

SDS Scoping Engagement
Infrastructure Discussion Paper

The infrastructure question this engagement is asking you to help us with:

Which significant infrastructure constraints and opportunities should shape the future Spatial Development Strategy and what strategic infrastructure is needed to support sustainable growth across Gloucestershire?

Gloucestershire
COUNTY COUNCIL

This is a discussion paper to explore the infrastructure matters of strategic importance that should be considered in drafting a future Spatial Development Strategy. It does not select growth locations or establish detailed policies.

We welcome your views on the strategic issues, evidence and outcomes for infrastructure that should inform the future Spatial Development Strategy (SDS).

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Executive Summary

Infrastructure will be fundamental to delivering sustainable growth across Gloucestershire. New homes, jobs and services must be planned alongside the transport, energy, water, wastewater, digital, education, health, community and emergency service infrastructure they require. Green and blue infrastructure is equally important for nature recovery, flood management, climate resilience, recreation and public health.

Gloucestershire has strong infrastructure networks and significant environmental assets, but parts of the county already face pressures on electricity capacity, water supply, wastewater treatment, transport and digital connectivity, and public services. Population and economic growth, demographic change, climate change and new technologies are likely to increase these pressures and could influence where and when future development can be delivered.

Delivery will require sustained collaboration between local authorities, utility companies, transport and environmental bodies, health and education providers, government agencies, developers and investment partners. A shared long-term framework can help align utility investment plans, public funding, developer contributions and future devolved funding, while strengthening business cases for critical infrastructure projects.

The SDS should support an infrastructure-led approach to growth. This means taking infrastructure capacity and delivery timescales into account when considering the scale, location and phasing of development; identifying dependencies between different infrastructure systems; and prioritising investment where constraints could prevent sustainable development.

The future Spatial Development Strategy provides an opportunity to plan growth and infrastructure together across local authority boundaries. It can establish a shared understanding of strategic constraints, identify long-term investment priorities and give infrastructure providers greater certainty about future needs. The SDS will not determine detailed local infrastructure requirements, but it can provide a strategic framework within which local plans, investment programmes and infrastructure delivery plans can be aligned.

Infrastructure matters of strategic importance

- IN1 Ensuring sufficient utility infrastructure capacity (energy, water, wastewater and digital networks) to support sustainable growth.
- IN2 Delivering integrated transport and connectivity infrastructure that improves accessibility, supports economic growth and reduces reliance on private vehicles.
- IN3 Reducing flood risk and improving climate resilience through strategic water management and adaptation infrastructure.
- IN4 Aligning growth with the provision of education, health, community and emergency service infrastructure.
- IN5 Protecting and enhancing green infrastructure, nature recovery networks and environmental resilience at a strategic scale.
- IN6 Securing the long-term delivery, funding and coordination of infrastructure investment through effective partnership working and infrastructure planning.

Introduction

Infrastructure shapes where growth happens and how well places work. New homes, jobs and services need transport, energy, water, digital, education, health and environmental infrastructure. Strategic infrastructure extends beyond transport and utilities. It includes the health, education, community and emergency service infrastructure needed to support growing and changing communities, as well as the green and blue infrastructure networks that provide nature recovery, flood management, recreation, climate adaptation and health benefits. Gloucestershire's environmental assets are a significant contributor to the county's identity, economy and quality of life, meaning that investment in natural infrastructure is likely to be as important as investment in physical infrastructure when planning for long-term sustainable growth.

Over the coming decades, population change, climate change, new technology and economic growth will place greater pressure on infrastructure. The county also wants to grow sectors such as engineering, cyber, digital, agri-tech and clean energy. The Gloucestershire Local Growth Plan 2025–2035 recognises that suitable infrastructure, housing and environmental investment will be essential to support productivity, attract investment and improve quality of life.

Gloucestershire has strong road, rail, energy, environmental and digital networks. However, there are pressures on transport, electricity, water, wastewater, flood protection, health, education and digital services. These pressures have the potential to influence both the location and pace of future development and therefore require strategic consideration.

Infrastructure planning must also respond to climate change and protect the environment. This includes managing flood risk, water supplies and energy security, as well as improving green spaces, waterways and wildlife networks. These networks can help nature recover, support health and make places more resilient to extreme weather.

The current changes to the planning system and the introduction of Spatial Development Strategies (SDS), Local Government Reorganisation, devolution and Gloucestershire's Local Growth Plan provide an opportunity to agree long-term investment priorities. Planning across local authority boundaries can better reflect how infrastructure networks and services operate. A future SDS provides an opportunity to plan growth and infrastructure together.

This discussion paper therefore explores the strategic infrastructure issues that should inform a future SDS. It seeks views on the infrastructure opportunities, challenges and investment priorities that will shape the county's future and considers how infrastructure can support sustainable growth, economic prosperity, healthy communities, climate resilience and environmental enhancement over the coming decades.

Policy and Legislation

- Planning and Infrastructure Act 2025: Planning and Infrastructure Act 2025
- National Planning Policy Framework (August 2026): National_Planning_Policy_Framework.pdf
- National Planning Practice Guidance: Planning practice guidance - GOV.UK
- National Policy Statements (NPSs) on energy: National Policy Statements for energy infrastructure - GOV.UK

- National Policy Statements on Transport: National Networks National Policy Statement - GOV.UK
- UK Infrastructure: A 10-Year Strategy (June 2025): UK Infrastructure: A 10 Year Strategy - GOV.UK
- Industrial Strategy Sector plans Sector Plans - GOV.UK, including for: Advanced Manufacturing; Clean Energy Industries; Creative Industries; Defence; Digital and Technologies; Financial Services; Life Sciences; and Professional and Business Services.
- Clean Power Action Plan 2030 Clean Power 2030 Action Plan - GOV.UK
- National Grid network development plan Network Development Plan (NDP) - Dataset - National Grid's Data Portal
- Severn Trent DWMP23 (updated plan in 2027): Drainage and wastewater management plan | Our plans | About us | Severn Trent Plc
- Thames Water DWMP23 (updated plan in 2027): DWMP23 Drainage and Wastewater Management Plan | Thames Water
- Wessex Water DWMP23 (updated plan in 2027): DWMP23 Drainage and Wastewater Management Plan I Wessex Water
- Welsh Water DWMP23 (updated plan in 2027): Drainage and wastewater management plan | Plan and strategy | About us | HD Cymru

Key Gloucestershire sources

- Gloucestershire's Local Growth Plan (2025-2030): gloucestershires-local-growth-plan-2025-2035-1.pdf
- Gloucestershire's Local Transport Plan (2020-2041): ltp-policy-document-final-v132-2.pdf (updated LTP currently out to consultation)
- Gloucestershire's Local Nature Recovery Strategy: Gloucestershire Local Nature Recovery Strategy | Gloucestershire County Council
- Local Plan Infrastructure Delivery Plans (current and emerging)
- Gloucestershire School Places Strategy (2025-2030): gloucestershire-school-places-strategy-2025-2030.pdf
- Gloucestershire Housing and Economic Needs Assessment (August 2026) Gloucestershire HENA August 2026
- Gloucestershire Housing with Care Strategy (2024-2029): housing-with-care-report_17feb_21.pdf
- Gloucestershire's Local Development Guide (2025): Gloucestershire's Local Development Guide 2025 | Gloucestershire County Council
- Gloucestershire's Digital Infrastructure, Inclusion and Innovation Strategy: Digital Infrastructure, Inclusion and Innovation Strategy | Gloucestershire County Council
- Gloucestershire Libraries Strategy (2023-2028): The Library Strategy 2023-2028
- Minerals Local Plan for Gloucestershire (2020) & Gloucestershire Waste Core Strategy (2012): Adopted Policy | Gloucestershire County Council
- (consultation on updated Minerals and Waste Local Plan pending)

Matters of Strategic Importance - Context

IN1 Ensuring sufficient utility infrastructure capacity (energy, water, wastewater and digital networks) to support sustainable growth.

Utility infrastructure is fundamental to the delivery of sustainable growth and the successful functioning of communities, businesses and public services. Future housing, employment development and strategic investment will depend on the availability and capacity of electricity, water, wastewater and digital networks.

Feedback from developers, local planning authorities and infrastructure providers indicates that electricity network capacity constraints are becoming an increasingly significant issue in some locations, affecting the ability to accommodate new housing, employment development, renewable energy generation and emerging sectors such as advanced manufacturing and data-intensive industries.

Water and wastewater infrastructure is also under pressure from population growth, environmental requirements and climate change (droughts, wildfires, warming climate). Water company investment plans identify the need to increase the capacity, storage and performance of water supply, sewerage and wastewater treatment infrastructure so that planned growth can be served reliably and environmental standards can be met. Across the parts of Gloucestershire served by Severn Trent Water, Wessex Water and Thames Water, the timing and location of development may therefore need to reflect available network and treatment capacity, planned upgrades and the long lead-in times for major investment. Early coordination between planning authorities, developers and water companies will be important to identify capacity constraints, align growth with investment programmes and avoid infrastructure becoming a barrier to delivery.

Digital connectivity is also emerging as a strategic infrastructure issue. While Gloucestershire has benefited from investment in broadband and mobile networks, variations in connectivity remain between urban and rural areas, potentially affecting access to jobs, education, healthcare and business opportunities. The county's ambitions for growth in cyber, digital, advanced engineering and innovation-led sectors, as set out within Gloucestershire’s Local Growth Plan 2025-2035, will require resilient and future-ready utility infrastructure capable of supporting economic growth and technological change.

IN2 Delivering integrated transport and connectivity infrastructure that improves accessibility, supports economic growth and reduces reliance on private vehicles.

Transport and connectivity pressures exist across Gloucestershire. Congestion and journey reliability issues affect several strategic corridors, particularly around Gloucester and Cheltenham, at key junctions on the M5, and along sections of the A40, A46 and other principal routes serving major employment areas and growth locations. While the A417 Missing Link is expected to address a long-standing constraint on the strategic road network, pressure remains on routes connecting the county's main urban areas and supporting freight movement. Many rural communities experience more limited access to public transport, employment opportunities, education, healthcare and other services, contributing to high levels of car dependency. The county's economic ambitions, including growth in cyber and digital industries, advanced engineering, logistics and emerging low-carbon sectors identified within Gloucestershire’s Local Growth Plan 2025-2035, will also depend upon reliable transport and connectivity infrastructure capable of supporting businesses, workers and investment.

IN3 Reducing flood risk and improving climate resilience through strategic water management and adaptation infrastructure.

Water management and climate resilience are critical strategic issues for Gloucestershire. The county's geography is shaped by the catchments of the River Severn, River Avon, River Wye and upper River Thames, with many communities, transport corridors and areas of planned growth located within or near flood risk areas. Gloucestershire has experienced several significant flood events in recent decades, including widespread flooding across the Severn Vale, and climate change is expected to increase the frequency and intensity of extreme rainfall events, river flooding, surface water flooding and periods of drought.

There is already evidence of increasing pressure on water-related infrastructure across Gloucestershire. Communities along the Severn corridor, including parts of Gloucester, Tewkesbury, Cheltenham and settlements within the wider Severn Vale, experience varying levels of river and surface water flood risk that can affect homes, businesses, infrastructure and transport networks. Strategic transport routes, including sections of the M5, A40 and local road network, can also be vulnerable to severe weather and flooding events. At the same time, water companies' Drainage and Wastewater Management Plans (DWMP23) identify long-term pressures arising from population growth, urbanisation and climate change, highlighting the need for investment in drainage systems, wastewater treatment infrastructure, sewer capacity, storm overflow management and catchment-based solutions over the coming decades. Growth planned through local plans and a future SDS has the potential to increase demands on these systems unless water management and adaptation measures are considered from the outset.

IN4 Aligning growth with the provision of education, health, community and emergency service infrastructure.

The ability to deliver sustainable growth is closely linked to the capacity and resilience of education, health, community and emergency service infrastructure. Many of the organisations providing these services operate across administrative boundaries and plan over long timescales. These services play a vital role in supporting the day-to-day needs of communities and contributing to health, wellbeing, social inclusion and quality of life. Population growth, demographic change and new development all increase demand for school places, healthcare facilities, community services and emergency response infrastructure. As Gloucestershire plans for future growth, it will be important to ensure that homes, jobs and supporting infrastructure are planned together so that development is matched by timely investment in the services and facilities that communities rely upon.

There is already evidence of infrastructure pressures in parts of Gloucestershire. Forecast population growth and new housing development continue to generate demand for additional primary, secondary and special educational needs provision across a number of areas, particularly around Gloucester, Cheltenham, Tewkesbury and other locations experiencing significant housing growth. Gloucestershire also has an ageing population, increasing demand for healthcare services, adult social care and specialist accommodation. Health inequalities persist between communities, while pressures on GP services, community healthcare facilities and hospital services have been identified through local health evidence and the Joint Strategic Needs Assessment. New development can also increase demands on libraries, leisure facilities, community halls, youth

services and other local facilities that help support strong and resilient communities, albeit these are typically planned for and delivered through the local plans, not the SDS.

A coordinated approach can help ensure that development supports healthy, inclusive and sustainable communities, reduces inequalities in access to services, and provides greater certainty for infrastructure providers when planning long-term investment.

IN5 Protecting and enhancing green infrastructure, nature recovery networks and environmental resilience at a strategic scale.

Gloucestershire's natural environment is one of its most important strategic assets. The county contains internationally, nationally and locally important landscapes, habitats, river corridors, woodlands and greenspaces that provide environmental, social and economic benefits. Green infrastructure forms a critical part of the county's infrastructure network, delivering functions that extend beyond recreation and biodiversity to include flood management, climate regulation, water management, carbon storage, public health and wellbeing. As Gloucestershire continues to grow, there will be increasing pressure on these assets, making it important that future development is planned in a way that protects, enhances and expands strategic green infrastructure networks rather than fragmenting them.

Climate change and environmental pressures are increasing the need for resilient natural infrastructure. Gloucestershire experiences flood risk associated with the River Severn catchment and its tributaries, while rising temperatures, extreme weather events and changing environmental conditions are expected to affect both communities and ecosystems. Green and blue infrastructure can play an important role in helping places adapt to these challenges through natural flood management, urban cooling, sustainable drainage, habitat creation and improved water quality. A strategic approach to environmental infrastructure can also support national net zero ambitions, strengthen resilience to climate change and deliver multiple benefits for people, communities and nature.

The SDS provides an opportunity to consider green infrastructure, nature recovery and environmental resilience at a county-wide scale, recognising that ecological networks, river catchments and landscape systems extend beyond local authority boundaries. This includes supporting the delivery of Gloucestershire's environmental objectives through better-connected habitats and wildlife corridors, improved access to green space, enhanced landscape resilience and investment in natural capital. By planning environmental infrastructure alongside homes, jobs, transport and utilities, the SDS can help create a more resilient county where growth contributes positively to nature recovery, climate adaptation, environmental quality and the long-term health and wellbeing of communities.

IN6 Securing the long-term delivery, funding and coordination of infrastructure investment through effective partnership working and infrastructure planning.

The successful delivery of an SDS will depend not only on identifying future infrastructure needs, but also on ensuring that the infrastructure required to support growth can be planned, funded, coordinated and delivered over the long term. Infrastructure provision at a strategic scale often involves multiple organisations, including local authorities, infrastructure providers, government agencies, utility companies, health bodies, education providers and the private sector. Many infrastructure networks operate across administrative boundaries and have long lead-in times,

making early planning and effective partnership working essential. National planning reforms and the emerging strategic planning system place increasing emphasis on infrastructure-led growth, recognising that development should be aligned with the infrastructure needed to support sustainable communities and economic prosperity.

Gloucestershire faces a range of strategic infrastructure challenges and opportunities which require coordinated action at a county-wide scale. These include investment in transport corridors, electricity networks, water supply, wastewater treatment, digital connectivity, flood resilience, health facilities, education provision and green infrastructure. Evidence from infrastructure providers demonstrates that future pressures from population growth, economic development, climate change and changing service demands will require significant investment across multiple infrastructure systems. For example, water companies' Drainage and Wastewater Management Plans (DWMP23) identify the need for long-term investment to address population growth, climate impacts, sewer capacity and environmental objectives over the next 25 years.

A key role of the SDS will therefore be to provide a framework for aligning infrastructure investment with future growth. This includes understanding where major infrastructure constraints may affect development, identifying strategic investment priorities, supporting funding bids and enabling infrastructure providers to plan with greater certainty. It also involves considering how different forms of infrastructure interact with one another. For example, housing growth may require coordinated investment in transport, schools, healthcare, energy networks, water infrastructure and green infrastructure, while climate resilience may depend on combining flood management, nature recovery and utility investment. By taking a long-term and integrated approach, the SDS can help ensure that future growth is both deliverable and supported by the infrastructure needed to create sustainable, healthy and resilient communities.

Matters of Strategic Importance for Infrastructure – Key Strategic Priorities

IN1 Ensuring sufficient utility infrastructure capacity (energy, water, wastewater and digital networks) to support sustainable growth.

Key strategic priorities

1. Align planned growth with electricity network reinforcement, water resource provision, wastewater treatment capacity and drainage improvements, particularly within and around Gloucester, Cheltenham, Tewkesbury, the M5 corridor and other strategic growth locations where infrastructure pressures are already emerging.

2. Prioritise locations where utility upgrades are required to enable sustainable growth.

3. Strengthen electricity capacity to accommodate the electrification of transport and heating, renewable and low-carbon energy generation, energy storage, and the requirements of Gloucestershire's growing cyber, digital and advanced engineering sectors.

4. Support the delivery of high-quality digital connectivity across both urban and rural areas to improve productivity, reduce inequalities and support modern service delivery.

5. Improve the long-term resilience of utility infrastructure to climate change, environmental pressures and population growth through integrated planning and investment.

IN2 Delivering integrated transport and connectivity infrastructure that improves accessibility, supports economic growth and reduces reliance on private vehicles.

Key strategic priorities

1. Prioritise investment in high-quality public transport, rail connectivity, interchanges, active travel networks and mobility hubs, particularly along the Gloucester-Cheltenham-Tewkesbury corridor, the M5 growth corridor and other locations identified for significant housing and employment growth.
2. Improve access to opportunities, reduce inequalities in connectivity and provide realistic alternatives to private car use.

IN3 Reducing flood risk and improving climate resilience through strategic water management and adaptation infrastructure.

Key strategic priorities

1. Ensure that planned growth is aligned with the capacity and resilience of drainage, wastewater and water infrastructure.
2. Deliver a coordinated catchment-based approach to flood risk management, water resilience and climate adaptation across Gloucestershire.

IN4 Aligning growth with the provision of education, health, community and emergency service infrastructure.

Key strategic priorities

1. Ensure that infrastructure capacity keeps pace with growth and that development contributes positively to community wellbeing.
2. Address geographic disparities in access to education, healthcare, community facilities and emergency services, particularly in rural areas and communities experiencing poorer outcomes and improve access to essential services for all residents.
3. Support the creation of complete communities where homes, services, community facilities and supporting infrastructure are planned together, helping to improve health, wellbeing, community resilience and quality of life.

IN5 Protecting and enhancing green infrastructure, nature recovery networks and environmental resilience at a strategic scale.

Key strategic priorities

1. Ensure that green and blue infrastructure investment delivers multiple benefits by integrating flood management, biodiversity enhancement, carbon storage, recreation and environmental resilience as part of a long-term infrastructure strategy for Gloucestershire.
2. Support the creation of connected networks of wetlands, floodplains, watercourses, sustainable drainage features and multifunctional green infrastructure that reduce flood risk, improve water quality, support nature recovery and help communities adapt to climate change.

IN6 Securing the long-term delivery, funding and coordination of infrastructure investment through effective partnership working and infrastructure planning.

Key strategic priorities

1. Strengthen collaboration across administrative boundaries where infrastructure networks, catchments and service areas extend beyond individual local authority areas.

2. Aligning local authorities, infrastructure providers, government agencies, utility companies, service providers and investment partners around a shared long-term infrastructure strategy.

3. Identify strategic infrastructure priorities, infrastructure delivery dependencies and investment requirements across the county, providing a clear framework for coordinating public and private sector investment and supporting infrastructure-led growth.

4. Establish a shared understanding of infrastructure constraints, critical infrastructure projects and developer funding requirements across the county.

5. Support a coordinated approach to infrastructure funding through developer contributions, infrastructure levies, government funding programmes, utility company investment plans and future devolved funding arrangements.

6. Provide a long-term infrastructure investment narrative that helps attract funding, supports business cases for strategic infrastructure projects and enables infrastructure providers to plan investment with greater certainty.



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