Transparency Report – Technical Annex

This section of the transparency report provides a more detailed view of the services delivered by Buckinghamshire Highways. It includes additional information on the highway assets we manage, how maintenance activities are planned and prioritised, the funding available, performance measures, asset condition data, and the scale of works carried out across the network. This annex is intended to give residents, stakeholders and those with a particular interest in highway maintenance greater insight into the technical aspects of how the service operates and how investment decisions are made.

Highways maintenance funding and spending figures

Capital funding allocation sources

Financial year	2024-25	2025-26	2026-27 (projected)
Highways maintenance capital funding allocated through DfT	£14,765,000	£20,725,000	£21,462,000
Other **DfT** capital funding utilised by local authority for highways maintenance	£87,100	£0	£0
Other **Government** capital funding allocated by local authority to Highways Maintenance	£0	£0	£0
Other capital funding allocated to highways maintenance	£32,531,258	£30,987,436	£28,100,898
Total Capital funding allocated to highways maintenance	£47,383,358	£51,712,436	£49,562,898

Additional information on funding figures

In 2024/25, the Council received £87,100 of additional Department for Transport (DfT) funding through the Traffic Signals Obsolescence Grant.

Other capital funding includes Buckinghamshire Council funding (including overheads) as well as contributions to highway maintenance from High Speed 2 (HS2) as compensation for accelerated deterioration of road condition due to increased traffic from local major infrastructure developments.

For 2026/27, other capital funding includes Buckinghamshire Council capital funding, as well as expected contributions to highway maintenance from East West Rail as compensation for accelerated deterioration of road condition due to increased traffic from local major infrastructure developments.

Spending

Total spending

Please confirm that you understand the answers provided in this section relate to your compliance under the 2026-27 local highways maintenance incentive funding requirements, as set out to your authority via letter to your chief executive in April and as published online.	**Yes**

Financial year	2024-25	2025-26	2026-27 (projected)
Total highways maintenance capital spend	£47,383,358	£51,712,436	£49,562,898
Total highways maintenance revenue spend	£21,164,186	£18,753,119	£17,667,377
Total spend	£68,547,544	£70,465,555	£67,230,275

Additional information on total spending figures

The total spend figures above include council overhead costs which have been apportioned as necessary based on the percentage split across revenue and capital spend.

Spending on carriageways by type of spend in financial year 2025-26 and 2026-27 (projected)

Carriageway spend related maintenance type	Capital 2025-26	Revenue 2025-26	Capital 2026-27 (projected)	Revenue 2026-27 (projected)
Planned maintenance				
Preventative carriageway maintenance	£ 9,865,248	£ 0	£ 7,843,808	£ 0
Structural carriageway maintenance	£ 16,003,448	£ 0	£ 15,869,192	£ 0
Planned carriageway **repair / patching** programmes	£ 7,809,547	£ 0	£ 4,257,500	£ 0
Reactive carriageway maintenance				
Reactive carriageway **repairs / patching** (**temporary repairs**)	£ 0	£ 832,540	£ 0	£ 517,927
Reactive carriageway **repairs / patching** (**permanent repairs**)	£ 0	£ 2,179,774	£ 0	£ 1,569,755
Reactive carriageway **repairs / patching (total)**	£ 0	£ 3,012,314	£ 0	£ 2,087,682
Other *carriageway-related spend*	£ 3,040,238	£ 340,001	£ 2,608,055	£ 226,788
Total	£ 36,718,481	£ 3,352,315	£ 30,578,555	£ 2,314,470

Additional information on spending on carriageways by type of spend

'Other carriageway-related spend' captures traffic management and staff costs associated with the delivery of carriageway maintenance activities. These costs have been apportioned to the relevant spend categories for 2025/26 and 2026/27.

Highway Maintenance Activity (Surface Treatments and Repairs)

Road resurfacing and surface treatments

Financial year	Road receiving preventative road surface treatments (length, km)	Road receiving planned structural maintenance (length, km)	Area receiving planned repair / patching programmes	Area receiving reactive repair / patching (permanent methods)	Area receiving reactive repairs/ patching (temporary methods)
2025-26	68.5 km	29.6 km	98,580 m^2	25,887 m^2	3,797 m^2
2026-27 projected	83.6 km	34.2 km	30,600 m^2	n/a	n/a

Additional information on surface treatments and repairs

Does the table above reflect all your carriageway-related road surface treatments & repair activities (for example, including pothole repairs)? **If no,** please add further information on any other types of treatments (planned to be) delivered and their extent in the table below.	**No**

Further information and context

The area receiving reactive repairs includes Road Mender Mastic treatments. This is a targeted repair treatment used to fix potholes, cracks and surface defects. The material is applied directly to damaged areas, helping to provide a durable repair while avoiding the need to resurface larger sections of road. We also carry out spray injection patching to treat a number of road defects. In 2025/26 we estimate that around 8,590 defects were treated using this treatment type in addition to the estimated number of potholes filled detailed in the Core Transparency Report.

Pothole repairs

This section sets out how we identify and repair potholes and other defects in carriageways, and how this activity fits within our wider maintenance approach. We realise that prevention is better than cure: therefore, we try to make planned, preventative maintenance the foundation of maintenance on our network, reducing the need for repeated reactive interventions

Pothole/Defect intervention criteria

The table below summarises how Buckinghamshire Highways defines potholes and other carriageway defects, and the intervention criteria used to assess when maintenance action is required.

Pothole/Defect category name	Minimum investigatory	Additional risk or contextual factors considered	Target response	Target response

	or definitional threshold		time – make safe	time – permanent repair
Potholes and spalling	40mm or over depth and 300mm across in any direction	When assessing a pothole or other highway defect, Buckinghamshire Highways considers more than just its size. Inspectors assess the level of risk by considering factors such as: • road type, • traffic levels and speeds • location of the defect, • likelihood of road users encountering it • potential consequences. This risk-based approach determines how quickly a defect requires attention.	**Emergency Defect** - Within 2 hours of identification (or made safe at the time of inspection if practicable). **Category 1** - If it is not possible to correct or make safe the defect at the time of inspection, then an appropriate repair, defaulted to be a permanent repair should be carried out within 5 working days. **Category 2** - Defects do not require immediate or urgent response and don't pose any immediate risks.	**Emergency Defect** - Follow-up works identified after assessment; no specific permanent repair target stated. **Category 1** - Within 5 working days where possible. If only a temporary repair is possible, permanent repair within 28 working days. **Category 2** - permanent repair within 28 working days.
Gaps and cracks	40mm or over depth, 20mm or over width			
Crowning and depressions	50mm or over height/depth			
Any other abrupt level difference in running surface (including ironwork)	40mm or over height/depth			
Dislodged kerbs (no footway)	50mm or over horizontal displacement			
Pedestrian crossing and other road markings significantly worn or faded	Markings worn out by 30% or more over the entire feature			
Rocking slab or block	40mm or above vertical movement			
Gaps within ironwork framework other than designed by manufacturer	25mm or over width			

For further information about how we define, inspect and treat defects on our highway network, please visit our Highway Safety Inspection Policy.

Number of potholes filled

Number of potholes filled in 2025-26 (estimate)	*10,328*

Of these how many do you estimate were resolved using each of the following approaches?

Planned repair / patching programmes	**Planned structural** maintenance programmes	**Reactive repair** using **temporary** repair methods	**Reactive repair** using **permanent** repair methods
No data held	No data held	33%	67%

Additional information on numbers of potholes resolved, by treatment type

We do not currently record pothole repair data at a level of detail to categorise repairs by all of the treatment types requested in the table above. While records are maintained on potholes identified and repaired, our current systems do not consistently capture whether individual repairs were delivered through planned patching programmes or planned structural maintenance. We are however able to provide a data-led estimate for the proportion of temporary vs. permanent reactive repairs. We will review our data collection arrangements to determine whether this information can be reported more accurately in future years.

CAUTION FOR READERS – Authorities have different criteria for identifying potholes and different methodologies for counting how many they have filled or resolved. Summing the figures in the above table across authorities will therefore not provide a reliable estimate of the total number of potholes filled across England.

Prices of pothole interventions

Unit/average cost of a permanent pothole repair on your network (reactive)	£141.48	Unit/average cost of a temporary pothole repair on your network (reactive)	£71.84

Additional information on pothole prices

Permanent pothole repair costs are based on a fixed contract rate for a 1m2, 100mm deep patch and includes assumptions on traffic management and overhead costs. Temporary repair costs are based on a fixed contract rate for plug / make safe repair, up to and including 1m² and up to 100mm deep and also includes assumptions on traffic management and overhead costs. Buckinghamshire Highways will seek to carry out permanent repairs in the first instance, wherever practicable, however in times where an immediate response is required, particularly during periods of increased defect volumes or severe weather, or where a substantial scheme is imminent, a temporary repair may be used.

Defect repair quality

Question	**Yes/no**
Do you set requirements to those delivering repairs about the longevity of both a) planned repairs/patching **and** b) reactive repairs using permanent methods?	**Yes**
If yes, do you base your material and process specifications on these longevity requirements?	**No**

Do you regularly monitor the appropriateness of the carriageway interventions chosen by your workforce or contractor and the quality of work delivered?	**Yes**
If yes, do you systematically record information about expected and delivered longevity of repairs?	**Yes**

Evidence Summary

Repairs are undertaken using industry standard materials and processes appropriate to the type of defect, with reactive repairs contractually covered by a one-year warranty period. Buckinghamshire Highways monitors the quality and appropriateness of repairs through post-completion inspections and audit reviews, including monthly quality compliance checks on a sample of completed works. Information on repair performance is recorded, including both passing and failing inspections, allowing trends to be identified and remedial actions to be taken where necessary. Repair, defect and asset information is maintained within the authority's asset management systems to provide an auditable record of completed works and outcomes.

Additional information

None

Public reporting system for defects and other issues

Question	Answer
Are defect reports from the public routinely used as an input into maintenance planning and inspection regimes?	**Yes**
Do you inform users about the outcomes from their feedback, including when no action is to be taken?	**Yes**

Evidence Summary

Defect reports submitted by members of the public are used to help inform our maintenance planning and investment decisions. However, they do not form part of the routine highway inspection regime unless they relate to a road that has been identified as requiring further investigation. Residents who submit reports are kept informed of the outcome through FixMyStreet, providing feedback on any actions taken or decisions made.

Tools used for reporting

Buckinghamshire Highways uses FixMyStreet as its primary customer reporting platform for highway defects and other issues. Residents can report problems, upload photographs, identify locations accurately and track progress online. The system helps us process reports efficiently, communicate updates to customers, and ensure issues are directed to the appropriate service teams.

Maintenance of highway structures

The Council is responsible for maintaining a range of highway structures located across both rural and urban parts of the network. These structures carry roads, paths and utilities over or under obstacles on the network such as rivers, railways and other roads. They vary in age, size and construction type, and many of these structures are long-life assets that require ongoing maintenance to remain safe and serviceable.

In line with the Code of Practice for Well-managed Highway Infrastructure and CG 300 Technical Approval of Highway Structures, the main types of structures we manage are set out below.

Structure type	Description	Number of assets
Bridges (including footbridges, cycle route bridges, bridleway bridges, accommodation bridges, occupation bridges, subways, and underpasses)	Structures with a span of 1.5 metres or more spanning and providing passage over an obstacle, e.g. watercourse, railway, road, valley.	431
Culverts	Drainage structures with a span of 1.5 metres or more passing beneath a highway embankment that has a proportion of the embankment, rather than a bridge deck, between its uppermost point and the road running courses. Culverts are usually rectangular or circular in cross section.	128
Retaining walls	Walls associated with the highway where the dominant function is to act as a retaining structure, and with a minimum retained height of 1.35 metres.	66
Tunnels and subways	Enclosed or semi-enclosed structure with a length of 150 metres or more that allow the road, pedestrians or cyclists to pass under obstacles.	27
	Total	652

Note: *Sign and signal gantries and cantilever sign structures are not included in this report.*

How we manage structures

The structures we manage are fundamental to Buckinghamshire's transport infrastructure. They form essential links in the highway network and help us to provide our customers with a road network that functions safely and efficiently. Any failures or restrictions to these assets can affect safety and cause disruption to the network. The Council therefore manages them carefully using a structured asset management risk-based approach. This includes:

- Keeping an up-to-date record of all structures
- Carrying out regular inspections to understand their condition
- Prioritising maintenance based on risk, safety and network importance
- Planning works to make best use of available funding

This approach helps ensure that resources are targeted where they are most needed.

Inspections

We carry out regular inspections to check that the structures we are responsible for remain safe.

General inspections and principal inspections are standard types of highway structure inspections defined in the Design Manual for Roads and Bridges (DMRB). General inspections are routine visual checks (typically every 2 years) to identify obvious defects, while principal inspections are more detailed (typically every 6 years) and may require close access to assess structural condition more thoroughly.

Additional inspections may be undertaken where needed, for example if there is damage, deterioration or a specific risk.

Maintenance

Inspection results are used to plan maintenance and repairs. Activities may include:

- Minor repairs to deal with defects early
- Planned maintenance to extend the life of structures
- Strengthening or refurbishment where needed
- Replacement of structures that have reached the end of their life

Work is prioritised to maintain safety and reduce the impact on road users.

Highway Structures

Question	Answer
Number of highway structures on your highway network	652
Number of highway structures with interim measures in accordance with CS470 applied?	6
Number of structures due a **General Inspection** in 2025-26 in accordance with CS450	228
Number of **General Inspections** carried out in 2025-26	228
Number of structures due a **Principal Inspection** in 2025-26 in accordance with CS450	47
Number of **Principal Inspections** carried out in 2025-26	47

The highway structures with interim measures currently applied in accordance with CS470 include:

- Thornton Middle – Road currently closed.
- Abbey Way Elevated Road – Lane 1 eastbound closed.
- Windmill Hill – Narrowing and weight restriction implemented.
- Abbey Barn Road – Weight restriction implemented.
- Queens Head Pub, Chesham (Pednormead End Culvert) – Multi Applicational Safety System Barrier (MASS) barrier in place to help contain or redirect errant vehicles.
- Winslow Road, Opposite Allotments, Little Horwood – priority controls / narrowing.

Asset Management

This section focuses on asset management practices that underpin how we plan, prioritise and deliver highways maintenance. It is intended to provide confidence that our decisions are evidence led, risk based and aligned to whole life value, in line with the Code of Practice for Well Managed Highways Infrastructure.

Asset Management Strategy and Policy

Please confirm that you understand the answers provided in this section relate to your compliance under the 2026-27 local highways maintenance incentive funding requirements, as set out to your authority via letter to your chief executive in April and as published online.	**Yes**

Please provide a link to your authority's published highways asset management policy and strategy.
Our current published asset management policy and strategy are available on our website via the below links: Highway Infrastructure Asset Management Policy | Buckinghamshire Council Buckinghamshire Highways Asset Management Strategy 2021 | Buckinghamshire Council

Please provide the date it was last reviewed or updated	Feb 2022

Please provide proof of the review or update.
In order to be uploaded to the council website, the latest published version of our asset management policy and strategy had to go through a series of review and approvals with necessary internal parties such as our highway operations board.
If your asset management policy or strategy has not been reviewed or updated since 1 August 2024, please confirm that it will be reviewed or updated by 30 September 2027 and provide a brief timetable for doing so.
We confirm that our Asset Management Policy and Strategy will be formally reviewed and, where required, updated by 30 September 2027, in line with DfT incentive funding requirements. An indicative timeline for the review and update is as follows. This may vary slightly dependant upon the availability of Cabinet reviews periods. • Complete internal review and update – August 2026 • Corporate Management Team review – Sept 2026 • Informal Cabinet review – October 2026 • Formal Cabinet review – November 2026 • Publish on council website – December 2026

Further context

Our Asset Management Policy and Strategy are currently in the process of being updated to reflect changes to the service structure and evolving asset management practices. These updated documents are currently going through formal approval at senior political level. Following this approval, the documents will be published and added to the Council website.

Key aspects of highways asset management approach

The following section provides information across a number of key areas to demonstrate how we apply asset management principles in practice, supporting evidence-based decision making and the delivery of value for money for residents and road users.

Asset data

Good asset management relies on having accurate and up-to-date information about the types of highway assets we manage and their condition. Buckinghamshire Highways maintains asset data on all key assets to support evidence-based decision making and help target investment where it is needed most. The table below summarises the extent to which we hold data on each of our key asset classes.

Asset type	**Asset inventory held? (None / partial / full)**	**Condition data held? (None / Partial / Full)**
Carriageways	Full	Full
Footways	Partial	Full
Cycleways	Partial	Partial
Structures	Full	Full

Drainage assets	Partial	Partial
Street lighting	Full	Full
Traffic signals	Full	Partial

Further context

Inventory and condition data on our key assets is collected through inspections, condition surveys, and project delivery activities, and is reviewed and updated on a regular basis. Information is held for carriageways, structures, street lighting, traffic signals and other highway assets. However, our footway inventory within UKPMS is primarily limited to hierarchy and length data, with construction type information available separately through FNS survey data. Cycleway inventory data only captures information where additional cycleways have been constructed on the network in more recent years, while drainage records and condition information are only available where drainage assets have been surveyed, designed, constructed or supporting records have been provided.

Asset data integration and management

This section seeks to understand the maturity of how asset data is managed and integrated to support planning and investment decisions.

Asset data integration

How is asset inventory and condition data for your key highway assets primarily managed? (please indicate one option with an X)

Discrete spreadsheets or documents held by individual teams	
Multiple digital platforms with limited integration	X
A single digital platform or a set of connected platforms used across the highways service	
Other *(please set out in further context)*	

Further context

Buckinghamshire Highways currently manages asset inventory and condition data across a number of specialist digital systems. These individual platforms support different asset groups, including pavements, structures, street lighting and intelligent transport systems (ITS), and have evolved over time to meet specific operational needs. While this approach provides robust management of individual asset types, integration between systems is currently limited, which can make it more challenging to access and analyse information across the whole network. We are looking to improve system integration, through the use of open API's to ensure, that while the most appropriate system is use for operational needs, the data can still be shared with the local authorities primary database for analysis and strategic decision making purposes. .

Lifecycle planning and investment decision-making

This section focuses on whether the authority uses lifecycle planning to inform maintenance investment decisions, rather than relying solely on reactive demand or short-term pressures.

Question	**Yes / No**
Do you use lifecycle plans for **carriageways** to support maintenance investment decisions?	**Yes**
Do you use lifecycle plans for **footways** to support maintenance investment decisions?	**Yes**
Do you use lifecycle plans for **structures** to support investment decisions?	**Yes**

Evidence Summary

Buckinghamshire Highways uses lifecycle planning to support maintenance investment decisions across carriageways, footways and structures. For structures, BridgeStation is used to undertake lifecycle planning and evaluate asset strategies, helping to identify the most appropriate interventions and inform long-term budget requirements. For carriageways and footways, Buckinghamshire Highways has recently transitioned to the Horizons asset management system, which enables scenario modelling and forecasting of future asset condition under different funding levels. The outputs are used to support Medium Term Financial Planning (MTFP) bids, helping ensure investment decisions are evidence-based, risk-driven and focused on delivering whole-life value.

Performance monitoring and continuous improvement

This section focuses on whether the authority monitors the effectiveness of its asset management approach and uses performance information to inform ongoing investment and prioritisation decisions.

Question	Answer
Do you have a defined set of key performance indicators (KPIs) to monitor the outcomes of your highways asset management approach?	**Yes**
Are these KPIs reviewed on a regular basis (at least annually)?	**Yes**
Are KPI trends used to inform maintenance planning, prioritisation or changes to forward programmes or investment decisions?	**Yes**
Have you conducted a value for money review or peer review of your service in the last 3 years	**Yes**

Evidence Summary

We have a set of KPI's which are used to monitor the Contract with our Alliance Partners Contracts. These KPI's are not specifically set up for Highways Asset Management but the data is used to help inform bids into Medium-Term Financial Plan each year. We also have Cabinet Indicators which are reported annually which monitor the percentage of roads that should be considered for maintenance. We are currently developing a specific suite of indicators to become a Performance Management Framework aligned to our Asset Management Objectives. In 2025, an independent review by the Future Highways Research Group concluded that Buckinghamshire Highways delivers strong value for money compared with similar authorities.

Maintaining footways and cycleways

Question	Answer
Do you have a defined footway hierarchy (e.g. based on footway function and usage levels) that underpins a risk-based approach to inspection frequencies and maintenance programmes?	**Yes**
For 2026-27, please provide the length of **footways** that you have earmarked for **structural maintenance / reconstruction / renewal**	**5.86 km**
For 2026-27, please provide the length of **footways** that you have earmarked for **preventative** maintenance treatments	**0.64 km**
Are priority footways and cycleways included in your winter service (e.g. gritting or snow clearance), and in a routine programme for keeping them clear of overgrown vegetation and debris (e.g. sweeping, cutting back)?	**No**

For 2026-27, are you planning to deliver structural or preventative maintenance to **cycleways** which is not yet covered as part of your carriageway maintenance programmes or footway maintenance programmes (e.g. segregated cycleways that are not shared with pedestrians or motorists). If yes, please set out the length of such cycleways that you have earmarked for:	**No**
a. Structural maintenance / reconstruction (in km)	**N/A**
b. Preventative maintenance treatments (in km)	**N/A**

Please provide any brief additional information you consider helpful in explaining your approach to maintaining footways and cycleways

Buckinghamshire Highways maintains footways using a risk-based approach informed by its Footway Hierarchy, inspections and condition data. Maintenance activities include structural renewals, preventative treatments and reactive repairs where required. Footway maintenance is generally planned alongside wider highway asset management activities to ensure investment is targeted effectively. Cycleways are maintained through highway maintenance programmes where appropriate, particularly where routes form part of the carriageway or shared-use network. Footways and cycleways are not routinely included within winter service operations, although treatment may be undertaken in exceptional circumstances and at key locations identified within the Winter Service Plan.

Evidence Summary

Buckinghamshire Highways has a documented Footway Hierarchy which supports a risk-based approach to inspection frequencies, maintenance priorities and investment decisions. The Council's Winter Service Policy and Winter Service Plan set out the approach to treating the highway network during adverse weather conditions. While footways and cycleways are not routinely gritted, the Winter Service Plan identifies circumstances where priority pedestrian routes, such as key shopping areas and important pedestrian links, may be treated when resources permit and after higher-priority carriageway routes have been addressed. These documents provide the framework for managing footway and cycleway maintenance activities.

Drainage

Question	**Answer**
Please provide an estimate of your drainage maintenance expenditure split (in percentages) between:	
a) Reactive (incident- or failure-driven) maintenance	**63%**
b) Planned maintenance (routine/cyclical and/or risk-based)	**37%**
Does your authority utilise a digital drainage management platform, covering asset inventory, inspection history, sensor data, and risk scoring?	**Yes**
Do you maintain a record of locations where drainage issues are known to cause or contribute to carriageway deterioration or surface water ponding?	**Yes**
Do you utilise smart sensors or other remote monitoring technologies to monitor performance of your drainage assets. If yes please provide some high level information in bullet points below.	**No**
No additional information on sensors/technologies for remote monitoring of drainage performance.	

Evidence Summary

We use CausewayOne Asset Management as our primary drainage asset management system to maintain an inventory of approximately 87,000 highway gullies alongside other drainage assets including balancing ponds, swales and combined kerb drainage systems. The planned gully cleansing programme aims to clean all gullies annually, with records kept of inspection dates and silt levels. Inspection and maintenance history is retained within the system, and new assets are added as they are adopted. We also maintain a flood hotspot layer in CausewayOne identifying locations prone to drainage issues or standing water, helping to inform maintenance and investment decisions.

Further context on approach to drainage asset management

We manage drainage through a combination of routine maintenance, reactive interventions and targeted capital investment. Flood events are becoming more common, and reactive activities include gully cleansing, drain jetting and ditch clearance where blockages affect network performance. Where routine maintenance does not resolve issues, investigations such as CCTV surveys are undertaken to identify root causes. Potential improvement schemes are then assessed for feasibility and prioritised using a risk-based approach that considers factors such as road hierarchy, flood history and the number of properties affected. We are currently implementing 'Hydromaster' to support proactive rainfall monitoring and storm preparedness. By combining live and historic rainfall data, this system will provide tailored alerts for locations at risk of flooding, helping the Council respond more effectively to severe weather events.

Skills and training

Question	Answer
Do you have an up-to-date training and development plan for those responsible for highways asset management in your authority?	**Yes**
Do you or your main highways contractors support professional development through a recognised professional training scheme (e.g. Institution of Civil Engineers (ICE) or Institution of Highway Engineers (IHE))?	**Yes**
Does your authority contribute towards the cost of professional membership or professional development required for relevant highways roles?	**Yes**
Do you employ a professionally qualified engineer (e.g. Chartered Engineer (CEng) or equivalent competence) with responsibility for the management of highway structures (either in house or through a contracted arrangement)?	**Yes**
Does your authority define competence requirements for key highways asset management roles and take steps to address any identified gaps (either directly or through contractual arrangements)?	**Yes**
Do you or your main contractors support early career development **in your local area, for example** through apprentice schemes, traineeships or pre-apprenticeship programmes, sponsored qualifications (e.g. HNC/HND, degree, MSc), graduate schemes etc	**Yes**

Evidence Summary

Buckinghamshire Council supports professional development through objective setting and performance plans, mid-year and annual performance reviews and funding for one professional membership per employee each year. Staff are encouraged to work towards and maintain accreditation with relevant professional institutions, including ICE and IHE. The service also supports local skills development through its partnership with Buckinghamshire College Group, helping shape T Level course content, supporting interviews for course leadership and providing student placements. Two T Level students

are currently on placement. Through AtkinsRéalis and BBLP, additional opportunities are provided through work experience placements, apprenticeships and graduate development programmes, including the recruitment of early careers professionals each year.

Further context on skills/training

Buckinghamshire Council is investing in the development of its workforce through apprenticeship and training programmes, including HNC qualifications and Aspiring Managers courses. The Council has also introduced a number of entry-level career-graded roles to support skills development, succession planning and the future resilience of the service. We also support a range of early careers pathways within Buckinghamshire through our alliance, including apprenticeships, graduate programmes, industrial placements, work experience opportunities and T Level industry placements. Through our partnership with Buckinghamshire College Group, we have helped establish and support the county's Civil Engineering T Level, providing curriculum input, student placements and industry engagement opportunities. Students and graduates gain practical experience through structured development programmes and work-based learning, helping build local skills and create routes into highways, engineering and infrastructure careers. Further information on early careers throughout our alliance is available via the links below: • Balfour Beaty Early Careers • AtkinsRéalis Early Careers • Civil Engineering Courses | T Levels | Buckinghamshire College Group

Adapting roads to withstand climate pressures

Climate and environmental factors, such as heavy rainfall, prolonged heat, and freeze-thaw cycles, are integral to effective highways asset management, as they influence asset performance, deterioration rates and long-term resilience. Understanding both the impacts of a changing climate and the carbon implications of maintenance activities supports better decision-making, helping authorities to optimise durability, manage risk and deliver best whole life value from their assets.

Question	**Yes/no**
Have you updated your asset management policy and strategy to reflect the increased probability of extreme-weather and/or geohazards now and in the future?	**Yes**
Have you identified your resilient network and agree this with senior decision-makers	**Yes**
If yes when did you last update this.	**09/2025**
Have you identified locations that are repeatedly affected by extreme weather (e.g. flooding, heat damage, storms)?	**Yes – formally recorded**
Which climate-adaptation measures are currently implemented on your network?	
- Targeted drainage upgrades or maintenance	**Yes**
- Natural flood management / SuDS	**Yes**
- targeted slope / ground stability / landslip mitigation	**No**
- Heat-resilient materials or surface treatments	**No**
- Tree planting / shading for heat management	**Yes**
- Other – e.g. Heat reflective paints applied to asset such as signal controllers()	**Yes**
- None of the above	**No**

Have you measured and benchmarked the greenhouse gas emissions from your highways maintenance service using a recognised industry standard? Or do you have arrangements in place to do this, such as by signing up to the DfT funded ADEPT Carbon Leadership Programme.	**Yes**
Have you formally engaged with the DfT funded ADEPT live labs 2 Programme, to understand what lessons your authority can utilise to increase the efficiency of your operations and support decarbonisation efforts?	**No**

Evidence Summary

Our asset management policy sets objectives such as 'Minimise unplanned disruptions to the network following incidents and extreme weather events' and 'Adapt and maintain the network to be resilient to a changing climate'. We also recognise the impacts of climate change on our network and discuss our approach in the 'Risk' and 'Sustainability' section of our asset management strategy. Our Resilient Network Plan and Climate Change and Air Quality Strategy detail more information on our resilient network and wider council aims on tackling climate change. Locations that are repeatedly affected by extreme weather are recorded in our asset management system and used to inform asset management decision making.

Further context on your adaptation / resilience activities

We are continuing to adapt our network management approach in response to climate change. Examples of measures currently being implemented on our network include:

- Telemetry systems within flood-prone subways, providing real-time condition monitoring and alerts that allow proactive intervention before flooding occurs.
- Weather forecasting software has also been introduced to improve preparedness for severe rainfall, flooding, high winds and other weather-related network risks.
- Targeted capital drainage works, such as the A4155 Henley Road drainage scheme in Marlow, which incorporates soakaways, additional gullies and a SuDS swale to reduce flood risk and improve infiltration.
- Roadside tree planting, with 768 trees established between 2022 and 2025 to support shading, biodiversity, carbon sequestration and floodwater management.
- Painting signal controllers white to reduce the risk of overheating during periods of high temperature.

The Council has invested in a weather prediction software package, which will enable us to proactively prepare for extreme weather events, including HydroMaster rainfall monitoring technology.

With regards to earthworks resilience, the requirement for mitigation measures is limited given that Buckinghamshire has very few steep cuttings/embankments in the county. The use of heat resilient materials is also currently limited due to due current materials for preventative maintenance treatment not aligning with heat resilience requirements.

Innovation

Question	**Yes / No**
Do your procurement and contracting approaches encourage and reward innovative practice?	**Yes**
Can you demonstrate that innovative materials and practices are regularly reviewed and, where appropriate, integrated into business-as-usual operations?	**Yes**

If you have conducted innovation trials, have you shared the findings of these publicly or with professional networks?	**Yes**

Evidence Summary

We encourage innovation through contractual mechanisms, including a compensation clause to reward efficiencies by sharing savings generated through innovative practice. Innovation opportunities are captured through an innovation register and assessed using a prioritisation framework. Learning is shared across industry networks and our alliance, helping successful approaches to be evaluated and adopted. Recent examples include the implementation of spray injection patching and the Pothole Pro machine to improve maintenance delivery. We share innovation findings widely through public and professional networks. A recent example was a joint Local Council Roads Innovation Group (LCRIG) session on the Immense Traffic Model, where we presented test cases and demonstrated how the tool can improve streetworks coordination.

Further context on your innovation activities

Buckinghamshire Highways regularly reviews and trials innovative technologies in collaboration with our Alliance partners, integrating successful solutions into business-as-usual operations where benefits are demonstrated. Over the past 6 months, we have developed a structured programme to progress continuous improvement and innovation activities. This includes the development of an Innovation Strategy and prioritisation framework to assess new innovation opportunities and support adoption. Learning is captured and shared through collaboration with LCRIG, Alliance partners AtkinsRéalis and BBLP, and sector roundtables, allowing successful innovations to be shared and adopted more widely.

Examples of innovations that have been adopted

Materials and Treatments

We have worked with our alliance partners to review and adopt proven maintenance innovations from elsewhere in the sector. Recent examples include the introduction of spray injection patching and Roadmender asphalt repairs. Spray injection patching enables quick and efficient repairs to localised defects, while Roadmender uses a durable hot-applied asphalt material designed to extend repair life and reduce the need for repeat interventions. We have also invested in the trial and implementation of hydraulic bound materials in high-wear footway locations and foamed bitumen technologies that recycle existing asphalt, reducing waste and supporting more sustainable highway maintenance practices. Overall, these approaches have been integrated into maintenance operations to improve repair quality, reduce disruption to road users and maximise value from maintenance investment.

Digital and Data

We have integrated the DfT's Street Manager platform into day-to-day operations and developed automated API connections to streamline streetworks processes and reduce manual administration. This has enabled real-time network disruption information to be shared with passenger transport operators and improved the coordination of activities across the highway network. The council is also extending this capability to other operational functions, including passenger transport and waste services, to improve whole-network coordination.

We have also trialled the Immense Traffic Model, which allows officers to assess the likely impacts of different traffic management and streetworks scenarios before implementation. This improves decision-making, helps minimise congestion and supports more efficient use of available road space. The learning from the trial has been shared with the wider sector through LCRIG.

Our asset team is trialling Vaisala RoadAI and Route Reports, which use vehicle-mounted cameras and artificial intelligence to identify potential defects against the Highway Safety Inspection Policy. The technology improves inspector safety by reducing the need to leave vehicles, creates greater consistency in defect identification and increases productivity through automated data collection.

The service has also introduced HydroMaster rainfall monitoring technology, which provides location-specific weather intelligence and alerts to support more proactive responses to flooding and severe weather events.

Vehicles, Plant and Equipment
In collaboration with our term maintenance contractor, we have introduced a range of innovative equipment and fleet solutions to improve service delivery and reduce environmental impacts. This includes the use of the Pothole Pro machine, which combines cutting, cleaning and repair activities into a single operation, improving productivity, repair quality and safety for the workforce. The service is also increasing the use of electric vehicles and lower-carbon fleet technologies across its operations, helping to reduce carbon emissions associated with highway maintenance activities. These innovations have moved into operational use and support Buckinghamshire's wider objectives around efficiency, sustainability and value for money.

Delivery and Process Innovation
We recently introduced joint site inspections with BBLP as part of their quality assurance processes. By undertaking inspections collaboratively, the alliance has reduced disputes, achieved a more consistent approach to quality assessments and reduced the administrative effort associated with duplicate reviews and follow-up actions.

We are making increasing use of automation, system integrations and emerging AI technologies to streamline administrative activities and reduce manual effort, allowing staff to focus more time on delivering improvements that matter to residents and stakeholders. Recent examples include automated workflows between Street Manager and internal systems, automation of permit processes, fixed penalty notice administration, member briefings and notification management. Together, these initiatives reduce duplication, improve data quality, minimise human error and accelerate decision-making, helping to deliver a more efficient and responsive highways service.

Workforce and Capability
To support the adoption of innovation, we maintain an innovation register and have recently developed an Innovation Strategy and prioritisation framework to help identify, assess and implement new opportunities. The council works collaboratively with partners including AtkinsRéalis, BBLP and LCRIG to share lessons learned, review proven innovations and build capability across the alliance.

Working with utility companies to reduce disruption to road users

Question	Yes / No
Do you routinely monitor **and** enforce utility works quality as part of your streetworks management?	**Yes**
Have you undertaken a senior-endorsed assessment of whether a lane rental scheme would be suitable for your area?	**Yes**
Do you seek input from utility companies when determining your highways maintenance programme to help reduce disruption?	**Yes**

Have you conducted and published a permit scheme evaluation within the last three years?	**Yes**
Have you conducted a traffic sensitive review in the last three years?	**Yes**

Evidence Summary

We routinely monitor and enforce the quality of street works through quarterly Highway Authorities and Utilities Committee (HAUC) meetings, supported by reporting on permit activity, inspections and Fixed Penalty Notices.

Forward works programmes are reviewed with utilities as a standing HAUC agenda item to support coordination and minimise disruption.

The Council introduced a Lane Rental Scheme in May 2026 and publishes its Permit Scheme Evaluations.

A review of Traffic Sensitive Streets was completed in March 2025 as summarised in Decision - Traffic Sensitive Streets Review - Modern Council and Final TSS End of Consultation Report OED.pdf.

We will carry out our next review in conjunction with our Annual Lane Rental evaluation report next year.

Further context

Buckinghamshire Council actively works with utility companies to coordinate works and reduce disruption for residents. During 2026, collaboration opportunities were identified with organisations including Scottish & Southern Electricity Networks, Cadent Gas, Southern Gas Networks, Gigaclear and EU Networks. Joint planning meetings helped align maintenance activities, share road closures and traffic management arrangements, and ensure utility works were completed before resurfacing schemes where possible. Examples include coordinating drainage, surfacing, gas, telecommunications and electricity infrastructure works at locations across High Wycombe, Stoke Poges, Aylesbury, Iver and Stoke Mandeville, reducing the need for multiple road closures and repeat disruption to road users.

Managing highways maintenance contracts effectively

Question	**Yes / No**
Does your authority retain in-house technical capability to independently assess maintenance interventions proposed by contractors?	**Yes**
Do you routinely analyse actual unit costs (for example £/m² of road surface treatments, or £/pothole repair) for core highways maintenance activities delivered under contract and compare them against benchmarks or historic performance?	**Yes**
Do you have defined KPIs for your highways maintenance contract(s), and are they actively monitored by your authority to manage performance?	**Yes**
If reactive pothole repairs are delivered by a contractor, do your contracting arrangements incentivise single-visit permanent repairs where it is safe and appropriate to do so?	**Yes**

Evidence Summary

Buckinghamshire Council retains in-house technical capability to independently assess maintenance interventions through experienced and appropriately qualified highways

maintenance professionals. Performance is managed through defined contractual KPIs, including Alliance KPIs and annual Value for Money (VfM) reporting, with VfM reporting also forming a contractual requirement for the term maintenance contractor. Contractor performance is actively monitored against these measures. The term maintenance contract operates through a schedule of rates and encourages permanent first-time repairs, with any temporary repairs or work not completed to the required standard requiring rectification by the contractor at no additional cost. Current performance indicates that the majority of repairs are completed as single-visit permanent repairs.

Further context

None