



# Highway Asset Management Plan

HAMP February 2024

London Borough of Redbridge  
Final 1.0

## HAMP MODULE I – EXECUTIVE SUMMARY

**Overview...** Redbridge manages and maintains the highway assets falling within our 532 km of highway network. With responsibility to ensure the highway assets are fit for purpose and able to fulfil their function in an efficient and sustainable manner.

Redbridge’s vision aims to improve wellbeing and the quality of life for everyone. The Redbridge Plan aims for by 2040, no area in Redbridge is to be considered “deprived”. The Council’s focus is on safer and cleaner roads, sustainable environment and strong communities. To achieve this, Redbridge will focus on 3 main ways of working: **Prevention**, **Collaboration** and **Responsibility**:

1. Addressing issues at an early stage and **prevent** increases in demand or worse outcomes.
2. **Collaborating** with residents, businesses, public bodies, voluntary and community sector, and others to achieve greater results.
3. Setting out the **responsibilities** of the council and those of our residents, businesses, and partners.

To achieve this, Redbridge has identified several corporate aims relevant to our highways, within the Mayor’s Transport Strategy 2018, such as:

- Ensuring streets and public spaces are high quality and well maintained.
- Building best programme to reduce the volume of traffic and congestion.
- Ensuring maintenance on highway schemes protects existing green infrastructure.

These are achieved through a policy supported by objectives to ensure focus is kept on what matters most to Redbridge in managing highway assets and the community’s needs.

Redbridge has adopted asset management practices to ensure the largest benefit for the whole community is achieved. Asset management best practices require a look into long-term investments to make best use of resources and ensure right interventions are implemented at the most effective time to ensure a safe highway, a statutory requirement.

**Overall performance...** Redbridge manages our network performance through performance indicators, which are aligned to and contribute towards achieving the Council’s corporate vision and objectives laid out in the Mayor’s Transport Strategy. Performance management demonstrates effective use of the Council’s budgets.

**Investment...** Through the modelling of investment strategies, Redbridge determined that the current condition of the highway assets create a backlog of around **£74.3m**. Over 10 years, Redbridge would need annual funding of **£15.4m** per year to maintain the desired condition and reduce the backlog each year. The document sets out the requirements to maintain a steady state of asset condition across the borough.

**Engagement...** Redbridge engages with several key stakeholders to inform our decision making processes. This ensures the social and economic benefit of the use of the road network is recognised. Such consultations help establish and prioritise an annual works programme considering the stakeholder’s most important considerations.

**Progress...** Redbridge is determined to develop and implement a continuous improvement programme to enhance our asset management processes, systems and data, and support effective delivery of our desired asset management outcomes. These outcomes will be reported periodically to key stakeholders, drawing together progress, performance and investment impact.

## HAMP MODULE II – CONTENTS & GLOSSARY

### CONTENTS

|                 |  |      |               |
|-----------------|--|------|---------------|
| <b>MODULE A</b> | <b>CONTEXT</b><br>Setting out the parties, documents & reporting processes involved in managing highway assets.                                    | V1.0 | February 2024 |
| <b>MODULE B</b> | <b>ASSET MANAGEMENT FRAMEWORK</b><br>Explaining the structure behind the asset management principles applied.                                      | V1.0 | February 2024 |
| <b>MODULE C</b> | <b>ASSET KNOWLEDGE</b><br>Collecting, storing and managing data.   | V1.0 | February 2024 |
| <b>MODULE D</b> | <b>MAINTENANCE STRATEGY</b><br>Explaining the approach to maintenance over the lifetime of assets.   | V1.0 | February 2024 |
| <b>MODULE E</b> | <b>WORKS PROGRAMMING &amp; PRIORITIES</b><br>Developing the programme of works that will be delivered.   | V1.0 | February 2024 |
| <b>MODULE F</b> | <b>HIGHWAY HIERARCHY AND NETWORK MODEL</b><br>Developing priorities for maintenance and hosting asset data.  | V1.0 | February 2024 |
| <b>MODULE G</b> | <b>FUNDING &amp; EXPENDITURE</b><br>Identifying funding sources and historical expenditure.  | V1.0 | February 2024 |
| <b>MODULE H</b> | <b>INVESTMENT STRATEGIES</b><br>Understanding the impact of different levels of investment.  | V1.0 | February 2024 |
| <b>MODULE I</b> | <b>PERFORMANCE MANAGEMENT</b><br>Establishing goals for asset management performance that can be delivered.  | V1.0 | February 2024 |
| <b>MODULE J</b> | <b>CUSTOMER ENGAGEMENT</b><br>Elaborating on existing communication channels to ensure asset management meets the needs of different stakeholders. | V1.0 | February 2024 |
| <b>MODULE K</b> | <b>SERVICE DELIVERY</b><br>Detailing expectations and responsibilities of service providers.   | V1.0 | February 2024 |
| <b>MODULE L</b> | <b>DESIGNING FOR MAINTENANCE</b><br>Incorporating maintenance considerations into decision-making processes during the design of highway schemes.  | V1.0 | February 2024 |
| <b>MODULE M</b> | <b>SUSTAINABLE HIGHWAYS MAINTENANCE</b><br>Committing to running environmentally friendly highways.  | V1.0 | February 2024 |
| <b>MODULE N</b> | <b>FLOOD AND WATER MANAGEMENT</b><br>Considering the impact of flooding on highway assets.   | V1.0 | February 2024 |

|                 |  |      |               |
|-----------------|--|------|---------------|
| <b>MODULE O</b> | <b>NETWORK RESILIENCE &amp; OTHER EMERGENCIES</b><br>Managing the highway network in times of extreme weather and other emergencies. | V1.0 | February 2024 |
| <b>MODULE P</b> | <b>IMPLEMENTATION PLAN</b><br>Plan for implementing asset management and maximising benefit.   | V1.0 | February 2024 |

## GLOSSARY

| Term         | Definition                                    |
|--------------|---|
| <b>DfT</b>   | Department for Transport                      |
| <b>SuDS</b>  | Sustainable Drainage System                   |
| <b>UKRLG</b> | UK Roads Leadership Group                     |
| <b>MTS</b>   | Mayor’s Transport Strategy                    |
| <b>HMEP</b>  | The Highways Maintenance Efficiency Programme |
| <b>IAM</b>   | Institute of Asset Management                 |
| <b>LoHEG</b> | London Highway Engineers Group                |
| <b>AMMA</b>  | Asset Management Maturity Assessment          |
| <b>BVPI</b>  | Best Value Performance Indicators             |
| <b>UKPMS</b> | UK Pavement Management System                 |
| <b>LoTAG</b> | London Technical Advisors Group               |
| <b>BPRN</b>  | Borough Principal Road Network                |
| <b>DMRB</b>  | Design Manual for Roads and Bridges           |
| <b>AADF</b>  | Annual Average Daily Flow                     |
| <b>HAMP</b>  | Highway Asset Management Plan                 |
| <b>SMEs</b>  | Small and Medium-sized Enterprises            |
| <b>LIP3</b>  | Local Implementation Plan                     |
| <b>CDAs</b>  | Critical Drainage Areas                       |
| <b>GIS</b>   | Geographic Information System                 |
| <b>STWP</b>  | Sustainable Transport Works Plan              |

## MODULE A - CONTEXT

**What...** Asset Management is a best practice approach to maintaining highway infrastructure assets. Redbridge seeks to optimise resources for the maintenance and operation of highway assets, enhancing the planning and the management to address the issues at early stages, preventing increases in demand or deterioration of assets. The right interventions implemented at optimum times to provide a safer and cleaner highway network, will be achieved by increasing the collaboration with residents, businesses, public bodies and the voluntary & community sector.

**Why...** Redbridge aims to maintain and enhance our road network. Associated spending of public money must demonstrate value and be aligned to the needs of residents, local businesses, and visitors. To help achieve best value, Redbridge strives to be a Council that engages effectively with residents, businesses, public bodies, volunteers and the community sector and demonstrates a clear understanding of their needs to inform decisions.

By ensuring key facilities have the right level of accessibility and are maintained to a safe standard Redbridge will satisfy its statutory duties as set out in the Highways Act (1980) and other legislation (Table A1).

With a long-term investment plan, Redbridge can schedule maintenance work to be more cost effective through a combination of surface treatments and major resurfacing works e.g. potholes and footway defects. The economies of scale of such maintenance works drives down the whole life cost of maintaining the highway, as well as extending the life of the asset.

**Carriageway assets:** *A typical 1m<sup>2</sup> pothole costs around £52 to repair while it costs around £35/m<sup>2</sup> for single coarse preventative treatments and £75/m<sup>2</sup> for deeper treatments to resurface a road to last for 10-25 years.*

**Footway assets:** *A typical 1m<sup>2</sup> footway defect costs around £42/m<sup>2</sup> to repair reactively, while it costs around £25/m<sup>2</sup> to resurface a footway, a significantly longer lasting treatment.*

Other assets that are essential for the operation and function of Redbridge's highway network include: highway structures, street lighting, drainage, street furniture, road markings, cycleways, highway trees and grass verges.

**Who...** The responsibilities for the 'Context' module lie with:

|                |                         |
|----------------|-------------------------|
| Statutory duty | <b>Head of Highways</b> |
|----------------|-------------------------|

|                             |                      |
|-----------------------------|----------------------|
| Overall reporting           | <b>Group Manager</b> |
| Updating & reporting module | <b>Group Manager</b> |

**How...** Through reviewing guidance and tools developed by the DfT, HMEP, UKRLG, IAM and ISO55000; a global standard for asset management, Redbridge can assess how best to implement asset management. Redbridge can then adapt our approach to reflect council policies and objectives.

**Reporting...** To ensure investment and outcomes remain effective, this HAMP provides a suite of measures to explore and demonstrate success or otherwise. From this, improvement actions can be developed, and benchmarked with other LoHEG Boroughs.

**Success Measures...** A dynamic asset management approach to managing Redbridge's highway assets will show continuous improvement, and a drive towards maintaining the Council's highway network efficiently. Aligned with investment planning, this approach will deliver demonstrable benefits to the community, achieving performance improvement targets and maximising the benefit of capital investment and revenue expenditure.

The following activities will be essential to measure the efficacy and justifiable benefit of asset management:

- A periodic Asset Management Maturity Assessment (AMMA) and the associated reporting to ensure progress towards the stated objectives.
- Regular monitoring of progress against key targets / measures such as expenditure

figures against investment strategies to track the efficiency of budget spend.

Reviewing and monitoring processes should ensure highway aims and objectives remain aligned with corporate and political aims. The relevant modules within the HAMP will be revised as required to reflect any changes.

| Further Information:   |
|--|
| <a href="#">HMEP/UKRLG – Maintaining a Vital Asset</a>                             |
| <a href="#">ISO55000 – Asset Management</a>  |
| <a href="#">UKRLG – Highways Infrastructure Asset Management Guidance Document</a> |
| <a href="#">UKRLG – Well-managed Highway Infrastructure</a>                        |

**Table A0.1: Legal framework supporting asset management principles and practices.**

| Legislation                 | Main Local Authority duties   |
|-----------------------------|---|
| Highways Act 1980           | <ul style="list-style-type: none"> <li>• To maintain highways maintainable at public expense.</li> <li>• To take such steps as considered reasonable to prevent snow and ice endangering the safe passage of pedestrians and vehicles over public roads.</li> <li>• To enable new roads to be provided to facilitate redevelopment.</li> <li>• To facilitate the adoption of new highways.</li> <li>• To deal with encroachment and obstruction on the highway.</li> <li>• To deal with illegal and unauthorised signs.</li> <li>• To issue permits for utilities, skips, hoardings, temporary closures and other authorised occupation of the highway.</li> <li>• To ensure the construction of vehicle crossings meet council policies and standards.</li> <li>• To deal with illegal parking on verges and footways</li> </ul> |
| Traffic Management Act 2004 | <ul style="list-style-type: none"> <li>• To ensure the expeditious movement of traffic on the road network and those networks of surrounding authorities.</li> <li>• To manage the Highway Register.</li> <li>• To deal with encroachment and obstruction on the highway.</li> <li>• To deal with illegal and unauthorised signs.</li> <li>• To issue permits for utilities, skips, hoardings, temporary closures and other authorised occupation of the highway.</li> <li>• To the construction of vehicle crossings.</li> <li>• To deal with illegal parking on verges and footways.</li> <li>• To the adoption of new highways.</li> </ul>   |

| Legislation                         | Main Local Authority duties   |
|-------------------------------------|---|
| New Roads and Street Works Act 1991 | <ul style="list-style-type: none"> <li>To enable new roads to be provided by new means.</li> <li>To make new provision with respect to street works.</li> </ul>   |
| Flood and Water Management Act 2010 | <ul style="list-style-type: none"> <li>To improve flood risk management and the way we manage our water resources.</li> <li>To adopt a leading role for local authorities in managing local flood risk (from surface water, ground water and ordinary watercourses).</li> </ul> |
| Wildlife and Countryside Act 1981   | <ul style="list-style-type: none"> <li>To comply with environmental and countryside when undertaking highway maintenance operations.</li> </ul>   |
| The Local Government Act 2003       | <ul style="list-style-type: none"> <li>To adopt best value practices.</li> <li>To adhere to the defined statutory framework of BVPI.</li> </ul>   |

**Table A0.2: Ownership and reporting of modules.**

| Module                                | Responsible      | Version | Next Review | Reporting  |                                  |
|---------------------------------------|------------------|---------|-------------|--|----------------------------------|
|                                       |                  |         |             | How  | When                             |
| A Context                             | Head of Highways | V1.0    | 2024        | Mayor’s Transport Strategy, 2018<br>Redbridge HAMP   | -<br>Periodically                |
| B Asset Management Framework          | Head of Highways | V1.0    | 2024        | Redbridge HAMP   | Annually                         |
| C Asset Knowledge                     | Group Manager    | V1.0    | 2024        | Asset Inventory Data<br>Module I – Performance Management<br>Module J – Customer Engagement  | -<br>Annually<br>Periodically    |
| D Maintenance Strategy                | Head of Highways | V1.0    | 2024        | Module H – Investment Strategies   | Periodically                     |
| E Works Programming & Priorities      | Team Leader      | V1.0    | 2024        | Highways Works Plan<br>Sustainable Transport Works Plan (STWP)                               | Annually<br>Annually             |
| F Highway Hierarchy and Network Model | Head of Highways | V1.0    | 2024        | Module K- Service Delivery   | Periodically                     |
| G Funding & Expenditure               | Head of Highways | V1.0    | 2024        | Redbridge HAMP   | Annually                         |
| H Investment Strategies               | Head of Highways | V1.0    | 2024        | Module I – Performance Management<br>HAMP & Investment Modelling                             | Periodically<br>Annually         |
| I Performance Management              | Portfolio Holder | V1.0    | 2024        | Asset Lifecycle Plan<br>Performance Management Dashboard<br>Module H – Investment Strategies | Ongoing<br>Annually<br>Annually  |
| J Customer Engagement                 | Head of Highways | V1.0    | 2024        | National Highways and Transport public satisfaction survey<br>The Ipsos MORI survey          | Annually<br>Annually<br>Annually |

|   |   |                  |      |      | Other self-developed series of questions  |                          |
|---|---|------------------|------|------|---|--------------------------|
| K | Service Delivery                                | Head of Highways | V1.0 | 2024 | Procurement Strategy  | Ongoing                  |
| L | Designing for Maintenance                       | Head of Highways | V1.0 | 2024 | Street Strategy   | Periodically             |
| M | Sustainable Highway Maintenance                 | Group Manager    | V1.0 | 2024 | Module D – Maintenance Strategy, Module J – Customer Engagement and, Module L – Designing for Maintenance | Annually<br>Periodically |
| N | Flood and Water Management                      | Group Manager    | V1.0 | 2024 | Asset management system CONFIRM   | Periodically             |
| O | Network Resilience, Weather & other Emergencies | Head of Highways | V1.0 | 2024 | Emergency Management Plan<br>Warning, Informing and Alerting Plan   | Periodically             |
| P | Implementation & Improvement Plan               | Group Manager    | V1.0 | 2024 | Improvement Action Plan   | Ongoing                  |



## MODULE B – ASSET MANAGEMENT FRAMEWORK

**What...** The AM Framework represents the structure of the current approach to asset management adopted by Redbridge. It provides a common reference point for all personnel engaged in highway maintenance activities. The framework informs on the activities and processes required to develop, document, and continually improve asset management practices by supporting effective scheme prioritisation, efficient delivery, and helping to ensure robust and long-term solutions are delivered.

**Why...** The AM Framework covers all aspects of asset management, explaining what is to be maintained, the reason why and processes involved. It allows Redbridge to establish high-level drivers for maintaining highway assets, linking corporate objectives to operations and delivery. As such, it applies a performance-based approach to setting service levels that seeks to maximise investment by concentrating on customer needs, for example minimising disruption, improving the street scene and contributing to safety.

**Who...** The responsibilities for the ‘Asset Management Framework’ module lie with:

Statutory duty  
 Overall reporting  
 Updating &  
 reporting module

**Head of Highways  
 Group Manager  
 Team Leader**

**How...** The structure of the asset management framework outlined in Figure B1 shows how Redbridge’s highway policy, strategy, plans and procedures would link together to achieve visibility and clarity of the key driving factors in maintaining a sustainable highway asset.

The framework’s key components are:

- *Highway Policy & Strategy* – A high level summary, with political input that sets out the corporate objectives.
- *Asset Management Plan* – This establishes the high-level drivers for maintaining the asset, and links corporate objectives to delivery.
- *Individual Asset Plans* – Building on the foundations of the strategy, this provides the ‘what’ and ‘how’ for managing each asset.
- *Operating Policies & Procedures* – The operating policy sets out the asset-specific goals, which link to the highway objectives and in turn the corporate

goals. The operating procedure then outlines how each goal will be achieved.

**Reporting...** This HAMP provides a concise and accessible reference for external parties interested in how Redbridge maintains local highway assets.

This HAMP will be regularly reviewed and updated when triggered by a change in policy, procedure or an update to the Code of Practice.

**Success Measures...** The recognition and adoption of this asset management approach will be reflected in other council documents and measured improvements to the highways network.

### Further Information:

[HMEP/UKRLG – Maintaining a Vital Asset](#)

[ISO55000 – Asset Management](#)

[UKRLG – Highways Infrastructure Asset Management Guidance Document](#)

[UKRLG – Well-managed Highway Infrastructure](#)

Figure B1: Highway asset management framework



## MODULE C – ASSET KNOWLEDGE

**What...** As the Highway Authority, Redbridge owns, and is responsible for, the repair and maintenance of all assets that form part of the public highway. The safety of the highway network is the Council's responsibility, which means that Redbridge has a duty to inspect and repair roads, footways and highway structures, and ensure that streets are safe and clean, and lighting and drainage systems work effectively.

Asset knowledge comprises inventory and condition data for the highway assets Redbridge is responsible for. To assess, analyse and report performance, progress, and future need, asset managers require regular and accurate collection and maintenance of asset data.

**Why...** Asset data is required to enable Redbridge to undertake the following processes:

- Monitor and report on the condition of the highway network.
- Assess the expected lifespan of individual assets or asset components.
- Evaluate performance indicators.
- Model sustainable future maintenance options.
- Identify future investment strategies.
- Investigate and manage risk.

Develop short- and long-term forward works programmes.

Managing asset data is crucial for the prosperity of the borough, enabling the safe and free movement of people and goods through walking, cycling, driving or on public transport services, increasing the quality of life of the residents, as one of the main objectives of Redbridge Plan 2022-26.

**Who...** The responsibilities for the 'Asset Knowledge' module lie with:

|                             |                      |
|-----------------------------|----------------------|
| Data collection             | <b>Group Manager</b> |
| Data management             |                      |
| Updating & reporting module | <b>Team Leader</b>   |

**How...** It is essential to ensure data collected and held can be trusted and remains current to support performance reporting and decision-making.

Redbridge adopts a sensible approach to the collection of data to ensure the same data can be used for multiple tasks and that the level of detail captured meets the needs of the authority while providing value for money. Table C1 provides an overview of the data collected and the resources used.

It is important for Redbridge to collect and manage asset information in line with changes in innovation and using new, cost-effective techniques on the market. Discussing with neighbouring local authorities helps Redbridge achieve the best value for services provided and aligns with the Code of Practice on adopting a common approach to asset management for example benchmarking rates and data collection methods.

**Reporting...** Redbridge uses the asset inventory shown in Tables C2 and C3 to quantify the extent of highway assets. This data is then used to feed into other HAMP modules to report on asset performance, including Module H – Performance Management and Module I – Customer Engagement.

**Success Measures...** Apart from feeding into other HAMP modules, asset knowledge helps Redbridge to support meeting statutory requirements, especially with regards to making effective and informed decisions.

### Further Information:

[Highway Infrastructure Asset Management Guidance document, HMEP – UKRLG, 2013](#)

[ISO55001 – Requirements of Asset Management Systems](#)

[UK Pavement Management System \(UKPMS\)](#)

[UK Roads Liaison Group - Codes of Practice](#)

**Table C1: Redbridge’s asset condition assessment.**

| Asset Group               | Asset Type   | Type of Survey                  | Network Coverage | Frequency     | Service Provider                        | Storage System |
|---------------------------|--|---------------------------------|------------------|---------------|---|----------------|
| <b>Carriageways</b>       | Principal Classified Roads (A roads)   | AI Survey                       | 100%             | Annually      | VAISALA                                 | CONFIRM        |
|                           |  | DVI surveys / AI Survey         | 100%             | Annually      | VAISALA/<br>PTS<br>(Walking Survey DVI) |                |
|                           | Hierarchy 3a   | DVI surveys / AI Survey         |                  |               |   |                |
|                           | Hierarchy 3b   | DVI surveys / AI Survey         |                  |               |   |                |
|                           | Hierarchy 4a   | CVI surveys / AI Survey         |                  |               |   |                |
|                           | Hierarchy 4b   | CVI surveys / AI Survey         |                  |               |   |                |
| <b>Footways</b>           | Prestige Walking Zones (Category 1A) & Primary Walking Routes (Category 1)                             | DVI surveys                     | 100%             | Annually      | VAISALA/<br>PTS<br>(Walking Survey DVI) |                |
|                           | Secondary Walking Routes (Category 2), Link Footways (Category 3) & Local Access Footways (Category 4) | DVI surveys                     |                  |               |   |                |
| <b>Cycleways</b>          | Cycleways  | AI Survey                       | 100%             | Annually      | VAISALA                                 |                |
| <b>Highway Structures</b> | All Structures   | Principal Inspections           | 100%             | Every 6 years | ENFIELD                                 | BRIDGESTATION  |
|                           |  | General Inspections             | 100%             | Every 2 years |   |                |
|                           |  | Superficial Inspections         | 100%             | Annually      |   |                |
|                           |  | Load Assessments                | As required.     |               |   |                |
| <b>Drainage</b>           | Gullies  | CCTV surveys (critical gullies) | 10% (Risk Based) | Annually      | REDBRIDGE                               | CONFIRM        |
|                           | Pipes / Carrier drains   | Ad hoc inspections              | 10% (Risk Based) | Annually      |   |                |
|                           | SuDS Features  | Visual Surveys                  | 100%             | Annually      |   |                |

| Asset Group             | Asset Type           | Type of Survey             | Network Coverage | Frequency     | Service Provider                 | Storage System |
|-------------------------|----------------------|----------------------------|------------------|---------------|----------------------------------|----------------|
| <b>Street Lighting</b>  | Lighting Columns     | Electrical testing         | 100%             | Every 6 years | Redbridge Contractor (Milestone) |                |
|                         |                      | Structural testing         | 100%             | Every 6 years | External Provider                |                |
| <b>Street Furniture</b> | All Street Furniture | Routine safety inspections | 100%             | Annually      | REDBRIDGE                        |                |

**Table C2: Redbridge’s carriageway and footway asset inventory.**

| Asset Group         | Asset Type   | Quantity        |
|---------------------|--|-----------------|
| <b>Carriageways</b> | Principal Classified Roads (A roads)                                       | 43.2 km         |
|                     | Hierarchy 3a   | 48.0 km         |
|                     | Hierarchy 3b   | 78.4 km         |
|                     | Hierarchy 4a   | 91.0 km         |
|                     | Hierarchy 4b   | 294.3 km        |
|                     | <b>TOTAL</b>   | <b>554.9 km</b> |
| <b>Footways</b>     | Prestige Walking Zones (Category 1A) & Primary Walking Routes (Category 1) | 79.0 km         |
|                     | Secondary Walking Routes (Category 2)                                      | 814.5 km        |
|                     | <b>TOTAL</b>   | <b>893.5 km</b> |

**Table C3: Redbridge’s Street lighting, highway structures and drainage asset inventory.**

| Asset Group   | Asset Type                    | Quantity          |
|---|-------------------------------|-------------------|
| <b>Street Lighting</b>  | Streetlights                  | 21,007 no.        |
|   | Illuminated Bollards          | 834 no.           |
|   | Illuminated Signs             | 850 no.           |
|   | <b>TOTAL</b>                  | <b>22,691 no.</b> |
| <b>Highway Structures*</b><br>* Responsible under the Highway Maintenance team. | Highway Bridge                | 23 no.            |
|   | Culvert                       | 34 no.            |
|   | Footbridge                    | 2 no.             |
|   | Pedestrian subway / Underpass | 6 no.             |

| Asset Group     | Asset Type                 | Quantity          |
|-----------------|----------------------------|-------------------|
|                 | Retaining Wall/ River wall | 11 no.            |
|                 | <b>TOTAL</b>               | <b>76 no.</b>     |
| <b>Drainage</b> | Standard Gullies           | 326 no.           |
|                 | Critical Gullies           | 22,403 no.        |
|                 | <b>TOTAL</b>               | <b>22,729 no.</b> |

## MODULE D – MAINTENANCE STRATEGY

**What...** A maintenance strategy is an approach to managing common asset groups with optimised treatments. These treatments are decided by finding the most efficient means of balancing resources to meet performance targets, based on whole-life-cost analysis.

**Why...** Redbridge has adopted a highway asset maintenance plan aligned to the vision and objectives of the Redbridge Plan 2022-26. The plan is based on early intervention and better management & preventing issues, and to prioritise and efficiently deliver the service. Redbridge have created a suite of treatment options that can be drawn upon for the asset type and condition. Benefits include:

- Optimised allocation of resources allowing the Council to maximise value for money.
- A consistent aesthetic and performance standard across Redbridge.
- Benchmarking and comparing new treatment options on the market.
- A better understanding of how assets and treatments behave over time.

**Who...** The responsibilities for the 'Maintenance Strategy' module lie with:

|                    |                         |
|--------------------|-------------------------|
| Defining strategy  | <b>Head of Highways</b> |
| Whole-life-costing | <b>Group Manger</b>     |

Updating & reporting module **Team Leader**

**How...** Redbridge uses a risk-based approach to asset management based on decision trees applied to determine the most suitable treatment type to be adopted for common asset groups, as shown in Table D1.

This decision demonstrates the various criteria considered when selecting a maintenance treatment. For carriageways and footways these are:

- Road hierarchy, which represents a specific traffic loading / priority category.
- Construction type, which determines the likely defects to be present.
- Predominant defect visible, which establishes the depth of the required treatment.
- Profile adequacy, which determines whether vertical realignment is necessary.
- Cumulative defect size, which outlines whether the treatment should be carried out under the Council's reactive or planned maintenance procedures.

The various treatment options are assessed for the best whole-life-cost solution, based on

performance and cost. This approach lends itself to ensuring different strategies for different asset types provide a 'right for asset' approach to long-term maintenance, accounting for local context.

For structures Redbridge's maintenance strategy is based on each structure's condition from the inspection survey results index (BCI). This helps to justify the investment required to improve the structure stock to the required level and maintain it at that level.

**Reporting...** Maintenance strategies are reviewed periodically, or when new treatment options come on the market. They are investigated through investment planning exercises and business cases as outlined in Module G - Investment Strategies.

**Success Measures...** To be able to demonstrate an on-going reduction in the whole-life-cost of asset maintenance, using the most efficient maintenance strategy for the particular asset group.

### Further Information:

[DMRB Volume 7 – Pavement Design and Maintenance](#)

**Table D1: The decision tree of preferred maintenance strategies.**

| Asset                     | Safety Intervention                          | Temporary Repair  | Permanent Repair  |
|---------------------------|--|---|---|
| <b>Carriageways</b>       | 40mm pothole                                 | Cold applied material<br>Low cost, low life expectancy.             | Saw cut and patch with hot applied material.<br>By hand – medium cost, medium life expectancy.<br>By machine – high cost, high life expectancy. |
| <b>Cycle Lanes</b>        | 40mm pothole<br>20mm at pedestrian crossings |   |   |
| <b>Footways</b>           | 20mm pothole                                 |   |   |
|                           | 20mm movement in slab / block                | Make safe   | Remove and relay slab / block   |
| Asset                     | Subgroup                                     | Interim Intervention  | Major Intervention  |
| <b>Carriageways</b>       | BPRN (TfL Funded)                            | Plane and Inlay – Shallow Treatment - 40mm<br>Thin Surfacing - 15mm | Partial reconstruction – 120mm to 150mm<br>Plane and Inlay – Deep Treatment – 80mm to 100mm   |
|                           | Hierarchy 2,3,4 & 5                          |   |   |
| <b>Cycle Lanes</b>        | Cycle Lanes                                  | Plane and Inlay – Shallow Treatment - 40mm                          | Partial reconstruction – 120mm to 150mm<br>Plane and Inlay – Deep Treatment – 80mm to 100mm   |
| <b>Footways</b>           | Bituminous                                   | Slurry Seal Surface Treatment                                       | Reconstruction – 70mm and 150mm Type1 or<br>80mm and Sand and 150mm Type 1  |
|                           | Blocked, Flagged & Mixed                     | Remove and replace with asphalt                                     | Reconstruction – Flag and Sand and 150mm Type1  |
| <b>Street Lighting</b>    | Managed in CONFIRM                           |   |   |
| <b>Highway Structures</b> | Managed in BRIDGESTATION                     |   |   |
| <b>Drainage</b>           | Gully Cleansing, Managed in CONFIRM          |   |   |



## MODULE E – WORKS PROGRAMMING & PRIORITIES

**What...** Redbridge prioritises maintenance work and generates forward works programmes to gather the individual maintenance activities required for the highway assets and schedules them into a task programme.

**Why...** Developing a prioritised longer-term programme of works gives greater transparency of the work to be delivered. For works delivery teams, there is greater certainty of future work to better resource and deliver work efficiently.

A longer-term perspective on highway asset investment also enables Redbridge to concentrate on implementing a forward-looking strategy, ensuring the investment yields the greatest possible benefit, as well as the ability to determine what can be done with the funding provided, ensuring higher road network quality, increasing the wellbeing and increasing the quality of life of the community.

**Who...** The responsibilities for the ‘Works Programming & Priorities’ module lie with:

|                             |                    |
|-----------------------------|--------------------|
| Preparing works programmes  | <b>Team Leader</b> |
| Updating & reporting module | <b>Team Leader</b> |

**How...** Redbridge provides ongoing analysis and updates of the priority for investment of each asset based on the usage factor, customer requests, customer collaboration, engineering need and condition. To achieve this, data is collected and analysed to provide a priority list of all assets within an asset group.

From this Redbridge can assess the quantity of work that needs to be done, and the type of work that needs to be undertaken. The tools used for assessment are:

1. CONFIRM:
  - Carriageways
  - Footways
  - Street Lighting
  - Drainage
2. BRIDGESTATION: Highway Structures
3. As part of the routine highway safety inspections: Street Furniture
4. By Redbridge Parks on behalf of Highways: Highway Verges & Trees

This supports Module D - Maintenance Strategy & Hierarchy and Module G - Investment Strategies. The processes for developing the programmes for the above-mentioned highway assets are shown in [Figure E1](#).

**Reporting...** Redbridge produces a carriageways and footways prioritised schedule of works through condition data and criteria shown in [Figure E1](#) and expanded on in [Table E1](#). Every road section is then assigned a score which determines its priority ranking. This ranking determines the schedule of works up to the available budget. The draft works programme is then presented to the cabinet for our final approval and endorsement.

**Success Measures...** The delivery of Redbridge’s works programme is the tangible outcome of the entire asset management planning process. The prioritisation, planning and delivery of works aligns with Redbridge’s Highway Policy, delivering performance targets as set in [Module H – Performance Management](#).

### Further Information:

[Highway Infrastructure Asset Management Guidance document, HMEP – UK RLG, 2013](#)

[ISO 55000 – Asset Management](#)

[UK Pavement Management System \(UKPMS\)](#)

[UKRLG – Well-managed Highway Infrastructure](#)

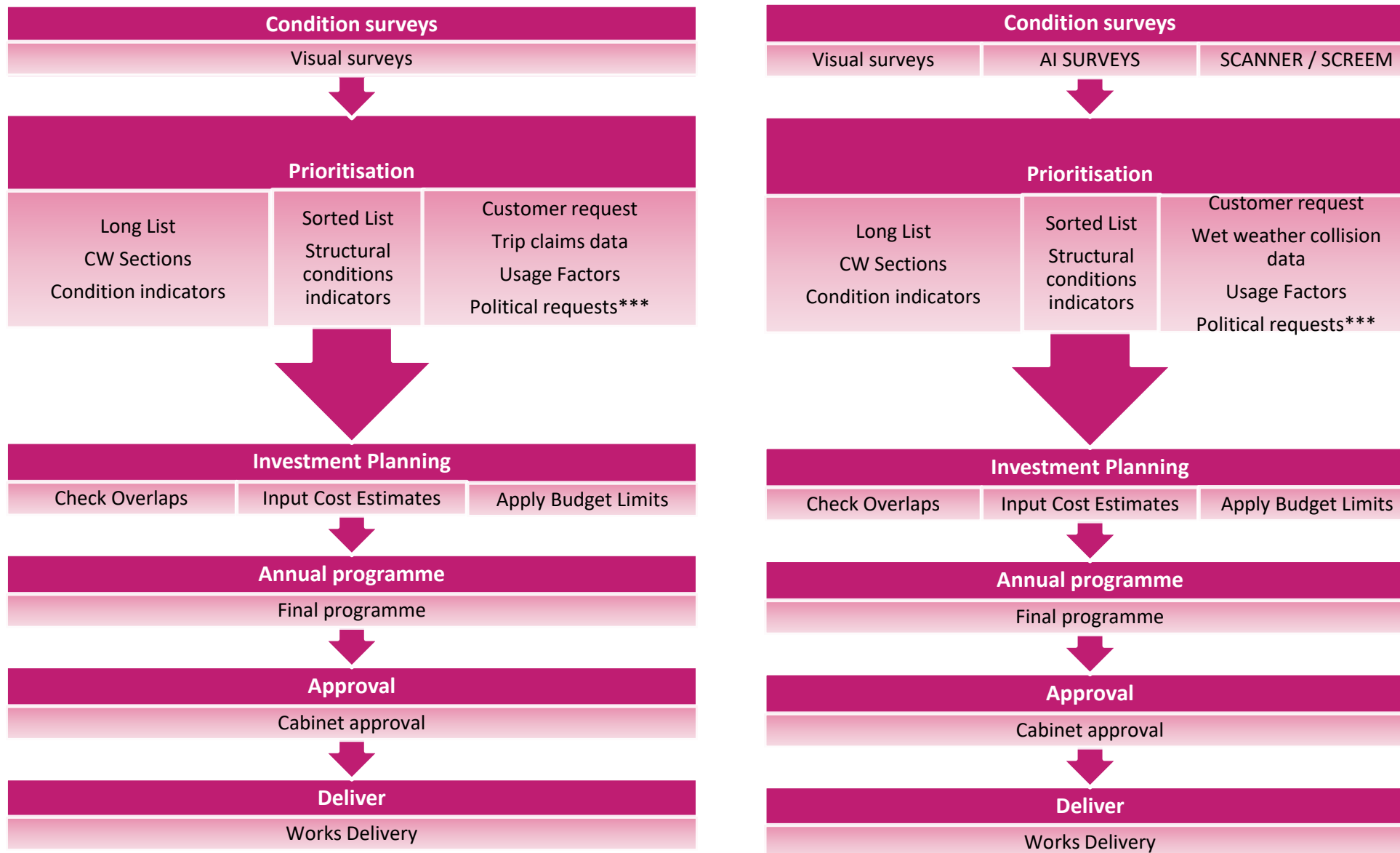


Figure E1: The works programme development process for footways (left) and carriageways (right).

## MODULE F– HIGHWAY HIERARCHY AND NETWORK MODEL

**What...** A network hierarchy is a ruleset used to assess the importance and usage factor of a group of highway assets. These factors governing the importance of assets differ for each asset group of the highway. Under LoTAG’s guidance, a series of related hierarchies should be defined for all elements of the highways network, including carriageways, footways, structures, drainage and street lighting.

A Network Model is a method of virtually storing and visualising asset data. The model would store both quantities and condition of the highway’s assets, and acts as a mechanism to monitor to the network.

**Why...** A highway hierarchy should reflect the priorities of each asset group. Assets should be assessed on a wide range of influencing factors to determine their relative importance to the highway network.

A hierarchy acts as a starting point for various activities, including: safety inspection regimes, defect investigatory levels, maintenance approaches, and treatment options. It is Redbridge’s duty to maintain and update the hierarchy as and when seen appropriate.

The Network Model is used to monitor and influence the overall network condition. The maintenance of the model data fundamentally feeds into the planning and execution of maintenance across the entire highway network.

**Who...** The responsibilities for the ‘Highway Hierarchy and Network Model’ module lie with:

|                               |                                  |
|-------------------------------|----------------------------------|
| Determining Hierarchy Drivers | <b>Head of Highways</b>          |
| Updating & reporting module   | <b>Group Manager/Team Leader</b> |

**How...** Redbridge has identified influential factors to be assessed within the framework. For example, when assessing carriageways and footways, these factors include:

- Traffic Volume
- Traffic Generators
- Network Resilience
- Bus Routes
- Essential Services

Redbridge uses a risk-based approach to assess the importance of each factor above. Tables F1 and F2 illustrate the elements constituting to managing Redbridge’s carriageways and footways, and similar rulesets are used to analyse Redbridge’s other assets. Hierarchy rulesets are reviewed regularly and

benchmarked against neighbouring borough hierarchies to consolidate a common asset management approach.

Redbridge manages and maintains the Network Model in-house using a GIS system to efficiently house the minimum appropriate data to manage the network.

**Reporting...** The network hierarchy is stored as part of the asset register and hosted on the network model. Regular reviews of the hierarchy are conducted to ensure changes of usage are reflected on the network.

**Success Measures...** Using hierarchies similar to those detailed in Tables I1 and I2 feed information and delegate maintenance options through a multitude of other modules, such as Module K – Service Delivery. Therefore, the success measures of the Highway Hierarchy and Network Model can be seen by the proportional improvement across highway assets and a reduction in consumer claims.

**Further Information:**  
[Highway Infrastructure Asset Management Guidance document, HMEP – UKRLG, 2013](#)

**Table F1: Redbridge’s carriageways hierarchy ruleset.**

| Strategic Roads | Motorway<br>TfL Road Network<br>Borough Principal Road Network |                          |   |
|-----------------|--|--------------------------|---|
|                 | Functionality Factor   | Functionality Definition |   |
| Local Roads     | <b>A</b>   | Prestige                 | High Profile  |
|                 | <b>B</b>   | Very High Traffic Volume | AADF > 10k   Local Knowledge  |
|                 |  | Essential Services       | Hospital<br>Fire Station<br>Police Station                          |
|                 |  | Major Traffic Generators | Town Centre<br>Shopping Centre<br>Market<br>Large School/University |
|                 |  | Very High Cyclist Volume | AADF > 1000   Defined Cycle Route                                   |
|                 |  | Major Bus Route          | Large no. of buses  |
|                 |  | <b>C</b>                 | High Traffic Volume   |
|                 | Medium Traffic Generators                                      |                          | Medium Schools<br>Shopping Parades                                  |
|                 | High Cyclist Volume  |                          | AADF > 500   Local Knowledge  |
|                 | Resilient Network  |                          | On resilient network  |
|                 | Minor Bus Route  |                          | Medium no. of buses   |
|                 | <b>D</b>   |                          | Medium Traffic Volume   |
|                 |  | Medium Cyclist Volume    | 100 < AADF < 500   Local Knowledge                                  |
|                 |  | HGV Usage                | Route to industrial estate  |
|                 |  | Minor Traffic Generators | Small Schools<br>Local Shops  |
|                 |  | Infrequent Bus Route     | Small no. of buses  |
|                 | <b>E</b>   | Low Traffic Volume       | AADF < 1k   Local Knowledge   |
|                 |  | No Traffic Generator     | No traffic generator  |

**Table F2: Redbridge’s footways hierarchy ruleset.**

| Local Footways            | Functionality Factor     | Functionality Definition   |
|---------------------------|--------------------------|--|
|                           | <b>A</b>                 | Prestige   |
| <b>B</b>                  | Very Pedestrian Volume   | Footfall Count<br>Local Knowledge  |
|                           | Essential Services       | Hospital<br>Care Home<br>Police Station                                    |
|                           | Major Traffic Generators | Town Centre<br>Shopping Centre<br>Large School/University<br>Train Station |
|                           | Major Bus Route          | Large no. of buses   |
|                           | <b>C</b>                 | High Pedestrian Volume   |
| Medium Traffic Generators |                          | Medium School<br>Shopping parade   |
| Vulnerable Users          |                          | GP Surgery<br>Senior Citizens Home   |
| Shared Use                |                          | Shared Cycle/Footway   |
| Minor Bus Route           |                          | Medium no. of buses  |
| <b>D</b>                  |                          | Medium Pedestrian Volume   |
|                           | Minor Traffic Generators | Small School<br>Local Shops  |
|                           | Infrequent Bus Route     | Small no. of buses   |
| <b>E</b>                  | Low Pedestrian Volume    | Footfall Count<br>Local Knowledge  |
|                           | No Traffic Generator     | No traffic generator   |

## MODULE G – FUNDING & EXPENDITURE

**What...** Funding is the financial support Redbridge uses to maintain highway assets. This is generally obtained from various streams, primarily from Council funded capital and revenue but with some additional funding from TfL and national sources. This module looks at current and future funding sources, as well as expenditure received to help understand impact on performance.

**Why...** Redbridge needs to stay abreast of developments in funding and revenue opportunities. With changes in government / TfL funding, Redbridge needs to be able to raise revenue locally to sustain normal working highways activities.

The highways team needs to ensure the best case is put forward for funding from funds available through CIL, Section 278, Section 106 and business rates as these provide income to the Council.

**Who...** The responsibilities for the ‘Funding & Expenditure’ module lie with:

Defining budget need    **Head of Highways**  
 Developing income opportunity

Monitoring expenditure    **Group Manager**  
 Updating & reporting module    **Team Leader**

**How...** Redbridge investigates alternative funding opportunities to invest in the highway infrastructure with the aim of reaching and maintaining a steady-state condition of the network. This follows from Redbridge’s intention to extend a best practice approach to all highway asset types, aligned with recent investment modelling, detailed in Module H – Investment Strategies.

The following funding routes are identified by Redbridge to be pursued:

- Council capital/revenue.
- Government / TfL grants where available.
- Funding from the Local Implementation Plan.
- Funding from revenues and contributions.
- Funding from the Community Infrastructure Levy; S106 and S278 Developer Agreement

Expenditure is recorded and monitored on an annual basis to reflect the overall funding, and income and capital / revenue split for the Council.

### Reporting...

The proposed capital / external expenditure is reported through an annual cabinet report. The Council will also report its expenditure and asset condition information as required to LoTAG, Transport for London and the Department for Transport as required.

**Success Measures...** Maximising income from third parties will be essential for the long-term improvement and steady-state maintenance of the highway assets.

The need to inform future budgets through investment modelling, outlined in Module H – Investment Strategies, will be imperative to build a robust business case for alternative funding.

| Further Information:   |
|--|
| <a href="#">HMEP/UKRLG – Maintaining a Vital Asset</a>                             |
| <a href="#">ISO55000 – Asset Management</a>  |
| <a href="#">UKRLG – Highways Infrastructure Asset Management Guidance Document</a> |
| <a href="#">UKRLG – Well-managed Highway Infrastructure</a>                        |

## MODULE H – INVESTMENT STRATEGIES

**What...** Investment in the highway asset is essential to improve the condition, maintain a steady-state or control the rate of deterioration. To determine the best level of investment and drive long-term capital savings, varying budget scenarios across the network can be explored.

Investment planning is the process used to determine backlog (to bring the asset to its desired condition) and steady-state (to sustain the asset in its desired condition) funding requirements. It provides an analysis of the short and long-term impacts of different possible budget scenarios.

**Why....** How the asset will behave in differing scenarios helps inform the level of investment required to meet desired levels of performance. In turn, this can advise appropriate budget levels and support decision making with a robust understanding of the impact of different investment scenarios. For example, reducing the maintenance budget below a certain level may lead to an increase in the backlog.

This can be demonstrated by comparing the value of annual investment plans against the predicted level of improvement to the maintenance backlog.

Redbridge have committed £10m between 2022 and 2026 to resurface roads and investment strategies will be used to distribute the money effectively.

**Who...** The responsibilities for the 'Investment Strategies' module lie with:

|                             |                         |
|-----------------------------|-------------------------|
| Determining strategies      | <b>Head of Highways</b> |
| Evaluation strategies       | <b>Group Manager</b>    |
| Updating & reporting module | <b>Team Leader</b>      |

**How...** Redbridge periodically reviews the investment needs of different assets using condition data collected and performance measures as demonstrated within the Module I – Performance Management.

This information then feeds into the lifecycle planning model to determine the current backlog and the impact of the determined investment scenarios. The approach ensures investment is driving capital savings, striving towards the desired performance level and is providing a network fit for purpose.

Redbridge aims to optimise the revenue expenditure and maximise savings where appropriate by implementing optimal treatment strategies.

**Reporting...** Lifecycle planning reporting is done through update reports as and when investment scenarios are undertaken. Within the HAMP, the investment strategy is set out in line with investment modelling undertaken.

**Success Measures...** Investment strategies are aligned to deliver the performance targets as stated in HAMP I - Performance Management. The summary Information below is from investment modelling work carried out in 2023.

**Table H1: Backlog per asset.**

| Asset        | Backlog              |
|--------------|----------------------|
| Carriageways | <b><u>£35.0m</u></b> |
| Footways     | <b><u>£37.5m</u></b> |
| <b>Total</b> | <b>£72.5m</b>        |

**Table H2: Required funding.**

| Asset        | Steady-State Funding Need |
|--------------|---------------------------|
| Carriageways | <b><u>£5.00m</u></b>      |
| Footways     | <b><u>£0.94m</u></b>      |
| <b>Total</b> | <b>£6.94m</b>             |

### Further Information:

[Investment Planning Reports](#)



## MODULE I - PERFORMANCE MANAGEMENT

**What...** Performance management is the process by which Redbridge communicates objectives for the highway assets and monitors performance against these objectives.

**Why...** Redbridge has adopted a performance management approach to ensure that the asset maintenance functions are aligned and delivered in a way that the vision and objectives for; an increased quality of life and a safer and cleaner road network are achieved in line with the Redbridge Plan 2022-26 and the London Mayor’s Transport Strategy 2018.

**Who...** The responsibilities for the ‘Performance Management’ module lie with:

|                             |                         |
|-----------------------------|-------------------------|
| Approving targets           | <b>Portfolio Holder</b> |
| Monitoring performance      | <b>Head of Highways</b> |
| Updating & reporting module | <b>Group Manager</b>    |

**How...** Redbridge has adopted performance management according to ISO 55000 and as

outlined in the HMEP – UKRLG Highway Infrastructure Asset Management Guidance document (2013).

Relevant high-level drivers have been identified from The Redbridge’s Plan 2022-26, and the Mayor’s Transport Strategy for London.

**Reporting...** Redbridge uses the following performance dashboards to illustrate the performance management system adopted, as in Tables I2 and I3. They consider all the highway assets under the Council’s remit, outlining for each, multiple performance indicators, our current condition, and our short- and long-term targets mapped to levels of service categories.

This process ensures Redbridge focuses efforts and investment into the areas that positively impact the high-level drivers and represent the highest level of risk to the Council. The cost of attaining target PIs is discussed in Module H – Investment Strategies .

**Success Measures...** Apart from providing a direct link to the Council’s corporate vision, performance management will help Redbridge demonstrate the effective use of available budgets. This will also demonstrate any shortfalls in funding and where this needs to be targeted to ensure the transport network is fit for purpose and with an acceptable level of risk.

| Further Information:  |
|---|
| <a href="#"><u>HMEP/UKRLG – Maintaining a Vital Asset</u></a>                             |
| <a href="#"><u>ISO55000 – Asset Management</u></a>  |
| <a href="#"><u>UKRLG – Highways Infrastructure Asset Management Guidance Document</u></a> |
| <a href="#"><u>UKRLG – Well-managed Highway Infrastructure</u></a>                        |
| <a href="#"><u>Mayor’s Transport Strategy 2018</u></a>                                    |
| <a href="#"><u>The Redbridge’s Plan 2022-26</u></a>                                       |

Figure I1: Asset performance indicators setting.





**Table I1: Redbridge’s service performance dashboard extract.**

| Asset Group     | Performance Indicators<br>Description           | Performance          |                |                         |
|-----------------|---|----------------------|----------------|-------------------------|
|                 |   | Current (2023)       | Target (2026)  | Target (Long-term 2033) |
| Carriageways    | % of BPRN roads in good condition               | 75%                  | 80%            | 85%                     |
|                 | % of Hierarchy 3a roads in good condition       | 65%                  | 75%            | 80%                     |
|                 | % of Hierarchy 3b roads in good condition       | 52%                  | 70%            | 80%                     |
|                 | % of Hierarchy 4a roads in good condition       | 48%                  | 65%            | 80%                     |
|                 | % of Hierarchy 4b roads in good condition       | 42%                  | 60%            | 80%                     |
| Footways        | % of Category 1A & Category 1 in good condition | 76%                  | 80%            | 90%                     |
|                 | % of Category 2 in good condition               | 51%                  | 70%            | 80%                     |
|                 | % of Category 3 in good condition               | 43%                  | 60%            | 70%                     |
|                 | % of Category 4 in good condition               | 15%                  | 60%            | 70%                     |
| Drainage        | % of gullies operating efficiently              | 95%                  | 97%            | 99%                     |
| Street Lighting | % of street lights not reported as faulty       | <b><u>99.93%</u></b> | <b>&gt;99%</b> | <b>&gt;99%</b>          |

## MODULE J – CUSTOMER ENGAGEMENT

**What...** Customer engagement is the process of engaging key asset users to inform how highway assets are maintained in management decision-making processes.

Customers are groups or individuals with an interest in how the highway assets are managed. These may include protected groups requiring access to the network and businesses needing good infrastructure to support our economic activity. Most importantly it must be ensured that the asset is maintained in a manner which provides a safe network, to fulfil the Council’s statutory duty.

**Why...** Engaging with end users ensures the social and economic benefit of the use of the road network is recognised. Such a consultation eliminates decisions being taken solely by engineers and a small cohort of advisors, which might have localised rather than network level interests.

Redbridge’s vision is to increase the collaboration between residents, businesses and public services so that their feedback will be reflected in the decision making. This is beneficial to avoid the decisions taken solely from engineers and a small group of advisors, ensuring the services being located accordingly

where it is most need based on customer interest.

Engagement with the wider community enables decision-makers to build on engineering need and focuses investment into areas which best benefit the community at large. This ensures maximised benefit of budget and focuses investment activity where it is most needed, considering the entire network.

**Who...** The responsibilities for the ‘Customer Engagement’ module lie with:

|                                       |                         |
|---------------------------------------|-------------------------|
| Leading customer engagement           | <b>Head of Highways</b> |
| Updating & reporting module           | <b>Group Manager</b>    |
| Consultation with other stake holders | <b>Team Leader</b>      |

**How...** The London Borough of Redbridge engages community interest groups that can best inform the approach towards investing in the highway network through collecting and analysing the National Highways and Transport public satisfaction survey, the Ipsos MORI survey, and other self-developed series of questions.

From these, a questionnaire is established in collaboration with the appropriate stakeholders

and the relevant importance is assigned to each criterion in the questionnaire.

The analysis of this questionnaire informs the value engineering process used in HAMS module H - Works Programme, to re-prioritise works based on the level of importance of each stakeholder-defined criterion.

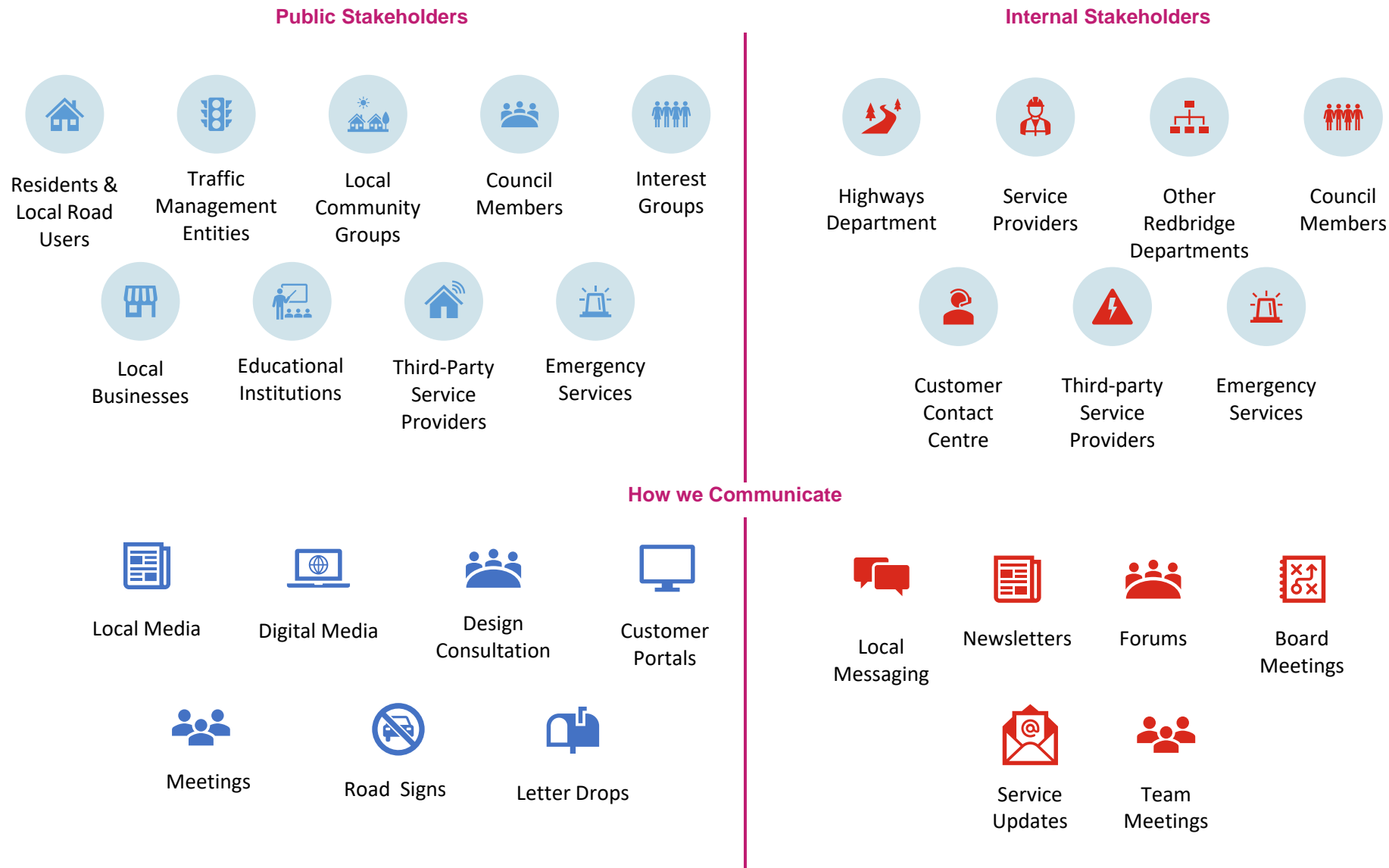
The stakeholder questionnaire remains static for a political cycle. However, the relative importance on each criterion is reviewed annually

**Reporting...** Customer satisfaction indicators are periodically reported and recorded in a dashboard. Moreover, the ease of customer interaction with digital services is recorded through a simple survey attached at the bottom of all Redbridge webpages.

**Success Measures...** Fewer claims on highway assets and diversity in the types of highway / public realm improvement works delivered to maintain the highway asset.

|  |
|--|
| <b>Further Information:</b>                                      |
| <a href="#">Equalities Act 2010, Public-Sector Equality Duty</a> |
| Public Communication Plan  |
| Internal Communication Plan                                      |

**Table J1: Highways asset management stakeholders.**



## MODULE K – SERVICE DELIVERY

**What...** Much of Redbridge’s highway maintenance service is delivered with support from external contractors, suppliers and consultants to ensure we are adopting the most effective way of delivering the service at a reasonable cost.

Redbridge follows the internal contract procedure rules and the relevant national procurement legislation to ensure fair competition for works contracts and support services. This ensures that the legal obligation for Local Authorities to allow fair and open competition is met.

**Why...** With value for money for Redbridge in mind, we ensure the strategy for delivering our services identifies the best approach to maintaining our assets in the most effective and efficient way possible. Redbridge use our in-house capability and skills to manage long-term costs and deliver the most current practices through competitive tendering.

**Who...** Management of the procurement strategy and delivery is essential, responsibilities lie with:

Procurement Strategy  
Procurement Process  
Contract Monitoring

**Head of Highways  
Group Manager  
Team Leader**

**How...** Redbridge aims to:

- Deliver robust contract management to improve service outcomes, provide value for money and deliver corporate aims.
- Provide opportunity to local people, particularly SMEs, for employment.

To achieve these aims, key strategic procurement will have the highest level of governance and oversight. Redbridge will continually improve on systems and technology to manage and monitor contracts and procurement processes to reduce unnecessary costs.

Redbridge ensures that tendered contracts include social value within the scoring methodology. This will be assessed using a concise list of social value considerations, directly linking to the Redbridge Plan 2022-26.

**Reporting...** All procurement follows relevant national procurement legislation to ensure fair, open and transparent processes to ensure Redbridge’s suppliers / contractors are well placed to deliver the service required.

Within procurement, the Board assists departments with tenders and contracts to ensure that a collaborative approach is implemented, whereby the procurement knowledge, experience and expertise already within the Council is pooled across the organisation.

This approval and review process provides a high level of auditability and transparency, with adequate consideration of commercial sensitivity. Any gaps in local knowledge, experience and expertise are filled through collaborative arrangement with other public sector organisations.

**Success Measures...** Redbridge monitors performance to ensure contractors deliver the intended value for residents and taxpayers. KPIs are recorded and monitored to work with the contractor to improve outcomes, with themes being timely, quality, economic, and health & safety, and process delivery.

### Further Information:

**Table K1: Service providers.**

| Area of Work                              | Contractor Name                              | Expiry    |                | Procurement Review | Contract Type    |
|---|--|-----------|----------------|--------------------|------------------|
|   |  | Core Term | Extension      |                    |                  |
| Client Services                           | Redbridge                                    | 4 years   | n/a            | 2025               | Ealing Framework |
| Traffic Signal Maintenance                | Redbridge / TfL                              | n/a       | n/a            | n/a                | n/a              |
| Design and Works Supervision              | Redbridge                                    | n/a       | n/a            | n/a                | n/a              |
| Consultancy Support                       | Various                                      | Various   | Various        | Various            | Various          |
| Civil Engineering and Highway Maintenance | <b>Kenson Contractors</b>                    | 5 years   | +up to 3 years | TBC                | NEC4             |
|   | Highway maintenance – planned                |           |                |                    |                  |
|   | Highway maintenance – reactive               |           |                |                    |                  |
|   | Resurfacing / Reconstruction                 |           |                |                    |                  |
|   | Drainage / Gully cleansing                   |           |                |                    |                  |
| Road markings laying / refresh            |  |           |                |                    |                  |
| Public Lighting & Testing                 | <b>Milestone Contractors</b>                 | 5 years   | +up to 3 years | TBC                | NEC4             |
|   | Street Lighting – planned                    |           |                |                    |                  |
|   | Street lighting – reactive                   |           |                |                    |                  |
|   | Signs and Bollards maintenance               |           |                |                    |                  |
| Highways Grounds Maintenance              | <b>Redbridge Parks on behalf of Highways</b> | In house  |                |                    |                  |
|   | Highway Tree Maintenance                     |           |                |                    |                  |

## MODULE L – DESIGNING FOR MAINTENANCE

**What...** Designing for maintenance considers the associated risks and costs linked to how highway schemes are maintained over the lifespan of materials. Incorporating maintenance considerations into decision-making processes during the design of new highway schemes and existing scheme improvements.

**Why...** Designing for maintenance is central to Redbridge’s borough objectives as set in our Local Implementation Plan (LIP3), as its application helps identify design solutions that:

- Creates healthy and safety streets, encouraging a safe environment for the community.
- Reduces congestion and encourages sustainable transport through delivery of high-quality services with our Partners.
- Supports new development opportunities from improving transport infrastructure.
- Deliver the Our Street Strategy with the actions associated with the 6 Our Street Priorities.

**Who...** The responsibilities for ‘Designing for Maintenance’ lie with:

|                                   |                         |
|-----------------------------------|-------------------------|
| Overseeing the design process     | <b>Head of Highways</b> |
| Review designs & provide comments | <b>Group Manager</b>    |
| Updating & reporting module       | <b>Team Leader</b>      |

**How...** Redbridge uses a sustainability-focused approach to design, that facilitates the integration of maintenance considerations at an early stage. This aligns with standard materials and items selected from a pre-approved pallet. This ensures items can be sourced to meet maintenance needs on a cost-effective basis.

In addition, Redbridge has implemented procedures that support and embed designing for maintenance. During the design of new assets, relevant internal stakeholders are involved at key stages and are given the opportunity to comment on aspects that have maintenance and other implications.

When designing for maintenance, Redbridge considers factors in-line with the Well-Managed

Highway Infrastructure Code of Practice, 2016. The Council prioritises options to encourage walking and cycling with manageable maintenance plans over the lifetime of each scheme when designing street environments.

**Reporting...** The Streets Strategy and this module of the HAMP are updated as Redbridge processes evolve in-line with industry best practice and as new materials / products come on the market.

**Success Measures...** Redbridge considers maintenance requirements at the design phase to demonstrate an on-going reduction in the whole-life-cost of asset maintenance and contribution to sustainability.

### Further Information:

[UKRLG – Well-managed Highway Infrastructure](#)

[Redbridge Third Local Implementation Plan 2019](#)

[Redbridge Our Street Strategy](#)

## MODULE M – SUSTAINABLE HIGHWAY MAINTENANCE

**What...** Sustainable highway maintenance looks at the three pillars of sustainability consisting of the social, economic and environmental aspects. This approach to maintenance will ensure Redbridge maximises community value and minimises whole life costs, whilst maximising environmental contribution and reducing the overall carbon footprint year-on-year.

**Why...** Highway maintenance has a direct impact on the sustainability of the Council as:

- It fosters the development of sustainable communities.
- It recognises social progress and supports needs to enhance social value to residents.
- It helps develop sustainable engineering solutions.
- It consumes large quantities of natural resources and generates large quantities of waste and carbon.
- The extraction, processing and transportation of materials used constitute a significant source of embodied carbon, particularly in the production of cement and asphalt.

Redbridge is committed to ensure that highway maintenance is conducted in as sustainable a manner as possible. Legacy funding for unusual

materials is an ongoing issue tackled through standardisation within regeneration works. A commuted sums approach is generally adopted, and a better understanding developed of any expectation of higher levels of maintenance and resourcing as required.

**Who...** The responsibilities for the ‘Sustainable Highway Maintenance’ module lie with:

|                             |                      |
|-----------------------------|----------------------|
| Monitoring contractual KPIs | <b>Group Manager</b> |
| Updating & reporting module | <b>Team Leader</b>   |

**How...** Redbridge addresses the social and economic pillars of sustainability in other HAMP modules, including module D – Maintenance Strategy, module J – Customer Engagement and, module L – Designing for Maintenance.

Within the environmental pillar of sustainability, Redbridge looks for opportunities within maintenance activities to:

- Improve community safety.
- Improve accessibility across ages and social groups.
- Encourage active travel.
- Enhance the quality of public space through biodiversity and wildlife conservation.
- Reducing the overall carbon footprint year-on-year.

In addition, Redbridge and engaged contractors are committed to the environmental mitigations outlined in Table L1.

**Reporting...** Redbridge monitors environmental sustainability through key performance indicators. These are reported in the term contractor’s Annual Performance Report and through monthly meetings between Redbridge and the term contractor.

**Success Measures...** Taking full advantage of the environmental contribution through the adoption of sustainable highway practices is imperative for the long-term benefits that Redbridge will reap in all three pillars of sustainability.

Hence, it is Redbridge’s aim to continue driving the sustainability agenda and retain environmental pollution to a minimum.

### Further Information:

[Contractor’s Annual Performance Report](#)

[Redbridge Our Street Strategy](#)



## MODULE N – FLOOD AND WATER MANAGEMENT

**What...** The 2012 Climate Change Risk Assessment identified flooding as an important risk for the transport sector. As a highway authority, Redbridge should consider the impact of climate change, specifically, the impact of flooding on highway assets. Redbridge will invest £830,000 in flood prevention measures between 2022-2026.

**Why...** As the Lead Local Flood Authority, Redbridge are responsible for reducing and managing the risk of flooding from surface water, groundwater and ordinary watercourses under the Flood and Water Management Act 2010.

**Who...** The responsibilities for the 'Asset Knowledge' module lie with:

|                             |                      |
|-----------------------------|----------------------|
| Data collection             | <b>Group Manager</b> |
| Data management             | <b>Team Leader</b>   |
| Updating & reporting module | <b>Team Leader</b>   |

**How...** Redbridge has a duty to coordinate views and activity with other local bodies and communities, in preparing a strategy for local flood risk management. Additionally, Redbridge considers a risk-based approach to the management of its drainage assets.

Redbridge identifies gullies located within the 14 Critical Drainage Areas (CDAs):

Redbridge has identified **22,401** gullies located within Critical Drainage Areas. Previously, these were kept operational through the annual gully cleansing programme. The remaining gullies were then programmed for proactive cleansing, with longer timelines.

Redbridge has also classified gullies within 3 priority bands for prioritised cleansing. Factors considered to assign the priority ranking include low-lying areas, recorded incidence of flooding and accessibility concerns, amongst others.

**Reporting...** In compliance with Section 21 of the Flood and Water Management Act 2010, Redbridge maintain a comprehensive asset register of all drainage structures and features, see Table M1, as well as a strategy for local flood risk management. Maintenance activities of drainage assets are logged in the asset management system CONFIRM. Information is gathered on the location, condition and performance of road gullies.

**Success Measures...** The functional operation of gullies will indicate a successful gully cleansing programme. Minimising the

impact of flood events will be the overarching success measure of Redbridge's flood and water management procedures.

### Further Information:

[HMEP/UKRLG – Maintaining a Vital Asset](#)

[Flood and Water Management Act 2010](#)

[Land Drainage Act 1991](#)

[UKRLG – Well-managed Highway Infrastructure](#)



## MODULE O – NETWORK RESILIENCE & OTHER EMERGENCIES

**What...** Redbridge manage the processes in place to manage the highway network in times of extreme weather e.g., intense heat and flash flooding, and other emergencies.

As defined in highway terms by the DfT, extreme weather includes major rainfall events, intense summer temperatures, strong winds exceeding infrastructure operational limits.

**Why...** To develop a resilient network and strategy to manage Redbridge’s approach to dealing with extreme weather and other emergencies.

This management approach will ensure that Redbridge maintains a functional network and minimises social and economic disruption caused by weather and other emergencies.

Redbridge is committed to ensure that the highway network is maintained to a high standard and disruption on the network is minimised, where possible. However, exceptional weather events and emergencies may cause unforeseen disruption.

**Who...** The responsibilities for the ‘Network Resilience, Weather & Other Emergencies’ module lie with:

|                                      |                         |
|--------------------------------------|-------------------------|
| Monitoring network resilience levels | <b>Head of Highways</b> |
| Monitoring emergency planning levels | <b>Group Manager</b>    |
| Updating & reporting module          | <b>Team Leader</b>      |

**How...** Redbridge aims to maintain the network resilience, by maintaining the defined resilient network to a good standard through highways maintenance and, by adopting fast-acting responses to emergency situations on the network to recover to full functionality as soon as practicable. Good coordination of all street and project works as well as maintaining key emergency routes contribute to enabling rapid action in emergencies.

Redbridge maintains a risk register which aligns with the Greater London Authority’s risk assessment process. The Emergency Planning team creates plans which guide how the council will respond to emergencies.

These plans are consistently reviewed and updated.

Redbridge defines the resilient network on the basis of local winter maintenance routes, as outlined in our winter maintenance plan. Redbridge also consider the following factors:

- Key strategic routes
- Town centres
- Key flooding areas
- Key amenities

**Reporting...** Redbridge reviews the performance of the network resilience by conducting reviews of responses to emergency situations. These are audited internally and used to inform lessons learnt.

**Success Measures...** To reduce network disruption to the minimum possible within the constraints of the scale and magnitude of weather events and other emergencies.

### Further Information:

[London Risk Register](#)

[Winter Service Plan](#)

## MODULE P – IMPLEMENTATION & IMPROVEMENT PLAN

**What...** The implementation and improvement plan is designed to assist Redbridge to develop and implement a continuous improvement programme to enhance asset management processes, systems and data, and support the effective delivery of desired asset management outcomes.

**Why...** Continuous improvement is an essential element of asset management for Redbridge. This enables financial savings to be reaped and better decisions made from information gathered around work done. Moreover, the HAMP should deliver key improvement actions to demonstrate improvement through time.

**Who...** The responsibilities for the 'Implementation & Improvement Plan' module lie with:

|  |                      |
|--|----------------------|
| Maturity Assessment                    | <b>Group Manager</b> |
| Implement asset management             | <b>Group Manager</b> |
| Identify & deliver improvement actions | <b>Group Manager</b> |
| Updating & reporting module            | <b>Group Manager</b> |

**How...** Redbridge undertakes continuous improvement according to ISO 55000 Asset Management Systems, and as outlined in the Well-managed Highway Infrastructure - A Code of Practice (2016).

A gap analysis is carried out periodically, through an Asset Management Maturity Assessment (AMMA), to highlight the disparity between the current and desired asset management practices within the Council. This identifies where strengths lie and areas where Redbridge should focus efforts and help establish improvement actions for both in the short and long terms.

**Reporting...** The main issues identified, and improvement actions proposed as part of an improvement action plan are shown in Table O1. This plan provides a summary of the actions that should be implemented and proposes a target year for completion.

**Success Measures...** By periodically undertaking a Maturity Assessment, Redbridge will demonstrate continuous improvement in asset management and close the identified gaps in the assessment.

**Further Information:**

- [ISO 55000 – Asset Management](#)
- [UKRLG – Well-managed Highway Infrastructure](#)

**Table P1: Improvement action plan.**

| Module                                  | Action  | Measure  | Responsibility   | Time |      |        |
|---|---|--|------------------|------|------|--------|
|   |   |  |                  | 2024 | 2025 | Onward |
| A – Context                             | Raise awareness of HAMP<br>Develop State of Highway Report  | Training workshops to all staff.<br>Webpage updated each May with report.  | Head of Highways | √    | √    | √      |
| B – AM Framework                        | No action required.   |  | Head of Highways |      |      |        |
| C – Asset Knowledge                     | Update of street furniture asset inventory.   | Updating of inventory post surveys.  | Group Manager    |      |      | √      |
| D – Maintenance Strategy                | Review maintenance strategy listed in Table D1.   | Review undertaken.   | Head of Highways |      |      | √      |
| E – Works Programming & Priorities      | Develop Carriageway and Footway Prioritisation Modelling plan.  | Prioritisation model completed and in use.   | Team Leader      | √    | √    | √      |
| F – Highway Hierarchy and Network Model | Review and implement new network hierarchy and inspection frequencies.  | Inspection frequencies adhered to.   | Head of Highways | √    |      |        |
| G – Funding & Expenditure               | Develop Robust Investment Strategy  | Continue gathering asset data through inspection programme.<br>Continue updating asset inventory and asset information to generate prioritisation and requirements for investment. | Head of Highways | √    | √    | √      |
| H – Investment Strategies               | Continued development of the Lifecycle Planning Module using accurate inventory and condition data to better understand future costs of managing the condition of the network to achieve levels of service. | Regular condition surveys of assets.<br>Periodic updates to the investment requirements as per condition surveys.  | Head of Highways |      |      | √      |

| Module                               | Action  | Measure  | Responsibility   | Time |      |        |
|--------------------------------------|---|--|------------------|------|------|--------|
|                                      |   |  |                  | 2024 | 2025 | Onward |
| I – Performance Management           | No action required.   |  | Portfolio Holder |      |      |        |
| J – Customer Engagement              | Ongoing evaluation subject to budgets. Update and publish strategy documents and forward plans.   | Review and updating of strategics and forward plans online.  | Head of Highways | √    | √    | √      |
| K – Service Delivery                 | No action required.   |  | Head of Highways |      |      |        |
| L – Designing for Maintenance        | Ensure schemes and any s278 or regeneration works use highways specification materials or are agreed beforehand during design.  | Update and create specification for highways assets for works to adhere to.                                    | Group Manager    |      |      | √      |
| M – Sustainable Highways Maintenance | Continued development of the Lifecycle Planning Module using accurate inventory and condition data to better understand future costs of managing the condition of the network to achieve levels of service. | Regular condition surveys of assets. Periodic updates to the investment requirements as per condition surveys. | Group Manager    |      |      | √      |
| N – Flood and Water Management       | Continue to undertake actions within action plans from:   | Periodic review of action plans and tracker from the relevant documents showing progress and completion.       | Group Manager    |      |      | √      |

| Module                                     | Action   | Measure            | Responsibility   | Time |      |        |
|--|--|--------------------|------------------|------|------|--------|
|  |  |                    |                  | 2024 | 2025 | Onward |
|  | July 21 Section 19 report and any future S19 reports.<br>Local Flood Risk Management Strategy<br>Surface Water 2024 Management Plan 2024   |                    |                  |      |      |        |
| O – Network Resilience & Other Emergencies | Review the Resilient Network so that it is relevant to the network and easily understood, and the Critical Infrastructure, to allow for more targeted investment strategies to be developed. | Review undertaken. | Head of Highways |      | √    |        |
| P – Implementation Plan                    | AMMA Annually reviewed.  | Plan reviewed.     | Group Manager    |      |      | √      |
| <b>Appendices</b>                          |  |                    |                  |      |      |        |
| A – Safety Inspection Manual               | Review annually.   | Plan reviewed.     | Group Manager    |      |      | √      |
| B – Highway Maintenance Plan               | Review annually.   | Plan reviewed.     | Group Manager    |      |      | √      |