386	131.58	£500,015
Gloucester Urban Fringe (GUF)	Windfalls	11	25	0.76	£2,884
	Hunt's Grove extension	500	1150	34.50	£131,100
Built/ committed sites		4,080	9384	281.52	£1,069,776
Scenario 2		8397	19313	579.39	£2,201,693
Stroud South Vale (SSV)	Windfalls	253	582	17.46	£66,337
	North East Cam	675	1553	46.58	£176,985
	Sharpness	225	518	15.53	£58,995
Stroud and West (SW)	Windfalls	277	637	19.11	£72,629
	West of Stonehouse	1375	3163	94.88	£360,525
	Stroud Valleys	500	1150	34.50	£131,100
Stroud and East (SE)	Windfalls	166	382	11.45	£43,525
	Aston Down	200	460	13.80	£52,440
Gloucester Urban Fringe (GUF)	Windfalls	22	51	1.52	£5,768
	Hunt's Grove extension	625	1438	43.13	£163,875
Built/ committed sites		4,080	9384	281.52	£1,069,776
Scenario 3		9989	22975	689.24	£2,619,116
Stroud South Vale (SSV)	Windfalls	336	773	23.18	£88,099
	North East Cam	950	2185	65.55	£249,090
	Sharpness	250	575	17.25	£65,550
Stroud and	Windfalls	374	860	25.81	£98,063

Libraries (floorspace m ²)					
Stroud Sub-area	Strategic location for development	Dwellings	Pop'n	Local Plan	
				Demand (m ²)	Estimated Capital Cost
West (SW)	West of Stonehouse	2000	4600	138.00	£524,400
	Stroud Valleys	800	1840	55.20	£209,760
Stroud and East (SE)	Windfalls	221	508	15.25	£57,946
	Aston Down	200	460	13.80	£52,440
Gloucester Urban Fringe (GUF)	Windfalls	29	67	2.00	£7,604
	Hunt's Grove extension	750	1725	51.75	£196,650
Built/ committed sites		4,080	9384	281.52	£1,069,776
	Per Dwelling	1	2.3	0.07	£262
	Per Capita	N/A	1	0.03	£114

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 6 - Library facilities close to strategic locations for development

Stroud Sub-area	Strategic Location	Nearest existing library facilities
Stroud South Vale (SSV)	North East Cam	Dursley Library; Cam Mobile Service stop
	Sharpness	Berkeley Community Library; Sharpness Mobile Service stop
Stroud and West (SW)	West of Stonehouse	Stonehouse Library
	Stroud Valleys	Stroud Library
Stroud and East (SE)	Aston Down	Minchinhampton Community Library
Gloucester Urban Fringe (GUF)	Hunt's Grove	Quedgeley

Initial conclusions that could be drawn with respect to 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
- **Aston Down** – development here has the potential to support the Minchinhampton Community Library, and consideration to be given to a new Mobile Library Service stop at Aston Down.

4.1.2 Community centres

Overview

There are existing community centres operated by town/parish councils and community groups within close proximity to strategic locations for development, with the exception being Aston Down, where it would be necessary to travel to nearby villages. 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 developments suggests that it is only the higher growth scenarios at West of Stonehouse that may warrant 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 new 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 a high level assessment of demand, it is predicted that the cost of community centres to serve new development in Stroud District will be between around £3.8 and £5.5 million, based on capital costs only.

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 highlights that there are numerous community, sports, voluntary and faith organisations already providing activities for young people in their local area. The County Council’s 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 will stop running youth centres, but offer the opportunity for communities to take over the running of these buildings and provide funding support to each District of £50,000.

Within 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*⁴.

Parish Plans and 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 and deficits

In the majority of cases there are existing community centres in those settlements where strategic developments 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 closest to the strategic locations for development. There is currently no community centre at Aston Down, although there are existing facilities in the nearby settlements of Minchinhampton, Frampton Mansell and Chalford.

Table 7 – Community centres close to strategic locations for development⁵

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.

⁴ <http://www.gloucestershire.gov.uk/extra/article/108406/Big-Community-Offer-Youth>

⁵ 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
		Stonehouse Town Hall	
		Stonehouse Youth Pod	
		St Joseph's Church Hall	
	Stroud Valleys	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		
Stroud and East (SE)	Aston Down	No existing facility. Nearest existing community centres are Minchinhampton Market House, Frampton Mansell Village Hall and Chalford Village Hall.	
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. ⁶
		Quedgeley Social Club	

⁶ Source: <http://www.quedgeley-pc.gov.uk/community-centre/> (accessed April 2013)

Assessment of infrastructure needs and costs

In order to gauge the level of 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* (Spon 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.
- 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 645m² 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/m² (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 the table below:

Table 8 - Assessment of need for Community Centres

Community centres (floorspace m ²)					
Sub-area	Geography/Site	Dwellings	Pop'n	Local Plan	
				Demand (m ²)	Estimated Capital Cost
Scenario 1		6,806	15654	2524	£3,786,263
Stroud South Vale (SSV)	Windfalls	168	386	62	£93,461
	North East Cam	400	920	148	£222,525
	Sharpness	200	460	74	£111,263
Stroud and West (SW)	Windfalls	187	430	69	£104,030
	West of Stonehouse	750	1725	278	£417,234
	Stroud Valleys	200	460	74	£111,263
Stroud and East (SE)	Windfalls	110	253	41	£61,194
	Aston Down	1,907	4386	707	£1,060,888
Gloucester Urban Fringe (GUF)	Windfalls	11	25	4	£6,119
	Hunt's Grove extension	500	1150	185	£278,156
Built/committed sites		4,080	9384	1513	£2,269,755

Community centres (floorspace m²)					
Sub-area	Geography/Site	Dwellings	Pop'n	Local Plan	
				Demand (m²)	Estimated Capital Cost
Scenario 2		8397	19313	3114	£4,671,356
Stroud South Vale (SSV)	Windfalls	253	582	94	£140,747
	North East Cam	675	1553	250	£375,511
	Sharpness	225	518	83	£125,170
Stroud and West (SW)	Windfalls	277	637	103	£154,099
	West of Stonehouse	1375	3163	510	£764,930
	Stroud Valleys	500	1150	185	£278,156
Stroud and East (SE)	Windfalls	166	382	62	£92,348
	Aston Down	200	460	74	£111,263
Gloucester Urban Fringe (GUF)	Windfalls	22	51	8	£12,239
	Hunt's Grove extension	625	1438	232	£347,695
Built/committed sites		4,080	9384	1513	£2,269,755
Scenario 3		9989	22975	3705	£5,557,006
Stroud South Vale (SSV)	Windfalls	336	773	125	£186,921
	North East Cam	950	2185	352	£528,497
	Sharpness	250	575	93	£139,078
Stroud and West (SW)	Windfalls	374	860	139	£208,061
	West of Stonehouse	2000	4600	742	£1,112,625
	Stroud Valleys	800	1840	297	£445,050
Stroud and East (SE)	Windfalls	221	508	82	£122,945
	Aston Down	200	460	74	£111,263
Gloucester Urban Fringe (GUF)	Windfalls	29	67	11	£16,133
	Hunt's Grove extension	750	1725	278	£417,234
Built/committed sites		4,080	9384	1513	£2,269,755
	Per Dwelling	1	2.3	0.37	£556
	Per Capita	N/A	1	0.161	£242

The assessment suggests that it is only at the West of Stonehouse strategic location, in scenario 3 (2,000 dwellings), that the potential need for a new community centre would be triggered. However, the need for and size of a community centre at any of the strategic locations will need to be considered in light of the capacity, accessibility and quality of existing and forthcoming provision in the area.

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 and revenue payments, rather than provision of new halls. Projects identified through the review work are listed below.

Recent and planned infrastructure 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.⁷
- **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.⁸
- **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 and £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.

⁷ Source: <http://www.stonehousetowncouncil.com/the-council/our-priorities/> (accessed April 2013).

⁸ Source: <http://www.stroud.gov.uk/docs/business/grants.asp>

4.1.3 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
- 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 Hunt's 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 and 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 amounts to £21,000/annum per 1,000 dwellings, with the expectation that costs relating to new development would apply for an 8 year period with the potential for annual review. Assuming support services for the 8 year period, a total cost of £168,000 per 1,000 dwellings would therefore apply. A preliminary assessment of need for Youth Support Services based on this standard is provided in the table below.

Table 9 - Assessment of need for Youth Support Services

Youth Support Services				
Sub-area	Geography/Site	Dwellings	Pop'n	Estimated Cost (based on payments for 8 years)
Scenario 1		6,806	15654	£1,143,408
Stroud South Vale (SSV)	Windfalls	168	386	£28,224
	North East Cam	400	920	£67,200
	Sharpness	200	460	£33,600
Stroud and West (SW)	Windfalls	187	430	£31,416
	West of Stonehouse	750	1725	£126,000
	Stroud Valleys	200	460	£33,600
Stroud and East (SE)	Windfalls	110	253	£18,480
	Aston Down	1,907	4386	£320,376
Gloucester Urban Fringe (GUF)	Windfalls	11	25	£1,848
	Hunt's Grove extension	500	1150	£84,000
Built/committed sites		4,080	9384	£685,440
Scenario 2		8397	19313	£1,410,696
Stroud South Vale (SSV)	Windfalls	253	582	£42,504
	North East Cam	675	1553	£113,400
	Sharpness	225	518	£37,800
Stroud and West (SW)	Windfalls	277	637	£46,536
	West of Stonehouse	1375	3163	£231,000
	Stroud Valleys	500	1150	£84,000
Stroud and East (SE)	Windfalls	166	382	£27,888
	Aston Down	200	460	£33,600
Gloucester Urban Fringe (GUF)	Windfalls	22	51	£3,696
	Hunt's Grove extension	625	1438	£105,000
Built/committed sites		4,080	9384	£685,440
Scenario 3		9989	22975	£1,678,152
Stroud South Vale (SSV)	Windfalls	336	773	£56,448
	North East Cam	950	2185	£159,600
	Sharpness	250	575	£42,000
Stroud and West (SW)	Windfalls	374	860	£62,832
	West of Stonehouse	2000	4600	£336,000
	Stroud Valleys	800	1840	£134,400
Stroud and East (SE)	Windfalls	221	508	£37,128
	Aston Down	200	460	£33,600
Gloucester Urban Fringe (GUF)	Windfalls	29	67	£4,872
	Hunt's Grove extension	750	1725	£126,000

Built/committed sites	4,080	9384	£685,440
Per Dwelling	1	2.3	£168
Per Capita	0.4	1	£73

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.⁹ 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 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 (potentially including West of Stonehouse, North East Cam and Hunt's Grove), a basic annual cost allowance of £30,000 - £35,000 is recommended by Gloucestershire County Council. In the case of Hunt's 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.

⁹ 'Grow Gloucestershire: A youth employment and skills strategy for Gloucestershire' (Gloucestershire County Council Youth Economic Stimulus Project, July 2012)

4.2 Education

4.2.1 Early Year's education and 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 will be introduced in two phases, with free early education for 20% of the least advantaged two-year-olds 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.

A detailed assessment of the need for additional Early Year's places will rely on the provision of updated baseline information, as well as more detailed information on planned housing mix and type (dwellings size and tenure) for each development. Therefore, at this stage, a high level assessment of need has been undertaken using a locally derived standard provided by Gloucestershire County Council. This suggests that planned development would result in the need for between 200 and 300 Early Year's care places, provided at a capital cost in the order of £1.4 to £2.1 million (based on Scenarios 1 and 3).

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. In September 2013 (phase one), around 130,000 (20%) of 2 year olds in England will 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).

Infrastructure related sector specific plans and 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 provision 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 is served by three further Children's Centres located in Kingsway, Quedgeley and Tuffley. The table below sets out which Children's Centres are located within each sub-area and 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 10 - Children's Centres serving Stroud District

Stroud Sub-area	Strategic Locations	Local Children's Centres reach and cluster areas	Gap analysis – based on 2011 Childcare Sufficient Assessment ¹⁰
Stroud South Vale (SSV)	North East Cam & Sharpness	Treetops Children's Centre, Dursley	-
		Wotton Children's Centre, Wotton-under-Edge	Demand high and gaps identified in current provision.
Stroud and West (SW)	West of 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.
Stroud and East (SE)	Aston Down	Nailsworth Children's Centre, Nailsworth	-
		Painswick Children's Centre, Painswick	-
Gloucester Urban Fringe (GUF)	Hunt's 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	-

¹⁰ 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.

Assessment of infrastructure needs and costs

To complete a detailed local assessment of the need for additional Early Years places, up to date data 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.

However, a high level District-wide indicative assessment of basic need based on the overall numbers of new dwellings proposed 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:

- 3 (full-time equivalent) Early Year's care places per 100 qualifying homes¹¹. Gloucestershire CC currently utilise the Department of Children, Schools and Families (DCSF) Basic Need Costs Multipliers (2009) to estimate capital costs, which is £7,000 per Children's Centre care place.

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. The assessment of need will therefore need to be reviewed as part of a more detailed analysis once data on the locations and proposed housing mix and type (i.e. size and tenure) has been confirmed.

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) Directorate¹². In line with good practice, the County Council have recently instigated an update review of this standard.

Table 11 sets out the results of the indicative assessment of demand from growth for Early Year's provision across Stroud District, for each of the three It covers the main Scenario 1, as applies for the emerging Development Strategy, and contingency growth scenario. The table also includes an indicative cost based on a basic needs cost multiplier applicable to Children Centre places, as identified by the former DCSF in 2009. 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.

Table 11 - Assessment of need for Early Year's / Care places

Geography/Site	Dwellings	Local Plan	
		Theoretical Demand for Places	Estimated Capital Cost
Scenario 1	6,806	204	£1,428,000
Scenario 2	8,397	252	£1,764,000

¹¹ 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).

¹² *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)

Scenario 3	9,989	300	£2,100,000
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Current projects

As previously mentioned, the County Council is in the process of reviewing the local standard used for assessing Early Year's requirements with respect to the demand arising from new development. This may result in the creation of a new standard that could be applicable to local planning and the future consideration of planning applications. In terms of infrastructure projects, the County Council are currently undertaking a major commissioning exercise for the running of all of its 39 Children's Centres for a period of up to 7 years. Newly commissioned services are due to be agreed by mid-2013.

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.

4.2.2 Primary and 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. Local Authorities 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 and DCSF Basic Needs Cost Multipliers. Application of

these results in projected demand for between 1,700 and 2,500 primary school places at a capital cost of around £20mil to £29.4mil; and between 1,225 and 1,800 secondary school places at a cost of around £18.6mil and £27.3mil.

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 improvement 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 and 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 yrs 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 – 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 complimented by a number of secondary schools within the Gloucester City secondary school planning area that also offer sixth-form provision.

Assessment of infrastructure needs and 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. Detailed site-by-site accessibility assessments will be needed. Consequently, at this stage of the IDP process a broader needs assessment to the level of a school planning area represents the most practical approach. This need assessment should be augmented by an occurrence of new pupils over time, such as in five-year blocks over the lifetime of the Local Plan.

Detailed assessments of need for school places will therefore rely upon 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).

For the purpose of this study, a high level assessment of indicative need has been undertaken, based on the following locally derived Gloucestershire CC Standards:

- 25 primary school places required by every 100 additional dwellings (Gloucestershire SIDP 2010). Gloucestershire CC currently utilise the DCSF Basic Need Cost Multipliers (2011/12) to estimate capital costs, which is £11,768 per primary school pupil place.
- 18 secondary school places per 100 qualifying homes, for 11-16yrs only (Gloucestershire SIDP 2010). Gloucestershire CC currently utilise the DCSF Basic Need Costs Multipliers (2011/12) to estimate capital costs, which is £15,199 per secondary school 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.

Table 12 - Assessment of need for Primary and Secondary Education places

Primary Education (Pupil Places)			
Geography/Site	Dwellings	Local Plan	
		Theoretical Demand for Places	Estimated Capital Cost
Scenario 1	6,806	1,702	£20,029,136
Scenario 2	8,397	2,099	£24,701,032
Scenario 3	9,989	2,497	£29,384,696
Secondary Education (Pupil Places)			
Geography/Site	Dwellings	Local Plan	
		Theoretical Demand for Places	Estimated Capital Cost
Scenario 1	6,806	1,225	£18,618,775
Scenario 2	8,397	1,511	£22,965,689
Scenario 3	9,989	1,798	£27,327,802

Gloucestershire County Council have provided preliminary comments on the implications of new development for four of the strategic locations:

- **Hunt's Grove Extension** – Likely that a larger development area will require a reassessment of education requirements, which may result in revised on-site provision, particularly for primary-level education.
- **West of Stonehouse** – 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, which is primarily situated within Stonehouse (i.e. there are two railway lines with limited crossing opportunities between the prospective development area and the existing settlement).
- **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.

Current projects

There are no current primary school projects in the district.

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.

4.2.3 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 concludes that between around 490 and 720 additional places would be required at a capital cost of approximately £7.4 to £10.9mil.

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 for Further Education places has been undertaken by projecting the Gloucestershire Secondary School standard and DCSF Basic Needs Cost Multiplier for secondary schools by a further two years. As 18 secondary school places are estimated to be required per 100 qualifying homes for a five year period (11 – 16 years), it is estimated that 7.2 Further Education places would be required for 17 and 18 year olds per 100 qualifying homes. It is also considered reasonable to apply the secondary school cost standard of £15,199 per pupil place. The Department for Education '*Briefing Framework for Secondary Schools*' recommends that secondary school sixth forms should provide 14.24m² per pupil aged 16 to 18 years. This broadly aligns with Department for Education '*Guidance for Further Education Colleges on the Management of Floor Space*' (2007), which recommends ranges per workspace of between 11.5m² and 14.5m² for colleges and 10m² to 13m² for sixth form colleges.

Application of these standards results in the following estimated demand for Further Education places as a result of new development:

Table 13 - Assessment of need for Further Education places

Further Education (Pupil Places)			
Geography/Site	Dwellings	Local Plan	
		Theoretical Demand for Places	Estimated Capital Cost
Scenario 1	6,806	490	£7,447,510
Scenario 2	8,397	605	£9,195,395
Scenario 3	9,989	719	£10,928,081

Current Projects

During the year 2011/12 the College's Estate Strategy was approved, which includes the development of a sports centre and classrooms at the Stroud Campus.¹³

¹³ Source: South Gloucestershire and Stroud College Annual Report 2011/12 - "*Outstanding by Standing Out*"

Funding Sources

The Government has put in place a series of funding mechanisms to support Further Education capital and infrastructure spending, which are administered by the Education Funding Agency (EFA):

- ***Devolved Formula Capital (DFC)*** – Sixth-form colleges will receive DFC payments for the 2012-13 financial year of £4,000 per institution plus £22.50 per full-time learner. This is to be allocated to planned capital and maintenance works.
- ***Sixth-form college Building Condition Improvement Fund (BCIF)*** – BCIF funding will be available during 2012-13 to help improve colleges in the lowest two condition categories.
- ***16-19 Demographic Growth (Basic Need) Fund (DGCF)*** - The purpose of the DGCF is to provide funding to create accommodation for new learners aged 16 to 19 in local areas, arising from increases in the local population or increases in participation by young people who were not in education, employment or training (NEET). In particular, the EFA wants to identify new learners with learning difficulties and/or disabilities (LLD/D) who require local provision.

4.3 Emergency Services

4.3.1 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 4000 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 Hunt's 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 14 below is based on feedback provided by SWASFT in April 2013. 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 14 - Ambulance Service requirements relating to new development

Areas	Strategic Locations	Scenario 1 (dwellings)	Scenario 2 (dwellings)	Scenario 3 (dwellings)	Comment on requirements from ambulance service	
Stroud District	All sites (including commitments and windfall development)	6,806	8,397	9,989		
Stroud South Vale	North East Cam	400	675	950	Investment in a Dursley Co-Responder scheme would assist with responses in this area.	
	Sharpness	200	225	250	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 (9ha)	-	-	-		
Stroud & West	West of Stonehouse	750	1,375	2,000	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 (17ha)	-	-	-		
	Stroud Valleys	Sub-total	200	500	800	
		Dudbridge to Wallbridge				Accessible within 8 minutes from Stroud Ambulance Station.
		Brimscombe & Thrupp				Brimscombe and Thrupp are not achievable within 8 minutes from any ambulance station: a facilitated standby point will be required in this area.
Grange fields and/or Callowell Farm				Grange fields and Callowell Farm are not achievable within 8 minutes from any ambulance station: a facilitated standby point will be required in this area. This could be shared with Brimscombe and Thrupp.		
Stroud & East	Aston Down	200	200	200	Aston Down is not achievable within 8 minutes from any ambulance station: a facilitated standby point will be required in this area. This could be shared with Brimscombe and Thrupp.	
Gloucester Urban Fringe	Hunt's Grove Extension	500	625	750	Development accessible within an 8 minute response time.	
	Quedgeley East employment allocation (13ha)	-	-	-		

4.3.2 Fire and 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*** notes 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 are being 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 and 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 15 - Fire and Rescue Stations in Stroud District¹⁴

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

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

and minimum standards for hydrants, which are normally secured by a condition attached to a planning permission.

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

Specific points raised in relation to strategic locations for development in Stroud are as follows:

Table 16 - Fire & Rescue Service comments on strategic locations for development

Stroud Sub-area	Strategic Location	Comment	
Stroud South Vale (SSV)	North East Cam (housing)	Location specific comments requested through consultation.	
	Sharpness (housing)	Location specific comments requested through consultation.	
	Sharpness (employment)		
Stroud and West (SW)	West of Stonehouse	Strategic location accessible from Stroud Community Fire & Rescue Station	
	West of Stonehouse (employment)		
	Stroud Valleys	Dudbridge to Wallbridge	Location specific comments requested through consultation.
		Brimscombe & Thrupp	
Grange fields and/or Callowell Farm			
Stroud and East (SE)	Aston Down	Location specific comments requested through consultation.	
Gloucester Urban Fringe (GUF)	Hunt's Grove	Position of access point and layout of development will be of particular importance in this location to ensure that target response times can be met.	

4.3.3 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.

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 between £85 – £122 per dwelling (depending on scenario) 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 and 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 it is anticipated building work will start in the summer of 2013

- New Gloucester Police Station – a site has been purchased and an outline business case approved but no timescales 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 17 - Police Stations in Stroud District

Name of facility	Key Functions	Infrastructure required
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 is 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 planned for construction at an identified site close to Police Headquarters in Waterwells is required to 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 and 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 the 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: £121.98¹⁵ per

¹⁵ Gloucestershire Constabulary has obtained population figures from the Gloucestershire County Council demographics team to input to the ACPO formula as this information was not provided in the Infrastructure Provider Briefing Packs prepared by Arup. The same population figure was utilised for the three development scenarios when it is expected that there should be a difference in population generated by the two options. The Constabulary therefore reserves the right to update the calculations as necessary.

dwelling for Development Scenario 1; £98.86 per dwelling for Development Scenario 2; and £83.11 per dwelling for Development Scenario 3.¹⁶

Of note is that for Hunt's 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.

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 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

¹⁶ Gloucestershire Constabulary has provided estimated costs for infrastructure, however this is strictly confidential and therefore not included within the IDP report or Appendices. The Constabulary has confirmed they should be contacted directly with any queries regarding infrastructure costs or the ACPO formula.

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 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 Board 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 will be one county-wide Clinical Commissioning Group, with a locality sub-structure. At the Stroud District level a single Practice-based Commissioning Cluster has been established, comprising the GP surgeries delivering local **Primary Healthcare** services. From April 2013 the GCCG and Practice-based Commissioning Clusters 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 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.
- **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.

- **PropCo** - A Government-owned limited company, NHS Property Services, is to take ownership of, and manage, that part of the former Primary Care Trust estate that will not transfer 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 some GP surgeries are owned independently.

4.4.1 Primary Healthcare

Primary healthcare services which have typically fallen under the direct control of 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 and baseline

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

- **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.

Assessment of infrastructure need and costs

The IDP assessment of need is based upon preliminary feedback provided by a representative of the Stroud CCG, supported by a high level 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.

Firstly, the high level assessment assumes that, as a minimum, a current average GP list size should be maintained at the District's surgeries. The demand for doctors is based on the average GP patient list size for Avon, Gloucestershire and Wiltshire of 1,369 (taken from the Department for Health GP Patient Survey *Overall PCT Report July 2011 - March 2011*). The capital cost of delivering surgeries is based on a standard of 140m² per GP, at a capital cost of £1,400/m² (floorspace benchmark recommended by South Cotswold GP representative, with estimated cost based on BCIS Online Q2 2013 information and Spons 2012 surgery example, rebased for 2013 and Gloucestershire location). It is noted following consultation with GPs that the capital cost of surgery provision can be substantially greater than that indicated here (upwards of £1,800/m²), particularly where additional design standards apply, such as within Conservation Areas.

This assessment indicates that residential development set out in the infrastructure planning development scenarios would generate demand for between approximately 11 and 17 General Practitioners.

Table 18 - Assessment of need for General Practitioner positions (GPs)

Primary healthcare					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand (GPs)	Estimated Capital Cost
Scenario 1		6,806	15654	11.4	£2,241,158
Stroud South Vale (SSV)	Windfalls	168	386	0.3	£55,321
	North East Cam	400	920	0.7	£131,717
	Sharpness	200	460	0.3	£65,858
Stroud and West (SW)	Windfalls	187	430	0.3	£61,578
	West of Stonehouse	750	1725	1.3	£246,969
	Stroud Valleys	200	460	0.3	£65,858
Stroud and East (SE)	Windfalls	110	253	0.18	£36,222
	Aston Down	1,907	4386	3.20	£627,959
Gloucester Urban Fringe (GUF)	Windfalls	11	25	0.02	£3,622
	Hunt's Grove extension	500	1150	0.84	£164,646
Built/committed sites		4,080	9384	6.85	£1,343,509
Scenario 2		8397	19313	14.11	£2,765,060
Stroud South	Windfalls	253	582	0.43	£83,311
	North East Cam	675	1553	1.13	£222,272

Primary healthcare					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand (GPs)	Estimated Capital Cost
Vale (SSV)	Sharpness	225	518	0.38	£74,091
Stroud and West (SW)	Windfalls	277	637	0.47	£91,214
	West of Stonehouse	1375	3163	2.31	£452,776
	Stroud Valleys	500	1150	0.84	£164,646
Stroud and East (SE)	Windfalls	166	382	0.28	£54,662
	Aston Down	200	460	0.34	£65,858
Gloucester Urban Fringe (GUF)	Windfalls	22	51	0.04	£7,244
	Hunt's Grove extension	625	1438	1.05	£205,807
Built/committed sites		4,080	9384	6.9	£1,343,509
Scenario 3		9989	22975	16.8	£3,289,292
Stroud South Vale (SSV)	Windfalls	336	773	0.6	£110,642
	North East Cam	950	2185	1.6	£312,827
	Sharpness	250	575	0.4	£82,323
Stroud and West (SW)	Windfalls	374	860	0.6	£123,155
	West of Stonehouse	2000	4600	3.4	£658,583
	Stroud Valleys	800	1840	1.3	£263,433
Stroud and East (SE)	Windfalls	221	508	0.4	£72,773
	Aston Down	200	460	0.34	£65,858
Gloucester Urban Fringe (GUF)	Windfalls	29	67	0.0	£9,549
	Hunt's Grove extension	750	1725	1.3	£246,969
Built/committed sites		4,080	9384	6.9	£1,247,544
	Per Dwelling	1	2.3	0.002	£329
	Per Capita	0.43	1	0.0007	£143

The locations of the nearest existing GP surgeries with respect to proposed strategic locations for development in Stroud are set out in the table below. 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 preliminary 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, to improve the accuracy of the average patient list size recorded here. This work will be undertaken to inform the final version of the IDP.

Table 19 - Stroud Doctors Surgeries

Stroud Sub-area	Strategic Location	Surgeries within settlements (or closest available)	Number of GPs ¹⁷	Patient list size ¹⁸	Average patient list size per GP	Description / comment
Stroud South Vale (SSV)	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.
Stroud and West (SW)	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	

¹⁷ Data on number of GPs sourced from NHS Choices website in November 2012.

¹⁸ Data source from www.apho.org.uk National General Practices Profiles (accessed April 2013)

Stroud Sub-area	Strategic Location	Surgeries within settlements (or closest available)	Number of GPs ¹⁷	Patient list size ¹⁸	Average patient list size per GP	Description / comment
		St Luke's Medical Centre, Stroud	3	4,233	1,411	
Stroud and East (SE)	Aston Down	Frithwood Surgery, Bussage	5	6,448	1,290	The surgery at Minchinhampton is investigating options for relocation to new premises. This could provide the option to expand premises to cater for new development.
		The Surgery, Bell Lane, Minchinhampton	7	7,158	1,023	
Gloucester Urban Fringe (GUF)	Hunt's Grove	Quedgeley Medical Centre, Quedgeley (Siva)	1	3,753	3,753	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 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	
		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.

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. The number of older people aged 65+ in the county has been growing by an average of 1,500 people per year over the last 10 years or so. Projections suggest that this will double to an annual increase of around 3,000 people on average in the short and medium term, increasing to 3,300 people in the longer term. Significantly, the projected percentage increase of the older population is greater in Gloucestershire than in England over the period 2010-2035 (up 70% compared to 65%).¹⁹ Within Stroud, there is a slightly higher proportion of people aged 65+ living alone, 13.6% in 2011 rather than the county average of 13.2%.²⁰

‘Ready for Ageing?’²¹, a recent report prepared for a House of Lords select committee, advises that a 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

¹⁹ Source: MAIDeN ‘Understanding Gloucestershire 2012’

²⁰ Source: MAIDeN ‘Stroud District Profile’ (2013)

²¹ House of Lords Select Committee on Public Service and Demographic Change ‘Ready for Ageing? – report’ (14 March 2013)

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 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.

Recent and current projects

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

Dentists

Responsibilities for delivery and baseline

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.

Dental Provision is measured by UDAs (units of dental activity) or UOAs (units of orthodontic activity). Contractors are commissioned to provide a specific volume of activity, which across the Gloucestershire County totals 844,866 UDAs and 42,218 UOAs, at a cost of £20.5 million.

Baseline and Assessment of Infrastructure Needs and 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

Stroud Sub-area	Strategic Location	Surgeries within settlements (or closest available)
Stroud South Vale (SSV)	North East Cam	Archway Dental Practice, Dursley
		Cam Dental Surgery, Cam

Stroud Sub-area	Strategic Location	Surgeries within settlements (or closest available)
		Sandpits Clinic, Dursley
	Sharpness	Berkeley Hospital, Berkeley
Stroud and West (SW)	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		
Stroud and East (SE)	Aston Down	Minchinhampton Dental Practice, Minchinhampton
Gloucester Urban Fringe (GUF)	Hunt's Grove	Quedgeley House Dental Practice, Quedgeley
		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 assessment of predicted demand for additional dental services assumes that 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 130m² per Dentist, at a capital cost of £1,400/m² (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).

Table 21 - Assessment of need for Dentists

Primary healthcare - demand for Dentists					
Sub-area / strategic location	Dwellings	Pop'n	Local Plan		
			Demand	Capital Cost	
Scenario 1	6,806	15654	7.8	£1,424,496	
Stroud South Vale (SSV)	Windfalls	168	386	0.2	£35,162
	North East Cam	400	920	0.5	£83,720
	Sharpness	200	460	0.2	£41,860
Stroud and	Windfalls	187	430	0.2	£39,139

Primary healthcare - demand for Dentists					
Sub-area / strategic location		Dwellings	Pop'n	Local Plan	
				Demand	Capital Cost
West (SW)	West of Stonehouse	750	1725	0.9	£156,975
	Stroud Valleys	200	460	0.2	£41,860
Stroud and East (SE)	Windfalls	110	253	0.1	£23,023
	Aston Down	1,907	4386	2.2	£399,135
Gloucester Urban Fringe (GUF)	Windfalls	11	25	0.0	£2,302
	Hunt's Grove extension	500	1150	0.6	£104,650
Built/committed sites		4,080	9384	4.7	£853,944
Scenario 2		8397	19313	9.7	£1,757,492
Stroud South Vale (SSV)	Windfalls	253	582	0.3	£52,953
	North East Cam	675	1553	0.8	£141,278
	Sharpness	225	518	0.3	£47,093
Stroud and West (SW)	Windfalls	277	637	0.3	£57,976
	West of Stonehouse	1375	3163	1.6	£287,788
	Stroud Valleys	500	1150	0.6	£104,650
Stroud and East (SE)	Windfalls	166	382	0.2	£34,744
	Aston Down	200	460	0.2	£41,860
Gloucester Urban Fringe (GUF)	Windfalls	22	51	0.0	£4,605
	Hunt's Grove extension	625	1438	0.7	£130,813
Built/committed sites		4,080	9384	4.7	£853,944
Scenario 3		9989	22975	11.5	£2,090,698
Stroud South Vale (SSV)	Windfalls	336	773	0.4	£70,325
	North East Cam	950	2185	1.1	£198,835
	Sharpness	250	575	0.3	£52,325
Stroud and West (SW)	Windfalls	374	860	0.4	£78,278
	West of Stonehouse	2000	4600	2.3	£418,600
	Stroud Valleys	800	1840	0.9	£167,440
Stroud and East (SE)	Windfalls	221	508	0.3	£46,255
	Aston Down	200	460	0.2	£41,860
Gloucester Urban Fringe (GUF)	Windfalls	29	67	0.0	£6,070
	Hunt's Grove extension	750	1725	0.9	£156,975
Built/committed sites		4,080	9384	4.7	£853,944
Per Dwelling		1	2.3	0.001	£209
Per Capita		0.43	1	0.0005	£91

Recent and current projects

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

4.4.2 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. No specific capital projects are identified in this summary document.

Baseline

In 2012/13 the Hospitals Trust secured around 80% of the locally available acute funding and therefore retains 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 Unify2 data 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 - Availability of hospital beds in Gloucestershire

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 and 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 597,200 to 636,400 over a ten year period and that the population is ageing at a higher 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 areas

around the trust, new and replacement equipment, and implementation of SmartCare and our technology blueprint.

In order to provide a high level 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 & Acute beds of 1.78 per 1,000 population is maintained. Capital costs have been estimated based on a floorspace standard of 50m² per bed (based on the NHS London Healthy Urban Development Unit model) and cost per bed of £1,700/m², based on BCIS Online April 2013 information with cost rebased to a Gloucestershire location.

The results of the assessment is summarised in the table below:

Table 23 - Assessment of need for General and Acute Care Hospital Beds

Secondary Healthcare - General & Acute Care Beds					
Sub-area / strategic location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Scenario 1		6,806	15654	27.9	£2,368,420
Stroud South Vale (SSV)	Windfalls	168	386	0.7	£58,462
	North East Cam	400	920	1.6	£139,196
	Sharpness	200	460	0.8	£69,598
Stroud and West (SW)	Windfalls	187	430	0.8	£65,074
	West of Stonehouse	750	1725	3.1	£260,993
	Stroud Valleys	200	460	0.8	£69,598
Stroud and East (SE)	Windfalls	110	253	0.5	£38,279
	Aston Down	1,907	4386	7.8	£663,617
Gloucester Urban Fringe (GUF)	Windfalls	11	25	0.0	£3,828
	Hunt's Grove extension	500	1150	2.0	£173,995
Built/committed sites		4,080	9384	16.7	£1,419,799
Scenario 2		8397	19313	34.4	£2,922,072
Stroud South Vale (SSV)	Windfalls	253	582	1.0	£88,041
	North East Cam	675	1553	2.8	£234,893
	Sharpness	225	518	0.9	£78,298
Stroud and West (SW)	Windfalls	277	637	1.1	£96,393
	West of Stonehouse	1375	3163	5.6	£478,486
	Stroud Valleys	500	1150	2.0	£173,995
Stroud and East (SE)	Windfalls	166	382	0.7	£57,766
	Aston Down	200	460	0.8	£69,598
Gloucester Urban Fringe (GUF)	Windfalls	22	51	0.1	£7,656
	Hunt's Grove extension	625	1438	2.6	£217,494
Built/committed sites		4,080	9384	16.7	£1,419,799
Scenario 3		9989	22975	40.9	£3,476,072

Secondary Healthcare - General & Acute Care Beds					
Sub-area / strategic location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Stroud South Vale (SSV)	Windfalls	336	773	1.4	£116,925
	North East Cam	950	2185	3.9	£330,591
	Sharpness	250	575	1.0	£86,998
Stroud and West (SW)	Windfalls	374	860	1.5	£130,148
	West of Stonehouse	2000	4600	8.2	£695,980
	Stroud Valleys	800	1840	3.3	£278,392
Stroud and East (SE)	Windfalls	221	508	0.9	£76,906
	Aston Down	200	460	0.8	£69,598
Gloucester Urban Fringe (GUF)	Windfalls	29	67	0.1	£10,092
	Hunt's Grove extension	750	1725	3.1	£260,993
Built/committed sites		4,080	9384	16.7	£1,419,799
	Per Dwelling	1	2.3	0.004	£352
	Per Capita	0.43	1	0.002	£153

Recent and current projects

No secondary healthcare building projects have been identified through the review work to date, other than the provision of a satellite radiotherapy unit in Herefordshire by the Hospitals NHS Trust.

4.5 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, some 15km away. This reinforcement work could take 2-3 years to implement.

With respect to heat 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 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.

4.5.1 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 and strategies

Gloucestershire Renewable Energy Study (2010-2011) A two stage study looking at the potential for renewable energy in Gloucestershire in the period to 2026²², 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 development²³ (either new build or conversion) should incorporate renewable energy technology on-site to reduce predicted CO₂ emissions by at least 10%.

Current and 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).
- **Energy from Waste facility at Javelin Park, Stroud** – during March 2013 Gloucestershire considered 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.

²² Gloucestershire County Council (2010) Renewable Energy Study and Resource Assessment
Gloucestershire County Council (2011) Renewable Energy Study 2 – Resource Assessment

²³ 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.

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 up to 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.

4.5.2 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 and 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).

WPD have provided 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 2-3 years, depending on negotiations with the landowners.

Table 24 - Western Power Distribution comments on electricity connections to Strategic Locations

Stroud Sub-area	Strategic Locations and scenarios	Comment from WPD
Stroud South Vale (SSV)	North East Cam (500; 625 or 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.
	Sharpness (200; 225 or 250 dwellings)	The primary substation (Berkeley) adjacent to the proposed site is nearing full capacity. 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.
	Severn Distribution Park (9ha employment)	Approximate load requirement 4.5MVA. The primary substation (Berkeley PSS) adjacent to the proposed site is nearing full capacity. Accommodation of 4.5MVA can be accepted at the moment with minimal works, but significant load growth in the area, coupled with the Severn Park scheme may necessitate installation of a new 33kV circuit back to Ryeford BSP some 15km away.
Stroud and West (SW)	West of Stonehouse (750; 1,375 or 2,000 dwellings)	The anticipated demand requirement for this site is 3MVA. The primary substation adjacent to the site (Ryeford/Netherhills PSS) currently has ample capacity to accommodate the proposed development. This development will probably necessitate a new 11kV circuit from the PSS, along with associated infrastructure.
	North of Stroudwater Industrial Estate (17ha 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.
	Stroud Valleys (200; 500 or 800 dwellings)	The anticipated demand requirements for the above developments is 2MVA. The primary substation (Dudbridge PSS) adjacent to the proposed site 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 development.
Stroud and East (SE)	Aston Down (200 dwellings)	The anticipated demand requirement for this site is less than 1MVA. The primary substation (Cherinton PSS) adjacent to the proposed site presently has sufficient capacity to accommodate the development. This development will probably require an additional 11kV circuit from Cherinton PSS, along with associated 11kV infrastructure to suit the development.
Gloucester	Hunt's Grove	The anticipated demand for this site is 1.5MVA. The

Stroud Sub-area	Strategic Locations and scenarios	Comment from WPD
Urban Fringe (GUF)	(500; 625 or 750 dwellings)	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.

4.5.3 Gas Distribution

Responsibilities for delivery

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

Assessment of infrastructure needs and current projects

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 the refresh and update of the IDP. Preliminary comments have been provided in relation to proposed development at Hunt's Grove:

Table 25 – 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 (500; 625 or 750 dwellings)	Further more detailed information is required to judge capacity or whether reinforcements to infrastructure will be necessary.
	Sharpness (200; 225 or 250 dwellings)	Further more detailed information is required to judge capacity or whether reinforcements to infrastructure will be necessary.
	Severn Distribution Park (9ha employment)	No comment to date.
Stroud and	West of Stonehouse (750; 1,375 or 2,000)	Further more detailed information is required to judge capacity or whether reinforcements to

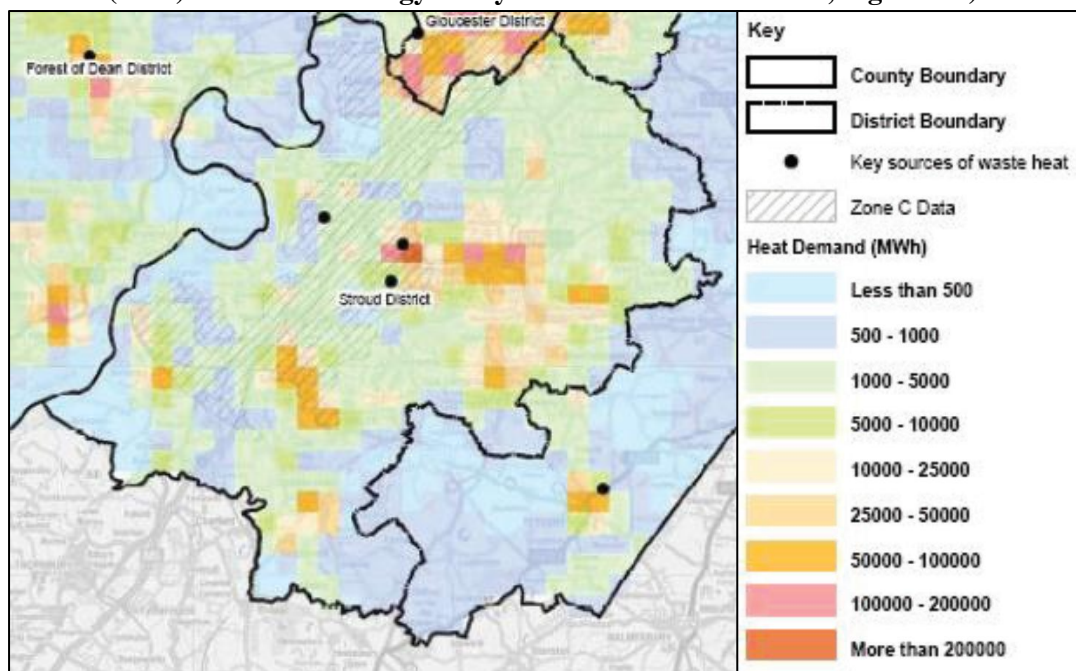
Stroud Sub-area	Strategic Locations and scenarios	Comment from WWU
West (SW)	dwelling(s)	infrastructure will be necessary.
	North of Stroudwater Industrial Estate (17ha employment)	No comment to date.
	Stroud Valleys (200; 500 or 800 dwelling(s))	WWU does serve the Stroud Valleys, but will require further more detailed information to judge capacity or possible reinforcements to infrastructure.
Stroud and East (SE)	Aston Down (200 dwelling(s))	Further more detailed information is required to judge capacity or whether reinforcements to infrastructure will be necessary.
Gloucester Urban Fringe (GUF)	Hunt's Grove (500; 625 or 750 dwelling(s))	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 dwelling(s) proposed.
	Quedgeley East (13ha employment)	No comment to date.

4.5.4 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.

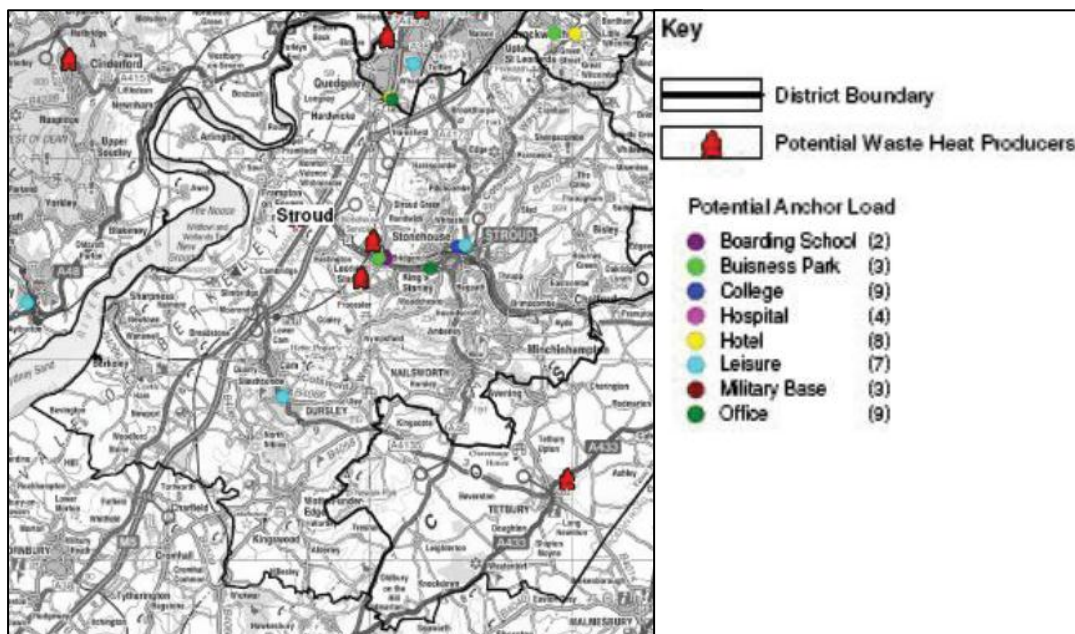
Figure 2 - Heat Demand in Stroud District (recreated from Gloucestershire County Council (2011) Renewable Energy Study 2 – Resource Assessment, Figure 8.1)



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 leisuers uses in Quedgeley. Also identified is a potential waste heat producer in the vicinity of Stonehouse.

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.

Figure 3 - Sites with Good Potential for Renewable Heating - recreated from Gloucestershire County Council (2011) Renewable Energy Study 2 – Resource Assessment, Figure 8.1



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.²⁴

²⁴ Source: 'Investing in Britain's Future' (June 2013, HM Treasury)

4.6 Flood management, water supply and wastewater

4.6.1 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 locations of strategic development proposals within the Local Plan, these have been informed by Strategic Flood Risk Assessments and it is not anticipated that any abnormal or onerous site specific flood risk management infrastructure requirements will arise. Site selection has been informed by the Strategic Flood Risk Assessment process and it has been possible to select areas of land that are predominantly located in Flood Zone 1 (low risk). An 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 Gloucestershire Flood Risk Management Strategy, the partnership of organisations have identified two 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 below²⁵ and a full list of responsibilities is attached at Appendix B.

²⁵ Summary of Local Government Association information:
<http://www.local.gov.uk/web/guest/local-flood-risk-management/>

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, 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.

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 and 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 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.

For each strategic location identified 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). It is not expected at this stage that any abnormal, onerous site specific flood risk management infrastructure requirements will arise. The Environment Agency has also advised that, providing developers undertake adequate and appropriate surface water drainage management, the allocations are not anticipated to require further infrastructure provision as a result of exacerbating flood risk.

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).

Through the preparation of the Draft Gloucestershire Flood Risk Management Strategy, two flood risk management projects within Stroud District have been identified. Table 26 provides a summary of the relevant SFRA Level 2 findings for each strategic location for development, together with notes on planned infrastructure projects within the relevant sub-area.

Table 26 – Review of flood risk management information by sub-area and strategic location for development

Areas	Strategic Locations		SFRA Level 2 conclusions	Planned infrastructure projects	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. 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.	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		Majority of site reference 321 located within Flood Zone 1. North western part of site has flooded historically and there are two forms of residual risk: culvert blockage or collapse along Brookend and Saniger watercourses; and breach of River Severn flood defences. For both of these scenarios flood hazard is significant to extreme.	No specific projects identified.	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.
Stroud & West	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	Dudbridge to Wallbridge	Site reference 319 identified as being significantly affected by Flood Zone 3b. It is noted that there are moderate to significant hazard ratings for areas of interaction between the canal and river. It is strongly recommended that the identified risk areas are kept as open	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. There are a number of other	The completion of site specific Flood Risk Assessment for Dudbridge to Wallbridge will be important to inform the locations of development within the site and extent of flood risk management measures that may be required.

Areas	Strategic Locations	SFRA Level 2 conclusions	Planned infrastructure projects	Comment
		space and development located towards Flood Zone 1.	‘clusters’ of flooding in Stroud (e.g. Devereaux Crescent) which needs to be investigated to identify flood alleviation schemes.	
	Brimscombe & Thrupp	<p>Brimscombe Port Flood Risk Assessment (April 2011) identifies that proposed canal restoration would not have adverse flooding impacts and would provide a small increase in floodplain storage of 1,000m³. Application of sequential and exception tests indicates that development and proposed land uses comply with PPS25.</p> <p>Thrupp (site ref: 284, 285, 286) – sites 284 and 286 significantly affected by Flood Zone 2, while 285 significantly affected by Flood Zone 3b. At site 285, there is a low hazard interaction between the river and canal. The football ground floods during events and it is recommended that the flow path to enable this is kept as open space.</p>		The completion of site specific Flood Risk Assessment for Thrupp will be important to inform the locations of development within the site and extent of flood risk management measures that may be required.
	Grange fields and/or Callowell Farm	<p>Callowell Farm (site ref: 148) – Site is fully within Flood Zone 1</p> <p>Grange Fields (site ref: 91) – Site is fully within Flood Zone 1.</p>		No further comments
Stroud & East	Aston Down	Area not covered by SFRA Level 2	No specific projects identified.	No further comments.
Gloucester Urban	Hunt’s Grove Extension	Site reference 9 in Flood Zone 1 but marginally affected by Flood Zones 2, 3a	No specific projects identified.	No further comments.

Areas	Strategic Locations	SFRA Level 2 conclusions	Planned infrastructure projects	Comment
Fringe		and 3b. Development in flood risk areas considered to avoidable through masterplanning process.		

Current infrastructure projects

The following current flood risk management projects within Stroud District have been identified through the review work:

Table 27 - Flood risk management infrastructure projects

Project Title	Project Description	Lead Organisation	Site Identified	Estimated Capital Cost	Programme date
Flood Risk - SSV - 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	Pending	Not known	2014
Flood Risk - SW - 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	Yes	£500,000 - £1,000,000	Current
Flood Risk - SSV - Managed Realignment Project	The Severn Tidal Tributaries CFMP and Consultation Draft Severn Flood and Coastal Erosion Management Plan provide assessments of need and identify potential requirements for a Managed Realignment scheme in Stroud District (to be confirmed – potential link with Green Infrastructure chapter)	Environment Agency	No	Not known	Not known

It is also recommended that a pot of funding for the maintenance of flood risk infrastructure is established.

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.

It is estimated that every £1 currently being invested in new and improved defences in the UK reduces the long-term costs of flooding by on average £8, providing a financial incentive for action at the local level. The cost of flood risk management works also can also appear more attractive when offset against projected increases in insurance premiums and excesses if no action is taken.

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 recent publication introduces 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.

4.6.2 Water and wastewater

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:

- *West of Stonehouse capacity improvements may involve, as a worst case, replacement of the existing pumping station and duplication/upsizing of a 1.3km rising main.*
- *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.*
- *Hunt's Grove – Subject to hydraulic modelling, some localized upsizing of pumping and sewerage infrastructure may be required, but no major capacity issues are envisaged.*
- *Sharpness - At Sharpness, the existing treatment works and sewerage network have limited capacity and it is expected that upgrades will be required, subject to further assessment.*

Wessex Water have advised that the proposed employment development at Sharpness occupies a position adjoining the existing sewage treatment works, with in a development restraint zone. Consultation with Wessex Water around potential odour nuisance issues is requested.

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.

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 and 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 the spring 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 1st April 2010 to 31st March 2015. AMP6 will cover the period from 1st April 2015 to 31st March 2020 and the water companies' draft Business Plans will be 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. 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 and 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 are²⁶:

- 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 waste water services the key commitments are:

²⁶ Source: “Our commitment to your services – Severn Trent Water’s investment plans for 2010-15”

- 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 waste water 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 and costs

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 strategic locations for development. 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.

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).

Table 28 - Water and wastewater utility comments by strategic location for development

Areas	Strategic Locations	Waste water treatment capacity	Sewage and drainage network capacity
<p>Stroud South Vale</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>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 – Treatment works at Sharpness have limited capacity and will require appraisal to confirm necessary capacity improvements.</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>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 request that further discussions are held with Wessex Water before proceeding with any development proposals at this location.</p>	<p>No specific comments raised.</p>	
<p>Stroud & West</p>	<p>West of Stonehouse</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</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</p>

Areas	Strategic Locations	Waste water treatment capacity	Sewage and drainage network capacity	
		other physical constraints preventing expansion.	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. 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.	
	North of Stroudwater Industrial Estate (employment)	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.		
	Stroud Valleys	Dudbridge to Wallbridge	STW – Proposed site 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.	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 affects some property. 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 sustainability 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 arrangements may be required which only allow new development flows to be discharged during times of low flow in the
		Brimscombe & Thrupp		
Grange fields and/or Callowell Farm				

Areas	Strategic Locations	Waste water treatment capacity	Sewage and drainage network capacity
			main sewer.
		STW - High potential impact on sewerage infrastructure – known severe flooding problems downstream in Stroud.	
Stroud & East	Aston Down	STW - This area is not currently connected to the public sewerage system. Any connection will be to the top of the Stroud sewerage catchment (see comments above relating to Stroud Valleys).	
Gloucester Urban Fringe	Hunt’s Grove Extension	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 expansion.	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.
	Quedgeley East (employment allocation)		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.
		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.	

4.7 Information and 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 providers. Within Stroud District, the Gloucester Urban Fringe, Stroud Valleys and Cam & Dursley have been upgraded to super-fast broadband through the BT Open reach programme, or will be upgraded by the end 2013. Stonehouse, Sharpness and Aston Down are included amongst the more rural communities that fall into the 'final third' category in the UK that will suffer from below average speeds and a lack of competition between services.

The Borders Broadband initiative has secured £14.4million from the Government towards rolling out fibre broadband in rural areas, which has been boosted with a further £7.5million investment by Gloucestershire County Council and £6million from Herefordshire County Council. The two county councils have now formed a non-profit making collaboration with BT called 'Fastershire', which has the aim of bringing fibre broadband to around 90% of homes by the end of 2016. Given the extent of existing and proposed employment and residential development at Stonehouse, this area should be put forward as a priority for investment through the Fastershire initiative.

Responsibilities for delivery

Telecommunications covers a wide range of services including voice, audio visual, mobile telephone and internet. BT have a universal service obligation to provide telephone connections and compete with other private companies to offer telephone and broadband internet services.

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

Assessment of infrastructure needs and current projects

The provision of ICT infrastructure is unlikely to have a significant impact on the soundness of the Local Plan, but will have implications for the economic competitiveness of Stroud District. This study has focussed on internet access as an important measure, and in particular the provision of high speed broadband connectivity. There is high recognition that broadband is vital for residents, public services and businesses.

BT Open Reach upgrades

BT Open Reach work on an on-going basis to upgrade the national broadband network. The aim is 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. This will 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.

In the case of Stroud District, exchanges located in the vicinity of strategic locations for development at North East Cam, the Stroud Valleys, Hunt's Grove and East Quedgeley already benefit from super-fast broadband upgrades at local exchanges, or upgrades are estimated to be completed by end 2013 (see table below).

Table 29 - 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 provision²⁷
Stroud South Vale (SSV)	North East Cam (500; 625 or 750 dwellings)	Upgrading of exchange at Cam and Dursley estimated to occur by end of 2013.
	Sharpness (200; 225 or 250 dwellings)	Local exchange at Berkeley not currently in rollout plans.
	Severn Distribution Park (9ha employment)	
Stroud and West (SW)	West of Stonehouse (750; 1,375 or 2,000 dwellings)	Local exchange at Stonehouse not currently in rollout plans.
	North of Stroudwater Industrial Estate (17ha employment)	
	Stroud Valleys (200; 500 or 800 dwellings)	Local exchange at Stroud now accepting orders, with upgrading of the exchange at Brimscombe estimated to occur by end of 2013.
Stroud and East (SE)	Aston Down (200 dwellings)	Local exchange at Frampton Mansell not currently in rollout plans.
Gloucester Urban Fringe (GUF)	Hunt's Grove (500; 625 or 750 dwellings)	Local exchange at Quedgeley now accepting orders.
	Quedgeley East (13ha employment)	

Stonehouse is an important existing and proposed location for housing and employment within the District and therefore should be promoted as a priority for upgrade. The more remote locations for proposed development at Aston Down and Sharpness also do not feature in current BT Open Reach rollout plans, and will therefore fall within the 'final third' of more rural communities suffering from below average speeds and a lack of competition between services.

Borders Broadband Project

Within the UK £830 million of public funding has been set aside for Broadband Delivery UK (BDUK the UK Government's broadband delivery authority) to

²⁷ Source: <http://www.superfast-openreach.co.uk/where-and-when/> (accessed June 2013)

address this challenge of poor coverage in rural areas. Borders Broadband is one of four initial pilots that have been set up, which secured £14.4million from the Government towards rolling out fibre broadband in rural areas. This has been boosted with a further £7.5million investment by Gloucestershire County Council and £6million from Herefordshire County Council. The two county councils have now formed a non-profit making collaboration with BT called 'Fastershire', which has the aim of bringing fibre broadband to around 90% 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 to those premises that currently receive downstream speeds of less than 2Mbps. Ofcom believe that around 20% of premises in the counties currently receive less than 2Mps but that percentage will reduce close to zero as a result of the Fastershire project.²⁸

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 (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.

²⁸ Source: <http://www.fastershire.com/questions-and-answers?tabId=5149>

4.8 Open Space, Sport and 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.

4.8.1 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 be most accessible from proposed development at Hunt's 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 additional demand for between 0.76 swimming pools (Scenario 1) and 1.12 swimming pools (Scenario 3) would arise from new development. Development within the Stroud Valleys and at North East Cam will be particularly well located with respect to existing facilities, however swimming pools tend to serve a wide catchment and it will be necessary to assess the extent of remaining capacity at these pools.

Major developments at Hunt's 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.

Table 30 - Assessment of need for swimming pools

Swimming Pools					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Scenario 1		6,806	15654	0.76	£2,287,618
Stroud South Vale (SSV)	Windfalls	168	386	0.02	£56,468
	North East Cam	400	920	0.04	£134,447
	Sharpness	200	460	0.02	£67,224
Stroud and West (SW)	Windfalls	187	430	0.02	£62,854
	West of Stonehouse	750	1725	0.08	£252,088
	Stroud Valleys	200	460	0.02	£67,224
Stroud and East (SE)	Windfalls	110	253	0.01	£36,973
	Aston Down	200	460	0.02	£67,224
Gloucester Urban Fringe (GUF)	Windfalls	11	25	0.001	£3,697
	Hunt's Grove extension	500	1150	0.06	£168,059
Built/committed sites		4,080	9384	0.46	£1,371,361
Scenario 2		8397	19313	0.94	£2,822,331
Stroud South Vale (SSV)	Windfalls	253	582	0.03	£85,036
	North East Cam	675	1553	0.08	£226,875
	Sharpness	225	518	0.03	£75,625
Stroud and West (SW)	Windfalls	277	637	0.03	£93,103
	West of Stonehouse	1375	3163	0.15	£462,154
	Stroud Valleys	500	1150	0.06	£168,056
Stroud and	Windfalls	166	382	0.02	£55,795

Swimming Pools					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
East (SE)	Aston Down	200	460	0.02	£67,222
	Windfalls	22	51	0.00	£7,394
Gloucester Urban Fringe (GUF)	Hunt's Grove extension	625	1438	0.07	£210,070
	Built/committed sites	4,080	9384	0.46	£1,371,336
Scenario 3		9989	22975	1.12	£3,357,482
Stroud South Vale (SSV)	Windfalls	336	773	0.04	£112,936
	North East Cam	950	2185	0.11	£319,312
	Sharpness	250	575	0.03	£84,029
Stroud and West (SW)	Windfalls	374	860	0.04	£125,708
	West of Stonehouse	2000	4600	0.22	£672,236
	Stroud Valleys	800	1840	0.09	£268,894
Stroud and East (SE)	Windfalls	221	508	0.02	£74,282
	Aston Down	200	460	0.02	£67,224
Gloucester Urban Fringe (GUF)	Windfalls	29	67	0.003	£9,747
	Hunt's Grove extension	750	1725	0.08	£252,088
Built/committed sites		4,080	9384	0.46	£1,371,361
	Per Dwelling	1	2.3	0.0001	£336
	Per Capita	0.43	1	0.00005	£146

Sports Halls

Baseline

A review of the locations of existing principal leisure centres within Stroud District shows that proposed strategic developments at North East Cam, West of Stonehouse and the Stroud Valleys are relatively well related to these (see table below). For development at Hunt's Grove, a journey to facilities at Stonehouse or central Gloucester would be necessary. Equally, in the cases of the smaller proposed developments at Aston Down and 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 (Gloucester City Council) includes martial arts, short may 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 these varies. A full audit of sports facilities and leisure programmes at schools and community centres is not available at this time, although section 4.1.2 of this report sets out brief details of community centre locations and facilities available.

Table 31 - Leisure centres/sports halls serving Stroud District

Stroud Sub-area	Strategic Location	Leisure centres within settlements (or closest available)	Facilities
Stroud South Vale (SSV)	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-aside football area, 4 x badminton courts, tennis courts, showering and changing facilities
	Stroud Valleys	Stratford Park Leisure Centre, Stratford Road, Stroud	52 station gym, group fitness classes, sauna and steam room, 6 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.
Stroud and East (SE)	Aston Down	Closest facilities at Thomas Keble Leisure Centre, Eastcombe, Stroud	
Gloucester Urban Fringe (GUF)	Hunt's 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 additional demand for between around 4 and 6 badminton courts would arise from new development (sports halls typically provide 4 to 6 courts). Taking into account the review of existing facility locations, provision of a sports hall in the Hunt's Grove area

could form a priority. An alternative approach would be to facilitate improvements to existing leisure and community centres across the District.

Table 32 - Assessment of need for Sports Halls

Sports Halls (based on number of courts)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Scenario 1		6,806	15654	4.12	£2,882,299
Stroud South Vale (SSV)	Windfalls	168	386	0.10	£71,147
	North East Cam	400	920	0.24	£169,398
	Sharpness	200	460	0.12	£84,699
Stroud and West (SW)	Windfalls	187	430	0.11	£79,193
	West of Stonehouse	750	1725	0.45	£317,620
	Stroud Valleys	200	460	0.12	£84,699
Stroud and East (SE)	Windfalls	110	253	0.07	£46,584
	Aston Down	200	460	0.12	£84,699
Gloucester Urban Fringe (GUF)	Windfalls	11	25	0.007	£4,658
	Hunt's Grove extension	500	1150	0.30	£211,747
Built/committed sites		4,080	9384	2.47	£1,727,855
Scenario 2		8397	19313	5.09	£3,556,014
Stroud South Vale (SSV)	Windfalls	253	582	0.15	£107,142
	North East Cam	675	1553	0.41	£285,853
	Sharpness	225	518	0.14	£95,284
Stroud and West (SW)	Windfalls	277	637	0.17	£117,306
	West of Stonehouse	1375	3163	0.83	£582,294
	Stroud Valleys	500	1150	0.30	£211,743
Stroud and East (SE)	Windfalls	166	382	0.10	£70,299
	Aston Down	200	460	0.12	£84,697
Gloucester Urban Fringe (GUF)	Windfalls	22	51	0.01	£9,317
	Hunt's Grove extension	625	1438	0.38	£264,679
Built/committed sites		4,080	9384	2.47	£1,727,824
Scenario 3		9989	22975	6.05	£4,230,281
Stroud South Vale (SSV)	Windfalls	336	773	0.20	£142,294
	North East Cam	950	2185	0.58	£402,319
	Sharpness	250	575	0.15	£105,873
Stroud and West (SW)	Windfalls	374	860	0.23	£158,387
	West of Stonehouse	2000	4600	1.21	£846,988
	Stroud Valleys	800	1840	0.48	£338,795
Stroud and East (SE)	Windfalls	221	508	0.13	£93,592
	Aston Down	200	460	0.12	£84,699
Gloucester	Windfalls	29	67	0.018	£12,281

Sports Halls (based on number of courts)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Urban Fringe (GUF)	Hunt's Grove extension	750	1725	0.45	£317,620
Built/committed sites		4,080	9384	2.47	£1,727,855
	Per Dwelling	1	2.3	0.0006	£423
	Per Capita	0.43	1	0.00026	£184

Current projects

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

4.8.2 Playing pitches and 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.*” (dated 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 and 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.
- 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 taken).

Table 33 - Assessment of need for Playing Pitches

Playing Pitches (Ha)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Scenario 1		6,806	15654	18.78	£1,830,378
Stroud South Vale (SSV)	Windfalls	168	386	0.46	£45,181
	North East Cam	400	920	1.10	£107,574
	Sharpness	200	460	0.55	£53,787
Stroud and West (SW)	Windfalls	187	430	0.52	£50,291
	West of Stonehouse	750	1725	2.07	£201,702
	Stroud Valleys	200	460	0.55	£53,787
Stroud and East (SE)	Windfalls	110	253	0.30	£29,583
	Aston Down	200	460	0.55	£53,787
Gloucester Urban Fringe (GUF)	Windfalls	11	25	0.03	£2,958
	Hunt's Grove extension	500	1150	1.38	£134,468
Built/committed sites		4,080	9384	11.26	£1,097,259
Scenario 2		8397	19313	23.18	£2,258,255
Stroud South Vale (SSV)	Windfalls	253	582	0.70	£68,041
	North East Cam	675	1553	1.86	£181,532
	Sharpness	225	518	0.62	£60,511
Stroud and West (SW)	Windfalls	277	637	0.76	£74,495
	West of Stonehouse	1375	3163	3.80	£369,787
	Stroud Valleys	500	1150	1.38	£134,468
Stroud and East (SE)	Windfalls	166	382	0.46	£44,643
	Aston Down	200	460	0.55	£53,787
Gloucester Urban Fringe (GUF)	Windfalls	22	51	0.06	£5,917
	Hunt's Grove extension	625	1438	1.73	£168,085
Built/committed sites		4,080	9384	11.26	£1,097,259
Scenario 3		9989	22975	27.57	£2,686,401
Stroud South Vale (SSV)	Windfalls	336	773	0.93	£90,362
	North East Cam	950	2185	2.62	£255,489
	Sharpness	250	575	0.69	£67,234

Playing Pitches (Ha)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Stroud and West (SW)	Windfalls	374	860	1.03	£100,582
	West of Stonehouse	2000	4600	5.52	£537,872
	Stroud Valleys	800	1840	2.21	£215,149
Stroud and East (SE)	Windfalls	221	508	0.61	£59,435
	Aston Down	200	460	0.55	£53,787
Gloucester Urban Fringe (GUF)	Windfalls	29	67	0.08	£7,799
	Hunt's Grove extension	750	1725	2.07	£201,702
Built/committed sites		4,080	9384	11.26	£1,097,259
Per Dwelling		1	2.3	0.003	£269
Per Capita		0.43	1	0.001	£117

Table 34 - Assessment of need for Other Outdoor Sports facilities

Other Outdoor Sports (Ha)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Scenario 1		6,806	15654	6.26	£5,227,405
Stroud South Vale (SSV)	Windfalls	168	386	0.15	£129,034
	North East Cam	400	920	0.37	£307,223
	Sharpness	200	460	0.18	£153,612
Stroud and West (SW)	Windfalls	187	430	0.17	£143,627
	West of Stonehouse	750	1725	0.69	£576,044
	Stroud Valleys	200	460	0.18	£153,612
Stroud and East (SE)	Windfalls	110	253	0.10	£84,486
	Aston Down	200	460	0.18	£153,612
Gloucester Urban Fringe (GUF)	Windfalls	11	25	0.01	£8,449
	Hunt's Grove extension	500	1150	0.46	£384,029
Built/committed sites		4,080	9384	3.75	£3,133,678
Scenario 2		8397	19313	7.73	£6,449,386
Stroud South Vale (SSV)	Windfalls	253	582	0.23	£194,319
	North East Cam	675	1553	0.62	£518,439
	Sharpness	225	518	0.21	£172,813
Stroud and West (SW)	Windfalls	277	637	0.25	£212,752
	West of Stonehouse	1375	3163	1.27	£1,056,080

Other Outdoor Sports (Ha)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
	Stroud Valleys	500	1150	0.46	£384,029
Stroud and East (SE)	Windfalls	166	382	0.15	£127,498
	Aston Down	200	460	0.18	£153,612
Gloucester Urban Fringe (GUF)	Windfalls	22	51	0.02	£16,897
	Hunt's Grove extension	625	1438	0.58	£480,036
Built/committed sites		4,080	9384	3.75	£3,133,678
Scenario 3		9989	22975	9.19	£7,672,135
Stroud South Vale (SSV)	Windfalls	336	773	0.31	£258,068
	North East Cam	950	2185	0.87	£729,655
	Sharpness	250	575	0.23	£192,015
Stroud and West (SW)	Windfalls	374	860	0.34	£287,254
	West of Stonehouse	2000	4600	1.84	£1,536,117
	Stroud Valleys	800	1840	0.74	£614,447
Stroud and East (SE)	Windfalls	221	508	0.20	£169,741
	Aston Down	200	460	0.18	£153,612
Gloucester Urban Fringe (GUF)	Windfalls	29	67	0.03	£22,274
	Hunt's Grove extension	750	1725	0.69	£576,044
Built/committed sites		4,080	9384	3.75	£3,133,678
	Per Dwelling	1	2.3	0.001	£768
	Per Capita	0.43	1	0.0004	£334

On the basis that existing shortfalls in provision are identified for Stroud, Stonehouse, 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.

4.8.3 Recreational open space and 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.*” (dated 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 7 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 and 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 35 - Overlap between FIT Benchmark Standards and Natural England Accessible Natural Greenspace Standards

FIT Benchmark Standards		Natural England ANGSt		Comment
Type	Standard	Type ²⁹	Standard	
Designated Children's Playing Space	0.25Ha per 1,000 population	-	-	FIT set out guidelines for ³⁰ : 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 and 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.

²⁹ 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.

³⁰ Local Areas for Play (LAP), Local Equipped Areas for Play (LEAP) and Neighbourhood Equipped Areas for Play (NEAP).

Table 36 - Assessment of need for Childrens Play Space and facilities for Young People

Facilities for Children and Young People (Ha)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Scenario 1		6,806	15654	3.91	£1,937,158
Stroud South Vale (SSV)	Windfalls	168	386	0.10	£47,817
	North East Cam	400	920	0.23	£113,850
	Sharpness	200	460	0.12	£56,925
Stroud and West (SW)	Windfalls	187	430	0.11	£53,225
	West of Stonehouse	750	1725	0.43	£213,469
	Stroud Valleys	200	460	0.12	£56,925
Stroud and East (SE)	Windfalls	110	253	0.06	£31,309
	Aston Down	200	460	0.12	£56,925
Gloucester Urban Fringe (GUF)	Windfalls	11	25	0.01	£3,131
	Hunt's Grove extension	500	1150	0.29	£142,313
Built/committed sites		4,080	9384	2.35	£1,161,270
Scenario 2		8397	19313	4.83	£2,389,996
Stroud South Vale (SSV)	Windfalls	253	582	0.15	£72,010
	North East Cam	675	1553	0.39	£192,122
	Sharpness	225	518	0.13	£64,041
Stroud and West (SW)	Windfalls	277	637	0.16	£78,841
	West of Stonehouse	1375	3163	0.79	£391,359
	Stroud Valleys	500	1150	0.29	£142,313
Stroud and East (SE)	Windfalls	166	382	0.10	£47,248
	Aston Down	200	460	0.12	£56,925
Gloucester Urban Fringe (GUF)	Windfalls	22	51	0.01	£6,262
	Hunt's Grove extension	625	1438	0.36	£177,891
Built/committed sites		4,080	9384	2.35	£1,161,270
Scenario 3		9989	22975	5.74	£2,843,119
Stroud South Vale (SSV)	Windfalls	336	773	0.19	£95,634
	North East Cam	950	2185	0.55	£270,394
	Sharpness	250	575	0.14	£71,156
Stroud and West (SW)	Windfalls	374	860	0.22	£106,450
	West of Stonehouse	2000	4600	1.15	£569,250
	Stroud Valleys	800	1840	0.46	£227,700
Stroud and East (SE)	Windfalls	221	508	0.13	£62,902
	Aston Down	200	460	0.12	£56,925
Gloucester	Windfalls	29	67	0.02	£8,254

Facilities for Children and Young People (Ha)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Urban Fringe (GUF)	Hunt's Grove extension	750	1725	0.43	£213,469
Built/committed sites		4,080	9384	2.35	£1,161,270
	Per Dwelling	1	2.3	0.001	£285
	Per Capita	0.43	1	0.0003	£124

Current informal open space projects

Hunt's 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 and 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).

Table 37 - Assessment of need for Informal Playing Space

Informal Playing Space (Ha)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Scenario 1		6,806	15654	8.61	£146,363
Stroud South Vale (SSV)	Windfalls	168	386	0.21	£3,613
	North East Cam	400	920	0.51	£8,602
	Sharpness	200	460	0.25	£4,301
Stroud and West (SW)	Windfalls	187	430	0.24	£4,021
	West of Stonehouse	750	1725	0.95	£16,129
	Stroud Valleys	200	460	0.25	£4,301
Stroud and East (SE)	Windfalls	110	253	0.14	£2,366
	Aston Down	200	460	0.25	£4,301
Gloucester Urban Fringe (GUF)	Windfalls	11	25	0.01	£237
	Hunt's Grove extension	500	1150	0.63	£10,753
Built/committed sites		4,080	9384	5.16	£87,740
Scenario 2		8397	19313	10.62	£180,577
Stroud South Vale	Windfalls	253	582	0.32	£5,441
	North East Cam	675	1553	0.85	£14,516

Informal Playing Space (Ha)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
(SSV)	Sharpness	225	518	0.28	£4,839
Stroud and West (SW)	Windfalls	277	637	0.35	£5,957
	West of Stonehouse	1375	3163	1.74	£29,569
	Stroud Valleys	500	1150	0.63	£10,753
Stroud and East (SE)	Windfalls	166	382	0.21	£3,570
	Aston Down	200	460	0.25	£4,301
Gloucester Urban Fringe (GUF)	Windfalls	22	51	0.03	£473
	Hunt's Grove extension	625	1438	0.79	£13,441
Built/committed sites		4,080	9384	5.16	£87,740
Scenario 3		9989	22975	12.64	£214,813
Stroud South Vale (SSV)	Windfalls	336	773	0.43	£7,226
	North East Cam	950	2185	1.20	£20,430
	Sharpness	250	575	0.32	£5,376
Stroud and West (SW)	Windfalls	374	860	0.47	£8,043
	West of Stonehouse	2000	4600	2.53	£43,010
	Stroud Valleys	800	1840	1.01	£17,204
Stroud and East (SE)	Windfalls	221	508	0.28	£4,753
	Aston Down	200	460	0.25	£4,301
Gloucester Urban Fringe (GUF)	Windfalls	29	67	0.04	£624
	Hunt's Grove extension	750	1725	0.95	£16,129
Built/committed sites		4,080	9384	5.16	£87,740
	Per Dwelling	1	2.3	0.001	£22
	Per Capita	0.43	1	0.0006	£9

Current informal open space projects

Hunt's 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

In order to provide a high level assessment 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. 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.³¹

The assessment of need in the table below 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).

Table 38 - Assessment of need for Natural and Semi-natural Greenspace

Natural and Semi-natural Greenspace (Ha)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Scenario 1		6,806	15654	15.65	£3,756,912
Stroud South Vale (SSV)	Windfalls	168	386	0.39	£92,736
	North East Cam	400	920	0.92	£220,800
	Sharpness	200	460	0.46	£110,400
Stroud and West (SW)	Windfalls	187	430	0.43	£103,224
	West of Stonehouse	750	1725	1.73	£414,000
	Stroud Valleys	200	460	0.46	£110,400
Stroud and East (SE)	Windfalls	110	253	0.25	£60,720
	Aston Down	200	460	0.46	£110,400
Gloucester Urban Fringe (GUF)	Windfalls	11	25	0.03	£6,072
	Hunt's Grove extension	500	1150	1.15	£276,000
Built/committed sites		4,080	9384	9.38	£2,252,160
Scenario 2		8397	19313	19.31	£4,635,144
Stroud South Vale (SSV)	Windfalls	253	582	0.58	£139,656
	North East Cam	675	1553	1.55	£372,600
	Sharpness	225	518	0.52	£124,200
Stroud and West (SW)	Windfalls	277	637	0.64	£152,904
	West of Stonehouse	1375	3163	3.16	£759,000
	Stroud Valleys	500	1150	1.15	£276,000
Stroud and East (SE)	Windfalls	166	382	0.38	£91,632
	Aston Down	200	460	0.46	£110,400
Gloucester Urban Fringe (GUF)	Windfalls	22	51	0.05	£12,144
	Hunt's Grove extension	625	1438	1.44	£345,000
Built/committed sites		4,080	9384	9.38	£2,252,160
Scenario 3		9989	22975	22.97	£5,513,928
Stroud South Vale (SSV)	Windfalls	336	773	0.77	£185,472
	North East Cam	950	2185	2.19	£524,400
	Sharpness	250	575	0.58	£138,000

³¹ 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.

Natural and Semi-natural Greenspace (Ha)					
Stroud Sub-area and Strategic Location		Dwellings	Pop'n	Local Plan	
				Demand	Estimated Capital Cost
Stroud and West (SW)	Windfalls	374	860	0.86	£206,448
	West of Stonehouse	2000	4600	4.60	£1,104,000
	Stroud Valleys	800	1840	1.84	£441,600
Stroud and East (SE)	Windfalls	221	508	0.51	£121,992
	Aston Down	200	460	0.46	£110,400
Gloucester Urban Fringe (GUF)	Windfalls	29	67	0.07	£16,008
	Hunt's Grove extension	750	1725	1.73	£414,000
Built/committed sites		4,080	9384	9.38	£2,252,160
Per Dwelling		1	2.3	0.002	£552
Per Capita		0.43	1	0.0010	£240

4.8.4 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 39 - 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	Brimcombe	To be delivered in partnership	C £9m	2013 - 2020

	Port	with HCA using HCA funds, income from Brimscombe Port and third party funds including developer contributions		
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 of 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.

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 and Public Realm

4.9.1 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.

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).

4.9.2 Sector plans and strategies

The following key sector plans and strategies are identified and have been referred to in this chapter.

Highways Agency Asset Management Plans

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 40 - 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 CO₂ 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.

4.9.3 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 Bath³².

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

³² Local Transport Plan, Stroud District Area Transport Strategy (Draft, July 2010).

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.

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 is now underway.

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 41 – 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 - 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
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 and cycling

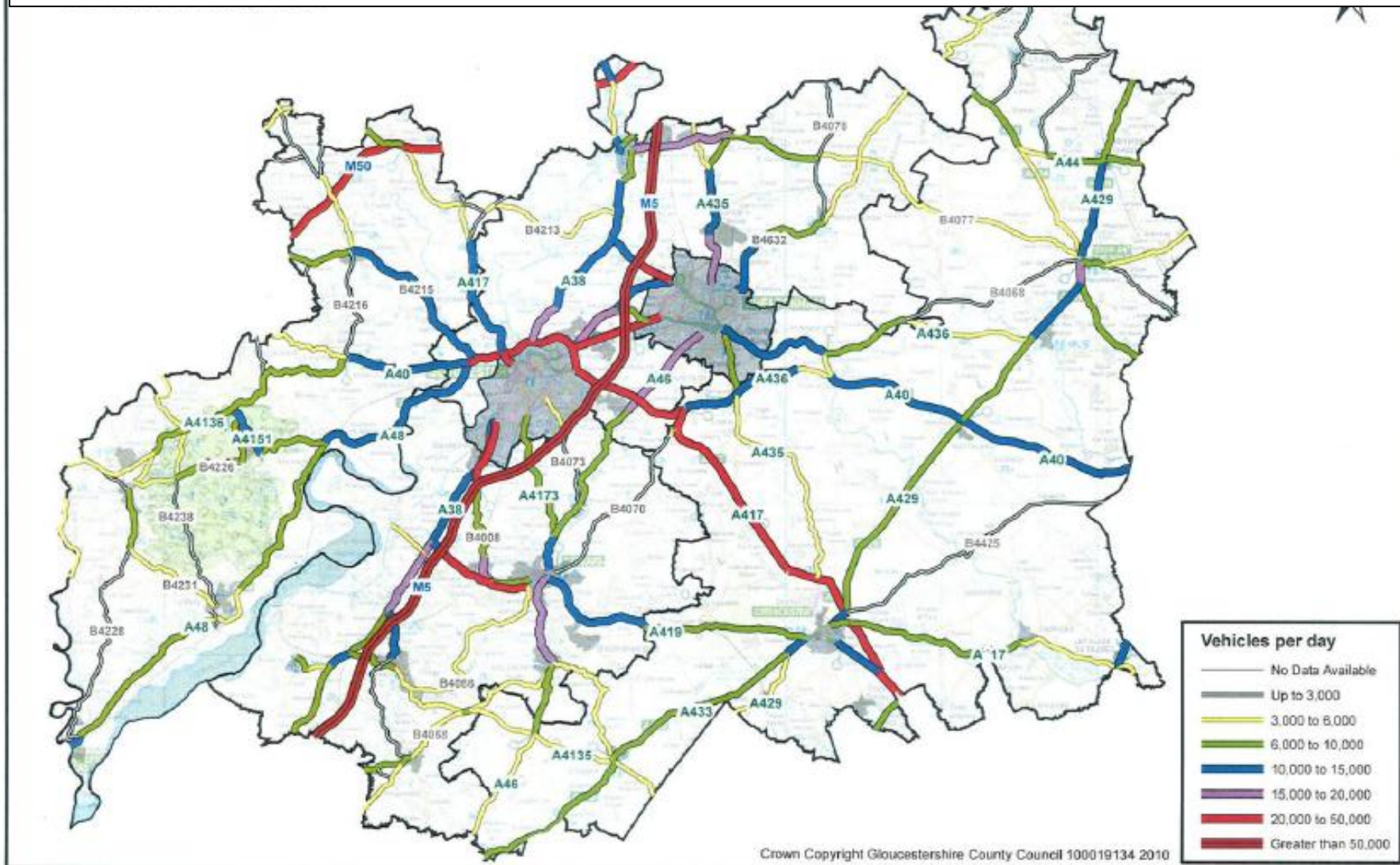
The LTP3 highlights that measures to encourage walking and cycling can make important contributions to the LTP objectives of reduce CO² emissions, improving health and quality of life. Reducing the number of short trips that are currently made by car can also help reduce traffic congestion. Broad measures 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.

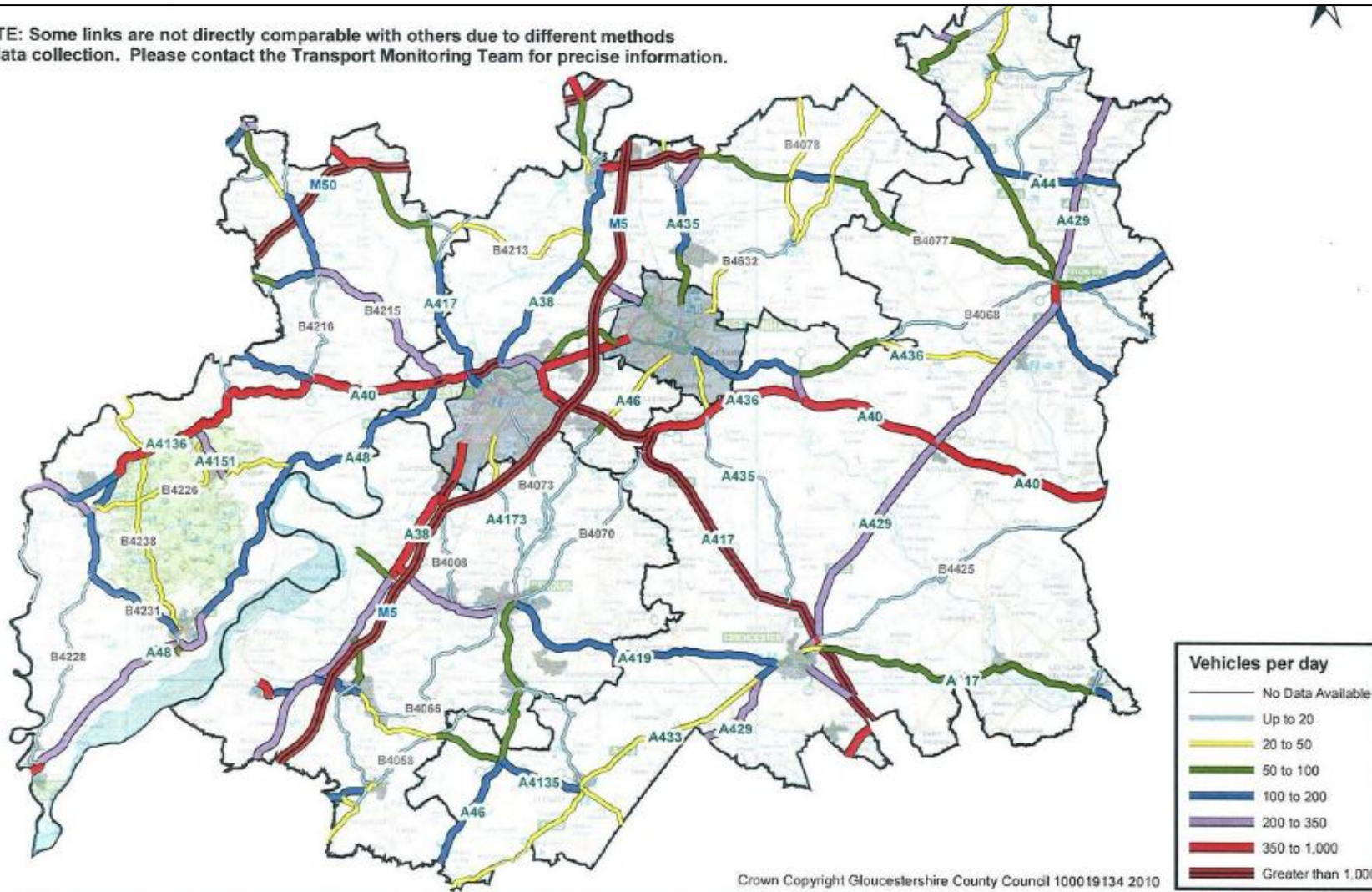
Figure 4 - All vehicle traffic flows in Gloucestershire - 2009 (24 hour work day flows)



Source: Gloucestershire's Local Transport Plan 2011-26, page 22.

Figure 5 – Large goods vehicle traffic flows in Gloucestershire – 2009 (24 hour work day flows)

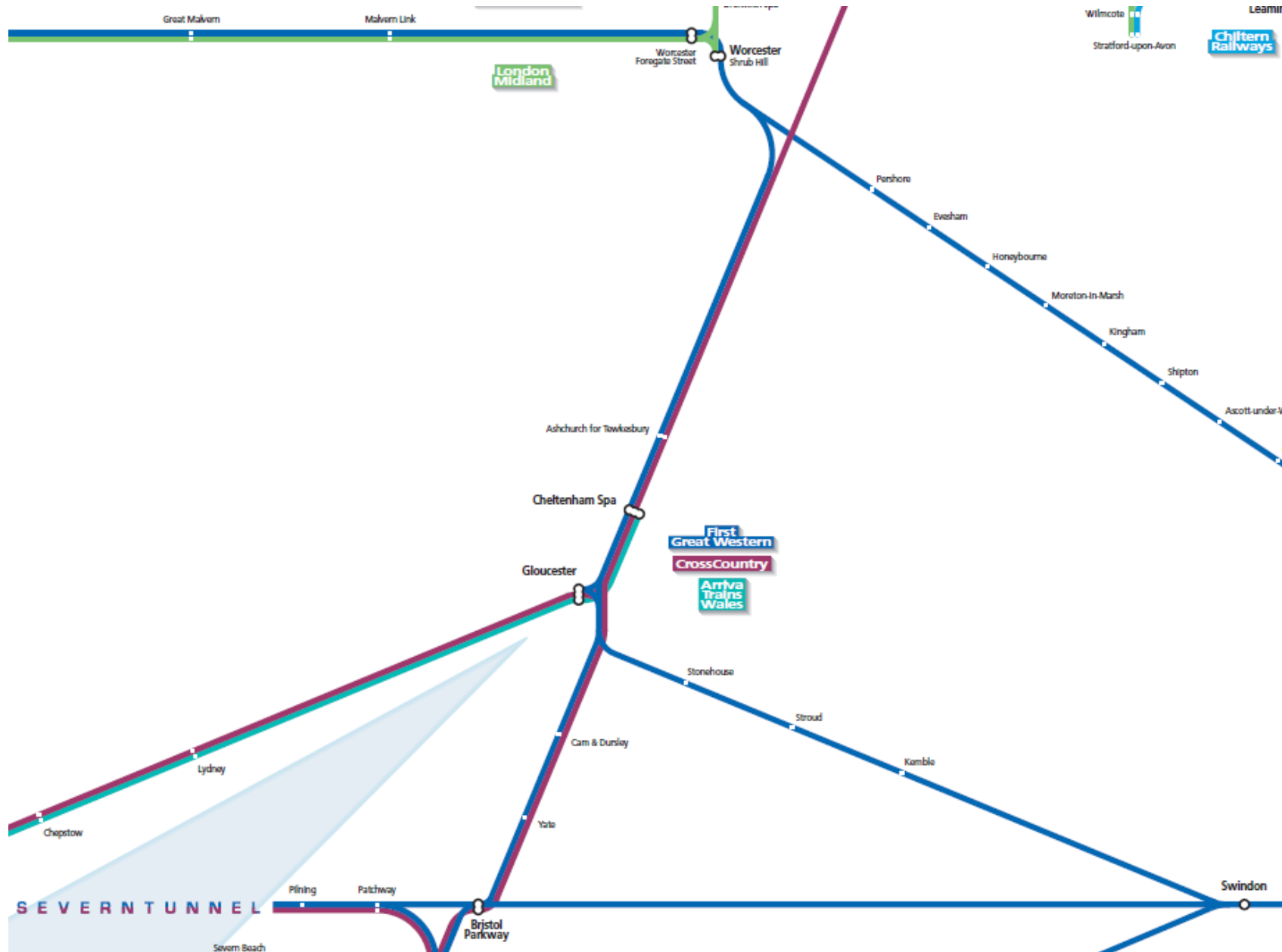
NOTE: Some links are not directly comparable with others due to different methods of data collection. Please contact the Transport Monitoring Team for precise information.



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Source: Gloucestershire’s Local Transport Plan 2011-26, page 29

Figure 6 - Nation Rail Network Operator Map (extract, Network Rail, March 2013)



4.9.4 Assessment of infrastructure needs

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.

The County Council has confirmed that there is currently no up to date strategic highways model covering Stroud District allowing for a quantitative highways assessment of the Local Plan development scenarios. The assessment of infrastructure needs within this version of the IDP is therefore based on knowledge of existing priority areas for investment and preliminary commentary on potential transport projects relating to strategic locations for development.

It is intended that a proposed refresh of the existing Transport Modelling Framework will extend to include the town of Stroud, however, the model covering this area will remain coarse and may not fully capture the impact of travel demand in the local area. As development proposals come forward, the County Council will require the following detailed assessment work to be undertaken:

- Full **Transport Assessments (TAs)** and **Travel Plans** will be required for the majority of planning applications (with the exception of small-scale applications. Appropriate guidance for these is set out in the Department for Transport's Guidance on Transport Assessment (March 2007), the Manual for Gloucestershire Streets (Feb 2012, due to be updated) and Gloucestershire Travel Plan Guide for Developers (2012). The scope of studies will need to be agreed with the County Council at an early stage of the planning process. The Highways Agency should also be consulted on these where there is potential for impacts upon the operation of the Strategic Road Network.
- **Accessibility Modelling** will be required to demonstrate how well the developments fit with access to local services. The County Council has an Accession Model available that can be used for this purpose.

The County Council has confirmed that without access to supporting TAs and further information the dwelling mix at each settlement the advice they have provided will be subject to review. However, local improvements to public transport, walking and cycling are likely in respect of all sites. Large developments are also expected to contribute appropriately to wider strategic transport infrastructure.

Without the benefit of up-to-date transport models, the Highways Agency has also been unable to provide detailed comments or advise with sufficient certainty on the nature, scale and costs of transport infrastructure which will be required on the Strategic Road Network to support development. Understanding the cumulative

impact of all the strategic development allocations affecting Junctions 12 and 13 will be of particular importance.

A review of current transport projects and a preliminary view of the transport implications and requirements relating to development at the District scale and each settlement is provided below. This includes information on potential upgrades to bus services for each settlement.

4.9.5 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):

- **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 is due to be completed during the spring 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 £12,610,000³³ 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 (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.

³³ Based on CSVT Study (Draft 2010) estimated cost for six bus corridors of £75,660,000, with equal cost per corridor assumed.

4.9.6 Stroud South Vale

North East Cam

IDP Development Scenarios for North East Cam provide for housing development of 400, 675 or 950 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. 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

IDP Development Scenarios for Sharpness provide for housing development of 200, 225 or 250 dwellings. There is also a strategic employment allocation of 9ha, 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.

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.

4.9.7 Stroud and West

West of Stonehouse

IDP Development Scenarios for West of Stonehouse provide for housing development of 750, 1,375 and 2,000 respectively. There is also a strategic employment allocation for 17ha 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 and would need to see modelling of impact on J12 and J13 of the M5 to understand what mitigation would be required.

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

IDP Development Scenarios for the Stroud Valleys provide for housing development of 200, 500 and 800 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.

4.9.8 Stroud and East

Aston Down

IDP Development Scenarios for Sharpness provide for housing development of 200 dwellings. 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.

4.9.9 Gloucester Urban Fringe

Hunt's Grove and Quedgeley East

IDP Development Scenarios for Hunt's Grove provide for housing development of 500, 625 or 750 dwellings. 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.

There is also a strategic employment allocation of 13ha at Quedgeley East.

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.

4.9.10 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 S106 Planning Obligations.

This study does not therefore include site-specific transport costs in the analysis of potential developer contributions in chapter 6. 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 42 - 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
Total			£1,150,000

- **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.

4.9.11 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 21st 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 43 - 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 Cleave 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.³⁴

³⁴ 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).

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 Valence, 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 availability for a strategic waste recovery facility has been confirmed by the site operator Grondon 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 Infrastructure by strategic location for development

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 proposed allocations in the Stroud Pre-Submission Local Plan. 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 'Funding: development viability and contributions' (chapter 6).

5.1 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:

- **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 is due to be completed during the spring 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 £12,610,000³⁵ 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

³⁵ Based on CSVT Study (Draft 2010) estimated cost for six bus corridors of £75,660,000, with equal cost per corridor assumed.

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.

- **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 in scenario 1 would result in demand for 1,225 secondary school places, while scenario 3 would generate demand for 1,798 places. 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 490 and 719 further education (including sixth form) places 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 28 and 41 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.

5.2 Stroud South Vale

5.2.1 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 are in the process of updating the 2005 Community Plan. While the Community Plan 2020 is not yet complete, a summary has been prepared that sets out some key priorities. These are reflected in the commentary below.

IDP Development Scenarios for North East Cam provide for housing development of 400, 675 or 950 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.

Indicative phasing for the Stroud South Vale area and North East Cam shows development spread over the period 2017 to 2031. The IDP has not identified any infrastructure projects that would suggest phased delivery of the development from 2017 onwards would be problematic.

Comments by sector are set out here:

- **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** – An emerging Community Plan objective 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.
- **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, and an investigation is planned for 2014/15. This work and the preparation of a site-specific Flood Risk Assessment should cross-reference to ensure the implications of new development (including new bridges) are taken into account and appropriate mitigation measures are identified.
- **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. An emerging 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 highway 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.

5.2.2 Sharpness and Severn Distribution Park

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 200 - 250 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.

IDP Development Scenarios for Sharpness provide for housing development of 200, 225 or 250 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.

Hinton Parish Council are in the process of preparing a Community Plan, however a Draft of the plan is not yet available.

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** - Development at Sharpness, and load growth in the area, may necessitate the provision of a new 33kV overhead electricity circuit to Ryeford BSP, some 15km away. This reinforcement work could take 2-3 years to implement.
- **Wastewater** – Treatment works at Sharpness have limited capacity and will require appraisal to confirm upgrades. The sewerage network is also constrained and a range of capacity improvements to the public sewer system will be necessary to accommodate development of the scale proposed.
- **Wastewater** – Wessex Water have advised that the proposed employment development at Sharpness occupies a position adjoining the existing sewage treatment works, within a development restraint zone. Consultation with Wessex Water around potential odour nuisance issues is requested.
- **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.

5.3 Stroud and West

5.3.1 West of Stonehouse and north of Stroudwater Industrial Estate

The draft Local Plan includes an employment allocation and a reserve housing allocation to the west of Stonehouse that will expand the existing Oldends/ Stroudwater employment area, with attendant transport and infrastructure improvements – including improved links to the town centre and opportunities for all to make use of pleasant and safe ‘green links’ on foot or cycle. It is intended that the development would be a sustainable workplace destination for the District, as well as a vibrant new community, served by its own new ‘village centre’.

IDP Development Scenarios for West of Stonehouse provide for housing development of 750, 1,375 and 2,000. There is also a strategic employment allocation for 17ha to north of Stroudwater Industrial Estate (the Draft Local Plan includes an allocation for up to 12ha). 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** – Options for Stonehouse will vary significantly depending on the level of development pursued in this location. 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.
- **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.
- **Wastewater** - West of Stonehouse capacity improvements may involve, as a worst case, replacement of the existing pumping station and duplication/upsizing of a 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.

5.3.2 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.

IDP Development Scenarios for the Stroud Valleys provide for housing development of 200, 500 and 800 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.

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.

Indicative phasing within the IDP scenario for the Stroud & West area suggests that a small number of dwellings (50 – 100) could come forward in the next five years. The more recently produced Draft Local Plan trajectory suggests 130 dwellings could be delivered in years 2013-2018. One important factor that could influence phasing is the Severn Trent Water project for a strategic sewerage improvement within the Stroud Valleys (timeframe of 3-5 years), that is intended to alleviate flooding problems. Severn Trent Water has advised that the modest levels of development proposed in the Local Plan are unlikely to significantly worsen conditions and that temporary solutions may be possible. Taking into account the level of committed development, for 997 dwellings within the Stroud & West area, it may be prudent to phase further development after the delivery of new sewage infrastructure (subject to further consultation with Severn Trent Water).

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 higher growth scenarios, such as the 800 dwellings proposed in Scenario 3.
- **Electricity connection** – Development in the Stroud Valleys may prompt the delivery of an additional Primary substation in the Brimscombe area.
- **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.
- **Wastewater** - there are significant hydraulic capacity issues within the Stroud Valleys 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.
- **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.

5.4 Stroud and East

5.4.1 Aston Down

Aston Down is a former RAF airfield located around 2.3 miles to the east of Minchinhampton. In 2009 planning permission was granted enabling the site to be used for employment uses. The Council has previously considered there may be scope to develop around 200 dwellings, to help cross-subsidise the enhancement of the site, improve the potential for live-work opportunities and self-containment, and foster a sense of community.

IDP Development Scenarios for Aston Down provide for housing development of 200 dwellings. The main constraint identified through the IDP work is that there are currently no community facilities at Aston Down and the level of development envisaged is unlikely to be sufficient to trigger appropriate provision. This would place a greater reliance on access to facilities in the settlements of Minchinhampton and Chalford.

Provision of public transport is also considered problematic and the level of development set out in the IDP development scenarios is unlikely to prompt significant improvements to service frequency and quality. The existing bus service does not form part of the strategic network that will be the focus for investment by the County Council.

The indicative phasing plan within the IDP Scenarios suggests that development would come forward within the period 2017 – 2022. Severn Trent Water have advised that the area is not currently connected to sewerage system and that a future connection would be to the top of the Stroud sewerage catchment. As set out within the Stroud Valleys section, it may be prudent to phase development for completion of the strategic upgrade to the Stroud system (3 – 5 years timeframe). A time allowance should also be made for the provision of the new site connection.

Minchinhampton Parish Council produced a Parish Plan 2005, within which proposed schemes included: public transport improvements, extension of the library building and greater police presence. The plan is now dated, so should development come forward at Aston Down, consultation with the local community would be beneficial to understand current priorities.

Further summary comments by sector are set out below:

- **Library** – development at Aston Down has the potential to support usage and contribute to the operation of the Minchinhampton Community Library that was recently transferred to community management. Consideration could also be given to the establishment of a Mobile Library stop serving the proposed development.
- **Community Centre** – there is currently no community centre at Aston Down, although there are existing facilities in the settlements of Minchinhampton Frampton and Chalford. Consideration would need to be given to whether a community building could be provided by the development, although the scale of development proposed could make this difficult in terms of both start-up costs and maintenance.

- **Ambulance** – a facilitated standby point will be required in this area (potentially shared with Brimscombe & Thrupp)
- **Police** – contribution to Stroud Police Station refurbishment and upgrade
- **Primary healthcare** – The surgery at Minchinhampton is investigating options for relocation. This could provide the option to expand premises to cater for new development.
- **Wastewater** – Aston Down is not currently connected to the public sewerage system. Any connection will be to the top of the Stroud sewerage catchment (see comments relating to the Stroud Valleys).
- **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** – 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.
- **Public transport** – There is limited access to rail and bus services in this location and the level of development proposed is insufficient to support significant changes to the existing infrequent bus services.
- **Walking and cycling** – No walking and cycling routes relating specifically to the site have been identified, although off-site contributions to the strategic Cotswold Canals Project may be sought.

5.5 Gloucester Urban Fringe

5.5.1 Hunt's Grove and Quedgeley East

There is an existing planning permission in place for 1,750 new homes (granted in 2008) and the Local Plan objective is to secure a re-masterplanned development comprising up to 750 additional homes. IDP Development Scenarios for Hunt's Grove provide for housing development of 500, 625 or 750 dwellings, which would result in a total scale of development of between 2,250 and 2,500 new homes. There is also a strategic employment allocation of 13ha 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.

It is understood that Hardwicke Parish Council are in the process of producing a Neighbourhood Plan and this may influence infrastructure priorities in due course.

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** – Development at Hunt's Grove and Quedgeley East may prompt the delivery of an additional Primary substation in the Hardwicke area.
- **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.
- **Wastewater** - Subject to hydraulic modelling, some localized upsizing of pumping and sewerage infrastructure may be required, but no major capacity issues are envisaged.
- **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.

6 Infrastructure funding: development viability and contributions

Financing the construction, operation and maintenance of infrastructure and services will depend on a wide range of funding sources including grants, loans, taxation, levies and rates. Many of these funding sources are specific to particular sectors and are identified in the sector specific infrastructure assessments within chapter 4.

A source of funding over which the Council has significant 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 DC are now also considering the introduction of a Community Infrastructure Levy (CIL). This would set a standard charge for development, the revenue from which would then be used to fund infrastructure.

This chapter of the Delivery Strategy sets out the following:

- background to the use of planning obligations and CIL;
- development viability considerations;
- a review of proposed CIL charging rates in other local planning authority areas along with a comparison to average house prices in those areas to identify trends;
- a summary table of estimated infrastructure costs; and
- recommendations on use of S106 Planning Obligations and CIL to fund infrastructure.

6.1 Section 106 Planning Obligation and CIL

6.1.1 S106 Planning Obligations

Planning Obligations are enabled by Section 106 (S106) of the Town and Country Planning Act and negotiated based on guidance in Government Circular 05/05. 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. 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.

6.1.2 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.

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 require local authorities to pass a meaningful proportion of CIL receipts to local neighbourhoods, as Neighbourhood Funds.

The Government has recently confirmed that Neighbourhoods that take 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.³⁶

In April 2013 CLG published a further consultation on proposed changes to the CIL Regulations. Together with the revised Statutory Guidance published in December 2012, this represents the outcome of work initiated by the property industry in summer 2012 to attempt to amend CIL in a number of significant ways to avoid potential impacts of the CIL that could halt recovery in the property market.

The December 2012 guidance has already made it harder for unrealistic CIL rates to be set and encouraged the use of a more flexible and evidence based approach to CIL charges – recognising that it can be necessary to set lower rates for strategic sites and to allow the use of the exceptions process. The Guidance also emphasises the need to ensure that CIL and S106 are complementary, not overlapping.

The April 2013 Consultation draft goes further, reinforcing these changes but also addressing some of the principal structural problems with CIL. Proposed changes to the Regulations include:

- Extending the date from 2014 to 2015 for the pooling of S106 so that more time can be taken to introduce CIL and get it right.
- Allowing payment of CIL ‘in kind’ with direct provision of infrastructure by a developer, as well as land.

³⁶ Source: <https://www.gov.uk/government/news/communities-to-receive-cash-boost-for-choosing-development>

- Greater flexibility over when CIL is paid, particularly for large complex sites.
- Allowing site preparation before CIL is triggered.
- Simplifying and extending affordable housing relief – and relieving gross rather than net affordable housing floorspace.
- Amending the exceptional circumstances relief to make it easier to qualify.
- Reinforcing the evidence tests for CIL setting and amending rules relating to Regulation 123 infrastructure lists to provide more clarity and commitment to infrastructure delivery.

In total, 22 reforms are proposed.

6.1.3 Relationship between S106 Planning Obligations and the CIL

CIL is intended to provide infrastructure to support the development of an area rather than to make individual planning applications acceptable in planning terms. As a result, there may still be some site specific impact mitigation requirements without which a development should not be granted planning permission. Some of these needs may be provided for through the levy but others may not, particularly if they are very local in their impact. Therefore, the Government considers there is still a legitimate role for development of specific S106 Planning Obligations to be used alongside a CIL, enabling a local planning authority to be confident that the specific consequences of development can be mitigated.

In order to ensure that Planning Obligations and the CIL can operate in a complementary way and the purposes of the two regimes are clarified, the regulations scale back the way Planning Obligations operate. On the local adoption of the levy the regulations restrict the local use of planning obligations for pooled contributions towards items that may be funded via the levy. The levy is the Government's preferred vehicle for the collection of pooled contributions.

Pooled contributions may be sought from up to five separate planning obligations for an item of infrastructure that is not locally intended to be funded by the levy. The limit of five applies as well to types of general infrastructure contributions, such as education and transport. In assessing whether five separate planning obligations have already been entered into for a specific infrastructure project or a type of infrastructure, local planning authorities must look over agreements that have been entered into since 6th April 2010.

6.2 Development Viability

When utilising S106 Planning Obligations and establishing a CIL, Local Authorities must ensure that they do not threaten the overall viability of development, 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.*”

With the objective of maintaining development viability in mind, the next two sections set out evidence leading to an initial view on the level of infrastructure funding that might be achieved through S106 Planning Obligation and CIL mechanisms.

6.3 Development Appraisal Study

A Stroud DC “*Community Infrastructure Levy Development Appraisal Study*” was completed in August 2012. This is due to be replaced by an updated Viability Assessment during the summer 2013, but in the meantime provides the best source of information available on the extent of financial contributions towards infrastructure that might be expected.

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 44 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.³⁷

Table 44 - Stroud Development Appraisal Study Recommended CIL 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

6.4 Review of reference CIL rates

A review of draft and adopted CIL charging rates for other Local Authorities in England, that are at an advanced stage of preparation, contributes further to a

³⁷ Size of semi-detached house based on Zoopla.co.uk ‘Area Stats’ for Gloucestershire.

preliminary view of what charging rates may be appropriate within Stroud District. Summary observations are as follows, with a more detailed comparison provided in Tables 46 and 47 below.

- Proposed CIL rates for residential development vary significantly from £40sqm Gross External Area (Shrewsbury) to £150sqm (rural South Somerset). This is due to variations in the level of viability of development across locations, the scope of infrastructure covered, as well as the levels of affordable housing that are required.
- The majority of Local Authorities reviewed have decided to apply “differential CIL rates” for residential development. This means the CIL rate has been varied to reflect differences in property values across the Local Authority area. The exception to this is Mid Devon, which has proposed the same residential rate across the area.

In Table 44 the residential CIL rates have been compared against average house prices in those local areas to identify trends. The average house prices are based on semi-detached housing, to give a sense of the CIL charge rates, and have been derived from the property website Zoopla.co.uk (accessed May 2013). The CIL is charged by unit of floorspace and an average semi-detached house size of 87sqm has been assumed for the purpose of this study³⁸.

There is no direct correlation between average house price and the CIL rate imposed as Local Authorities have had to weigh up a range of factors when setting rates. Further research into the justification of the CIL rates by the various Local Authorities is shown in Table 47, with the main reasons for variation being:

- For council areas with differential rates, varying levels of viability are demonstrated, with certain areas capable of remaining viable at a higher rate.
- The need to encourage and remain attractive to development in certain areas, e.g. such as Shropshire’s lower CIL rate for town revitalisation areas.
- For urban extensions, a low CIL rate has been set in some instances. South Somerset District Council conclude that urban extensions have very high start-up costs to open up sites for development and therefore lower rates are proposed than elsewhere in the District. For an urban extension to Wellington (Taunton Deane Borough Council), the proposed CIL rate has been set to zero.
- Some rates have been set lower than what can be viably achieved, but the Council involved has taken the view that there should be flexibility. For instance some sites have higher site specific costs that would result in further S106 Planning Obligations (e.g. Bristol and Mid Devon).
- Varying levels of affordable housing requirements are set out in policy, as summarised in Table 47.

Property values across Stroud District do of course vary from place to place and have been subject to price volatility in the period of recession and low economic growth since 2007/2008. Average property prices sourced from Zoopla.co.uk in 2013 show values that fluctuate around the average figures for Gloucestershire as a whole (see Table 45).

³⁸ Based on Zoopla.co.uk ‘Area Stats’ for Gloucestershire.

In terms of areas where the establishment of a CIL is further progressed, the Shropshire and Taunton Deane LAs provide potential comparators for Stroud District (see Tables 46 and 47). Property values in Shrewsbury (for semi-detached) are lower than those in Stroud, but the authority seeks a slightly higher affordable housing contribution (33% compared to 30% for Stroud District Council). Shropshire have proposed a residential CIL rate of £40/sqm in Shrewsbury and £80/sqm for rural areas. In the case of Taunton Deane, property values tend to be slightly higher than those in Stroud District, but the Council also seeks a lower affordable housing contribution of 25%. Proposed residential CIL rates for Taunton Deane are £70/sqm for Taunton and £125/sqm in rural areas.

Table 45 - Stroud District average house prices

Area / settlements	Viability Assessment (2011)		Average house prices (2013) ³⁹	
	Post code	Average house price (2011) ⁴⁰	Semi-detached properties	All properties
Gloucestershire	-	-	£205,384	£244,417
North East Cam	GL11	£199,630	Dursley - £186,357	Dursley - £221,086
Sharpness	GL13	No info	Berkeley - £208,860	Berkeley - £256,979
West of Stonehouse	GL10	£276,250	£192,634	£231,278
Stroud Valleys	GL5	£135,478	Stroud - £215,746	Stroud - £277,301
Aston Down	GL6	£359,625	-	-
Hunt's Grove	GL2	£183,946	Gloucester - £169,457	Gloucester - £184,657
Stroud District settlements average	-	-	£194,611	£234,260

In order to derive an estimate of funding that could be achieved through CIL, predicted upper and lower CIL rates have been estimated on the following basis:

- **Lower CIL rate** - a CIL rate of £70/sqm has been assumed based on the Taunton residential rate for existing urban areas and urban extensions, which represents a contribution of around £6,090 for a semi-detached house. This represents a conservative estimate of what may be achieved when compared to the results of the 2011 Viability Assessment undertaken for Stroud DC.
- **Upper CIL rate** – the Stroud District Council CIL Viability Assessment (August 2011) recommended a CIL rate of £80/sqm for development in urban areas, or around £6,560 for a semi-detached dwelling. This CIL rate is expected to apply for the strategic locations for development, as the majority are located within or adjacent to towns and are likely require greater site-specific investment in transport access and utility connections etc. A higher CIL rate of £120/sqm was recommended in the Viability Assessment for developments in rural areas, but this rate would be expected to apply to smaller number of developments and would therefore make up a relatively low proportion of overall CIL receipts.

³⁹ Source: www.zoopla.co.uk Property values for Gloucestershire (accessed July 2013).

⁴⁰ Source: Stroud District Council Community Infrastructure Levy Development Appraisal Study (August 2012), based on Land Registry data.

This represents an initial estimate of appropriate CIL rates only and detailed viability assessment of various development typologies and scenarios are required to provide the evidence base for a CIL. Further development viability work is currently being undertaken on behalf of Stroud District Council, which will inform an update of the IDP.

Table 46 - Residential CIL rates and house prices across local authorities

Local Authority	Urban 1 (Prime)		Urban 2 (Secondary)		Urban extension		Other / rural
	CIL rate	Average House Price (semi-detached)	CIL rate	Average House Price (semi-detached)	CIL rate	Average House Price (semi-detached)	CIL rate
Taunton Deane BC	Taunton £70/sqm	Taunton - £198,799	Wellington £0/sqm	Wellington - £187,259	Wellington £0/sqm	Wellington - £187,259	£125/sqm
Shropshire	£40sqm	Shrewsbury - £167,708		Telford - £121,427	-		£80/sqm
Bristol CC	Inner Zone £70/sqm	Central Bristol BS1 - £360,652	Outer Zone £50/sqm	Bristol as a whole £223,468	-		-
Newark & Sherwood DC	Newark £45/sqm	Newark - £165,497	Collingham £45/sqm	Collingham – not available	-		£55-75/sqm
South Somerset DC	£150/sqm	Chard EDA £169,689			Yeovil £32/sqm Chard EDA £100/sqm	Yeovil - £170,175 Chard - £169,689	£150/sqm
Mid Devon DC	-	-	-	-	-	-	All - £90/sqm Note: Inspector has recommended that this rate is reduced to £40/sqm

Table 47 - Justification for CIL rates across Local Authorities

Local Authority	Rates	CIL rate justification	Affordable housing policy	Status
Taunton Deane BC	Taunton (including urban extensions) - £70/sqm Wellington urban area - £0/sqm Wellington urban extensions - £0/sqm Rest of Borough - £125/sqm	The Community Infrastructure Levy Viability Appraisal (June 2012) provides the following points: <ul style="list-style-type: none"> The viability evidence suggests that there are significantly higher residual values in Taunton than in Wellington, and again significantly higher values in the 'Rest of the Borough' which has been reflected in different CIL rates. For development to be viable in Wellington CIL rates have been set to nil. For the Wellington urban extension – with flexibility around affordable housing and attention to the mix of dwellings, CIL at a maximum of £25/sqm is realistic. The proposed rate for the Wellington urban extension has been reduced from £25/sqm in the Preliminary Draft Charging Schedule (June 2012) to £0/sqm Noted that children's play would be provided via s106 agreements rather than CIL http://www.tauntondeane.gov.uk/irj/public/council/futureplans/futureplan?rid=/wpccontent/Sites/TDBC/Web%20Pages/Council/Future%20plans/Community%20Infrastructure%20Levy	25% affordable housing	Draft Charging Schedule (January 2013)
Shropshire	£40/sqm in Shrewsbury, the market towns and key centres and £80/sqm elsewhere	The following points are made in the CIL levy rationale background paper (March 2011) <ul style="list-style-type: none"> For Shrewsbury, the market towns and other key centres, the current economic downturn and the Council's emphasis on market town revitalisation suggests that the CIL rate should not be too high In rural Shropshire there is evidence that economic viability of residential development is stronger than in the towns and key centres A lower proportion of development is sought in rural areas in Shropshire in the Core Strategy period http://www.shropshire.gov.uk/planningpolicy.nsf/open/7C726F39E5694F6E80257922004CC920	33% for the first five years of the Core Strategy, including 20% social rented- and 13% intermediate affordable housing	Adopted
Bristol CC	Inner Zone £70/sqm Outer Zone £50/sqm	Recommendations of the BNP Paribas Community Infrastructure Levy Viability Study for BCC Feb 2012: <ul style="list-style-type: none"> Use higher rates for sites that could provide a greater contribution CIL is not a critical factor in determining scheme viability but it is important not to 	40 % in North West, Inner West and Inner East Bristol 30% in all other	Approved at examination with no alterations

Local Authority	Rates	CIL rate justification	Affordable housing policy	Status
		<p>set rates that are on the limit of viability</p> <ul style="list-style-type: none"> For residential schemes, the application of CIL of £50 to £70 per sq m does not appear to be a critical factor in determining whether or not a scheme is viable. The rates allow a viability buffer that should be large enough to take account of economic downturns and site-specific issues that may affect individual development schemes. <p>http://www.bristol.gov.uk/page/community-infrastructure-levy-consultation</p>	locations	
Newark & Sherwood DC		<ul style="list-style-type: none"> Not viable to charge a standard rate as some areas could not take even a low CIL rate Council's use of zones for charging different CIL rates is appropriate as the margin of viability varies across the District <p>http://www.newark-sherwooddc.gov.uk/cilexam/</p>	30% affordable housing	Adopted
South Somerset DC		<p>As set out in the Community Infrastructure Levy Evidence Base (Jan 2012) and the Preliminary Draft Charging Schedule (March 2012):</p> <ul style="list-style-type: none"> The rate is lower for the urban extension as urban extensions have higher costs associated with opening up sites for development which reduces viability All locations outside of Chard and Yeovil Urban Extensions could bear an increased level of CIL to at least £150 sqm and still remain viable Differing levels of site viability and needs for site specific mitigation between the two locations means that differential rates are appropriate <p>http://www.southsomerset.gov.uk/planning-and-building-control/planning-policy/community-infrastructure-levy-(cil)/</p>	35% affordable housing including (60% social rented and 40% intermediate housing)	Preliminary Draft Charging Schedule (March 2012)
Mid Devon DC	<p>£90/sqm</p> <p>Note: Inspector has recommended that this rate is reduced to £40/sqm</p>	<p>As set out in The Draft Charging Schedule (Submission Version July 2012):</p> <ul style="list-style-type: none"> One rate for the whole area is proposed as it is considered that Mid Devon is a homogenous housing market Viability research suggested that £156/sqm would be viable however a rate of £90 permits a level of flexibility and allow schemes with higher costs to pay the CIL charge <p>http://www.middevon.gov.uk/index.aspx?articleid=8598</p>	30% affordable housing provision	Draft Charging Schedule (July 2012)

6.5 Total estimated infrastructure costs

Bearing in mind that viability places limits on the finance that can be raised for infrastructure through developer contributions, it is likely to 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 chart below provides a summary of estimated infrastructure costs per dwelling that could form the basis for a CIL charging schedule and shows total estimated costs amounting to between £13,559 and £14,517 per dwelling.

When interpreting the information in the chart, 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 48. 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 £98.8mil for Scenario 1 and £135.4mil for Scenario 3.

The overall estimated infrastructure costs per dwelling are considerably higher than the indicative CIL rates of £6,090 and £6,560 per dwelling, as illustrated in the chart at Figure 7 below. 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: the Council will need to take account of the number of existing dwellings that have already achieved planning consent; certain sites may be excluded from the CIL on viability grounds; and Social Housing Relief can be claimed where affordable housing is delivered.

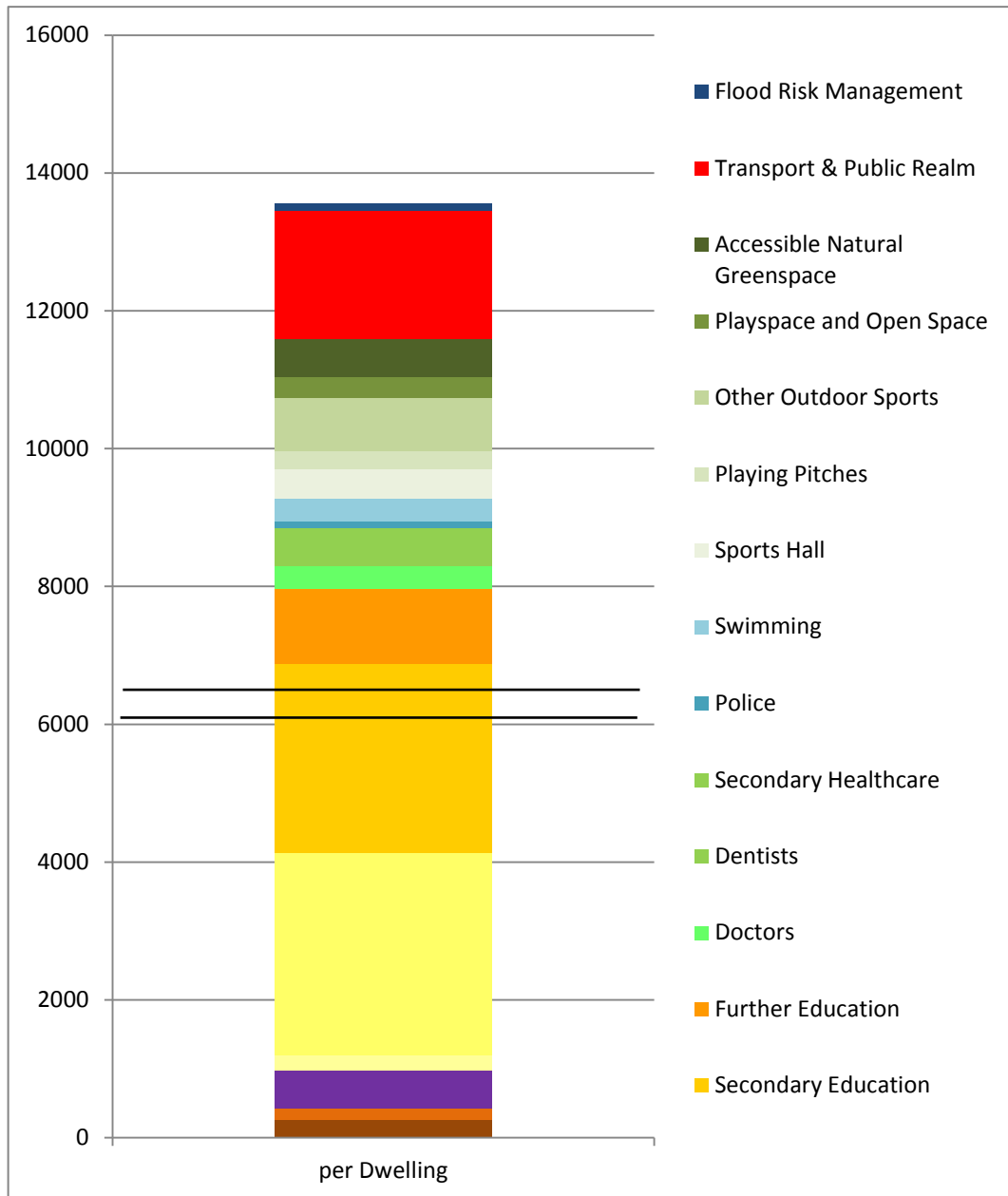
Table 48 - Summary of Estimated Infrastructure Costs

Infrastructure Category	Infrastructure Type	Comment	Estimated contributions per Dwelling
Community & Culture	Library	Based on Arts Council recommended standard	£262
	Community Centre	Based on Shaping Neighbourhoods and Sport England Village Hall Design Guide	£556
	Youth Support Services	Based on standard provided by Gloucestershire County Council	£168

Infrastructure Category	Infrastructure Type	Comment	Estimated contributions per Dwelling
Education	Early Years Education	Based on standard provided by Gloucestershire County Council	£210
	Primary Education	Based on standard provided by Gloucestershire County Council	£2,943
	Secondary Education	Based on standard provided by Gloucestershire County Council	£2,736
	Further Education	Based on standard provided by Gloucestershire County Council	£1,094
Emergency Services	Fire & Rescue Service	Developer on-site provision of fire hydrants and sprinkler systems where necessary	-
	Ambulance Service	SWASFT investment including co-responder scheme	-
	Police	Developer contributions may be sought	£122 for scenario 1; £99 for scenario 2; £83 for scenario 3
Healthcare	Doctors	Developer contributions may be sought	£329
	Dentists	Developer contributions may be sought	£209
	Secondary Healthcare	Developer contributions may be sought	£352
Energy	Generation	Funded by consumer rates; or developer provision of on-site capacity.	-
	Transmission (electricity/gas)	Funded by consumer rates and developer connection charges.	-
Flood Risk, Water & Wastewater	Flood Risk Management Fund (Councils)	Flood risk management projects to be confirmed and costed, plus Property-level Protection scheme for Slad Brook, Stroud.	£500,000 - £1,000,000 (upper estimate assumed for contingency) = £147 for scenario 1; £120 for scenario 2; £100 for scenario 3
	Flood Risk Management (utilities)	Funded through Asset Management Plan process	-
	Flood Risk Management (developers)	Flood risk management works to manage on-site works and prevent increase to flood risk elsewhere.	-

Infrastructure Category	Infrastructure Type	Comment	Estimated contributions per Dwelling
	Water supply & wastewater	Funded through Asset Management Plan process, consumer rates and developer connection charges	-
ICT	Broadband	Fastershire programme in place	-
Open Space, Sport & Recreation	Swimming	Based on Sport England Sports Facility Calculator	£336
	Sports hall	Based on Sport England Sports Facility Calculator	£423
	Playing Pitches	Based on Fields in Trust Benchmark Standard	£269
	Other Outdoor Sports	Based on Fields in Trust Benchmark Standard	£768
	Facilities for Children and Young People	Based on Stroud DC Residential Development Outdoor Play Space Provision (standard for 3 bed house).	£285
	Informal Playing and Open Space	Based on Fields in Trust Benchmark Standard	£22
	Natural & semi-natural open space	Based on Natural England ANGSt standards	£552
	Cotswold Canals Project	Costed schemes: Stonehouse Ocean Railway Bridge (£1.5mil); and Saul Chalford Towpath Upgrade (£650,000)	£316 for Scenario 1; £256 for Scenario 2; £215 for Scenario 3
Transport & Public Realm	Bus Services	Based on Gloucester to Stroud Strategic Bus Route (£12.6mil)	£1,853 for Scenario 1; £1,502 for Scenario 2; £1,262 for Scenario 3
	Cycle Path Schemes	Completion of Cam and Dursley Greenway cycle and pedestrian link (£350,000)	£51 for Scenario 1; £42 for Scenario 2; £35 for Scenario 3
	Highways	A419 Major Scheme for improvements between M5 Junction 13 and Stroud town centre (£3.5mil)	£514 for Scenario 1; £417 for Scenario 2; £350 for Scenario 3
	Site-specific transport mitigation and access	Developer provision of site-specific S106 Obligation	-
Waste	Waste	Funded through Council Tax	-
Totals			£14,517 for Scenario 1 £13,950 for Scenario 2 £13,559 for Scenario 3

Figure 7 – Chart of estimated infrastructure costs per dwelling (based on Scenario 3 – 9,989 dwellings) showing lower and upper estimated CIL rates. Diagram does not illustrate Council priorities.



6.6 Recommendations on use of developer contributions

Preliminary CIL viability work undertaken suggests that a CIL rate could be set around the level of £6,090 per dwelling to £6,560 per dwelling, while still allowing for the achievement of 30% Affordable Housing. In comparison, the estimated infrastructure costs per dwelling are estimated to be around £13,559 to £14,517 per dwelling, although this is expected to increase as further costing information becomes available for site specific infrastructure. It will therefore be necessary for Stroud District Council to prioritise infrastructure investment taking account of strategic objectives at the district level, and consideration of the most pressing needs at the local/site-specific level.

Based on the infrastructure planning work undertaken to date, emerging recommendations for the structure of developer contributions policy are as follows:

6.6.1 Strategic Location Reduced CIL Rate

It is suggested that for Strategic Locations for development, a reduced rate of CIL or exclusions from CIL should be considered. The following reasons are put forward for this:

- Firstly, the scale of development at the strategic locations of North East Cam, West of Stonehouse and Hunt's Grove is such that significant new infrastructure may be required and 'in kind' delivery as part of the development is likely to be desirable. Examples of infrastructure that may be delivered on site includes early years and primary education buildings, community centres, public open space and play facilities, and transport projects (e.g. junction improvements and cycling and walking links) required to enable access.
- Secondly, strategic locations at Sharpness and within the Stroud Valleys (Dudbridge & Wallbridge, Thrupp and Brimscombe Port) may have significant abnormal costs. These include site remediation and, in some cases, complex access arrangements involving the provision of bridges. As these development schemes will directly contribute to Council objectives of regenerating Sharpness Docks and the Cotswold Canals, a case by case approach to infrastructure contributions and ensuring development viability may be warranted.
- Finally, financial contributions towards other projects that relate directly to the strategic locations could still be secured through S106 Planning Obligations, while taking care to ensure these do not include pooled contributions or standards charges from five or more developments.

A reduced CIL rate may cover further infrastructure investment where it would make sense to pool contributions from a number of developments. For instance: contributions towards secondary education; and a fund to support the delivery of a network of high quality bus routes.

6.6.2 Infrastructure Tiers

As suggested above, it is likely to be necessary for the Council to prioritise those infrastructure projects that should benefit from S106 Planning Obligations or CIL payments, taking account of other sources of funding available. It is outside the role of consultants to make decisions around the prioritisation of infrastructure, but it is possible to assist the Council by recommending a framework of infrastructure tiers to assist the decision-making process.

Strategic Projects

Through the course of preparing IDPs for all the Districts in Gloucestershire, projects of county-wide and strategic importance may be identified. These may:

- assist in achieving economic development objectives (e.g. strategic highways schemes);
- be necessary taking account of the level of development across the county as a whole, such as the expansion of hospital capacity;
- relate to development across District boundaries, so require a greater level of coordination; and/or
- facilitate major development at two or more strategic locations with Stroud District.

A list of candidate strategic projects is set out at section 5.1 and will be updated as the Gloucestershire District IDPs for neighbouring authority areas are progressed.

Core Projects

Core projects are those items of infrastructure that are considered of fundamental importance to support development at a strategic location in Stroud District and the Local Plan may be found ‘unsound’ if reasonable prospect of provision cannot be demonstrated. Transport, flood risk management and utilities infrastructure are necessary to ‘unlock’ sites for development and if these infrastructure items cannot be delivered at strategic locations, this would comprise a serious flaw within the development strategy.

Essential Services

Most people would also agree there are certain essential services required by a community, although the relative importance and ranking of different services could be enthusiastically debated. Education, healthcare and emergency services are ranked as Essential Services of primary importance that are necessary to enable development, as presented in Table 49.

Table 49 - Infrastructure categories and priorities

Category	Infrastructure Sectors
Strategic Projects	Projects of strategic or county-wide importance. Typically involves energy, flood risk management, water, wastewater, transport and waste. Other community services with a large catchment area such as hospitals may be included.
Core Projects &	Projects that enable major development at Strategic Locations.

Category	Infrastructure Sectors
Essential Services	Typically involves energy, flood risk management, water, wastewater, transport and waste, but could include other infrastructure types where a major shortfall in provision would otherwise arise.
	Community services of primary importance, namely education, healthcare and the emergency services.
Place-making and self-fulfilment	Community services including libraries, community centres, cultural facilities, sports facilities, recreation, open space, enhanced public realm.

Place-making and self-fulfilment

The third category in Table 49 contains a number of further community services that contribute to overall quality of life, including the availability of community centres, cultural and sports facilities, and open space. For each settlement and strategic location for development within Stroud District, the extent of existing provision and local priorities for new facilities will have an important bearing on how funds obtained through S106 Planning Obligations or a CIL would be utilised.

The picture is of course more complex than that presented here. For instance, recognition of the preventative health benefits of exercise suggests that sports facilities and open space should rank equally with health care. Nonetheless, it is expected that conventional services modes and priorities will continue to have a bearing on decisions made.

6.6.3 Neighbourhood Funds

As introduced in section 6.1.2, the Government has confirmed that neighbourhoods where development comes forward will be able to claim 15% or 25% of CIL finance as Neighbourhood Funds. 25% of CIL receipts will be passed to the parish or town council where a Neighbourhood Plan has been approved by the local community. Neighbourhood Funds provide a mechanism that could allow residents close to new development to determine spending priorities for place-making infrastructure, such as community centres, sports and recreation facilities and public realm improvements.

7 Infrastructure funding: alternative finance mechanisms

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.

7.1 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.⁴¹ 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.

⁴¹ Source:

http://www.conservatives.com/News/News_stories/2013/06/Investing_in_Britains_future.aspx

7.2 New Homes Bonus and 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.

7.3 Gloucestershire Infrastructure Investment Fund

Gloucestershire Local Enterprise Partnership (LEP) and the County Council have recently 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 Fund⁴²:

- to generate economic activity in the short term by addressing immediate infrastructure and site constraints and promote the delivery of jobs and housing;
- 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)

⁴² Communities & Local Government & Department for Transport ‘*Growing Places Fund, Prospectus*’ (November 2011)

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 GIIF⁴³:

- 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.

7.4 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.

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.

⁴³ Source: <http://www.lepnetwork.org.uk/five-investments-projects-to-boost-cash-for-gloucestershire-lep.html>

‘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 £1.5 billion 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.

8 Governance and capacity for delivery

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.

8.1 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.

8.2 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.

8.2.1 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.

8.2.2 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.

9 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 re-doubling of the Swindon to Kemble railway; 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. Development scenarios for NE Cam (400, 675 or 950 dwellings) vary greatly, with the higher housing scenarios thought to be at the threshold of what may trigger provision of new community infrastructure on or off-site. For instance, development may result in the need for new local primary-level education infrastructure.
- **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 (200 – 250 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.
- **West of Stonehouse (housing) and north of Stroudwater Industrial Estate (employment)** – IDP housing scenarios range through 750, 1,375 and 2,000 dwellings. The higher scenarios are likely to trigger significant investment in on-site community infrastructure, including primary education, a community centre and healthcare facilities. For all development scenarios, creating safe and attractive links from the new development to Stonehouse across the railway lines would be a priority. Housing and employment development at Stonehouse may help facilitate delivery of strategic transport improvements, including A419 corridor improvements, a high quality bus corridor between Stroud and Gloucester, and/or delivery of the Cotswold Canals Project.
- **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.
- **Aston Down (housing)** – Development scenarios considered for IDP purposes provide for 200 houses. The main constraint identified through this study is that there are currently no community facilities at Aston Down, which would place greater reliance on access to facilities in the settlements of Minchinhampton and Chalford. Provision of public transport is also problematic and the level of development proposed would be unlikely to prompt significant improvements to bus service frequency and quality. Severn

Trent have advised that the site is not currently connected to the sewerage system and a future connection would be to the top of the Stroud Valleys section.

- ***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 IDP development scenarios (500, 625 or 750 dwellings), total development could range between 2,250 and 2,500 new homes. 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 that infrastructure costs to support development would exceed £98.8mil for Scenario 1 (6,806 dwellings) and £135.4mil for Scenario 3 (9,989 dwellings), which equates to infrastructure costs per dwelling between £13,559 and £14,517. 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

Infrastructure Delivery Plan Development Scenarios

A1 Development Scenario Tables

Stroud Housing Commitments and Allocations by Sub-area - Scenario 1

Sub-area	Dwelling total	Commitments & Windfall	Allocations	Committed sites and potential allocations ⁴⁴	5 Year Housing Land Supply Phasing (Dwellings)					2017 to 2022	2022 to 2027	2027 to 2031
					2012/13	2013/14	2014/15	2015/16	2016/17			
Stroud South Vale (SSV)	1,612	844		Committed sites	593					241	10	N/A
		168		Windfalls	21					52	52	42
			600	400 dwellings at North East Cam 200 dwellings at Sharpness	0					400	200	0
Stroud & West (SW)	2239	1,101		Committed sites	997					56	48	N/A
		187		Windfalls	23					58	58	48
			950	750 dwellings at West of Stonehouse 200 dwellings within Stroud Valleys	100					400	350	100
C. Stroud & East	537	227		Committed sites	227					0	0	0
		110		Windfalls	14					34	34	28
			200	200 dwellings at Aston Down	0					200	0	0
D. Gloucester	2,418	1,907		Committed sites	558					790	559	N/A

Sub-area	Dwelling total	Commitments & Windfall	Allocations	Committed sites and potential allocations ⁴⁴	5 Year Housing Land Supply Phasing (Dwellings)					2017 to 2022	2022 to 2027	2027 to 2031
					2012/13	2013/14	2014/15	2015/16	2016/17			
Urban Fringe		11		Windfalls	2					4	4	1
			500	500 dwellings at Hunt's Grove extension.	0					0	200	300
Totals	6,806	4,556	2,250									

Stroud Housing Commitments and Allocations by Sub-area - Scenario 2

Sub-area	Dwelling total	Commitments & Windfall	Allocations	Committed sites and potential allocations ⁴⁵	5 Year Housing Land Supply Phasing (Dwellings)					2017 to 2022	2022 to 2027	2027 to 2031
					2012/13	2013/14	2014/15	2015/16	2016/17			
A. Stroud South Vale	1997	844		Committed sites	593					241	10	N/A
		253		Windfalls	32					79	79	63
			900	675 dwellings at North East Cam 225 dwellings at Sharpness	0					360	315	225
B. Stroud & West	3,253	1,101		Committed sites	997					56	48	N/A
		277		Windfalls	34					86	86	71
			1,875	1,375 dwellings at West of Stonehouse 500 dwellings within Stroud Valleys	50					650	650	525
C. Stroud & East	593	227		Committed sites	227					0	0	0
		166		Windfalls	21					52	52	41
			200	200 dwellings at Aston Down	0					200	0	0
D. Gloucester Urban Fringe	2554	1,907		Committed sites	558					790	559	N/A
		22		Windfalls	3					7	7	5

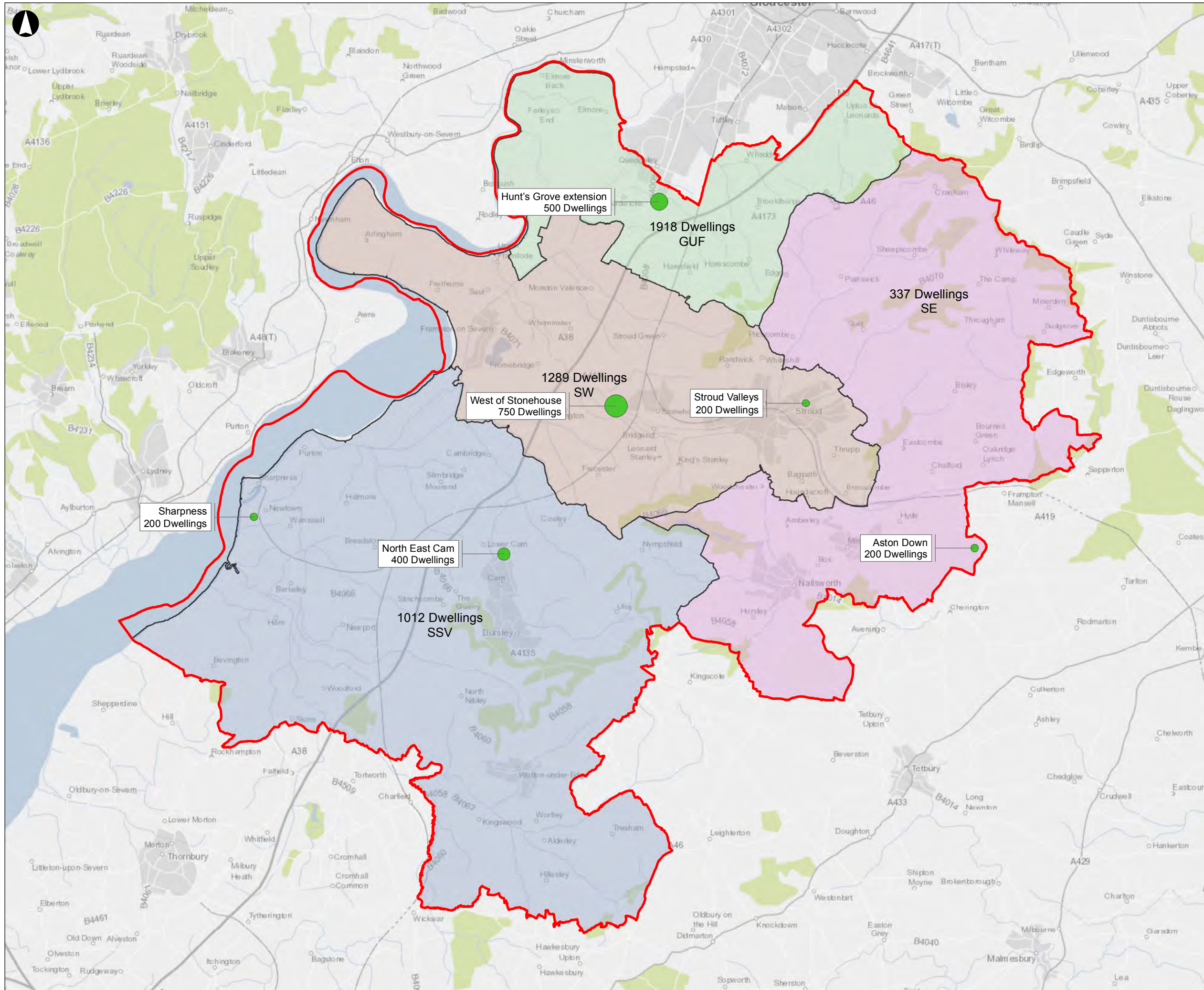
Sub-area	Dwelling total	Commitments & Windfall	Allocations	Committed sites and potential allocations ⁴⁵	5 Year Housing Land Supply Phasing (Dwellings)					2017 to 2022	2022 to 2027	2027 to 2031
					2012/13	2013/14	2014/15	2015/16	2016/17			
			625	625 dwellings at Hunt's Grove extension.	0					0	250	375
Totals	8,397	4797	3,600									

Stroud Housing Commitments and Allocations by Sub-area - Scenario 3

Sub-area	Dwelling total	Commitments & Windfall	Allocations	Committed sites and potential allocations ⁴⁶	5 Year Housing Land Supply Phasing (Dwellings)					2017 to 2022	2022 to 2027	2027 to 2031
					2012/13	2013/14	2014/15	2015/16	2016/17			
A. Stroud South Vale	2,380	844		Committed sites	593					241	10	N/A
		336		Windfalls	42					105	105	84
			1200	950 dwellings at North East Cam 250 dwellings at Sharpness	0					400	400	400
B. Stroud & West	4,275	1,101		Committed sites	997					56	48	N/A
		374		Windfalls	46					117	117	94
			2,800	2,000 dwellings at West of Stonehouse 800 dwellings within Stroud Valleys	50					900	950	900
C. Stroud & East	648	227		Committed sites	227					0	0	0
		221		Windfalls	28					69	69	55
			200	200 dwellings at Aston Down	0					200	0	0
D. Gloucester Urban Fringe	2,686	1,907		Committed sites	558					790	559	N/A
		29		Windfalls	4					9	9	7

Sub-area	Dwelling total	Commitments & Windfall	Allocations	Committed sites and potential allocations ⁴⁶	5 Year Housing Land Supply Phasing (Dwellings)					2017 to 2022	2022 to 2027	2027 to 2031
					2012/13	2013/14	2014/15	2015/16	2016/17			
			750	750 dwellings at Hunt's Grove extension.	0					0	300	450
Totals	9,989	5,039	4,950									

A2 Development Scenario Maps



- Legend**
- Strategic Housing Locations
 - District Boundary
- Stroud Sub Areas**
- GUF Gloucester Urban Fringe
 - SE Stroud & East
 - SW Stroud & West
 - SSV Stroud South Vale

Note:
Housing numbers for the Strategic Housing Locations are additional to the housing numbers indicated for each sub-area.

P2	2013-03-12	YO	TD	TD
Issue	Date	By	Chkd	Appd

Metres

0 1,625 3,250 6,500

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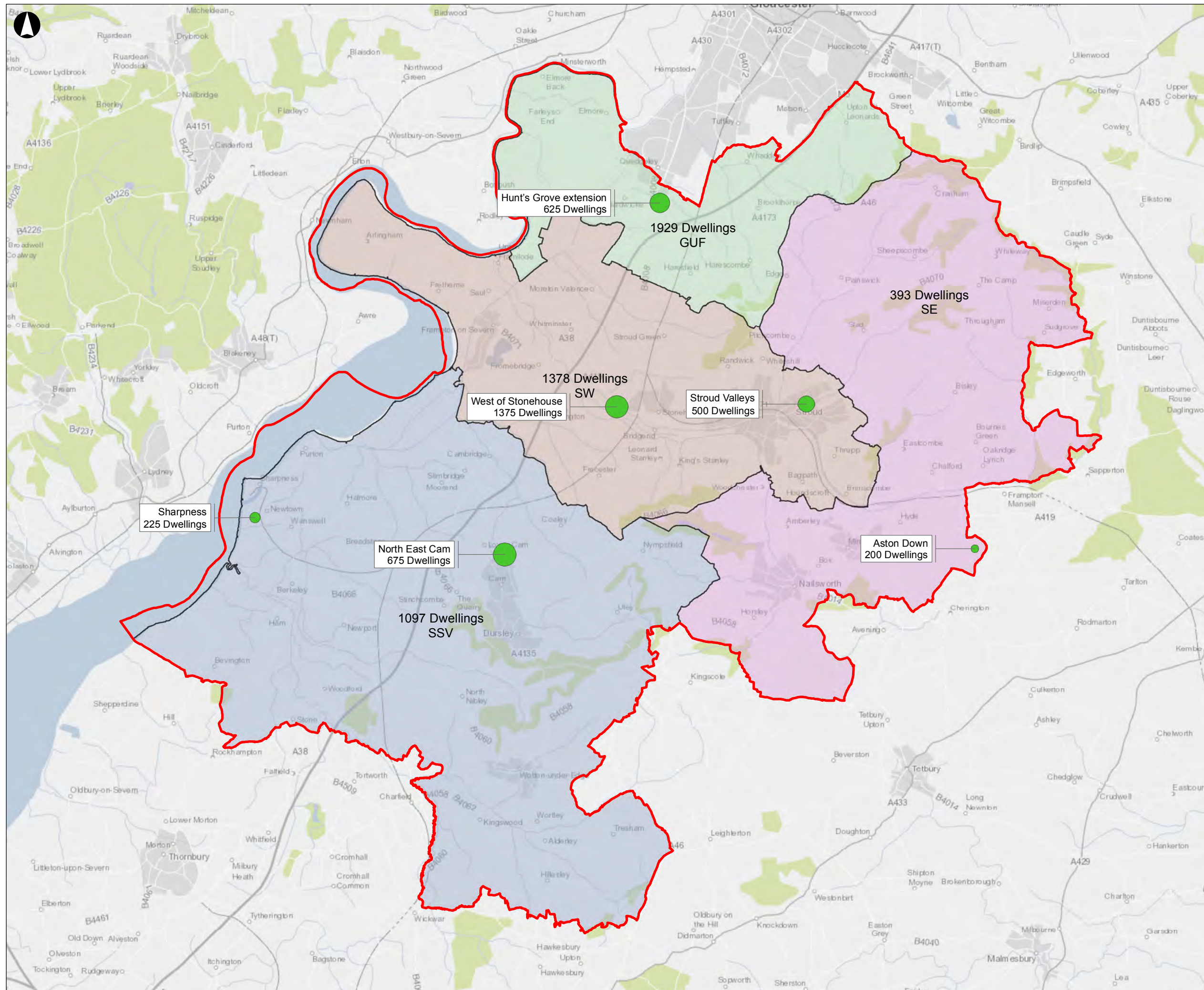
Client
Cheltenham Borough Council, Cotswold District Council, Forest of Dean District Council, Gloucester City Council, Stroud District Council and Tewkesbury Borough Council

Gloucestershire Districts Infrastructure Delivery Plans

Draft Stroud Core Strategy Development Levels (for infrastructure planning purposes only) Scenario 1

Scale at A3 **1:120,000**

Job No 226824-00	Drawing Status Preliminary
Drawing No 001	Issue P2

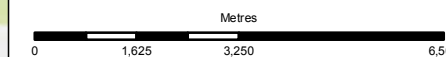


- Legend**
- Strategic Housing Locations
 - District Boundary
- Stroud Sub Areas**
- GUF Gloucester Urban Fringe
 - SE Stroud & East
 - SW Stroud & West
 - SSV Stroud South Vale

Note:
Housing numbers for the Strategic Housing Locations are additional to the housing numbers indicated for each sub-area.

P3	2013-03-12	YO	TD	TD
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Issue	Date	By	Chkd	Appd
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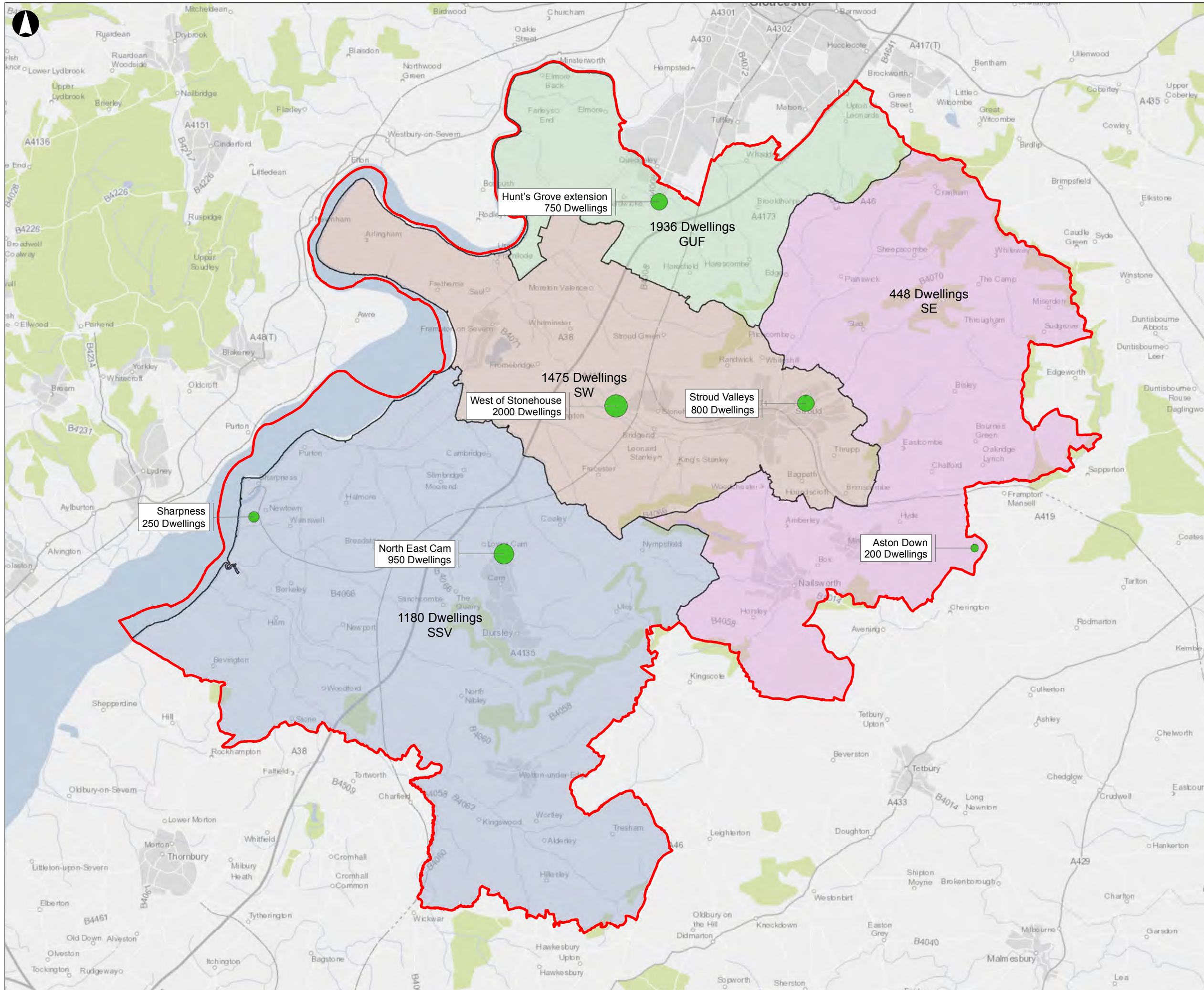
Job Title
Gloucestershire Districts Infrastructure Delivery Plans

Draft Stroud Core Strategy Development Levels (for infrastructure planning purposes only) Scenario 2

Scale at A3
1:120,000

Job No 226824-00	Drawing Status Preliminary
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Drawing No 002	Issue P3
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Legend

- Strategic Housing Locations
- District Boundary

Stroud Sub Areas

- GUF Gloucester Urban Fringe
- SE Stroud & East
- SW Stroud & West
- SSV Stroud South Vale

Note:
Housing numbers for the Strategic Housing Locations are additional to the housing numbers indicated for each sub-area.

P3	2013-03-12	YO	TD	TD
Issue	Date	By	Chkd	Appd

Metres

0 1,625 3,250 6,500

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Job Title
Gloucestershire Districts Infrastructure Delivery Plans

Draft Stroud Core Strategy Development Levels (for infrastructure planning purposes only) Scenario 3

Scale at A3 **1:120,000**

Job No 226824-00	Drawing Status Preliminary
Drawing No 003	Issue P3

Appendix B

Flood Risk Management Responsibilities in Gloucestershire

Table of flood risk management responsibilities provided by Gloucestershire County Council

Risk Management Authority	Key summary of role	Primary flood-related duties, powers & responsibilities
Gloucestershire County Council	LLFA, responsible for managing local flood risk	<ul style="list-style-type: none"> • develop, maintain, apply and monitor a Local Strategy; • managing local flood risk from ordinary water course, surface runoff and ground water upon becoming a ware of a flood, the LLFA must, • to the extent it considers necessary or appropriate, investigate which authority has flood risk management responsibilities and whether that authority has or is proposing to exercise those function. • maintain a register of structures or features which are considered to significantly affect flood risk; • power to do works to manage flood risks from surface runoff and groundwater; • power to designate structures and features that affect flooding; • responsible for consenting third party works on ordinary watercourses (outside of IDB area) (NB: these responsibilities have been delegated to certain districts for a trial period of 12 months as described in Section 4 of the Local Strategy); • power of enforcement where works have been completed without a necessary consent power of enforcement to maintain a proper flow on ordinary watercourses (NB: these responsibilities have been delegated to certain districts for a trial period of 12 months as described in Section 4 of the Local Strategy); • approval, adoption and maintenance of sustainable drainage systems (SUDS) (NB: this part of the legislation has yet to come into force); • contribute towards achievement of sustainable development; • providing information to the Environment Agency as necessary to enable the EA to report to the Minister about flood and coastal erosion risk management • Category 1 responder to emergencies and lead on the coordination and preparation of Multi-Agency Flood Plan (MAFP) through Civil Protection Team, and; • planning authority for minerals and waste, and GCC infrastructure (e.g. schools, highways).
Cheltenham BC Cotswold DC Forest of Dean DC Gloucester CC Stroud DC Tewkesbury BC	Responsible for undertaking works on ordinary watercourses, spatial planning lead, and part of emergency response	<ul style="list-style-type: none"> • power to do works on ordinary watercourses; • power to designate structures and features that affect flooding; • investigate flooding incidents on ordinary watercourses, subject to agreement with GCC; • contribute towards achievement of sustainable development; • duty to co-operate and may share information; • as the local planning authority, prepare a Local Plan outlining proposals for growth and determine planning applications;

Risk Management Authority	Key summary of role	Primary flood-related duties, powers & responsibilities
		<ul style="list-style-type: none"> • act as a statutory consultee for planning applications, and; • category 1 responder to emergencies and responsible for assisting in preparation of Multi-Agency Flood Plans
Gloucestershire Highways	Responsible for highway drainage	<ul style="list-style-type: none"> • responsible for the provision and maintenance of highway drainage under the Highways Act (1980). This excludes trunk roads that are the responsibility of the Highways Agency (M50, M5, A40 and A417); • contribute towards achievement of sustainable development, and; • statutory consultee for the SUDS Approval Body where a drainage proposal is likely to affect a road (NB: this part of the legislation has yet to come into force);
Environment Agency	Strategic overview of all sources of flood risk, and operational responsibility for flooding from Main Rivers, the Sea and Reservoirs	<ul style="list-style-type: none"> • responsible for managing flood risk from Main Rivers, the Sea and Reservoirs; • develop, maintain, apply and monitor a strategy for flood and coastal erosion risk management in England (a ‘national flood and coastal erosion risk management strategy’) • statutory consultee for the SUDS Approval Body where a drainage system directly or indirectly involves discharge of water into a watercourse. (NB: this part of the legislation has yet to come into force); • competent authority to deliver the Water Framework Directive (WFD) in partnership with other organisations; • administer various consents, permits and licences associated with flood risk management, abstraction, discharges, and impounding of water, for example; • provide advice to local planning authorities in relation to development and flood risk; • provide fluvial and coastal flood warnings; • support emergency responders when flooding occurs; • allocation of flood and coastal erosion risk management capital funding (FDGiA); • manage the RFCC process, and; • power to designate features/structures
Lower Severn Internal Drainage Board	Responsible for maintaining ordinary watercourses in their area to protect properties from flooding and to drain agricultural land	<ul style="list-style-type: none"> • operate pumping stations to evacuate water to prevent permanent flooding and water logging; • maintain open drainage channels via dredging and vegetation control; • make byelaws to ensure and protect adequate drainage systems and works • require owners and occupiers of properties to remedy defects in systems, for example where flows of water are impeded through defaults of persons; • control the erection of structures affecting watercourses and the culverting of watercourses which require their special consents; • provide advice to planning authorities regarding new development, by considering the flood risk implications of proposals on site and downstream;

Risk Management Authority	Key summary of role	Primary flood-related duties, powers & responsibilities
		<ul style="list-style-type: none"> • provide advice to ensure that any flood protection works are carried out as a necessary part of the infrastructure for developments; • statutory consultee for the SUDS Approval Body where a drainage system will directly or indirectly discharge water into an ordinary watercourse within their geographical boundary, and; • power to designate features/structures.
Severn Trent Water Thames Water Welsh Water Wessex Water	Responsible for provision, maintenance and operation of public sewers and works	<ul style="list-style-type: none"> • provide, maintain and operate systems of public sewers and works for the purposes of ‘effectually draining’ their area • have a duty to adopt private sewers; • maintain a register of properties which have flooded due to hydraulic overload (DG5 Register); • duty to co-operate and may share information; • statutory consultee for the SUDS Approval Body where a drainage proposal would interact with a public sewer, and; • need to have regard to the Local Strategy.