

Appendix A Benchmarking Document

Stroud Sustainable Transport Strategy

Benchmarking Report

Stroud District Council

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1. Introduction

AECOM have been commissioned by Stroud District Council (SDC) to develop a Sustainable Transport Strategy (STS) to form part of the evidence base for their Local Plan Review. The Local Plan identifies the housing, employment, retail and community development that is required to meet local needs up until 2031. It sets out the strategy for distributing development within the District, and policies for protecting and conserving the natural and built environment. SDC's declaration of a Climate Emergency in 2018 further supports their strong ambition for an STS to be a transformative force which reduces the environmental impact of transport and drives forward its sustainability agenda.

The STS will play a key role in setting out plans for achieving the connectivity and mobility needed to support growth, in as sustainable a manner possible.

This benchmarking report aims to present contextual evidence from a desktop review of the Stroud District. The report explores national and local policy, understanding the significance they have on the STS, but also how the STS will contribute and support adopted Local Policies.

A summary of the demographics and existing travel behaviours has been undertaken using the latest data available. A thorough review of existing transport conditions has highlighted merits of the existing transport network, but also has emphasized some issues and potential improvements. Combined, this detailed assessment of existing conditions will inform the study in its vision, objectives and interventions and lead towards the delivery of a robust STS.

2. Policy Context

A number of relevant local and national policies have been considered during the development of the Sustainable Transport Strategy (STS), described in more detail below.

2.1 National Policy and Guidance

Future of Mobility (2019)

As one of the 2017 Industrial Strategy's 'Grand Challenges', the 'Future of Mobility' has been the subject of two prominent strategic reports from the Government Office for Science (GOfS) and the DfT;

- Future of Mobility: A time of unprecedented change in the transport system (GOfS)
- Future of Mobility: Urban Strategy (DfT)

The two strategic reports focus upon the expectation that transport technology is expected to change at a rate that is faster than any period since the Victorian era, and aim to guide the development of a “*genuinely integrated 21st Century transport system underpinned by digital connectivity and data*” (GOfS, p.iii) up to 2040. The understanding of travel behaviours and how they interact to societal change is emphasised as key to understanding future demand and the role of transport within the context of societal and environmental challenges, in addition to the traditional focus upon economic growth.

The DfT's strategy for the future of urban mobility (for freight, passengers and services) is manifested in the following nine key principles:

- 1) New modes of transport and new mobility services must be safe and secure by design.
- 2) The benefits of innovation in mobility must be available to all parts of the UK and all segments of society.
- 3) Walking, cycling and active travel must remain the best options for short urban journeys.
- 4) Mass transit must remain fundamental to an efficient transport system.
- 5) New mobility services must lead the transition to zero emissions.
- 6) Mobility innovation must help to reduce congestion through more efficient use of limited road space, for example through sharing rides, increasing occupancy or consolidating freight.
- 7) The marketplace for mobility must be open to stimulate innovation and give the best deal to consumers.
- 8) New mobility services must be designed to operate as part of an integrated transport system combining public, private and multiple modes for transport users.
- 9) Data from new mobility services must be shared where appropriate to improve choice and the operation of the transport system.

One of the key short-term priorities listed in the 'Future of Mobility: Urban Strategy' is the proposed regulatory review to help facilitate the testing and implementation of alternative transport modes. The results of this review pave the potential for legislation allowing the wider uptake of 'disruptor' Mobility as a Service (MaaS)¹ or 'micromobility'² providers such as Uber or E-scooters.

Despite the evident focus for future mobility to be assisted by new technologies, more 'traditional' transport solutions such as active mode promotion, mass-transit and integration of different modes are still outlined to play a central role³. In practice the STS will therefore need to help facilitate a safe and equitable mobility network which utilises technology to increase non-private vehicular journeys where possible, and reduce the impact of essential private vehicular journeys.

¹ DfT definition: Mobility as a Service involves “*the integration of various modes of transport along with information and payment functions into a single mobility service. Recent services that allow customers to purchase monthly subscription packages giving them access to public transport and private taxi and bike hire schemes are an example*”

² DfT definition: Micromobility is “*the use of small mobility devices, designed to carry one or two people, or 'last mile' deliveries. E-scooters and e-bikes are examples*”

³ Emphasised by policies 3, 4 and 8

Clean Air Strategy (2019)

The Department for Environment, Food & Rural Affairs (DEFRA) 2019 'Clean Air Strategy' sets out the requirement for action to address air pollution, cited as the top environmental risk to human health in the UK. Chapter 5 is dedicated to addressing transport's contributory role and supports recent central government strategies and guidance in the form of the 2018 'The Road to Zero' and the 2017 Clean Air Zone framework⁴. Concentrations in the Stroud District do not currently exceed nationally set levels, however as the Clean Air Strategy acknowledges that there is a need to minimise exposure to harmful concentrations of pollution, the STS will still need to help promote clean air.

The National Planning Policy Framework (2019)

Introduced in 2012, and most recently updated in February 2019, the National Planning Policy Framework (NPPF) defines the UK government's planning policies and how these should be applied. It is the starting point for Local Planning Authorities when considering future plans and making development decisions, and is supported by the web-based Planning Practice Guidance (PPG).

At the heart of the NPPF is a presumption in favour of 'sustainable development'⁵ which should run through all plan making. In the context of planning for transport this means actively managing patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable. The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel.

The meeting of the NPPF at a local level, through the implementation of Local Plan documents, is discussed in greater detail in the 'Local Plans' section.

National Infrastructure Assessment (2018)

The National Infrastructure Commission (NIC) is an independent body, set up by the government, with the purpose of providing impartial advice on the UK's long-term infrastructure challenges and needs. The NIC's 'National Infrastructure Assessment' reviews available evidence from across infrastructure sectors and sets out the long-term strategy for the UK's economic infrastructure from 2020 to 2050. Although the report is not a statutory government policy, the government has committed to respond to its recommendations and adopt any agreed recommendations as government policy. The National Infrastructure Assessment therefore provides a reasonably foreseeable view into the government's forthcoming National Infrastructure Strategy.

The report made the following core recommendations:

- Nationwide full fibre broadband by 2033
- Half of the UK's power provided by renewables by 2030
- Three quarters of plastic packaging recycled by 2030
- £43 billion of stable long-term transport funding for regional cities
- Preparing for 100 per cent electric vehicle sales by 2030
- Ensuring resilience to extreme drought through additional supply and demand reduction
- National standard of flood resilience for all communities by 2050

When viewed in greater detail, a number of direct transport recommendations could have a significant impact on the STS if adopted in the National Infrastructure Strategy. For example, the report recommends that the government should require local authorities to "allocate 5 per cent of their parking spaces (including on-street) by 2020 and 20 per cent by 2025... to electric vehicle charge points" (p.60). In response to the potential for electric or Connected and Autonomous Vehicles (CAV) to increase the number of vehicles on the road⁶, the report recommends that every city need to act now to ensure that "space in cities is used effectively, with room allocated for fast, frequent public transport systems, well-connected and affordable housing, and pleasant public spaces" which will "require a new approach to governance, strategy and funding" (p.70).

⁴ Which outlined the principles for setting up Clean Air Zones (including provision of road user charging) in England

⁵ The NPPF summarises sustainable development as meeting the needs of the present without compromising the ability of future generations to meet their own needs, in line with Resolution 42/187 of the United Nations General Assembly

⁶ As discussed in greater detail in the Road to Zero policy review

UK Industrial Strategy (2017)

The Department for Business, Energy and Industrial Strategy's (BEIS) 'Industrial Strategy: Building a Britain fit for the future' White Paper is outlined to herald "a new approach to how government and business can work together to shape a stronger, fairer economy" (p.4). The aim of the White Paper is to enhance the United Kingdom's future international competitiveness and achieve a position of leadership in 'industries of the future' through the following five foundations:

- 1) **Ideas:** the world's most innovative economy
- 2) **People:** good jobs and greater earning power for all
- 3) **Infrastructure:** a major upgrade to the UK's infrastructure
- 4) **Business environment:** the best place to start and grow a business
- 5) **Places:** prosperous communities across the UK

To assist with the achievement of the strategy's overall aim, four 'Grand Challenges' have been set, encompassing 'Artificial Intelligence and the Data Economy', 'Clean Growth', 'Future of Mobility', and 'Ageing Society'.

Department for Transport Departmental Plan (2018)

The Department for Transport's single departmental plan sets out the Department's objectives to 2020 and the plans for achieving them. The plan emphasises the importance of transport's role in delivering cross-cutting governmental priorities including the Industrial Strategy, environment and clean growth, housing and race disparity. The following six core objectives are outlined:

1. Support the creation of a stronger, cleaner, more productive economy
2. Help to connect people and places, balancing investment across the country
3. Make journeys easier, modern and reliable
4. Make sure transport is safe, secure and sustainable
5. Prepare the transport system for technological progress, and a prosperous future outside the EU
6. Promote a culture of efficiency and productivity in everything we do

Whilst the implementation period for the departmental plan currently covers the early period of the STS and could be subject to parliamentary changes, the requirement for future mobility to holistically create a safe, secure, efficient and reliable transport system that works for the people who depend on it, whilst supporting a strong, productive economy and the jobs and homes people need, is clear.

Inclusive Transport Strategy (2018)

The DfT's 'Inclusive Transport Strategy' outlines the government's ambitions for an inclusive transport system:

"Our vision is for disabled people to have the same access to transport as everyone else. They will travel confidently, easily and without extra cost. By 2030 we envisage equal access for disabled people using the transport system, with assistance if physical infrastructure remains a barrier"

Whilst many of the requirements referred to in the strategy were previously covered by legislation in the form of the *Equality Act 2010*, the strategy aims to supplement the legislation by presenting objectives that work towards addressing current implementation shortfalls. In addition, the strategy contributes to the 2017 Industrial Strategy's Ageing Population 'Grand Challenge' and several other White Papers and cross-departmental strategies⁷, and therefore provides an important consideration when considering the mobility of all segments of society within the Stroud District.

Transport Investment Strategy (2017)

The Transport Investment Strategy sets out the DfT's priorities and approach for future transport investment decisions and explains how transport investment can deliver a stronger, fairer Britain. It describes what the government is aiming to achieve through:

- Investment in transport infrastructure
- Priorities and propositions that will guide future investment decisions

⁷ Including the 2017 'Improving lives: the future of work, health and disability and the 2018 'A connected society: A Strategy for tackling loneliness – laying the foundations for change'

- Institutional frameworks within which those decisions will be taken
- Actions being taken at achieving the ambitions.

The policy document includes a commitment to consult on a new 'major road network' which will complement the Strategic Road Network which is managed by Highways England. It also outlines plans for a new 'rebalancing' measure, which will judge how investment programmes contribute to a more balanced economy. Since the implementation of the strategy in 2017, Major Road Network (MRN) proposals have undergone a consultation period, with responses informing the development of investment guidance for schemes along the designated network.

The emerging MRN guidance emphasises the requirement for Sub-National Transport Bodies (STBs), or regional groups of local highway authorities where STBs do not already exist, to plan and prioritise investments. Prioritised schemes stand to benefit from a £3.5 billion fund during the period 2020-2025. This is discussed under Section 2.2 on Regional Context in terms of how the STBs relate to Stroud District.

Road to Zero (2018)

The Department for Transport's 'The Road to Zero' strategy supplements the 2017 Industrial Strategy and is built around a core mission of putting the UK at the forefront of the design and manufacturing of zero emission vehicles and for all new cars and vans to be effectively zero emissions by 2040. In addition, the ambition of almost every car and van being zero emission by 2050 is also outlined.

A key driver behind 'The Road to Zero' is transport's position as the largest sector for UK greenhouse gas emissions⁸, with transport's contribution to emission reduction targets mandated by the Climate Change Act 2008⁹ falling significantly behind other sectors including Energy production. Three main actions are outlined as necessary to achieve the strategy's ambitions:

- 1) **Adequate vehicle supply:** as only 38 cars are currently eligible for the plug-in car grant, as opposed to hundreds of conventional vehicle options
- 2) **A strong consumer base and the right market conditions:** only 38% of consumers considering a new car purchase were found to consider an electric car, with only 2% of new car sales currently ultra-low emission vehicles
- 3) **A fit for purpose infrastructure network:** requirement for easily accessible, affordable, efficient and reliable charging infrastructure

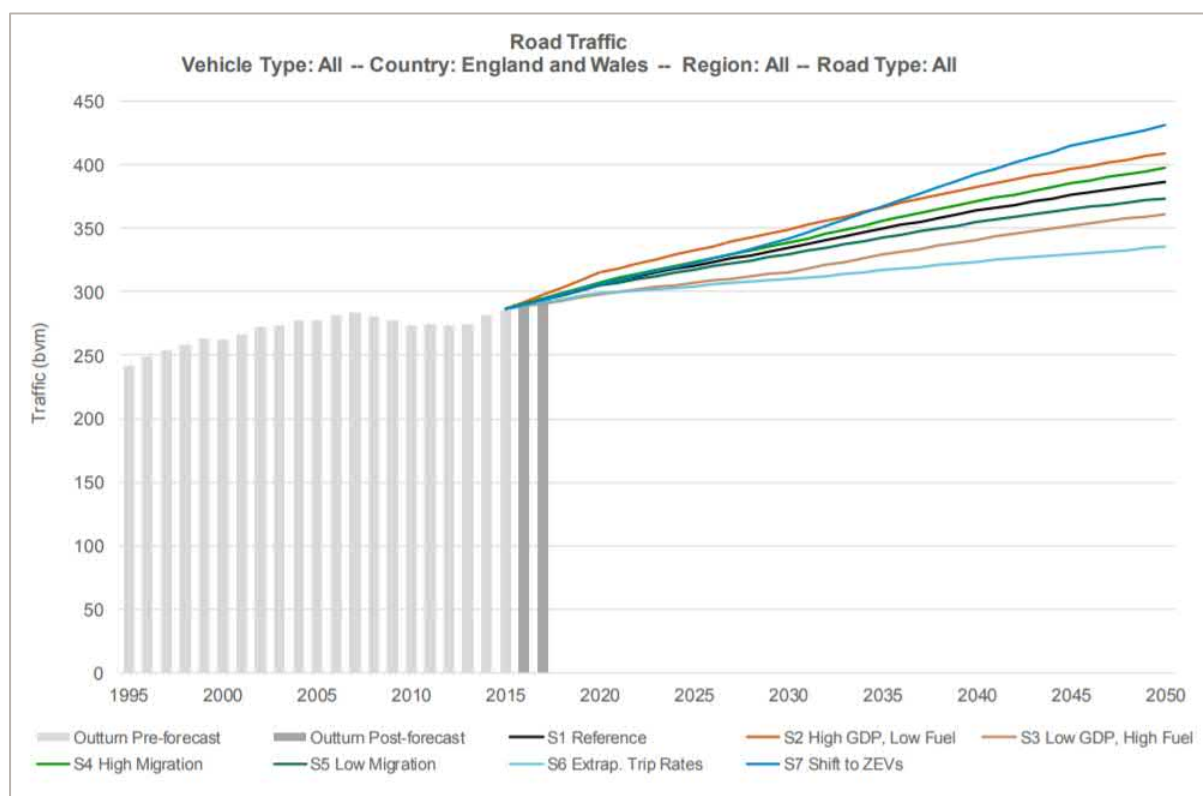
Whilst the first two ambitions listed above are generally outside of the sphere of influence of the local authorities within the Stroud District, the STS will intrinsically be required to help achieve a fit for purpose infrastructure network at a local level. It is important to note that the 2018 Road Traffic Forecasts predict potentially significant demand increases in the event of widespread Zero Emissions Vehicle (ZEV) uptake, which could represent demand levels 51% higher than 2015 by 2050¹⁰. Scenario 7 of Figure 1 demonstrates the additional road demands predicted in the event of high ZEV uptake.

⁸ Producing 27% of all emissions, of which road transport accounts for 90%

⁹ A reduction of greenhouse gas emissions by at least 80% of 1990 levels by 2050

¹⁰ As opposed to 17% in the 'extrapolated trip rates' scenario (Scenario 6)

Figure 1. Vehicle Mile Forecasts for England & Wales. Source: DfT (2018) Road Traffic Forecasts (Figure 25)



With the government’s recent announcement that the UK will eradicate its net contribution to climate change by 2050¹¹, there is the potential for Road to Zero measures to be either fast-tracked or supported by greater funding and may expedite the predicted road demand increases, but may be supported by increased funding.

Cycling and Walking Investment Strategy (2017)

The Cycling and Walking Investment Strategy outlines the DfT’s strategy through to 2040 for making cycling and walking the natural choice for shorter journeys, or as part of a longer journey. The strategy aims to change perceptions of active travel (cycling in particular) as a niche activity, rather than normal activities for all, and subsequently achieve substantial economic, social and environmental benefits. By 2025, the strategy aims to:

- Double cycling, where cycling activity is measured as the estimated total number of cycle stages made each year, from 0.8 billion stages in 2013 to 1.6 billion stages;
- Increase walking activity, where walking activity is measured as the total number of walking stages per person per year, to 300 stages per person per year;
- Increase the percentage of children aged 5 to 10 that usually walk to school from 49% in 2014 to 55%; and
- Reduce the rate of cyclists killed or seriously injured on England’s roads, measured as the number of fatalities and serious injuries per distance cycled.

The strategy also outlines approximately £1 billion worth of funding sources for the settlement period up to 2020-21, with the intention of reducing the potentially negative impacts resulting from the previously stop-start funding of cycle and walking projects. Supporting guidance and tools, in the form of Local Cycling and Walking Infrastructure Plan (LCWIP) guidance and the Propensity to Cycle Tool¹² were also presented alongside the strategy to assist potential active travel scheme identification and development. Gloucestershire County Council has developed an LCWIP for the Central Severn Vale (Gloucester and Cheltenham) area with the intention to conduct future investigation of lateral links to the strategic cycle link and to increase walking corridors to extend the current route proposals into more

¹¹ <https://www.gov.uk/government/news/pm-theresa-may-we-will-end-uk-contribution-to-climate-change-by-2050>

¹² <https://www.pct.bike/>

of a network across the Central Severn Vale. The Stroud District is not proposed to be part of the next phase of the LCWIP.

Rail Strategy (2017)

The DfT's vision for rail is to invest up to £34.7bn in the five years from 2019 to 2024 as part of a £47.9bn overhaul of the network in England and Wales, including a significant increase in asset renewals to improve reliability and reduce disruption. The delivery of rail infrastructure falls under the remit of Network Rail and therefore the implementation impacts are covered in the Network Rail section later.

The following objectives are outlined:

1. A more reliable railway – identifying improvements on lines (which are currently extensively used, are aging and are putting reliability at risk), to make sure passengers, freight customers and communities get the most out of the existing network;
2. An expanded network – investment in capacity to rebalance the economy and create more homes by forging new links between places, spurring development and economic growth;
3. A better deal for passengers – ensuring the right controls and incentives are on each part of the network to improve the customer experience on an increasingly busy railway;
4. A modern workforce – improving skills, diversity, training and development in the rail workforce, and staff sharing in the success of the railway; and
5. A productive and innovative sector – understating that a productive, innovative rail industry is essential to delivering ambitions for the railway and for the UK economy overall.

Following the release of the vision document, the DfT announced in 2018 that it was undertaking a rail review in Britain to look at the structure of the whole rail industry, including increasing integration between track and train, regional partnerships and improving value for money for passengers and taxpayers. Led by the independent chair, Kenneth Williams, the review's findings and recommendations are due to be published in a White Paper in Autumn 2019, with reforms implemented from 2020¹³.

2.2 Regional Context

Highways England

Highways England takes responsibility for the Strategic Road Network (SRN) through its **Road Investment Strategy 2015/16 –2019/20 (RIS)**. Highways England's remit is to ensure strategic roads are more dependable, durable and safe. Its guiding principles to deliver these aims are to ensure the SRN is:

- Free flowing – where routine delays are infrequent, and journeys are reliable;
- Safe and serviceable –where no-one should be harmed when travelling or working;
- Accessible and integrated –so people are free to choose their mode of transport and can move safely across and alongside our roads;

Furthermore, Highways England's role is to support economic growth with a modern and reliable road network that reduces delays, creates jobs, helps business and opens up new areas for development, and to ensure its activities result in a long term and sustainable benefit to the environment.

The RIS sets the strategic vision for Highways England and shows how it will achieve that vision through this five-year plan which is accompanied by a confirmed funding envelope. No schemes were progressed within the Stroud District during RIS Period 1 (up to 2020). The RIS Period 2 schemes (covering the period from 2020 to 2025) are currently being appraised, with more details expected to be released later in 2019. However, the Government's objectives¹⁴ for the period are broadly similar those adopted previously and outlined above.

One of Highways England's Route Strategies, created in support of the RIS2 process is relevant to Stroud District; Birmingham to Exeter¹⁵, setting out the challenges and capacity issues at nearly all the

¹³ <https://www.gov.uk/government/collections/the-williams-rail-review>

¹⁴ [DfT \(2018\) Draft Road Investment Strategy 2: Government Objectives](#)

¹⁵ [Highways England \(2017\) Birmingham to Exeter Route Strategy](#)

junctions on the M5 between Birmingham and Exeter. However, no schemes within the Stroud District were identified, with the strategy focusing on issues in Somerset and the Midlands.

Network Rail

Strategic Business and Wessex Strategic Route Plans (2018)

Network Rail's Strategic Business Plan outlines the plans for Control Period 6 (CP6), running from 2019 to 2024. The document emphasises Network Rail's four key responsibilities of running a safe, reliable, efficient and growing railway.

The **Western Route Strategic Route Plan** encompasses the Stroud District and was presented concurrently to provide greater detail of route enhancements and objectives during and beyond CP6 (up to 2029).

Much of the Western Route Strategic Plan focuses upon interventions that improve connections from Bristol, Cardiff and Penzance to London by 2024 by increasing journey times and frequency of services. There are no major improvements within the District, however within CP6, an hourly service between London and Cheltenham Spa will be delivered as well as investment into Bristol Temple Meads Station.

Long Term Planning Process (LTPP) Strategy

The LTPP considers the role that rail can play in delivering the following strategic goals:

- Enabling economic growth;
- Reducing carbon and the transport sector's impact on the environment;
- Improving the quality of life for the communities and individuals; and
- Improving affordability to funders and value for money.

The LTPP looks at the long-term capability of the rail network up to 30 years in the future to promote efficient use of capacity. It considers the views of stakeholders to identify solutions to drive and support economic growth and provides relevant authorities and passenger/freight train operating companies a basis on which to plan the future of their rail services.

The LTPP is made up of three individual elements; market studies, route studies and cross-boundary analysis. Three of the four market studies which are relevant to this study: the **Long Distance Market Study**, the **Regional Urban Market Study** and the **Freight Market Study**.

Long Distance Market Study (2013)

Released in October 2013, this Market Study forecast future rail demand based on stakeholder views on rail services and how they could support the delivery of the strategic goals. This market is defined by travel usually greater than 50 miles or by 30 miles between large cities and towns and includes both leisure and business journeys. The strategic goals for long distance rail, within the high-level headings provided earlier are:

Enabling economic growth

- By providing sufficient capacity for people travelling to take part in economically productive activities;
- By improving business to business connectivity; and
- By improving connectivity to/from the retail, tourism and leisure sectors of the economy.

Reducing carbon and the transport sector's impact on the environment

- By directly reducing the environmental impact of rail; and
- By reducing the use of less carbon efficient modes of transport.

Improving the quality of life for communities and individuals

- By connecting communities;
- By providing access to social infrastructure such as educational establishments and major leisure venues; and
- By reducing road congestion.

Improving affordability and value for money

- By meeting other outputs in a value for money and affordable way; and
- By directly reducing whole industry subsidy.

Regional Urban Market Study (2013)

This market study focussed on travel in an area less than 50 miles from a regional centre for either commuting or leisure purposes. The strategic goals for this market study within the overall headings are slightly different from the other market studies:

Enabling economic growth

- By providing sufficient capacity for employers to access the labour pool;
- By improving access to workers for businesses; and
- By improving connectivity to/from the retail, leisure and tourism sectors of the economy.

Reducing carbon and the transport sector's impact on the environment

- By reducing the use of less carbon efficient modes of transport; and
- By directly reducing the environmental impact of rail.

Improving the quality of life for communities and individuals

- By improving access to employment and training opportunities;
- By providing sufficient capacity for workers to access employment;
- By connecting communities;
- By providing access to social infrastructure such as educational establishments and major leisure venues; and
- By reducing road congestion.

Improving affordability and value for money for Government and other funders

- By meeting other outputs in an affordable and value for money way;
- By directly reducing whole industry subsidy; and
- By improving the value for money for passengers and taxpayers.

Freight Market Study (2013)

This market study looks at the overall freight market in Great Britain and demand forecasts for freight over a 10, 20- and 30-year planning horizon. Overall, rail freight is expected to continue to grow. Total freight traffic, in terms of tonne kilometres moved, is forecast to increase at an average of 2.9 per cent per annum through to the year 2043, implying that the size of the market more than doubles over this period. The overarching strategic goal for this market study is to enable economic growth:

- By enabling rail freight volumes to stabilise or increase, following recent declines; and
- By funding improvements identified by the industry to continue rail freight expansion in England and Wales.

Sub-National Transport Body Creation

Following the initial announcement as part of the Transport Investment Strategy (2017), the DfT produced additional details of the proposed Major Road Network (MRN) in a December 2017 consultation document. The consultation document outlined the Government's proposals for the network and sought views on its core principles, the definition of the network, investment planning, and eligibility and investment assessment. The MRN is outlined around five central objectives:

1. Reduce congestion
2. Support economic growth and rebalancing
3. Support housing delivery
4. Support all road users
5. Support the Strategic Road Network

The consultation outlined that, in addition to £6.2 billion of sustained funding between 2015 and 2021, local road networks would also benefit from access to an additional £9 billion funding and other incentive driven, competitive schemes.

The development of Sub-National Transport Bodies (STB), where they did not already exist, is outlined as one of the key elements of the Transport Investment Strategy. The STBs are expected to develop a Regional Evidence Base and enable regions to speak with one voice on strategic transport planning, particularly in relation to the MRN, to boost economic growth and development. Gloucestershire County Council is part of the recently formed 'Western Gateway' STB, consisting of several neighbouring local authorities covering the area outlined in Figure 2.

Located in the north of the Western Gateway STB, the study area is bordered by the Economic Heartland and Midlands Connect STBs and needs to consider the objective and scheme proposals presented within these areas.

Figure 2. Western Gateway Sub-National Transport Body Area. Source: Western Gateway (2019) Sub-national Transport Body Outline Case Report (p. 1)



The Western Gateway STB is targeting an additional 300,000 homes and over 190,000 new jobs by 2036, of which Gloucestershire aims to deliver 60,000 new homes and 35,000 new jobs. The growth is focused around unlocking employment and housing land within the M5 Growth Zone. This includes delivery of a new Cyber Business Park near Cheltenham and extensions to Gloucester’s Southern Fringe.

2.3 Local Policy

Gloucestershire Local Transport Plan (2015-2031)

Gloucestershire’s Local Transport Plan (LTP3), adopted in June 2016, sets the long-term strategy for Gloucestershire up to 2031. It aims to influence how and when people choose to travel so that individual travel decisions do not cumulatively impact on the desirability of Gloucestershire as a place to live, work and invest.

The LTP is divided into 13 documents; one overarching; six transport mode policy documents and six area-based Connecting Places Strategies. The documents highlighted in Figure 3 below are of relevance to this study and are summarised in more detail below.

Figure 3. Relevant LTP Policy documents



PD1 - Bus

The first of the six Policy Documents aims to improve travel choice by working with bus operators to provide economic and social benefits directly to bus users, and indirectly through freeing up road space for the benefit of all road users. It sets out that the key challenges are ensuring that bus services provide coverage of both urban and rural areas in the county, and provide connectivity with key services and employment and educational opportunities, whilst being affordable and financially sustainable.

The policies that are relevant to this STS are as follows:

PD 1.1 - Gloucestershire's Bus Network: GCC will work with partners and communities to provide realistic opportunities for travel choice by bus for residents, employers, and visitors and promote them as an alternative to the car to encourage increased levels of use.

PD 1.2 – Community Transport including voluntary car schemes- GCC will support those with limited Travel Choice. GCC will work with and support local communities to develop innovative responses to local transport need.

PD 1.3 – Park and Ride - GCC will work with its partners to provide realistic opportunities for travel choice for residents, employers, and visitors through the delivery of local Park and Ride and commercially viable strategic Park and Ride facilities.

PD 1.4 – Improving the quality of the bus network - GCC will encourage investment in the bus network to increase patronage improve safety and promote bus travel as a viable alternative to the car.

PD 1.6 – Coach Travel - GCC will work with all coach operators to provide a reliable and efficient coach network that supports tourist day trips and connects communities, employment and services in Gloucestershire with key locations outside the county.

PD 1.7 – Integration with new developments - GCC will work with Local Planning Authorities and developers (through the use of planning obligations and site master planning) to ensure connectivity between new developments and existing bus infrastructure and to ensure that realistic opportunities for

travel choice are provided and consistently and comprehensively promoted to residents, employers and visitors.

PD 1.8 –Bus Information - GCC will provide clear and accurate information on services for passengers through a variety of outlets mediums, reaching every individual in every location.

PD 1.9 – Concessionary Travel - GCC will continue to administer the English National Concessionary Travel Scheme within Gloucestershire.

PD 1.10 – Home to school travel - GCC will continue to help with the cost of school / college transport in line with the latest home to school transport policy and will work with its partners to improve personal safety perceptions of using the transport network services and promote the use of transport to contribute to enjoyment and psychological wellbeing.

The relevant short-term (2015-2021) delivery priorities include:

- Gloucester Transport Hub, Gloucester – new bus station
- A40 Corridor Bus Priority, Cheltenham
- Local Park and Ride facilities

The relevant long-term (2021- 2031) delivery priorities include:

- Bus stop and bus advantage improvements between Stroud and Gloucester corridor
- Local Park and Ride facilities
- Strategic Park and Ride expansion at Waterwells, Gloucester

The relevant revenue projects are:

- Ongoing bus stop improvement programme
- Feasibility Study to consider potential Local Park and Ride sites
- Continued roll out of multi operator bus Smartcard ticket

PD2 - Cycle

Policy Document 2 assesses cycling within the area and outlines the specific cycling improvements which can be made throughout Gloucestershire. Cycling as a travelling mode supports the over-arching economic, social, environmental and health objectives set in the LTP.

PD 2.1 – Gloucestershire’s Cycle Network - GCC will deliver a functioning cycle network by improving cycle linkages and safeguard quiet highway connections by working with delivery partners, other agencies, and community stakeholders to identify and remove barriers (physical or psychological) to cycling.

PD 2.2 - Cycle Asset Management - GCC will manage cycle infrastructure in line with the Transport Asset Management Plan (TAMP), the Highways Maintenance Handbook and other guidance or policies such as the updated Gloucestershire Highways Biodiversity Guidance (2015).

PD 2.3 Integration with new developments - GCC will liaise with Local Planning Authorities and developers to ensure connectivity between new developments and existing infrastructure and to ensure that realistic opportunities for travel choice are taken up within and between new developments.

PD 2.4 Cycle Safety, Awareness and Confidence - Contribution will be made by the GCC towards better safety, security and health to improve life expectancy through the reduced risk of death injury or disease.

PD 2.5 – Increasing levels of health and wellbeing - Partners and GCC will work together to encourage physical activity by encouraging larger populations to walk or cycle short distances and promote children to enjoy more independence through physical activity.

The relevant short term (2015 – 2021) delivery projects include:

- Access improvements for Stroud Town Centre
- Cycle infrastructure improvements (countywide)

The relevant long-term (2021-2035) delivery priorities include:

- Access improvement between Eastington and Nailsworth
- Access improvements for Cam and Dursley Greenway to the Railway Station
- Access improvements for Cam and Dursley Greenway to Uley
- Improving access to Gloucester and Sharpness Canal towpath, Gloucester
- Access improvements to national cycle route 45, Stroud
- Access improvements for Cainscross roundabout, Stroud
- Access improvement Multi-use track – B4008 between Little Haresfield and Stonehouse
- Cycle infrastructure improvements (countywide)

PD3 – Freight

Policy Document 3 (PD3) includes all variety of freight such as mail deliveries on foot to the traditional 'heavy' goods vehicles. Journey times and route of freight have become an issue within Gloucestershire, however a balance must be decided on mitigation and effective management of the impacts on demand. Policies set out in the Freight Policy Document that are relevant to this study are as follows:

PD 3.1- Gloucestershire's Freight Network - GCC will work within the role as the Local Highway Authority with Highways England, town/parish councils, policy and highway authorities to maintain a safe and functioning network.

PD 3.2 – Travel Information - GCC will work in partnership with Highways England, neighbouring highway authorities and the Police to increase the role of technology to assist in the dissemination of journey information.

PD 3.3 – Driver Facilities - GCC will ensure drivers' facilities are available at suitable locations to enable drivers to rest along primary routes.

PD 3.4 – Construction Management Plans - As required by the Construction Management Plan (CMP), GCC will support strategic development sites to minimise the impact of their construction on surrounding communities.

PD 3.5 – Managing domestic deliveries in urban or other sensitive locations - To minimise the impact of domestic deliveries in urban or other sensitive locations and of wasted delivery miles due to failed deliveries, GCC will encourage local communities, Chamber of Commerce, Town and Parish Councils to consider the role of freight within their Neighbourhood or Town Centre Plans.

The relevant short term (2015 – 2021) delivery projects include:

- Improvements for A419 corridor, Stonehouse
- B4066 corridor improvements, Berkeley
- Improvements to A38 Berkeley Bridges, Berkeley
- Capital maintenance programme

The relevant long term (2021 – 2026) capital projects include:

- Highway improvement completing the Dursley Relief Road
- Junction improvement A38 / B4066 junction including a new roundabout, Berkeley
- Capital maintenance programme

PD4 – Highways

The fourth Policy Document (PD4) details Gloucestershire's aims to provide the right connections to facilitate economic growth, ensuring the highways network serves all communities, commuters and travellers linking them to job opportunities, services and other areas. This however must be balanced against pressures to reduce car dependency and reduce adverse environmental impacts.

The policies that are relevant to this STS are as follows:

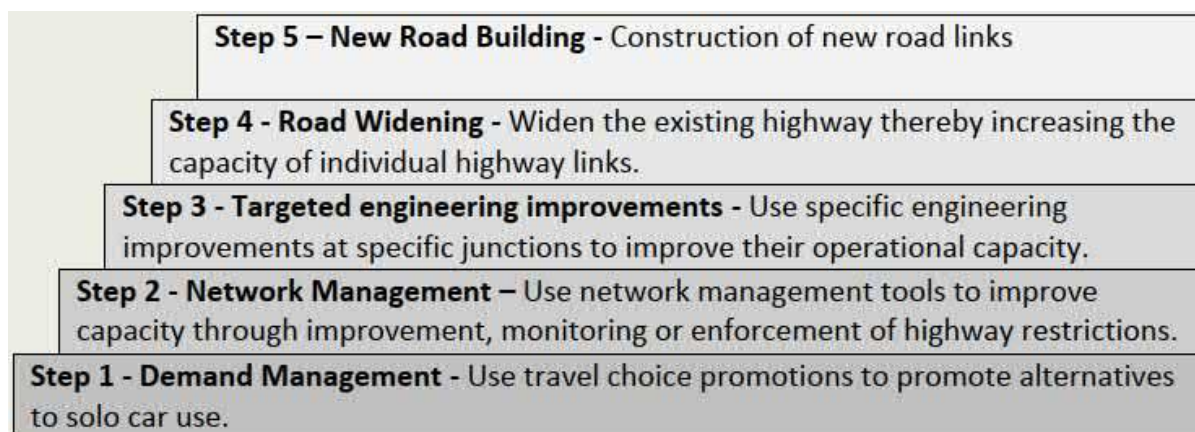
PD 4.1 – Gloucestershire’s Highway Network - GCC will maintain a functioning highway network that supports Gloucestershire’s transport network by ensuring the safe and expeditious movement of highway users.

PD 4.3 – Highway Maintenance - GCC will manage the local highway asset in line with the Transport Asset Management Plan (TAMP), the Highways Maintenance Handbook and other guidance or policies such as the updated Gloucestershire Highways Biodiversity Guidance (2015).

PD 4.4 – Maximising investment in the highway network - GCC will work with partners to ensure the delivery of a financially sustainable transport network by maximising opportunities for inward investment.

PD 4.5 – Enabling development - GCC will work with its partners to provide realistic and safe opportunities for travel choice for residents, employers, and visitors to new developments whilst maintaining the safe and expeditious movement of traffic on the local highway network by prioritising investment which seeks to reduce recurring congestion in line with the Network Capacity Management Hierarchy as seen below in Figure 4.

Figure 4. GCC LTP Network Capacity Management Hierarchy



PD 4.6 – Road Safety - GCC will contribute to better safety, security and health by reducing the risk of death, injury or illness arising from transport and will work with partners to improve personal safety perceptions and the promotion of transport that contribute to health and wellbeing.

PD 4.7 – On Street car parking - GCC will work in partnership with transport operators, neighbouring traffic authorities and the Borough and District Councils to ensure that parking policies in each area support the local economy and maintain the safe and expeditious movement of traffic on the road network.

PD 4.8 – Pedestrians - GCC will work with all transport providers to provide a safe, reliable and efficient highway network that encourages pedestrian movements and provides vital walking connections between communities, employment and services.

PD 4.9– Environment - GCC will work with District Councils to improve air quality, levels of noise pollution and biodiversity loss resulting from traffic on the highway network.

PD 4.10 – Use of Bus Lanes - To manage the use of County Council managed bus lanes to facilitate the movement of buses along congestion routes ensuring the safe and efficient movement of all highway users

PD4.11 Health and wellbeing - GCC will support the Rights of Way and Countryside Access Improvement Plan in identifying and seeking to support measures to improve safety, accessibility and the quality of the experience for walkers, horse riders, carriage drivers and cyclists where there is an identified need.

Short term projects (2015 – 2021) of relevance include:

- Improvements for A419 corridor, Stonehouse

- B4066 corridor improvements, Berkeley
- Improvements to A38 Berkeley Bridges, Berkeley
- Capital maintenance programme
- Highway safety improvement programme
- 20 mph zones

Long term capital projects (2021 – 2031) include:

- Highway improvement completing the Dursley Relief Road
- Highway improvement Merrywalks (link and roundabout), Stroud
- Junction improvement A38 / B4066 junction including a new roundabout, Berkeley
- Junction improvement A4135 / B4060 Woodfield roundabout, Dursley
- Junction improvement A4135 / B4066 Dursley Road roundabout, Dursley
- Junction improvement A419 / A46 Dudbridge Road roundabout, Stroud
- Junction improvement A46 / Bath Road (Dudbridge Road), Stroud
- Junction improvement A419 London Road / Dr Newton's Way, Stroud
- 20 mph zones
- Capital maintenance programme
- Highway safety improvement programme

PD5 – Rail

This policy document focuses on the future plans for rail. Network Rail are the Government owned company responsible for managing rail infrastructure including rail lines and level crossings, therefore GCC has a limited role when future rail investments are made however GCC can identify opportunities for development to Network Rail. Relevant policies to the STS include:

PD 5.1 - Rail Infrastructure Improvements - GCC will engage with the rail industry to ensure that Gloucestershire is well placed to take advantage of the wider rail infrastructure improvements including route electrification, HS2 at Birmingham, MetroWest, western access to Heathrow Airport and Cross Rail at Reading.

PD 5.2 - Rail Service Capacity Improvements - GCC will engage with the rail industry to ensure Gloucestershire has access to reliable and efficient rail services that enable local access and longer distance services accessing London, Bristol, Birmingham, Cardiff and Worcester.

PD 5.3 – Railways Stations - GCC will engage with delivery partners to maximise the desirability, demand and customer experience of using Railway Stations within Gloucestershire. Station facilities need to meet existing and forecasted demand by providing the safe and secure facilities for pedestrians, cyclists, bus users and car users.

The short term (2015-2021) projects for delivery include:

- Railway station enhancements at Cheltenham, Gloucester, Lydney and Kemble

The long term (2021-2031) schemes for delivery include:

- New railway station(s) south of Gloucester and North of Bristol
- Railway station enhancements at Cam and Dursley, Stonehouse and Stroud
- Electrification of Bristol to Birmingham main line
- Rail junction and capacity improvements to enable more trains to operate and more stopping services
- Railway Station Travel Plans and investment strategies
- Providing an improved service linking Gloucester, Cam & Dursley with Bristol (MetroWest)

PD6 - Thinktravel

The final of the six Policy Documents, PD6, details Gloucestershire's smarter choices programme – 'Thinktravel'. The overarching aim of this initiative is to inform, educate and inspire people to make journeys in a smarter, more sustainable way and therefore reduce the impact of private vehicles on the transport network. There are a number of policies that are relevant to the STS, including:

PD 6.1 – Thinktravel travel promotion - GCC will continue to use the 'Thinktravel' brand and associated marketing and information tools to ensure the appropriate promotional materials are produced in order to carry out a range of travel awareness initiatives to promote the benefits and use of sustainable modes of transport.

PD 6.2 – Managing car use from new developments - GCC will liaise with Local Planning Authorities and developers to secure Development Plan compliant contributions from developers, businesses and local partners to deliver travel plans and promote smarter travel choices including marketing and incentives to encourage sustainable travel and ensure that realistic opportunities for travel choice are taken up in new developments.

Thinktravel has identified the following projects, all of which are revenue funded, to be delivered until 2031:

- Ongoing support for Thinktravel branding
- Bikeability training in schools
- Ongoing installation of electric cars and bikes charging points
- Personalised Travel Plans for new developments
- Personalised Travel Plans for key corridors
- Workplace Travel Plans

Connecting Places Strategy (CPS) 5- Stroud (2016)

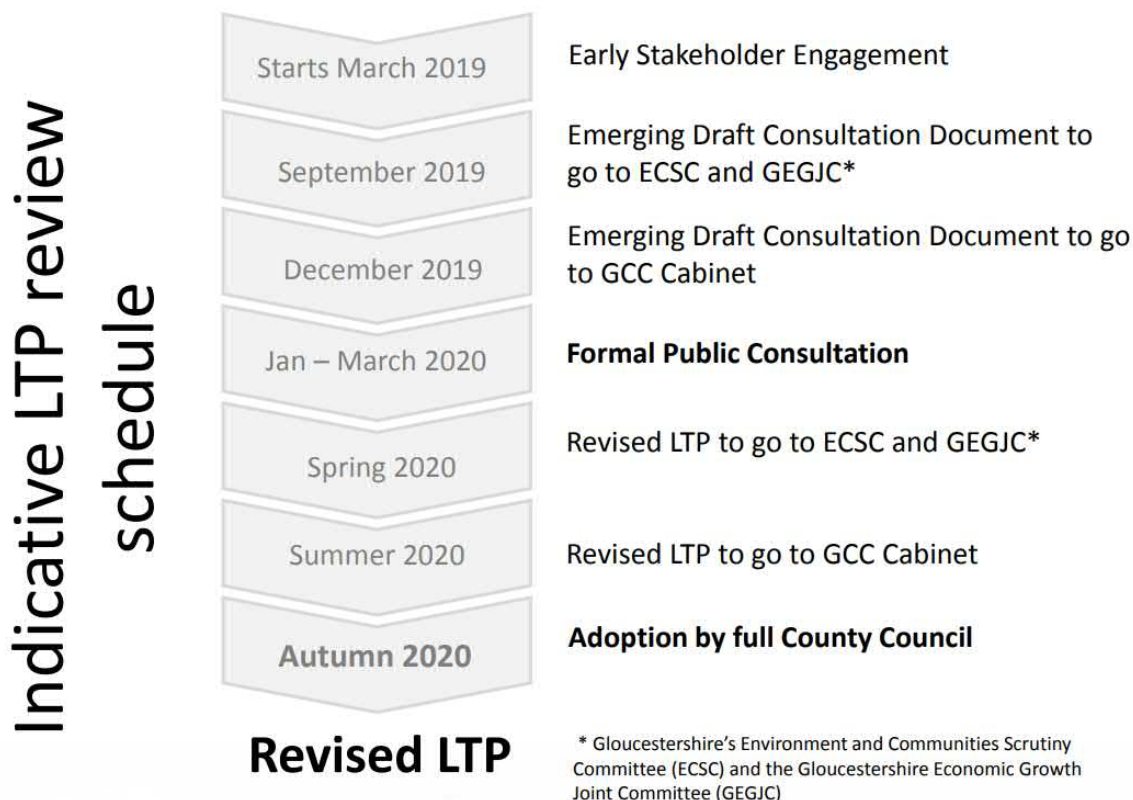
As part of the GCC Local Transport Plan, there are six strategies which characterise transport issues and identify transport priorities within a travel corridor. Stroud has been identified as one of these areas, proposing solutions to support the delivery of the LTP objectives.

The short-term (2015-2021) and long term (2021 – 2031) priorities include measures previously identified in PD1, PD2, PD3 and PD4, with additional long-term rail priorities of Stonehouse and Stroud railway station enhancements.

LTP Review

The LTP is at the early stages of a review, looking to shape the time horizon to 2041, reflect changes to national policy and local priorities, and take account of transport strategies developed for recently adopted local plans. The revised LTP is expected to be adopted in Autumn 2020 (Figure 5).

Figure 5. Indicative GCC LTP schedule



The revised vision is:

“A resilient transport network that enables sustainable economic growth by providing door to door travel choices for all, making Gloucestershire a better place to live, work and visit”

There are no proposed changes to the strategic objectives:

- Support sustainable economic growth
- Enable community connectivity
- Conserve the environment
- Improve community health and wellbeing

Proposed changes include the amalgamation of the six Connecting Places Strategies into one chapter and Scheme Priorities categorised under Strategic, Major, Local and Countywide, replacing the existing Short or Long term.

Stroud District Local Plan (2015)

In November 2015, SDC implemented the Stroud District Local Plan (SDLP). It establishes broad principles about acceptable levels of developments in towns and the countryside, creating a policy framework that sets the scene for sustainable development. It details a set of overarching Strategic Objectives, ‘Core Policies’ and ‘Delivery Policies’, acting together to help achieve an overall vision of how the District should evolve to 2031. The Stroud vision is below:

Stroud District sits at the south-western edge of the Cotswolds Area of Outstanding Natural Beauty and extends westward across the Severn Vale, which is bordered by a rich estuarine landscape. This Vision draws upon our special environmental, social and economic qualities.

Our rural District is living, modern and innovative. We have responded to climate change through our Local Plan core policies and actions. These contribute to reducing our CO2 emissions and adapting our lifestyles to live within our environmental limits.

Our District supports a network of market towns, well connected to their rural hinterlands and wider regional centres. Each contributes to our sustainable and thriving local economy. We capitalise on our heritage, skills, and knowledge – exploiting our unique assets to nurture growth in green technologies and creative industries. We are adaptable and able to respond to changing needs and modern lifestyles.

We enjoy a high quality of life within our vibrant and diverse communities, which have a strong sense of their own identity and local distinctiveness – from Wotton-under-Edge in the south, to Stroud Town in the centre and Upton St. Leonards in the north. They are all safe and secure places, where vulnerable people are supported.

Every day we see the richness, diversity and beauty of our District. We nurture our historic and cultural heritage, from our arts and crafts, through to the Cotswold Canals and our wool and cloth mills.

Strategy Objective 4 (SO4) relates to this sustainable transport strategy to:

Promote healthier alternatives to the use of the private car and seeking to reduce CO2 emissions by using new technologies, active travel and/or smarter choices, working towards a more integrated transport system to improve access to local goods and services.

This objective focuses around development opportunities located within or adjacent to the District's larger settlements to reduce the need to travel and provide sustainable travel opportunities to existing networks.

The relevant Core Policies are as follows:

CP1 – Presumption in favour of sustainable development - Supports the NPPF in favouring sustainable growth both economically, environmentally and social progress for future generations.

CP2 – Strategic growth and development locations - Assesses the needs of the District by providing for the strategic development, including housing, employment, retail and other necessary development for the 2006-2031 period. Stroud District will accommodate at least 11,400 additional dwellings within the Local Plan period.

CP3 – Settlement hierarchy - to provide a hierarchy for growth and development across the District's settlements. First tier priority is given to improving access to local service centres to Cam and Dursley, Stonehouse and Stroud

CP4 – Place Making - supporting the spatial vision for Stroud District through integrating services and neighbourhoods.

CP5 – Environmental development principles for strategic sites - strategic sites are required to have low environmental impact, be readily accessible by all modes to key local services and community facilities and be located in such a way that will achieve sustainable development and/or support regeneration.

CP11 – New employment development - New employment development will be provided through a range of sites and premises across the district, but must be readily accessible by public transport, bicycle and foot.

CP13 – Demand management and sustainable travel measures – Proposals for major schemes should provide for a variety of forms of transport as alternatives to the car, contribute to improving the existing infrastructure network including pedestrian and cycle facilities, and mitigate any significant affects arising from the proposed development.

The following delivery policies are relevant to STS:

DP EI12 – Promoting transport choice and accessibility - New developments will be required to connect with surrounding infrastructure and contribute towards new or improved walking, cycling and rail facilities.

DP EI13 - Protecting and extending our cycle routes - The council will encourage proposals that develop and extend the cycle network. Major development should provide new cycle routes within the development and connect to nearby established cycle routes including the Eastington to Chalford, Eastington to Nailsworth and Cam and Dursley cycle routes and NCN 41.

DP EI16 - Provision of public transport facilities - Proposals should cater for the needs of bus and taxi operators, where appropriate. Layouts should maximise bus passenger traffic and include facilities such as seating and shelters, where necessary.

Parking standards have also been defined with the SDLP, notably cycle parking standards. A minimum of 2 cycle parking spaces must be provided at any new non-residential development, even if car parking is limited. The location of cycle stands should be as close as possible to the destination served, and any more than 10 stands provided should be undercover, lit and appropriately signed. Strategic developments should also provide showers and lockers.

Sustainable Transport Assessment, Local Plan Evidence Base (2015)

This report examines the existing sustainable transport infrastructure at the main development locations in the District, whilst providing a strategy for sustainable transport infrastructure at each of the locations. The report assessed the quality of existing walking and cycling routes at each of the development sites, as well as investigating the accessibility of local facilities and public transport serving the area. On this basis, the overall sustainability of each site was considered, and subsequent infrastructure requirements identified.

Hunts Grove, Stonehouse and North East Cam strategic developments were considered to benefit from sustainable travel reductions in trip rate. A factor of 6% was applied to these sites, where sustainable travel was seen as viable. This included walking facility improvements or provision of new bus stops at Hunts Grove, and pedestrian facilities in the immediate area surrounding Quedgeley East.

Local Plan Review – Emerging Strategy Paper (2018)

The Local Plan started its review in 2018 in anticipation of the Government's requirement to review Local Plans every five years. It is anticipated that the draft plan consultation (Reg 18) will be undertaken in Autumn 2019, with further plan consultation in Autumn 2020 (Reg 19) leading up to adoption in winter 2021/22.

The Local Plan review recognises one of the key issues identified from consultation is ensuring that housing development is located in the right place, supported by the right services and infrastructure to create sustainable development. The emerging strategy will seek to address this issue by:

- Concentrating housing development at locations where there is currently the best access to services, facilities, jobs and infrastructure;
- Creating new sustainable communities at locations where development can transform existing access to services and infrastructure; and
- Concentrating employment growth within the A38/M5 corridor and at locations in tandem with housing growth.

The emerging Strategy Paper includes six principal objectives to provide a tangible way of taking forward the overall vision for the District. These are:

- **Strategic Objective SO1: Accessible communities:** Maintaining and improving accessibility to services and amenities, with:
 - Healthcare for all residents
 - Affordable and decent housing for local needs
 - Active social, leisure and recreation opportunities
 - Youth and adult learning opportunities

- **Strategic Objective SO1a: Healthy, inclusive and safe communities:** Developing communities that support healthy lifestyles, promote social interaction, ensure public safety and reduce the fear of crime
- **Strategic Objective SO2: Local economy and jobs:** Providing for a strong, diverse, vibrant local economy that enables balanced economic growth, coupled with enhancing skills and job opportunities across the District
- **Strategic Objective SO3: Town centres and rural hinterlands:** Improving the safety, vitality and viability of our town centres, which link to and support the needs of their rural hinterlands
- **Strategic Objective SO4: Transport and travel:** Promoting healthier alternatives to the use of the private car and seeking to reduce CO2 emissions by using new technologies, active travel and/or smarter choices, working towards a more integrated transport system to improve access to local goods and services
- **Strategic Objective SO5: Climate Change and environmental limits:** Promoting a development strategy that mitigates global warming, adapts to climate change and respects our environmental limits by:
 - Securing energy efficiency through building design
 - Maximising the re-use of buildings and recycling of building materials
 - Minimising the amount of waste produced and seeking to recover energy
 - Promoting the use of appropriately located brownfield land
 - Supporting a pattern of development that facilitates the use of sustainable modes of transport
 - Minimising and mitigating against future flood risks, recycling water resources and protecting and enhancing the quality of our District's surface and groundwater resources
- **Strategic Objective SO6: Our District's distinctive qualities:** Conserving and enhancing Stroud District's distinctive qualities, based on landscape, heritage, townscape and biodiversity.

The merging strategy paper has measures to improve sustainable in each area, shown below.

Stroud Valleys Cluster

- Improvements to Stroud station; and investigate the potential for an integrated transport hub
- Walking and cycling links to and from the Stroudwater canal and the wider Stroud valleys network
- Achieving a better public transport system
- Further pedestrianisation in Stroud
- Pedestrian improvements to Market Street, Nailsworth
- Improved walking and cycling links to the wider Stroud valleys network
- 20mph zone in Nailsworth town

Cam and Dursley Cluster

- Improved walking and cycling links connecting with Cam and Uley
- Reducing car-borne traffic levels and delivering public transport improvements
- Enhancing rail facilities at Cam and Dursley station
- Urban design, signage and public realm improvements in Dursley

Stonehouse Cluster

- Better cycling and walking links, with signage to/from the canal to the wider Stroud valleys network
- Delivering a new station on the Bristol-Birmingham main line at Bristol Road, Stonehouse
- Designing safe cycle routes and achieving better public transport

- Reducing A419 road congestion and travel to work out-commuting

Gloucester Fringe Cluster

- Maintaining and designing safe footpaths, cycle paths and bridleways

Berkley Cluster

- Designing safe walking and cycle routes from Newport to Berkeley
- Improving transport links with towns and villages in South Gloucestershire and to Bristol beyond

Severn Cluster

- Designing a new cycle way between Arlingham Passage and Newnham on Severn

Wotton Cluster

- The Greenway cycle and walking route, subject to further feasibility work.
- Designing safe walking and cycle routes and achieving a better public transport system

The STS will contribute to achieving each of the Strategic Objectives and therefore is fundamental to the successful delivery of the Local Plan. It will assist communities in maintaining accessibility to services and amenities, and support healthy lifestyles in line with SO1 and SO1a. It will provide for access to jobs and town centres to deliver on SO2 and SO3. In supporting sustainable transport and sustainable growth, it is integral to achieving SO4 and SO5. In providing tools to reduce car dominance, it can play a role in achieving SO6 through lessening the impact of motor vehicles on our landscape, heritage, townscape and biodiversity. Thus, a strong and ambitious STS is vital to the success of the Local Plan.

Strategy Options Transport Discussion Paper – Stroud District Council (July 2018)

This report informs Stroud District Council's process in deciding the preferred development strategy, assessing four development scenarios arising from the Issues and Options stage of the Stroud Local Plan Review. Four options were assessed:

- **Option 1 Concentrated development** - 5,550 dwellings and 30ha B class employment
- **Option 2 Wider distribution** - 5,520 dwellings and 30ha B class employment
- **Option 3 Dispersal** -5,695 dwellings and 40ha B class employment
- **Option 4 Growth Point** -6,010 dwellings and 40ha B class employment

Option 1 was shown to be the most appropriate scenario based on concentrated development. The scenario disperses growth throughout the region with around 35% of new trips impacting Gloucester's southern fringe, linking to the M5, J12. Approximately, 45% of new trips will impact the A419 corridor and around 20% of new trips will be focussed around Cam and Dursley. The likely mitigation package is to include:

- Linkages to Countywide cycle network;
- Improved cycle linkages to Cam & Dursley station;
- Upgrade to Cam and Dursley Station;
- Bus service 12 - extension of existing service;
- Bus service 61 extension & increased frequency for access to Stroud;
- Bus service frequency increase and better linkages to Cam & Dursley railway station;
- A419 corridor – possible dualling from Chipman's Platt Roundabout;
- A38 – Cross Keys Roundabout – upgrade of access;
- A419 corridor – Chipman's Platt Roundabout upgrade; and
- M5 J12, 13 and 14 – Capacity improvements.

GCC LCWIP

Local Cycling and Walking Infrastructure Plans (LCWIPs) set out the strategic approach to identifying long-term cycling and walking improvements, and make the case for future investment through funding bids and by informing discussions with developers

GCC has developed the first phase of a LCWIP for the Central Severn Vale area of Gloucestershire. The authority intends to conduct future investigation of lateral links to the strategic cycle link and to increase walking corridors to extend the current route proposals into more of a network across the Central Severn Vale. The Stroud District is not proposed to be part of the next phase of the LCWIP.

2018 Air Quality Annual Status Report

The 2018 Air Quality report highlights Nitrogen Dioxide (NO₂) as the main pollutant of concern within Stroud District as a result from road traffic emissions. In 2017, NO₂ levels were noted to have stabilised slightly, following a downward trend overall, with no reported levels of NO₂ at or above the national average.

Nevertheless, GCC has a responsibility for strategies relating to traffic management. The LTP3 has a number of policies which promote bus travel, the pedestrian and cycle network, rail network and the Thinktravel campaign.

Other

Shared Mobility – Where Now, Where Next, CREDS (2019)

Although not policy, this research report highlights surface transport as the largest emitting sector in the UK, and yet to show any clear reductions in its emissions trajectory, transport is at the heart of the climate emergency. Currently, there is no coherent national or consistent local policy framework for integrating shared car use within the wider set of mobility options. CREDS inquiry into shared mobility takes, the position that more rapid and radical action is required to decarbonise the transport sector.

The report sets out 20 recommendations which support their evidence base around shared mobility, delivery, deliver more meaningful innovation trials and deliver a step change in the policy framework and incentives which sit around sharing mobility. It states that “there is no ‘one-size fits all’ approach but there are some actions which will have universal benefits”.

The 20 recommendations that are relevant to the STS include:

- Shared mobility options are placed within a road user hierarchy which is directly linked to the public policy outcomes they can deliver.
- Regional or local transport bodies establish a shared mobility strategy with a goal of reducing individual vehicle ownership and promoting access to a cleaner fleet.
- Piloting of mobility hubs in new developments to deliver good practice guidance and workable standards.
- Highways England, in partnership with local transport authorities and car sharing companies, develop a series of pilot schemes with high quality interchange designs to encourage safe car sharing across their network (this should be part of Highways England’s core spend from the Department for Transport)

Transport for New Homes Checklist for new housing developments(2019)

Transport for New Homes aims for new developments to be linked to sustainable transport networks leading to traffic reduction, in order to address climate change and congestion as well as to provide good, healthy living environments. They have produced a checklist for new developments to be used by local authorities, developers and neighbourhoods to ensure new development is not built around car use but to promote good sustainable transport links.

The Checklist will be used as a foundation to inform interventions suggested by this evidence report.

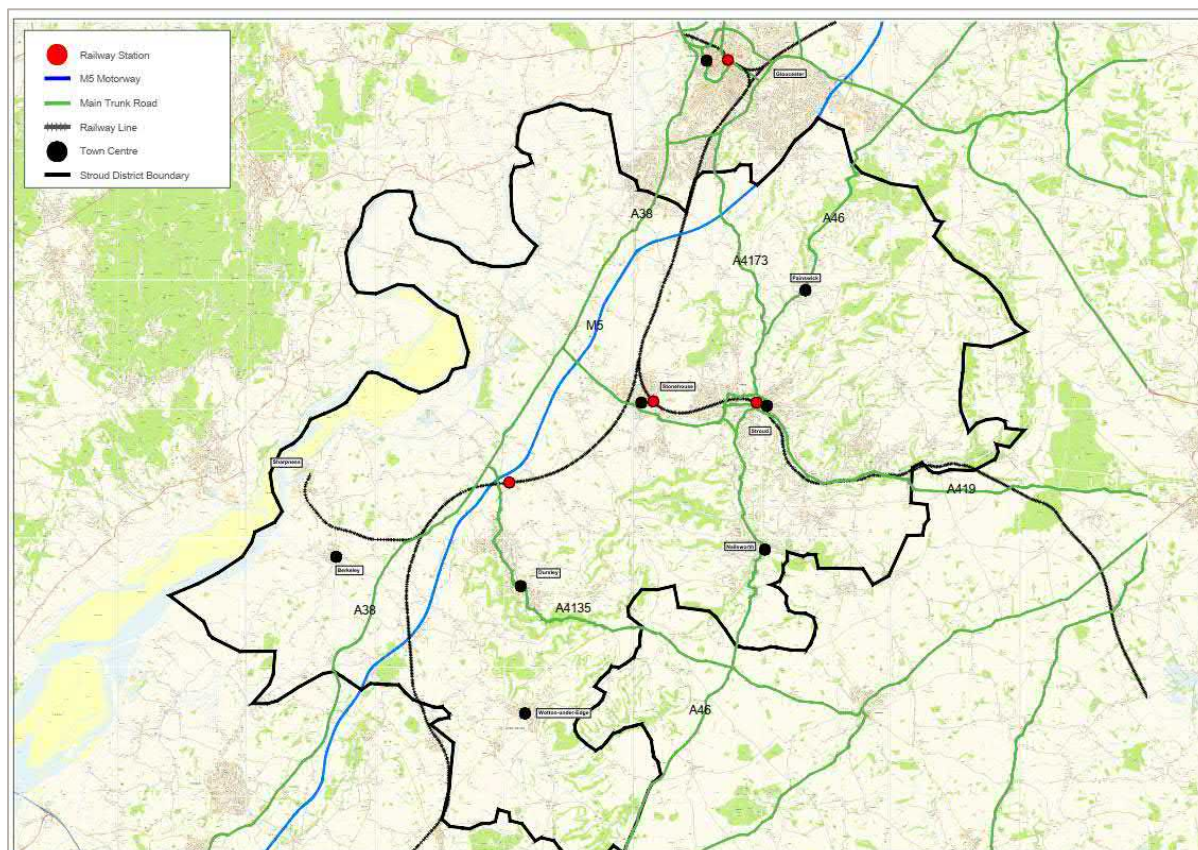
3. Review of Local Context

Geographical Context

This section sets out the geographical context of Stroud District, to assist with understanding the issues, opportunities and constraints for the District.

The Stroud area is made up of several developed areas identified in Figure 6. These areas are Stroud, Cam, Dursley, Nailsworth, Stonehouse, Wotton-under-Edge, Berkeley and Sharpness.

Figure 6. Stroud District area (Source: Gloucestershire County Council Local Transport Plan, p.5).



The area surrounding Stroud is predominantly semi-rural, albeit with the City of Gloucester to the north, with much of the area located with Cotswolds Area of Outstanding Natural Beauty (AONB). To the west of the district is the Severn Estuary, recognised as a Special Protection Area, Ramsar site and Special Area of Conservation. The Cotswold and Gloucester Districts within Gloucestershire are to the east and north respectively.

Demography

The current population (2018 estimates) for the Stroud area is 119,000¹⁶, accounting for approximately 20% of Gloucestershire’s population. Growth in Gloucestershire is expected to increase by 9% between 2012 and 2031¹⁷.

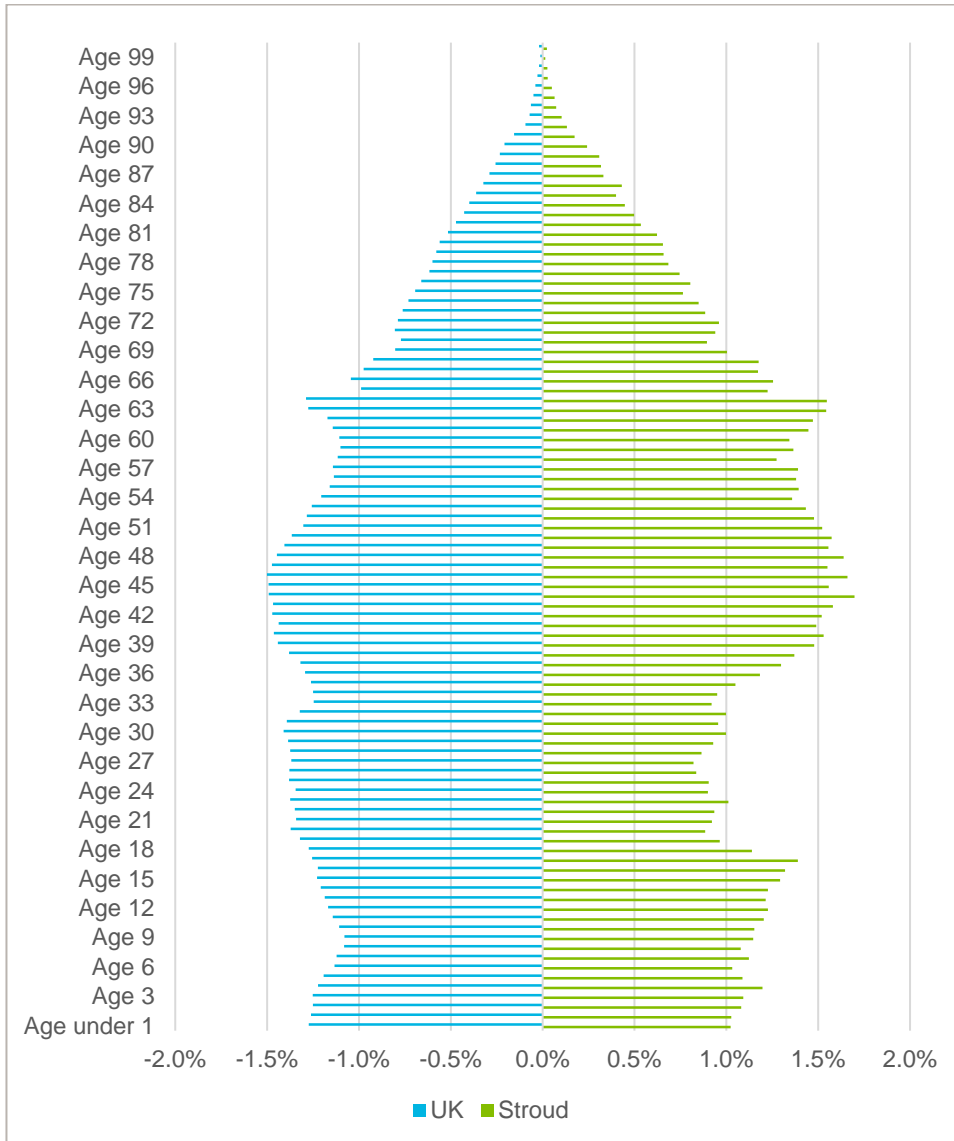
Figure 7 below highlights the age range of Stroud¹⁸. A large portion of the population (40%) is between 40 and 65. When compared to the national average, the Stroud district has fewer young adults between the ages of 16 and 34. On balance, the population is generally older than the UK average.

¹⁶ Office for National Statistics 2018

¹⁷ Gloucestershire Local Transport Plan (2015-2031) – Policy Document 1 – Bus

¹⁸ 2011 Census data

Figure 7. Population age distribution of Stroud District and England

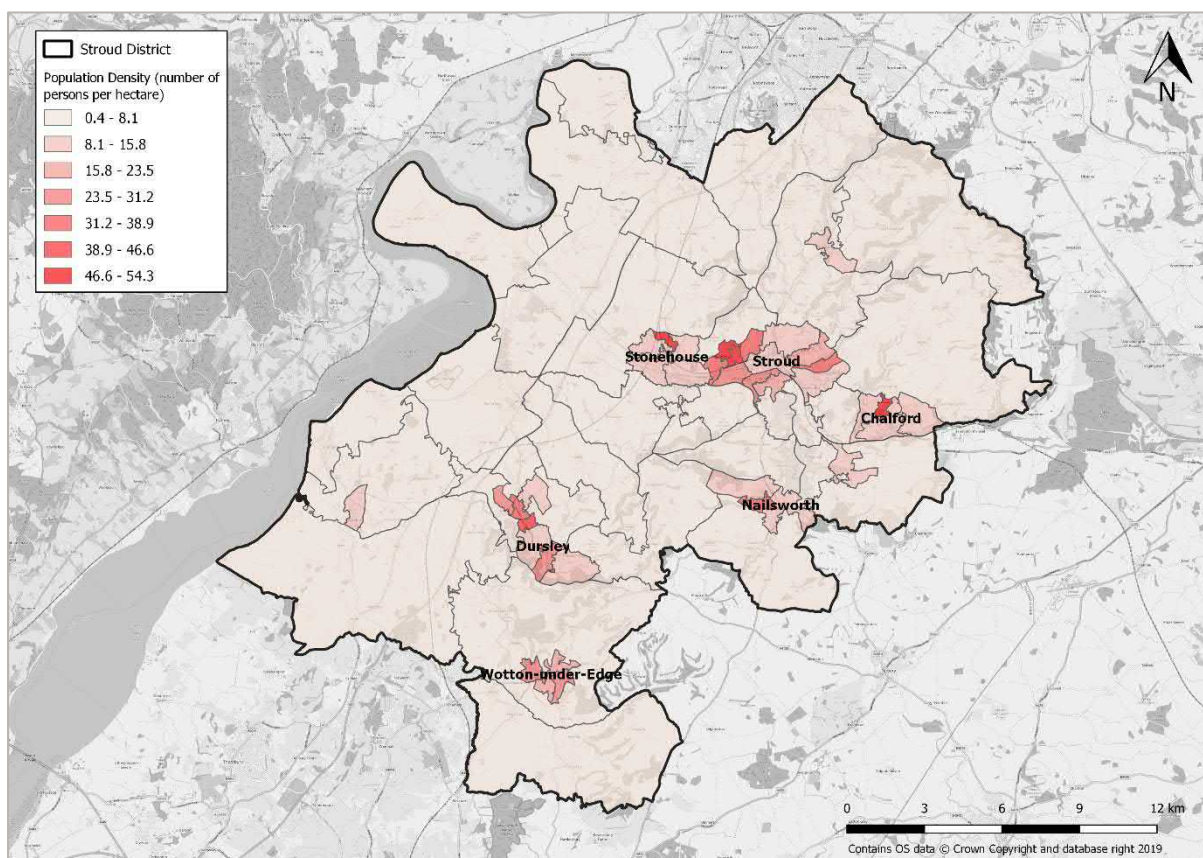


Population Distribution

The population density distribution map of the output areas within the Stroud District is displayed in Figure 8. This has been calculated from 2011 Census data¹⁹ and gives an indication of the spatial distribution of population within the area. Due to the rural nature of the district, the highest population densities are within the main towns: Stroud, Stonehouse, Nailsworth, Dursley and Wotton-under-edge.

¹⁹ [Office for National Statistics \(KS101EW\)](#)

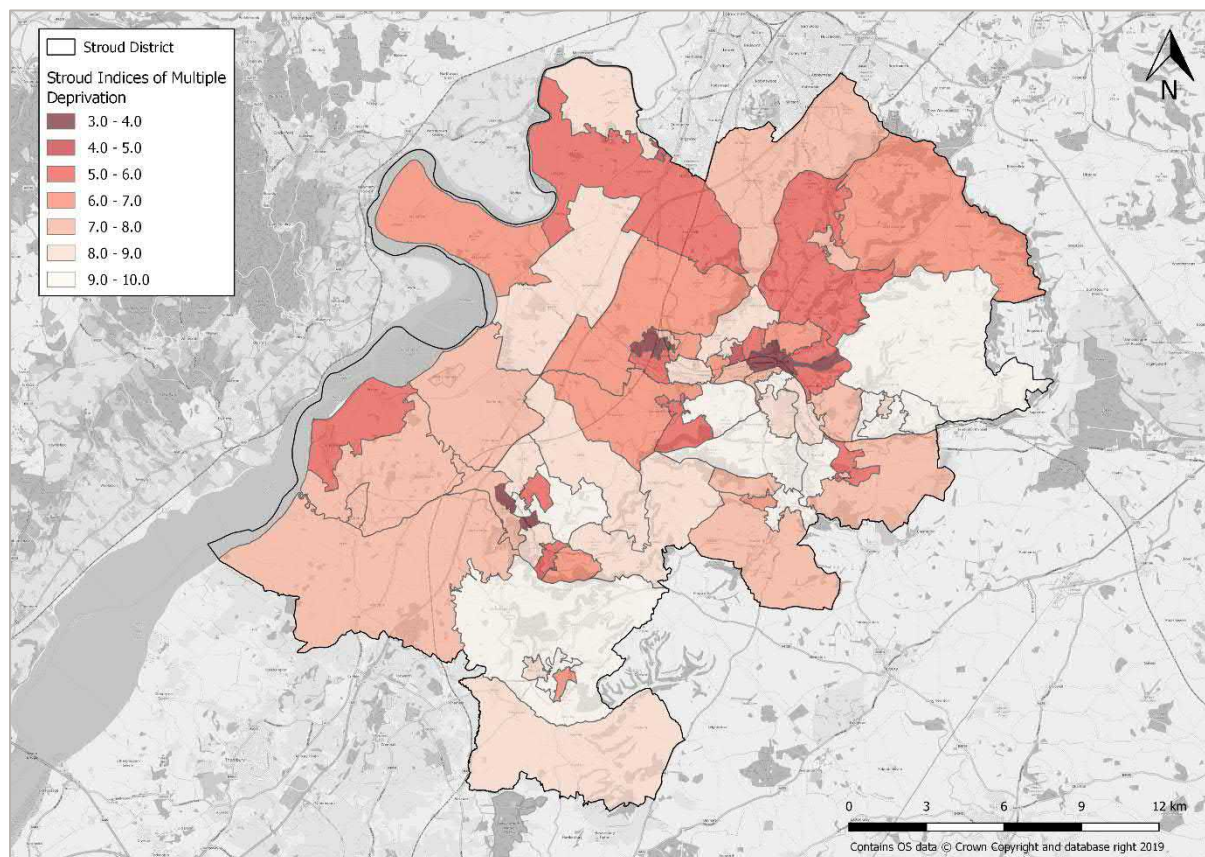
Figure 8. Population Density



Social Context – multiple deprivation scores

Figure 9 demonstrates indices of multiple scores, with the lower numbers representing the most deprived areas. As a district, Stroud experiences low levels of deprivation with no LSOAs within the top 20% of deprived areas in England and Wales. The most deprived areas within the district are within Stroud town centre in the Central, Slade and Trinity 2011 Census wards. The least deprived area is within the Chalford Ward.

Figure 9. Stroud District Index of Multiple Deprivation (2015²⁰)



Car Ownership

The car ownership per household within the Stroud District is highlighted in Table 1. It shows the spatial distribution of car and van vehicles per household across the area at the time of the last census (2011). 86% of households in Stroud District own at least one vehicle, compared to the national average of 74%. Gloucestershire as a whole has a high car ownership, especially with three or more cars/vans per household. Stroud ranks 24th and 25th (out of 348 local authorities in England) for households with three and four or more cars/ vans, suggesting a high dependency on private vehicles as a mode of transport.

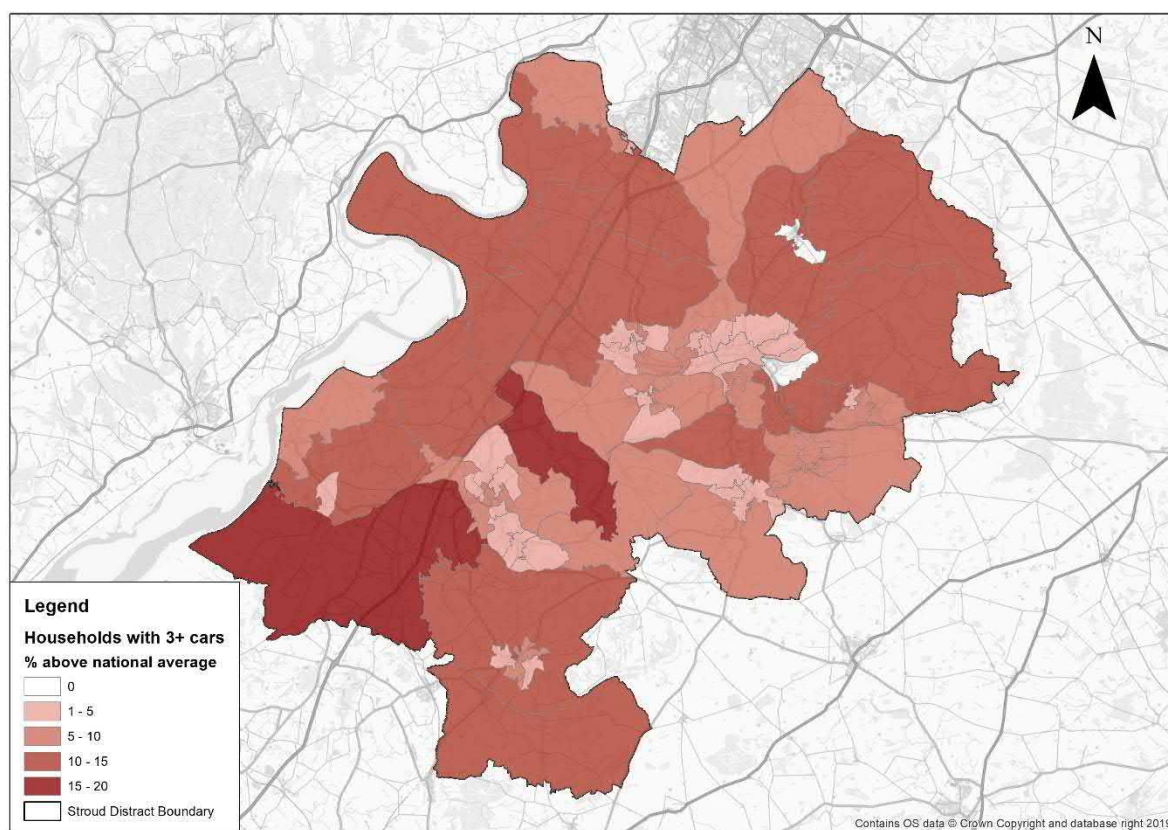
Table 1. Car availability in Gloucestershire

Area	Car/ Van availability	Percentage of households					
		No cars/ vans	1 car/ van	2 cars/ vans	3 cars/ vans	4 or more cars/ vans	
England	22,063,368	25.8	42.2	24.7	5.5	1.9	
Gloucestershire	Total	254,615	17.1	41.8	30.8	7.4	2.9
	Cheltenham	50,929	22.0	46.0	25.5	4.9	1.6
	Cotswold	36,236	12.6	40.1	34.3	9.1	3.8
	Forest of Dean	34,167	14.4	39.2	32.9	9.5	4.0
	Gloucester	50,363	22.6	43.4	26.9	5.4	1.7

²⁰ Office for National Statistics: English Indices of Deprivation 2015

Area	Car/ Van availability	Percentage of households				
		No cars/ vans	1 car/ van	2 cars/ vans	3 cars/ vans	4 or more cars/ vans
Stroud	47,794	13.9	38.6	34.4	9.3	3.8
Tewkesbury	35,126	13.6	42.2	33.5	7.8	3.0

Figure 10. Stroud District Car Ownership, per Household (2011 Census²¹)



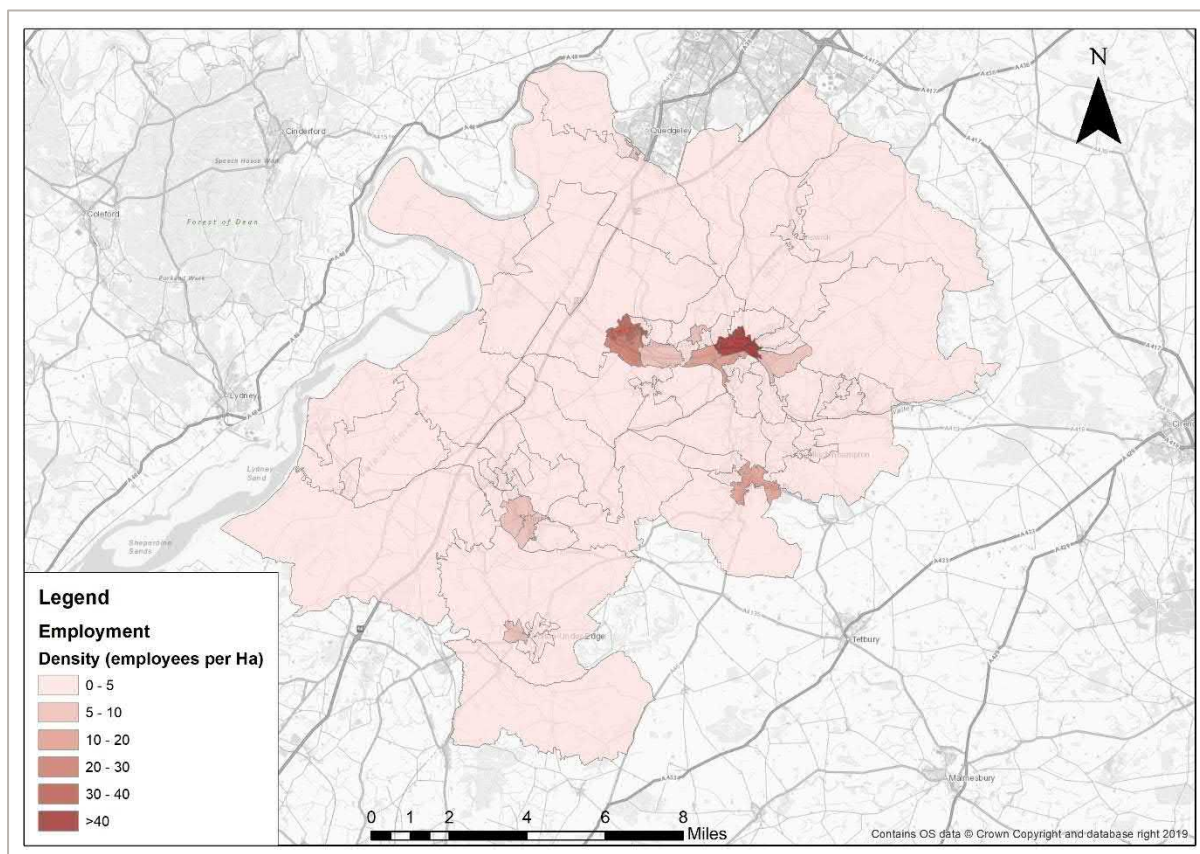
Economic Performance and Activity

Employment Distribution

Employment density is a measure of employment (employees) per hectare. It shows where built up employment areas are and helps to visualise what areas are likely to attract trips in the peak periods. In some cities, employment areas represent a major part of built-up areas but include little to no residential population. However, from the employment distribution map shown in Figure 11 **Error! Reference source not found.**, it is evident that the main employment areas within Stroud are generally located within the areas with the greatest population density. The Lower Super Output Areas (LSOAs) with the highest employment densities are centred around Stroud town centre, Stonehouse town centre and Nailsworth town centre.

²¹ [Office for National Statistics \(KS404EW\)](#)

Figure 11. Stroud District Employment Distribution (2017 data²²)



Unemployment

Office for National Statistics (ONS) local labour market statistics for the 2018/19 financial year²³ have been reviewed to establish how the Gloucestershire LEP, which includes Stroud District, compares to the United Kingdom on key labour supply indicators (Table 2). The Gloucestershire LEP has relatively high employment levels, slightly above the national average (+7%), with unemployment marginally lower (-2%). This suggests a highly economically active working age population, which could lead to higher journey to work trip proportions than in other areas of the country within these age ranges.

Table 2. Labour Supply Key Indicator Comparison, Gloucestershire LEP and United Kingdom, Working Age Population (16 to 64 years old)

	United Kingdom	Gloucestershire	Difference
Employment	75%	82%	+7%
Unemployment	4%	2%	-2%
Economic Inactivity	21%	17%	-4%

Note: Employment, Unemployment and Economic Activity totals are not 100% due to rounding

Commuting Patterns

Journey to Work (JTW) data is collected as part of the Census and describes aspects of commuting behaviour. This data provides a valuable insight in to the mode choice of both residents and commuters in and out of the Stroud District.

Mode Share

Sustainable trips include those taken by train, bus, as a passenger in a car, bicycle or on foot. Table 3 shows the modal split for journeys to work in the Stroud District.

²² [Office for National Statistics \(2017\) Business Register and Employment Survey](#)

²³ [Office for National Statistics \(2019\) LI05 Regional labour market: Local indicators for Local Enterprise Partnerships](#)

Table 3. Journey to Work Mode Share

Travel to Work Method	Stroud	Gloucestershire	England
Mainly Work from Home	9%	7%	5%
Walk	9%	12%	11%
Cycle	2%	4%	3%
Bus, Minibus or Coach	2%	4%	7%
Train	1%	1%	5%
Car or Van Passenger	5%	5%	5%
Driving Car or Van	70%	65%	57%
Other	2%	2%	7%
Total	100%	100%	100%

Three quarters of people in the Stroud District travel to work in a car or van; the majority of which drive. This is a significantly higher percentage than the England average of which 62% of people travel by car or van. The next highest mode share is split between walking and working from home. It is notable that the proportion of people who work from home in Stroud is almost double the England average. The other sustainable modes of transport (cycling, bus, train), are all lower than the England average, highlighting the dominance of driving to work and relative limitations in sustainable transport opportunities.

Commuting Distances

Commuting distances have been calculated from 2011 Census data²⁴ for those living in the Stroud District. The average distance (km) for each MSOA is highlighted geographically in Figure 12.

²⁴ Office of National Statistics – QS702EW

Figure 12. Average distance (km) travelled to work

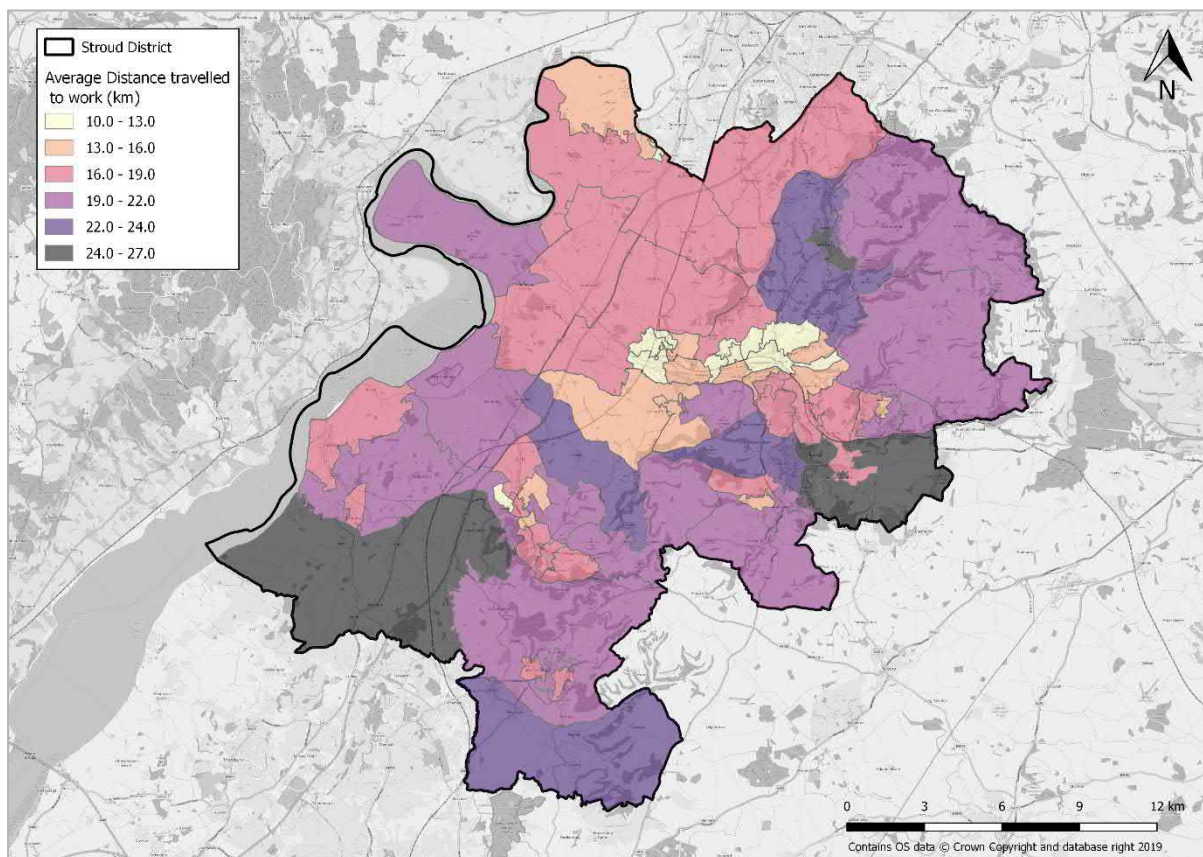


Figure 12 highlights people in the Minchinhampton, Vale and Painswick 2011 census wards travel, on average, the furthest distance to work. Stroud and Stonehouse town centres have the lowest average distances travelled to work, and consequently, the highest proportion of people (on average, approximately 40%) of people travelling less than 5km to work. These wards also have the highest levels of deprivation (Figure 9) and have the highest percentage of people with no access to a car or van.

4. Existing Transport Conditions

Active Travel Network

Cycling

A cycle map is available for the Stroud District (Appendix A), presenting the routes around the area with additional inset maps of the town centres. Highways have been graded along a colour spectrum according to cycling amenity, and because it is recognised the district is hilly, chevrons have been also been shown on the map.

The cycle network is mainly on-road, with limited connected off-road cycle infrastructure available in the district. Nevertheless, the district benefits from canal towpaths on the Gloucester and Sharpness Canal and Thames and Severn Canal.

National Cycle Routes 41 and 45 run through the district. Route 41 runs from Bristol to Stratford whilst Route 45 runs from Salisbury to Chester, shown in Figure 13 below. Figure 13 also shows the close proximity of the cycle network to the strategic development sites. These cycle routes connect to and from the Stroud Pedestrian/Cycle Route and, when its built, the Cam and Dursley cycle route. Other cycle paths in the area include the Stroud Valleys Trail which is a traffic-free route beginning in Stonehouse. This cycle route follows the line of the old Midland railway. There are currently works underway to create an 8km cycle, horse rider and pedestrian Greenway linking Uley, Dursley and Cam.

In Autumn 2019, ThinkTravel produced a brochure regarding travelling around Gloucestershire by bicycle (Appendix B). It identifies a £9million package of improvements, of which £1.3million is set aside for upgrading the canal towpath linking Hardwicke and Gloucester. It also highlights the key cycle desire lines, linking primary areas of growth.

Walking

There are also a number of Public Rights of Way (PROWs), shown in Figure 14. The Cotswold way, a 102-mile long-distance footpath, runs along the Cotswold Edge escarpment, passing through Wotton-under-Edge, Dursley, Stonehouse and Painswick.

Figure 15 highlights the 2km and 5km buffers from the main town centres. These distances are considered acceptable for walking (2km) and cycling (5km), however this is as the crow flies rather than on routes.

Figure 13 - National Cycle Network

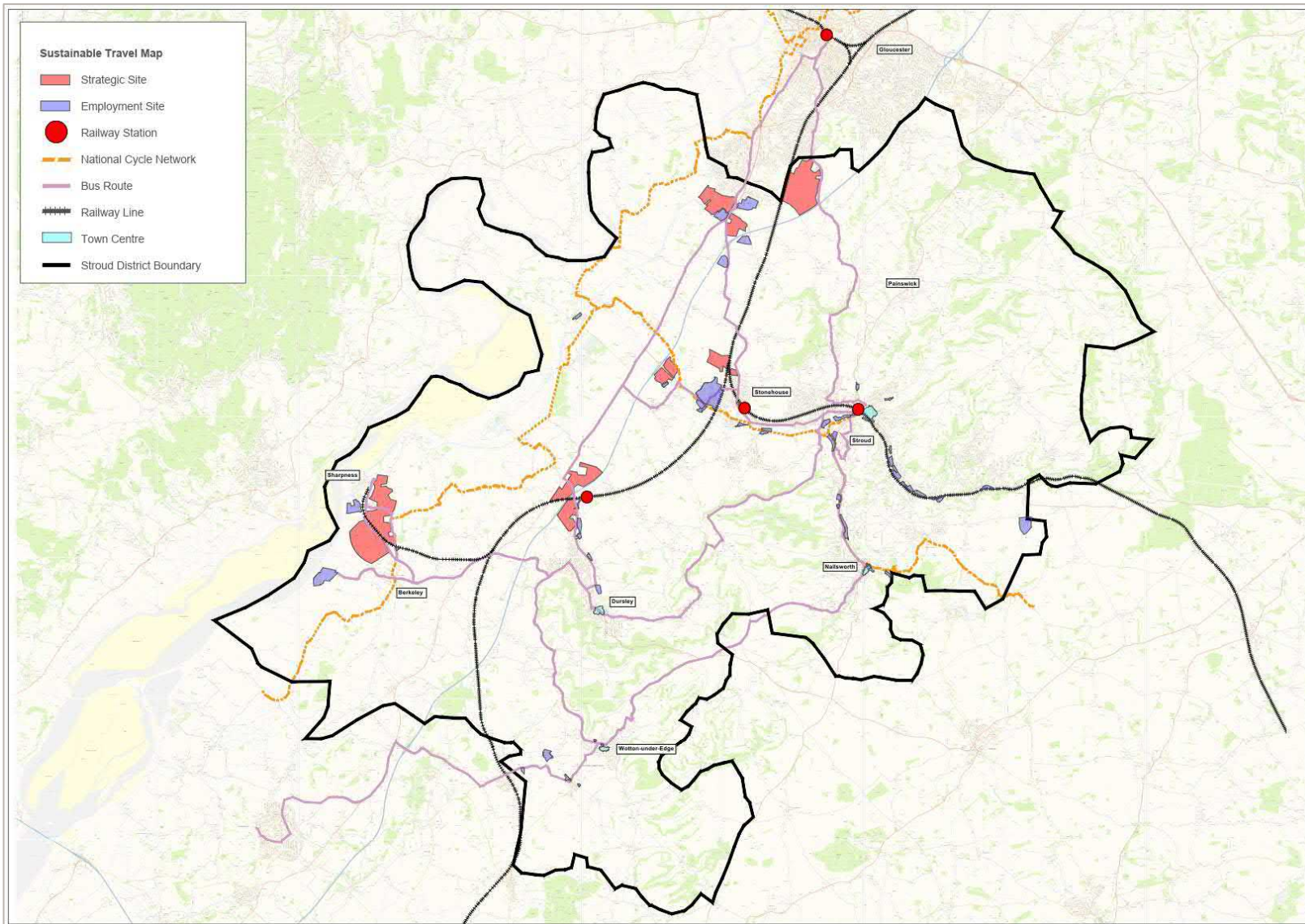


Figure 14 - Public Rights of Way

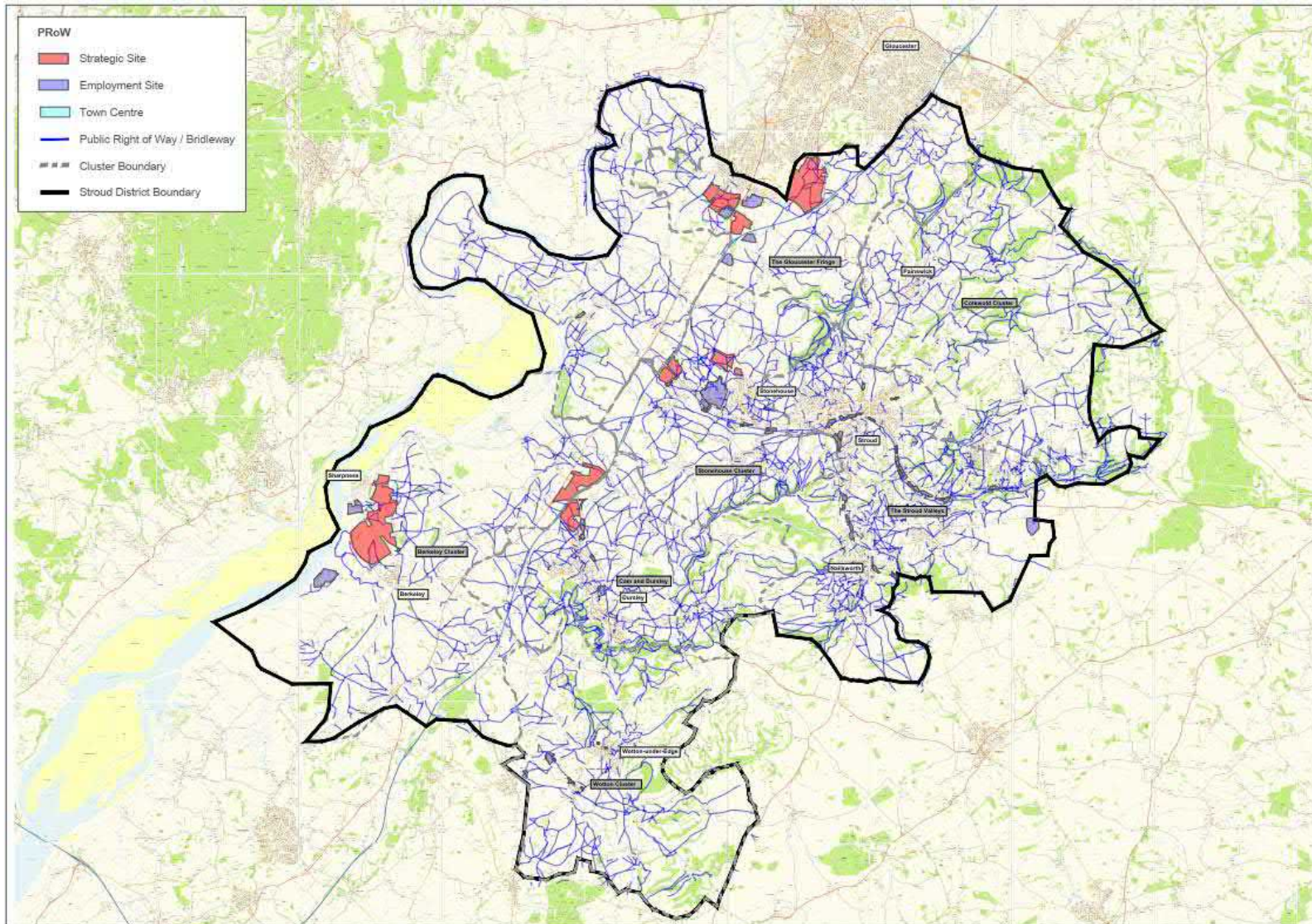
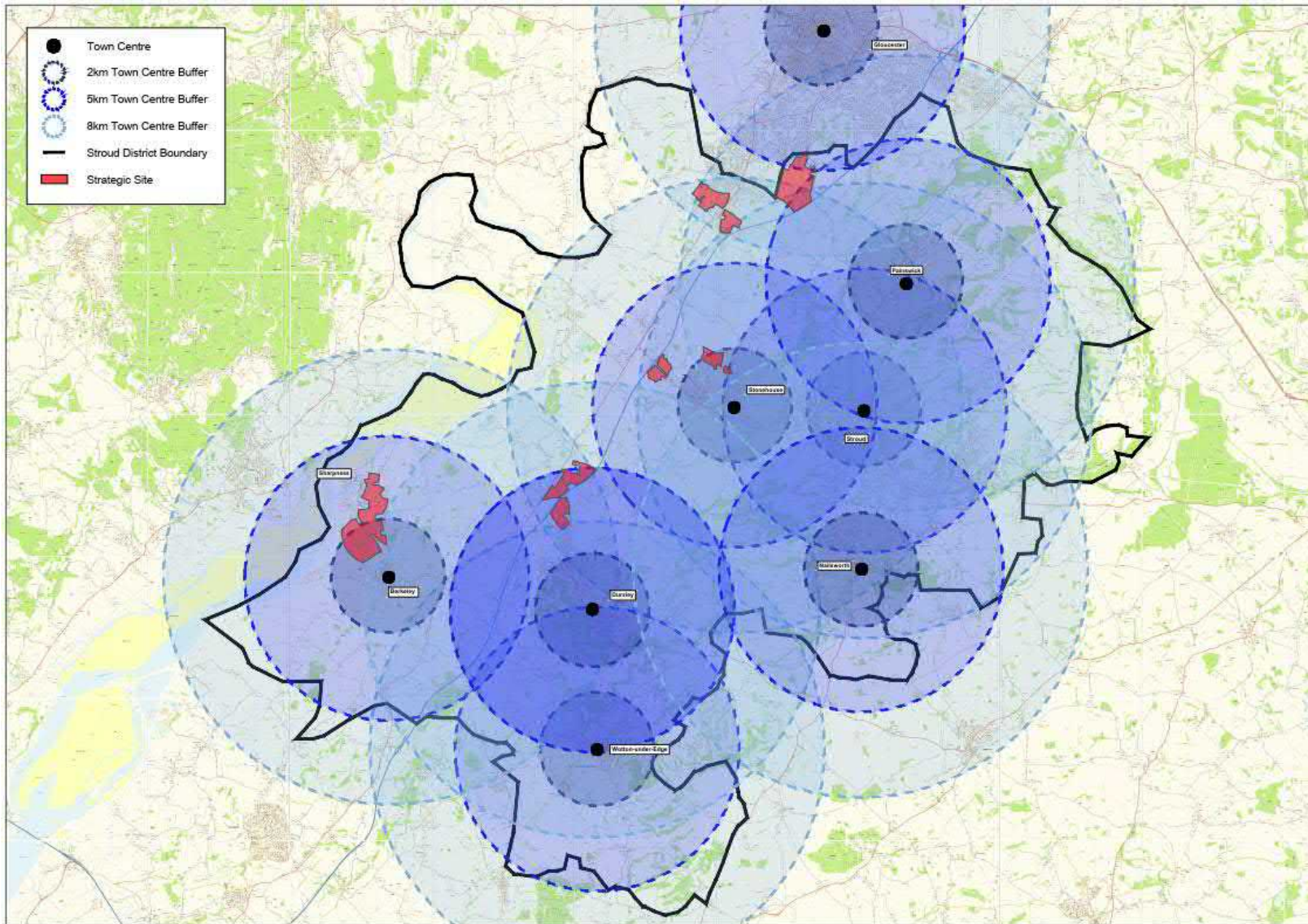


Figure 15: Walkable and Cyclable Distances from main town centres



Bus Network

Stagecoach West is the main bus operator in the area providing travel around the South West region, highlighted in Table 4. There are also several school and community buses operated by companies such as Cotswold Green and Taylors Travel which have not been included in Table 4. National Express also operate in Stroud providing travel to further afield destinations such as London.

Table 4. Bus services within the District

Operator	Service	Route	Days	Freq.	First Bus	Last Bus
Cotswold Green	40	Stroud - Lightpill - Nailsworth - Wotton-under-Edge	Mondays - Fridays	Every 60 – 90 minutes	08:20	17:30
Cotswold Green	40	Stroud - Lightpill - Nailsworth - Wotton-under-Edge	Saturdays	Every 60 – 90 minutes	08:20	17:30
Cotswold Green	54	Stroud - Chalford - Frampton Mansell - Sapperton - Cirencester	Mondays - Fridays	2 a day	11:10	14:10
Cotswold Green	54A	Stroud - Chalford - Frampton Mansell - Sapperton - Coates - Cirencester	Mondays - Fridays	3 a day	09:30	16:50
Cotswold Green	54A	Stroud - Chalford - Frampton Mansell - Sapperton - Coates - Cirencester	Saturdays	3 a day	08:10	16:20
Cotswold Green	8	Stroud - Stroud Hospital - Mason Road - Uplands - Stroud	Mondays - Fridays	hourly	08:40	17:50
Cotswold Green	8	Stroud - Stroud Hospital - Mason Road - Uplands - Stroud	Saturdays	hourly	08:40	17:50
Cotswold Green	8A	Stroud - Uplands - Bowbridge - Stroud Hospital - Stroud	Mondays - Fridays	90 mins	09:10	17:20
Stagecoach West	52	Cirencester - Cirencester Hospital - Brimscombe - Bowbridge - Stroud	Mondays - Fridays	3 a day	09:45	14:10
Stagecoach West	61	Bussage - Stroud - Stonehouse - Eastington - Dursley - Woodmancote	Mondays - Fridays	hourly from 09:35	06:55	19:50
Stagecoach West	61	Bussage - Stroud - Stonehouse - Eastington - Dursley - Woodmancote	Saturdays	hourly	08:35	19:50
Stagecoach West	63	Gloucester - Tuffley - Whiteshill - Stroud - Nailsworth - Forest Green	Mondays - Fridays	half hourly from 09:38	06:36	19:08
Stagecoach West	63	Gloucester - Tuffley - Whiteshill - Stroud - Nailsworth - Forest Green	Saturdays	half hourly from 08:33	07:38	19:08

Operator	Service	Route	Days	Freq.	First Bus	Last Bus
Stagecoach West	63	Gloucester - Tuffley - Whiteshill - Stroud - Nailsworth - Forest Green	Sundays	hourly	09:38	16:38
Stagecoach West	64	Gloucester - Quedgeley - Stonehouse - Stroud	Mondays - Fridays	half hourly from 09:08	06:06	17:18
Stagecoach West	64	Gloucester - Quedgeley - Stonehouse - Stroud	Saturdays	half hourly from 09:08	06:53	17:08
Stagecoach West	64	Gloucester - Quedgeley - Stonehouse - Stroud	Sundays	2 hourly	09:53	17:43
Stagecoach West	65	Stroud - Nympsfield - Uley - Dursley - Hospital - Cam & Dursley Rail	Mondays - Fridays	2 hourly	06:20	17:30
Stagecoach West	66	Stonehouse - Leonard Stanley - King's Stanley - Stroud - Painswick - Cheltenham	Mondays - Fridays	hourly	08:25	22:15
Stagecoach West	66	Stonehouse - Leonard Stanley - King's Stanley - Stroud - Painswick - Cheltenham	Saturdays	hourly	08:30	22:15
Stagecoach West	66	Stonehouse - Leonard Stanley - King's Stanley - Stroud - Painswick - Cheltenham	Sundays	2 hourly	08:38	16:38
Stagecoach West	66X	Gloucester - Stonehouse - Leonard Stanley - King's Stanley - Stroud	Mondays - Fridays	1 a day	07:15	07:15
Stagecoach West	66X	Gloucester - Stonehouse - Leonard Stanley - King's Stanley - Stroud	Saturdays	1 a day	07:30	07:30
Stagecoach West	67	Stonehouse - Leonard Stanley - King's Stanley - Stroud - Painswick - Cheltenham	Saturdays	hourly	08:30	22:15
Stagecoach West	68	Stonehouse - Leonard Stanley - King's Stanley - Stroud - Painswick - Cheltenham	Sundays	2 hourly	08:38	16:38
Stagecoach West	67	Stroud - Paganhill - Cashes Green - Paganhill - Stroud	Mondays - Fridays	every 15 - 30 mins	06:50	19:40
Stagecoach West	67	Stroud - Paganhill - Cashes Green - Paganhill - Stroud	Saturdays	every 20-30 minutes	07:20	19:40
Stagecoach West	69	Stroud - Minchinhampton - Avening - Tetbury - Westonbirt - Old Sodbury	Mondays - Fridays	3 hourly	08:05	17:35
Stagecoach West	69	Stroud - Minchinhampton - Avening - Tetbury - Westonbirt - Old Sodbury	Saturdays	2 a day	10:05	16:25
Stagecoach West	863	Forest Green - Nailsworth - Dudbridge - Brimscombe - Cirencester College	Mondays to Fridays	2 a day	08:05	16:30

Operator	Service	Route	Days	Freq.	First Bus	Last Bus
Stagecoach West	864	Stroud - Bowbridge - Brimscombe - Cirencester College	Mondays - Fridays	1 a day	07:45	07:45
Stagecoach West	866	Gloucester - Quedgeley - Kingsway - Stonehouse - Cirencester College	Mondays - Fridays	1 a day	08:05	16:30
Stagecoach West	869	Paganhill - Stroud - Amberley - Minchinhampton - Cirencester College	Mondays - Fridays	1 a day	16:47	16:47
Ebley Coaches	16A	Quedgeley - Haresfield - Standish - Stonehouse - Cainscross Road	Mon - Fri	1 a day	15:45	15:45
Taylors Travel	X2	Berkeley - Sharpness - Cambridge - Eastington - Stroud High & Marling School	Mondays - Fridays	1 a day	07:15	07:15
Taylors Travel	X54	Stroud High and Marling School - Stroud - Frampton Mansell - Cirencester	Mondays - Fridays	3 a day	08:19	17:05
K Coaches	B 401A	Epney - Leonard Stanley - King's Stanley - Stroud High & Marling Schools	Mondays - Fridays	1 a day	15:40	15:40
K Coaches	B 401B	Arlingham - Frampton - Eastington - Stroud High & Marling Schools - Stroud College	Mondays - Fridays	1 a day	15:45	15:45

Figure 17 shows the bus routes within Gloucestershire by frequency, highlighting the highest frequencies of services are in Gloucester and Cheltenham with a couple of these services travelling to the Stroud area. The Stroud Valley is not as densely served by bus routes when compared with Gloucester and Cheltenham. 8,000 young people travel through the region on bus services funded by Gloucestershire County Council, however 7,700 use alternative travel including local bus service, privately commissioned school transport, cycling, walking and car²⁵.

Figure 17 highlights the services that are subsidised, demonstrating the bus network relies heavily on public subsidy except in population centres and on main corridors.

²⁵ Gloucestershire Local Transport Plan (2015-2031) - Policy Document 1 - Bus, Nov 2017

Figure 16. Bus frequency in Gloucestershire (Source: Gloucestershire Local Transport Plan (2015-2031) - Policy Document 1 - Bus, 2017)

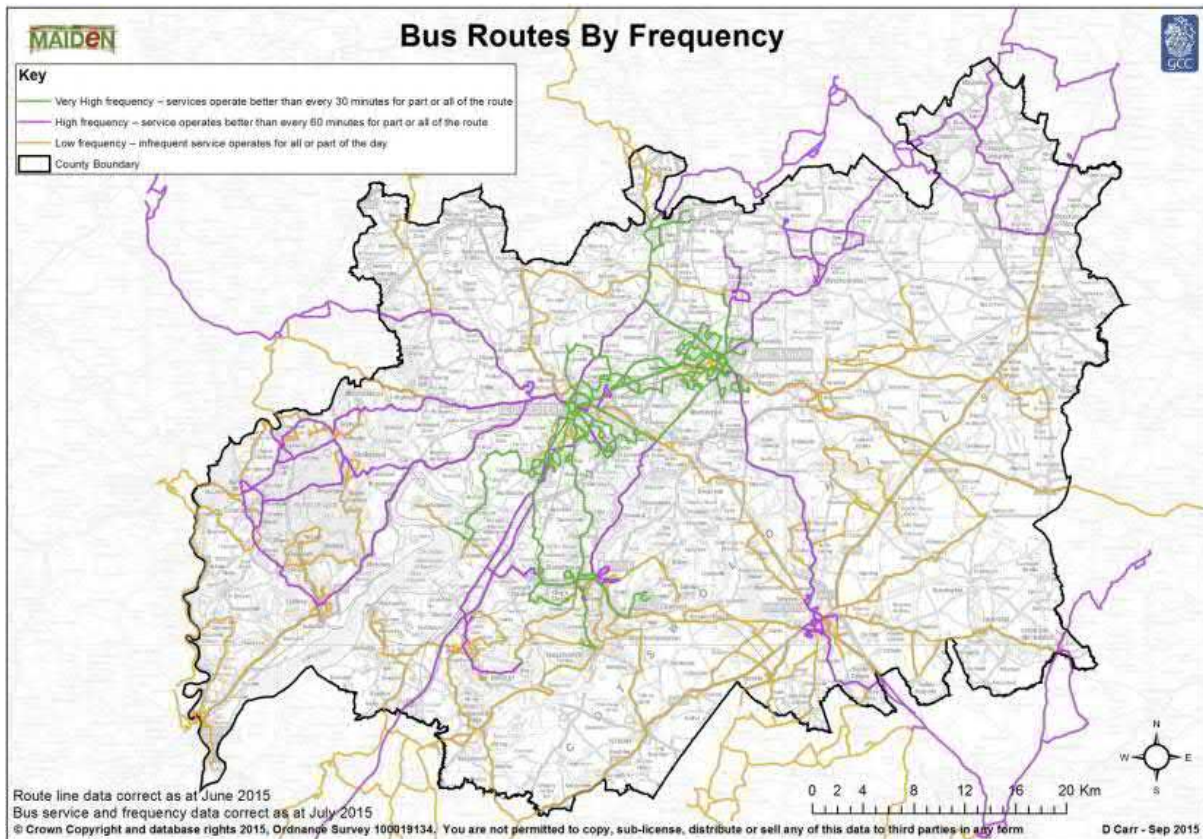
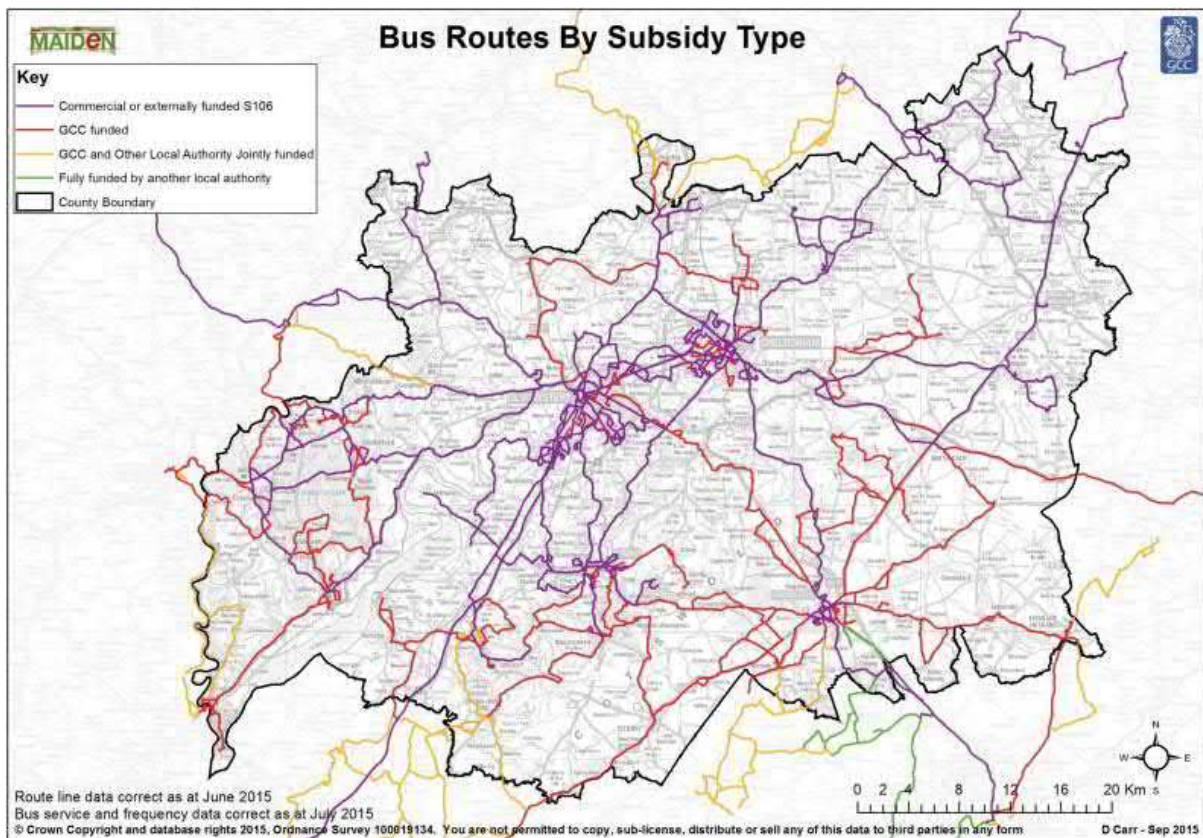


Figure 17. Bus Routes by Subsidy



Bus Patronage

Error! Reference source not found. Table 5 outlines the change in total passenger journeys on local bus services within Gloucestershire, since 2010/11.

Table 5. Bus Passenger Journeys (million passengers)²⁶

Local Authority	2010/ 11	2011/ 12	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016/ 17	2017/ 18	10/11 to 17/18 % Change
Gloucestershire	21.3	21.2	20.5	20.5	20.8	19.5	20.3	20.3	6%

The results in **Error! Reference source not found.** Table 5 demonstrate that bus travel in the Gloucestershire has decreased by 6% since 2010. This decrease in travel coincides with the trend for England which has seen a reduction in bus travel by approximately 6% within the same period. The South West region overall however has seen an increase in bus travel of 9% over this period.

Cost of Bus Travel in Stroud

Table 6 lists the cost per day for commuting to the major urban centres within Stroud using the bus network. Tickets are available to allow travel across the whole of the South West region. Tickets can be bought on the bus or beforehand at a discounted price on the Stagecoach app.

Error! Reference source not found. Table 6. Bus Operator Charges (Fees as of July 2019)

Operator	Cost (per working day)	Travel Bounds
Stagecoach (Daily Ticket)	£7.00 (via app) £7.20 (on bus)	

²⁶ DfT (2019) BUS0109

Operator	Cost (per working day)	Travel Bounds
Stagecoach (Weekly Ticket)	£3.00 (via app) (£3.07 on bus)	See above
Stagecoach (Monthly Ticket)	£2.95	See above

Bus Service Demand

Between August 2014 and Spring 2015, GCC worked with Parish Councils, Town Councils and intermediary stakeholder groups to assess the bus demand for the surrounding communities²⁷. Some key issues were raised throughout the consultations:

- Gaps with public transport network restricting movement to medical and health services. Appointments with these services are arranged to accommodate bus time tables.
- There is a high car reliance for leisure and night time demands between rural areas to the main hubs due to this being the only option.
- A lack of clear and legible information at bus stops and on parish notice boards on all corridors were noticed.
- Timings on many rural services are perceived to be unsuitable to meeting commuter needs with missing services from residential areas to key transport hubs, e.g. Cam and Dursley.
- Bus services have been perceived to be unreliable and at risk of changing whilst the car use is reliable especially in rural areas.
- The missing gaps in the network have become a restriction to young children and adults for access to education, work and social life.
- Poor access for the elderly from rural areas to access key services and avoiding social isolation for this group. Including the individual's health and wellbeing should also be considered.

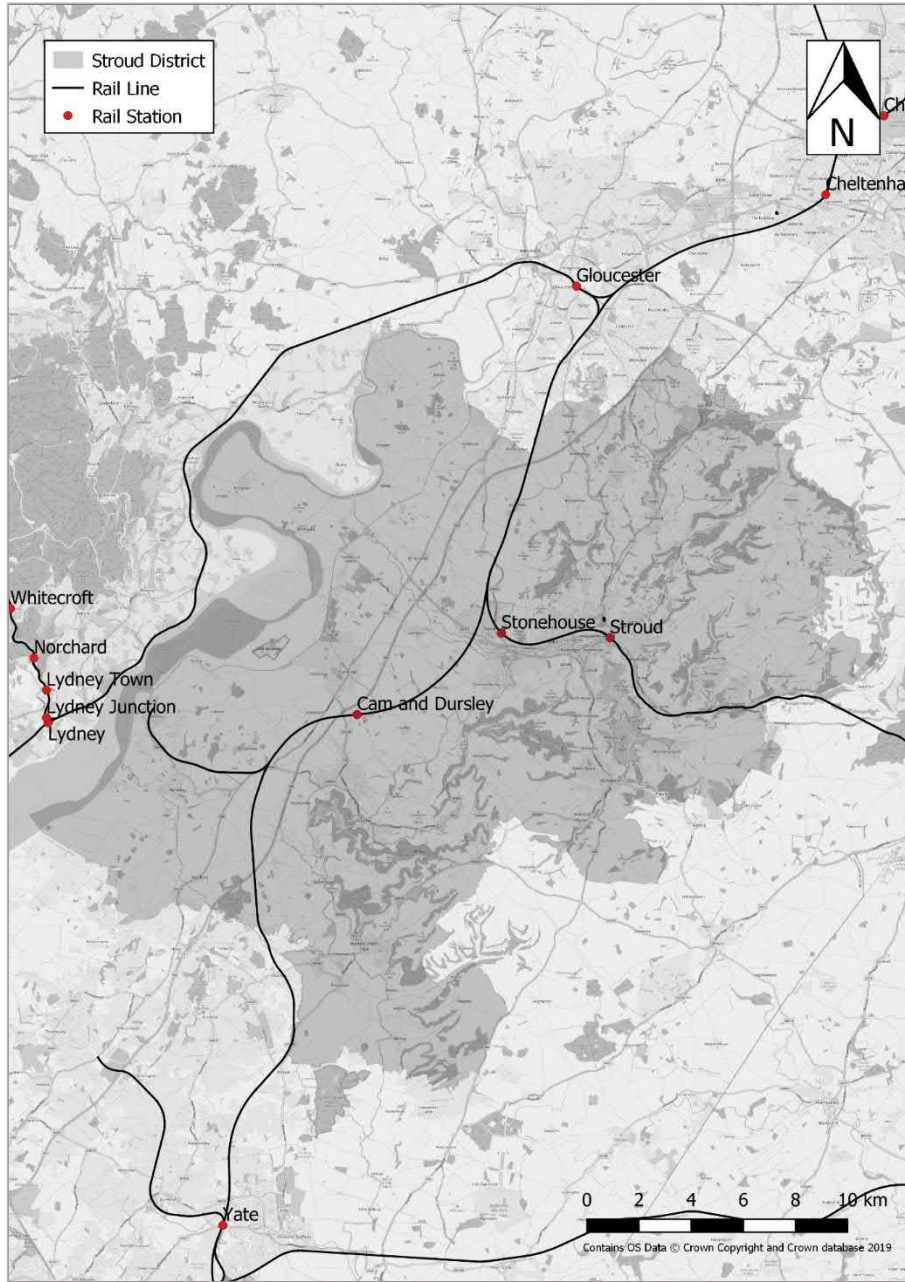
Increasing trends show a widening of travel patterns to 'pull' destinations such as Swindon, Bristol, Birmingham and Cardiff for employment, leisure and shopping. Growth has also been identified in Tewkesbury, Mitcheldean, Gloucester and Cheltenham for start-up and small to medium enterprise businesses.

Rail Network

Stroud station is located on the Swindon to Gloucester Golden Valley line which diverges from the Great Western Main Line at Swindon and joins the Bristol Temple Meads to Birmingham New Street Line at Standish Junction. Other stations within the district include Stonehouse and Cam & Dursley. Stonehouse station is also located on the Golden Valley line and provides hourly services to London. Cam & Dursley station is located on the main Bristol-Birmingham line between Yate and Gloucester. Great Western Railway serves all these stations station. Cam & Dursley provides a commuting option for journeys to Bristol with trains to Bristol Temple Meads operating every hour.

²⁷ Gloucestershire Draft Local Transport Plan – Policy Document 1 - Bus

Figure 18. Rail Stations within, and in close proximity to the Stroud District



Rail Patronage

Table 7^{Error! Reference source not found.} lists the annual passenger usage for stations within the Stroud District. The annual estimates are based on sales of tickets which end or originate at the stations.

Table 7. Estimated Annual Passenger Usage for Stroud Stations (millions)²⁸

Station Name	2010/11	2017/18	Growth
Stroud	0.45	0.54	20%
Stonehouse	0.12	0.15	25%
Cam & Dursley	0.15	0.18	20%

²⁸ [Office of Rail and Road \(2019\)](#)

The figures show that all stations in the Stroud District have seen an increase in passenger numbers since 2010/11. The Stroud area has experienced a passenger growth of 22% between 2010/11 and 2017/18. This broadly follows wider trends of increased passenger numbers within the rail industry.

Rail Fares and Journey Times

Approximate fare prices and journey times of services²⁹, as of September 2019, are shown below in Table 8.

Table 8. Rail Journey Times and Ticket Prices (Fees as of September 2019)

Station	Journey Time	Ticket Price
Gloucester	~25 mins	£5.10
London Paddington	~1 hour and a half	£82.50 (peak) £29.00 (off-peak)
Bristol Temple Meads	~1 hour and a half	£23.90 (peak) from £12.60 (off-peak)
Southampton	~2 and a half hours	£82.50 (peak) £47.20 (off-peak)

Rail Station parking

All stations within the Stroud District have step free access allowing accessibility for passengers with disabilities and also allows passengers with non-folding bikes to access the stations with ease.

There are a reasonable number of cycle parking spaces located at Stroud and Cam & Dursley, however there are only 6 available in Stonehouse, shown in Table 9.

Funding has been granted to provide covered cycle parking at Stroud station which is due to be completed by March 2020.

Table 9. Stroud Rail Station Parking and Accessibility Facilities³⁰

Station Name	Cycle Parking	Car Parking	Step Free Access?
Stroud	20	150	Yes (not direct)
Cam & Dursley	30	90	Yes
Stonehouse	6	25	Yes (not direct)

Great Western Railway apply restrictions to bikes on trains arriving into London Paddington at peak times but otherwise operate a 'first come, first served' basis.

South Western Railways restrict usage on services arriving into London Waterloo at peak times, but otherwise operate on a 'first come, first served' basis³¹. Great Western Railway provide two non-reservable cycle spaces (first come, first served).

Road Network Characteristics

Main Artery routes

Figure 19 presents the road network within the Stroud District. The M5 and the parallel A38 are in the west of the district, forming a north-south link between Gloucester and Bristol. There are two motorway

²⁹ [Network Rail \(2019\)](#)

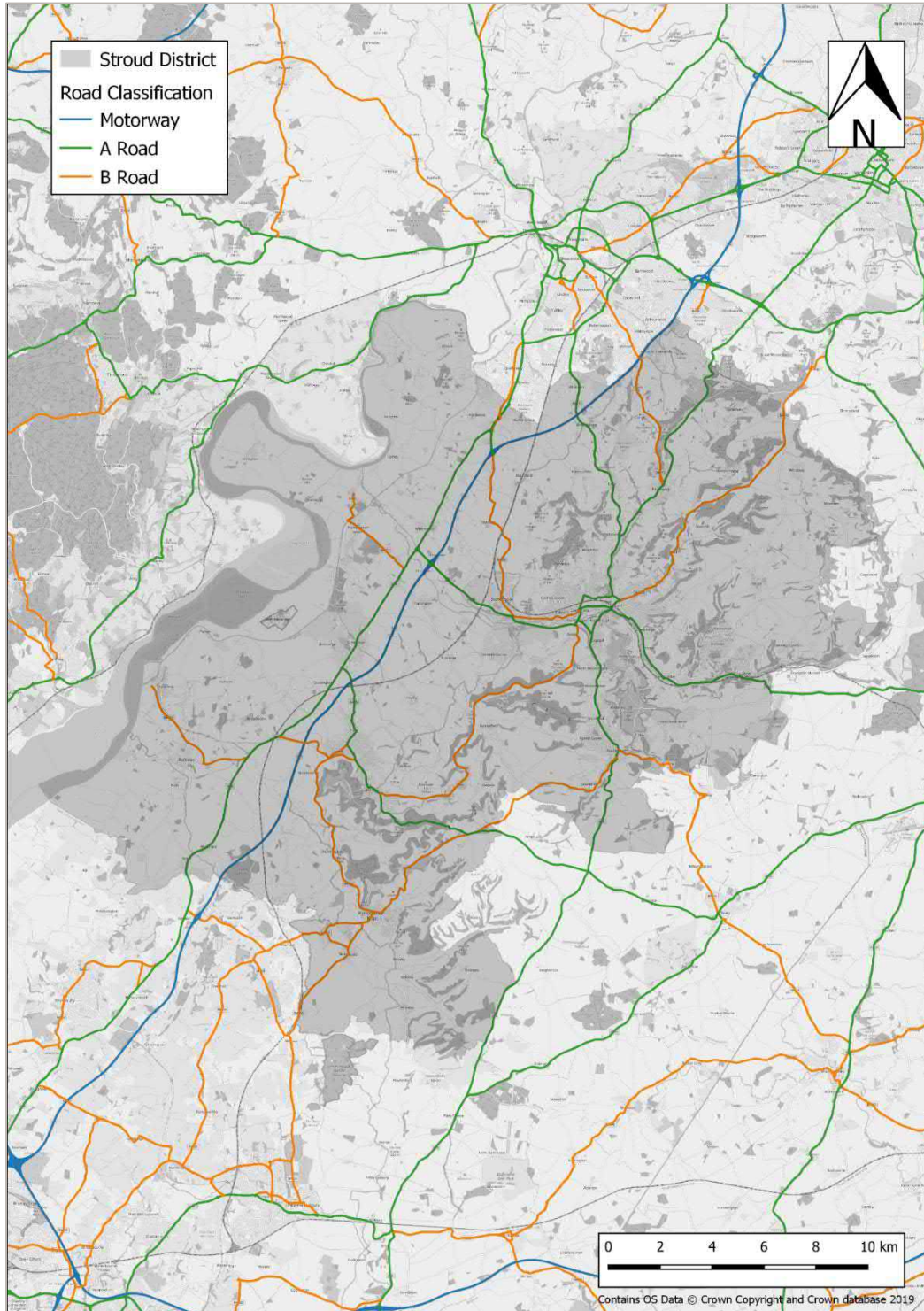
³⁰ [National Rail \(2019\) Station Services and Facilities](#)

³¹ [Great Western Railways \(2019\)](#)

junctions in the district; M5 Junction(J) 12 (Quedgeley) and J13 (Stroudwater). J11a and J14 are just outside of the study area, but provide connections between the M5 and large parts of in the north and the south of the district respectively.

There are no dual carriageways in the district, and the majority of the road connections follow a north-south pattern. There are two main A-roads that provide an east-west connection across the district. The A419 connects the A38 and M5 to Cirencester, through the main towns of Stonehouse and Stroud. The A4135 is the main highway through Cam and Dursley and connects the A38 to the A433, Tetbury.

Figure 19. Road network within the Stroud District



Local roads

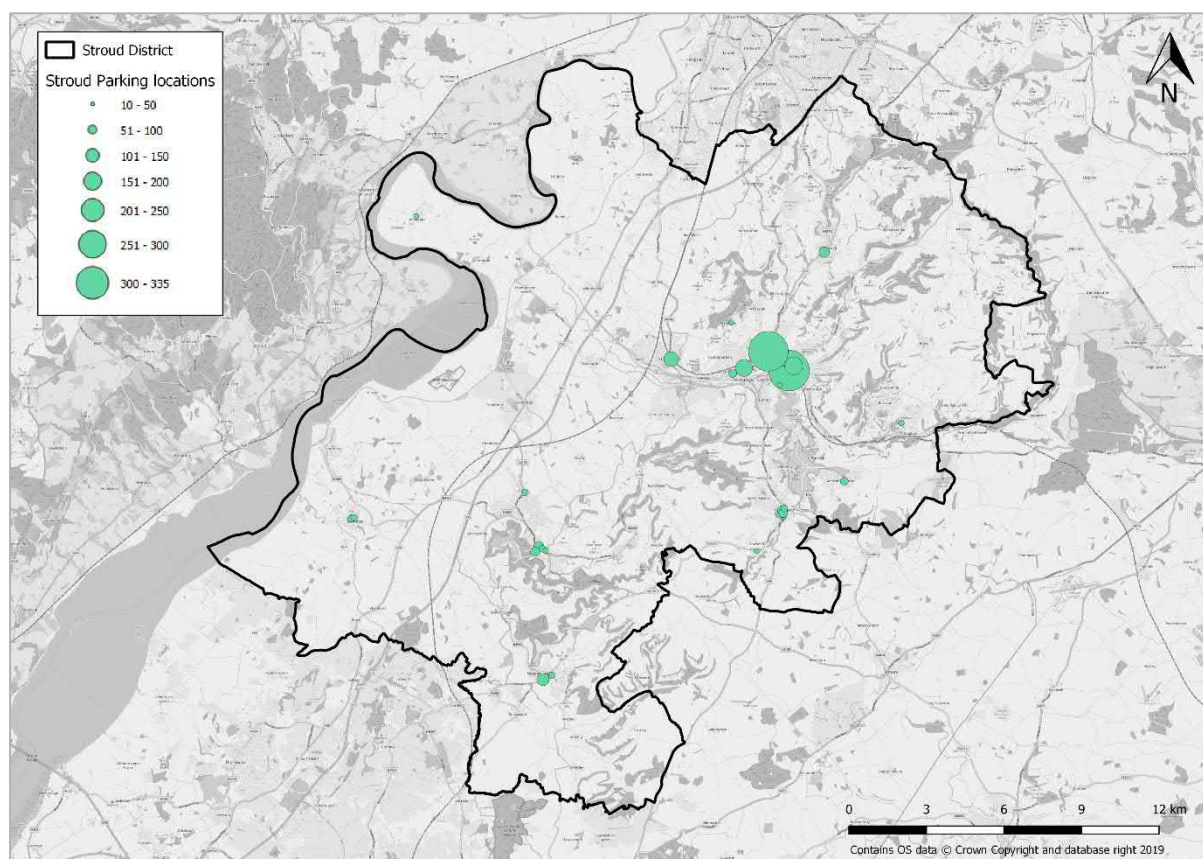
There are a number of local roads connecting the villages and market towns to the main artery routes. Most notable ones include:

- B4008, connecting Stonehouse and Quedgeley, via M5 J12
- B4058, linking Wotton-under-Edge and Nailsworth
- B4060, connecting Cam and Wotton-under-Edge
- B4066, connecting Sharpness and Stroud
- B4070, linking Stroud and the villages in the north-east of the district
- B4073, connecting Painswick and Gloucester

Parking

Figure 20 shows the location of the car parks available within the District. The highest frequency of car parks are located in the more urban areas, specifically Stroud. Stroud, as the main town in the district, also has the largest capacity car parks. These are a mixture of privately owned and Council run carparks.

Figure 20. Public Car Parking locations in the Stroud District



Costs

There are numerous free car parks available in the district. For the car parks that charge, the prices vary from £2.10 to £3.30 for a four hour stay. Prices are cheaper however when using the MiPermit parking app.

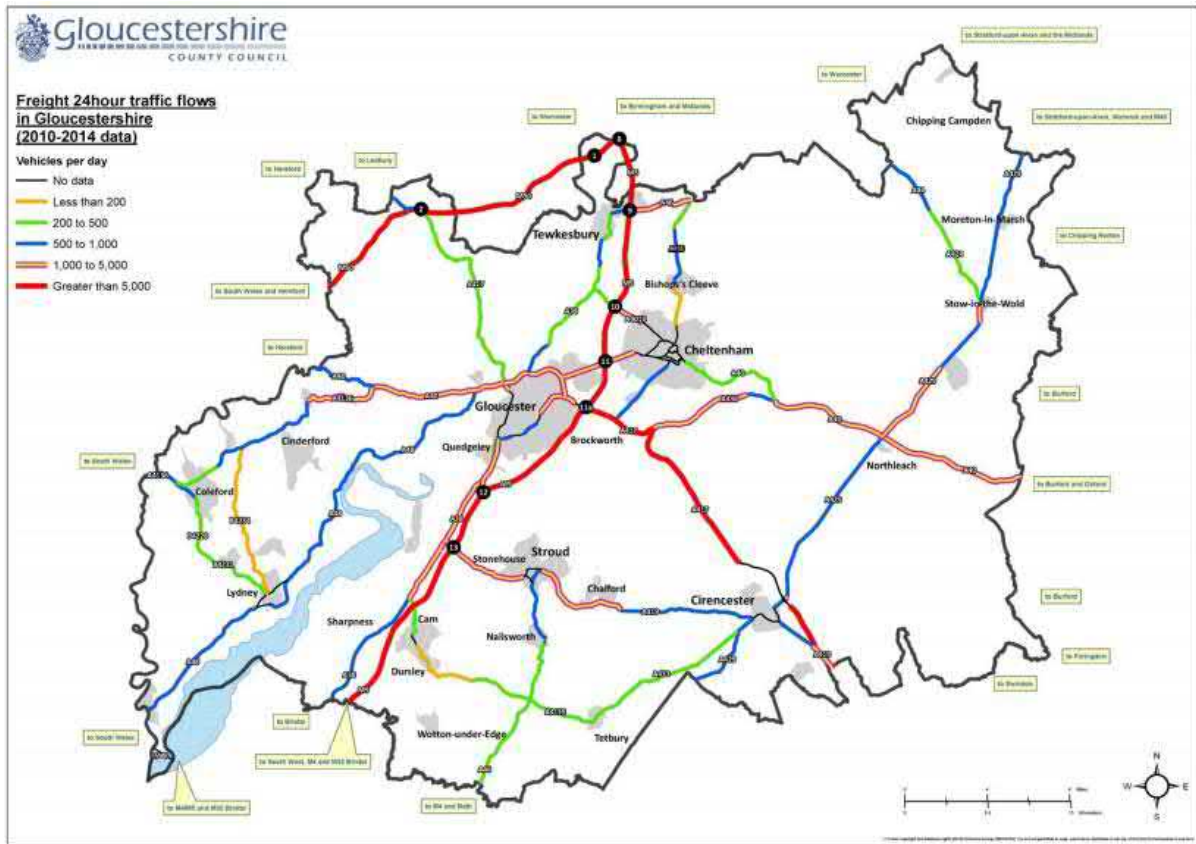
Freight Movements

In Gloucestershire, freight vehicles account for 1 - 8% of all vehicle movement³², Figure 21 shows the daily freight flow between 2012 and 2014 showing the M5 and A417 to be the heaviest used. The roads

³² Gloucestershire Local Transport Plan (2015-2031) - Policy Document 3 - Freight, Nov 2017

surrounding Stroud are also highlighted as being well used by freight, especially through Stonehouse and Chalford.

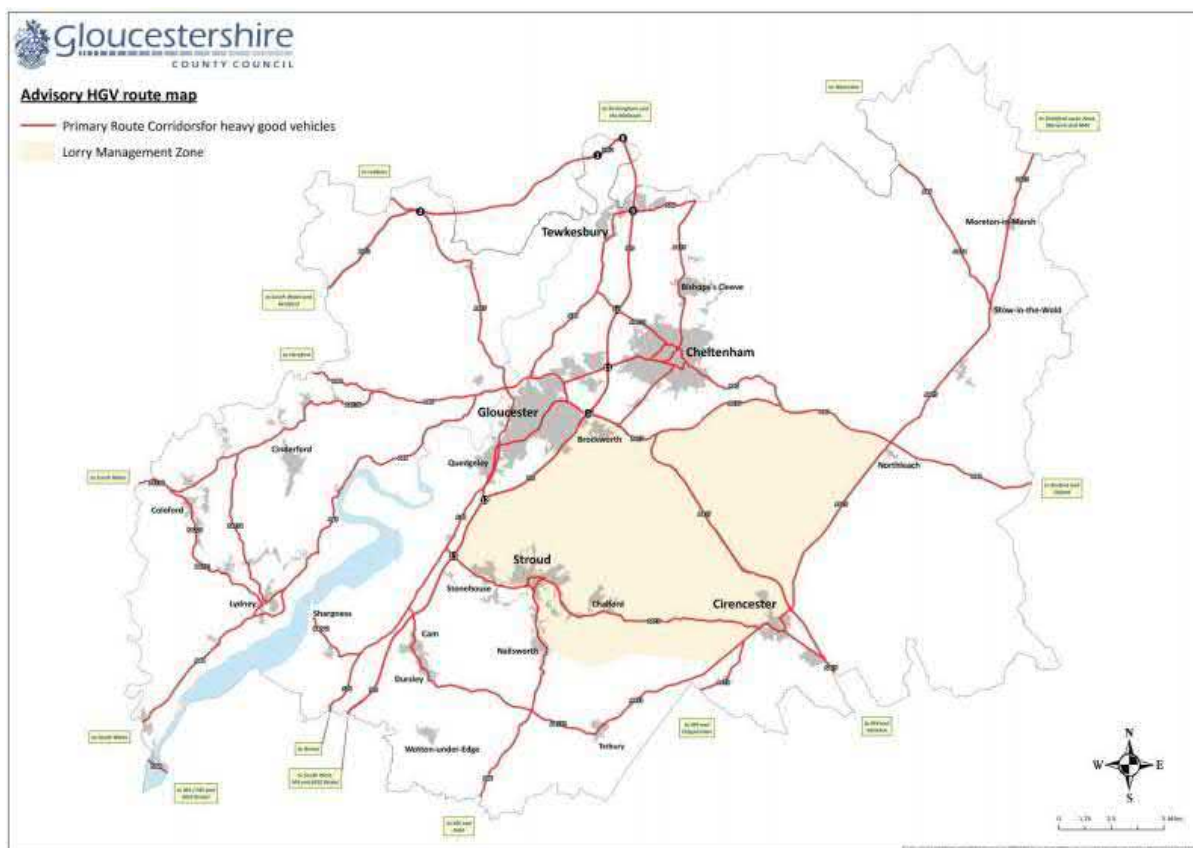
Figure 21. Average Annual Daily Freight flows by corridor 2012 - 2014 (Source: Gloucestershire Local Transport Plan (2015-2031) - Policy Document 3 - Freight, Nov 2017)



Much of the Cotswolds fall within the Cotswold Lorry Management Zones, seen in Figure 22, which includes several Traffic Regulation Orders in place to reduce the number of HGVs using unsuitable roads for their journey. The M5, A38, A46 and the A419 in the study area all fall within the Cotswold Lorry Management Zone.

The LTP has identified the primary pinch points in Gloucestershire, however none of these are in, or close to the Stroud District.

Figure 22. Primary routes for HGVs and Lorry Management Zone



Road Safety

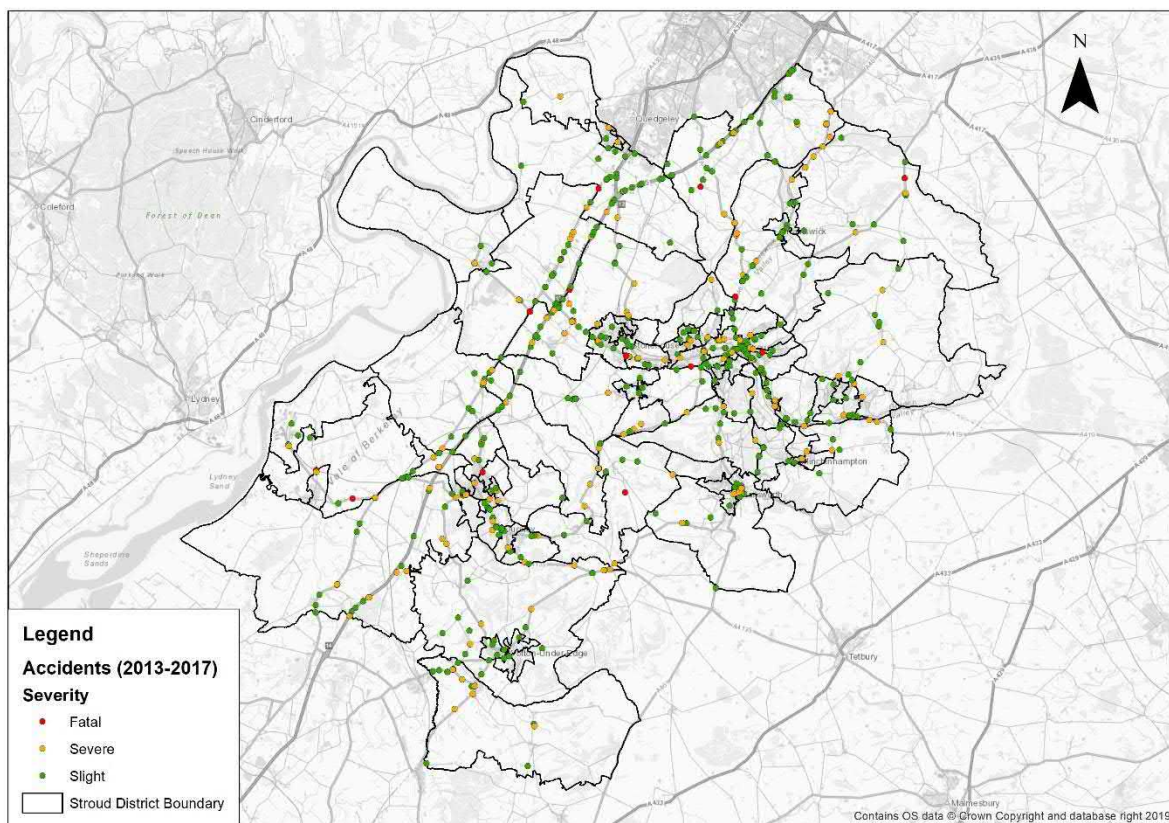
Within the Stroud District there have been 603 reported accidents over a five-year period (2013-2017), shown in Figure 23. Of these, 17 were fatal, 166 were classed as severe and 420 were classed as slight.

In total, 638 casualties were reported over this 5-year period, described in more detail in Table 10. Of these casualties, 63 were pedestrians, 52 were cyclists and 523 were vehicle-based. There were two pedestrian fatalities and one cyclist fatality. The majority of accidents occurred on major roads within the District.

Table 10. Stroud Collision Casualties figures (2013-2017)

Severity	Pedestrian	Cyclists	Vehicles	Total
Fatal	2	1	10	13
Serious	17	11	83	111
Slight	44	40	430	514
Total	63	52	523	638

Figure 23. Accidents within the Stroud District between 2013 and 2017³³



³³ STATS19

