HIGHWAYS INSPECTION STRATEGY

LONDON BOROUGH OF REDBRIDGE

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Contents

PART A – THE INSPECTION STRATEGY

1. Introduction

1.1. What is a Safety Inspection?

The London Borough of Redbridge Council (Redbridge) undertakes a system of regular highway safety inspections of all its adopted highways in order to comply with its statutory duty to maintain highways in accordance with Section 41 of the Highways Act 1980, and to provide a special defence under Section 58 of the Act (see Section 1.2). This allows Redbridge to provide defence against actions brought by third parties for damages resulting from failure to maintain the highway provided there is an efficient and effective highway inspection regime and that thorough and detailed inspection records are kept, as well as a reasonable system for repair and maintenance.

Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network or the wider community. The risk of danger is identified by a highway inspector on site, and the defect categorised in terms of an appropriate priority response. The establishment of an effective regime of inspection, assessment and recording is a key component of highway maintenance. This regime also provides the basic condition data for the development of a maintenance programme.

An effective inspection strategy has clearly defined:

- Inspection frequencies,
- Items to be recorded,
- Degree of defect,
- Assessment of risk, and
- Nature of response.

These will be covered in turn in the following sections.

1.2. The Law

Under Section 41 of the Highways Act of 1980, the Highway Authority has a duty to maintain the highway.

They are, under Section 58, afforded a defence.

The Code puts an emphasis on integrated asset management and promotes the adoption of a risk-based approach across all elements of highway management. Therefore, it is less prescriptive than previous Codes of Practice and does not set minimum standards.

To manage risk effectively, Redbridge have reviewed their network management hierarchy and inspection regime so that:

- Higher and lower risk highway sections are identified, and their risk is managed accordingly, by having more frequent or less frequent inspections

- Defects are categorised based on their location and the impact they can have on the public at large, triggering different responses and response times

1.3. Links to Code of Practice and Guidance

In preparing the inspection strategy, Redbridge has duly considered the following documents:

- Well Managed Highway Infrastructure: A Code of Practice (UKRLG 2016) (The Code), and
- Well Managed Highway Liability and Risk Guidance (IHE 2017).

In developing the regime due consideration has been made to the Highways Act 1980.

Redbridge has also developed an asset management framework, within which the Inspection Strategy sits.

2. Competency and Training (General)

2.1. Ensuring Appropriate Competencies and Training

Redbridge will ensure the staff engaged in the inspection strategy are suitably competent, experienced and trained to undertake their role. The IHE Well Managed Highway Liability Risk Guidance (March 2017) provides an outline of training suitable for the officers engaged in the regime, the Redbridge specific approach to competencies and training is defined in Part B, Section 1.

Only officers with the appropriate training, competency and experience will be engaged in the street safety inspection activity.

The inspectors will be registered on the official register for highways safety inspections with the Institute of Highway Engineers.

3. Risk Based Approach (General)

3.1. Adoption of a Risk Based Approach

Redbridge will use investigatory levels to identify when a defect may pose a risk. Then a workflow approach will be adopted to decide if that defect needs to be repaired and on what time scale. Defect size, network management hierarchy and location will all inform the decision process.

4. Management Hierarchy

4.1. What is a Management Hierarchy?

Functionality factors are used to categorise network sections based on usage. By considering usage, or functionality, at the hierarchy development stage, risk becomes ingrained into subsequent decision making for setting inspection frequencies and maintenance strategies. The functionality factors used in determining the hierarchy are listed in Tables 1 to 4 below.

4.2. Basis for the Management Hierarchy

The management hierarchy will be used as the base point for multiple activities that are key recommendations of the Code, they are not exclusive to:

- Inspection regimes,
- Defect investigatory levels,
- Maintenance approaches, and
- Treatment options.

4.3. Redbridge's Management Hierarchy

Carriageways Hierarchy

Table 1: Carriageways Hierarchy

Description		Category
Prestige Areas	High Profile	**A**
Very High Traffic Volume	A Road | AADF ≥ 20,000 | Local Knowledge	**B**
Essential Services	Hospital | Local Knowledge	
Major Traffic Generators	School: 1,500+ Pupils | Town Centre | ≥ 3 Traffic Generators	
Very High Cyclist Volume	Local Knowledge	
Major Bus Route	30 or more buses/hour |	
High Traffic Volume	AADF 10,000-19,999 | Local Knowledge	**C**
Medium Traffic Generators	School: 500-1,499 Pupils | Key Retail Parade	
High Cyclist Volume	Cycle Quietway Network	
Minor Bus Route	15 - 30 buses per hour	
HGV Usage	Strategic Industrial Area	
Medium Traffic Volume	Local Knowledge	**D**
Minor Traffic Generators	School: 0-500 Pupils | Place of Worship | GP | Museum | Stadium | Procession Route	
Medium Cyclist Volume	Local Knowledge | Cycle Strategy	
Infrequent Bus Route	Less than 15 buses per hour	
Vulnerable Users	Care Home	
HGV Usage	Local Industrial Area	
Low Traffic Volume	Local Knowledge	**E**
Low Cyclist Volume	Local Knowledge	
No Traffic Generator	None of the above	

Footways Hierarchy

Table 2: Footways Hierarchy

Description		Category
Prestige Areas	High Profile	**A**
Very High Pedestrian Volume	Local Knowledge	**B**
Essential Services	Hospital | Local Knowledge	

Major Traffic Generators	School 1,500+ Pupils | Town Centre | Rail/Tube Station ≥ 5m passengers/year | ≥ 3 Traffic Generators	
Very High Cyclist Volume	Local Knowledge	
Major Bus Route	30 or more buses/hour	
High Pedestrian Volume	Local Knowledge	**C**
Medium Traffic Generators	School: 500-1,499 Pupils | Key Retail Parade | Rail/Tube Station < 5m passengers/year	
High Cyclist Volume	Cycle Quietway Network	
Minor Bus Route	15 - 30 buses per hour	
Medium Pedestrian Volume	Local Knowledge	**D**
Minor Traffic Generators	School: 0-500 Pupils | Place of Worship | GP | Museum | Stadium | Procession Route	
Medium Cyclist Volume	Local Knowledge | Cycle Strategy	
Infrequent Bus Route	Less than 15 buses per hour	
Vulnerable Users	Care Home	
Low Pedestrian Volume	Local Knowledge	**E**
No Traffic Generator	None of the above	

Cycleways Hierarchy

Table 3: Cycleways Hierarchy

Description	Category
Cycle lane forming part of the carriageway	As per Carriageway
Shared or segregated cycle track on footway	As per Footway

Public Rights of Way

Table 4: Public Rights of Way Hierarchy

Description	Category
All Public Rights of Way	As per footway

4.4. Maintaining the Management Hierarchy

The Management Hierarchy should be reviewed periodically. Where new developments have taken place then the hierarchy should be re-considered.

All stakeholders are able to recommend a change in Management Hierarchy due to change in function to support the activity influenced by the Management Hierarchy.

5. Safety inspections

5.1. Inspection Frequency

From the Management Hierarchy we understand how the asset is used and the risk presented by the identification of the hierarchy level. This is then translated into the frequency of inspection for a homogenous hierarchy level.

Redbridge carry out both carriageway and footway inspections simultaneously, therefore, a dominant inspection frequency for each of the highway sections is chosen based on the higher ranked hierarchy from the carriageway or footway and assigning this to the whole highway section.

The frequency of safety inspections shall be carried out in accordance with Table 5 below.

Table 5: Dominant frequencies of safety inspections

Category	Frequency of inspection (per annum)	Number of Roads	Length (km)	Length (km per annum)*
B	12	76	72.9	875.1
C	4	122	74.0	295.9
D	2	181	85.0	170.1
E	1	1305	303.7	303.7

**footways on both sides of the carriageway are inspected, therefore, footway inspection kilometrage is doubled.*

5.1.1. Cycleways / Core Cycle Routes

Cycleways have been incorporated in the carriageway and footway hierarchy. The frequency of safety inspections on cycleways shall be carried out in accordance with Table 3 above.

5.1.2. Metalled Public Right of Way

Metalled public rights of way have been incorporated in the footway hierarchy. The frequency of safety inspections on public rights of way shall be carried out in accordance with Table 4 above.

5.1.3. Additional Inspections

Additional safety inspections may be carried out in response to extreme weather conditions, such as to provide a find and fix on the gritting network.

Locus inspections shall be carried out when there are:

- Reports or complaints from organisations such as the Metropolitan Police;
- Community concern, namely reports or complaints from members of the public;
- Severe weather, including flooding, high winds and extreme temperatures; or
- Major accidents and disasters.

All claims, incident data and Road Traffic Accident data should be used to aid the decision-making process on inspection frequencies to improve targeting of resources. Furthermore, inspection frequencies may be increased or decreased on certain routes as the risk is reviewed.

5.2. Investigatory Levels

Highway defects are managed based on risk. Any potential defect for which the investigatory level is reached or exceeded is to be identified as a risk that needs to be investigated further. The list of highway inventory to be observed for possible defects and the defect investigatory levels are shown in Table . Appendix A provides the relevant asset risk assessments.

Table 7: Investigatory Levels

Item no.	Highway Description	Defect	Investigatory Level (IL)
1	Carriageway	Potholes or loss of surface Depression Crack Missing / defective anti-skid	40mm vertical face depth 40mm vertical face depth and area of 2sqm 40mm vertical face depth and 20mm width Yes
2	Carriageway (Cycle Lanes and Natural Crossing Points e.g. junctions and pelican crossings)	Potholes or loss of surface Damaged posts	20mm vertical face depth Yes
3	Iron works on the Carriageway includes: Manholes / Access Covers Catch Pit Covers Gullies Kerb outlet Utilities covers and frames	Misaligned ironworks on Carriageway (1) Misaligned ironworks on Crossing point (2)	Misalignment of 40mm in the vertical face Misalignment of 20mm in the vertical face
4	Modular Footways	Misaligned slabs or flags Rocking slabs or flags Misaligned iron works	Misalignment of 20mm Rocking by 20mm Misalignment of 20mm
5	Bituminous Footways	Potholes or loss of surface Misalignment of surface (inclusive of iron works) Tree root damage Cracks	20mm vertical face depth 20mm vertical face depth 20mm level difference 20mm vertical face depth and 50mm in any horizontal direction

Item no.	Highway Description	Defect	Investigatory Level (IL)
6	Kerbs	Dislodged kerbs Missing	20mm vertical face and 50mm in horizontal direction Yes
7	Verges	Sunken area adjacent to footway edge	Risk-based decision
8	Flooding or Standing Water	Standing Water on Highway Substantial Running Water across Highway Property inundation	Risk-based decision
9	Road Markings	Faded or worn markings	Yes
10	Signs / bollards / lights / traffic signals includes: Signs Bollards Illuminated signs Belisha beacons Lighting columns Wall mounted street lighting Traffic Signals (TfL owned) All other lighting units	Damaged or misaligned item causing hazard Missing item causing hazard Lights or signal not operating correctly or malfunctioning Signal head pointing the wrong way Exposed wiring or damage which could result in cables exposed Missing door to lamp column	Risk-based decision
11	Safety fencing and barriers includes: Fences and barriers Pedestrian guardrails Safety fencing Boundary walls and fences	Damaged or misaligned item causing hazard Item unstable	Risk-based decision

Item no.	Highway Description	Defect	Investigatory Level (IL)
12	Hedges and trees	Unstable tree causing danger of collapse onto highway Overhanging tree leading to loss of height clearance over carriageway, footway or cycleway	Risk-based decision <2.1m over footways <2.4m over cycleways <5.1m over carriageways
13	Highways General	Street furniture missing / damaged causing hazard Oil / debris / mud / stones / gravel causing hazard Obstructions in highway Obstructed sight lines Scaffolding / skips causing hazard Unprotected building materials on highway Abandoned vehicles causing hazard	Risk-based decision
14	Other dangers to the public	Anything else considered dangerous	Yes

5.3. Defect Response

Once a defect has been identified and recorded, the risk it presents needs to be established. This document is for guidance only and the risks contained in the register are based on the highest assumed risk attributable to the type of defect, position and assessed type of usage. Local knowledge could assess the risk differently. The position of the defect on the carriageway is also of significance and will inform the assessment.

Table 8: Defect Response

Risk Factor Category	Response Time
Priority 1	Make safe or repair in 2 hours
Priority 2	Repair defect by next working day
Priority 3	Repair within 3 working days
Priority 4	Repair within 28 working days
Priority 5	Repair programmed where funds permit

6. Defect Reporting from the Public

6.1. Options Available to the Public

The general public can report defects to Redbridge in a number of ways including, the telephone, email and through the Council website.

The best way to report defects to the Council is to use the Report It section as that will go directly into Confirm and updates will be given as the job changes status:

https://www.redbridge.gov.uk/report-it/

The information regarding defects reported by the public is processed through the council's customer services.

7. Managing Change (General)

7.1. Triggers for Updates

The inspection strategy should be reviewed periodically. Interim updates to the inspection strategy may be triggered if:

- The total number of defects recorded increases significantly, an increase in the frequency of inspection should be considered. The opposite is also true, therefore a decrease in inspections may be introduced post asset refurbishment, such as major resurfacing;
- The number of claims increases significantly, then the consistency and training of officers needs to be considered alongside a full review of the process;
- The usage of the network changes significantly, then a review of the hierarchy should be considered;
- A high level of defects is being identified, then this should inform the capital budget; or
- Legislation changes or precedent is set through case law, then the process should be reviewed.

7.2. How Updates are Managed

A periodic review of the overall process will be undertaken and recorded. This will enable all officers involved in the management of maintenance of the highway network to review information and update the process.

The information to assess will include:

- Claims – volume. type, asset, repudiation
- Defects – volume type, asset, expenditure
- Management Hierarchy parameters
- Inspector competency (audit of inspectors)

A review of the competencies and training requirements of staff will be conducted if any significant changes to this document or staffing levels are encountered.

PART B – IMPLEMENTING THE INSPECTION STRATEGY

1. Competency and Training (Specific)

1.1. Competencies

Redbridge's staff involved in maintaining a safe highway are suitably trained and competent. The following table demonstrates what competencies and training are required. The source is the IHE Well Managed Highway Liability Risk guidance (March 2017) Part B. The table below details the training Redbridge undertake to achieve this.

Table 9: Competency and Training

Role	Role Responsibilities	Competency and Training Required
Policy and Decision Makers	Allocation of resources and management of corporate risk	Understanding duty to maintain Legal and financial liabilities from the duty Issues around risk transfer of outsourcing
Highway Asset Managers	Managing the asset with consideration of risk, liability and financial elements	Application of strategic risk management, ISO31000 Implementation of risk-based approach and how it might be challenged in court Legal and financial liabilities from the risk Role of claims in informing risk Forward planning to enable mitigation of risk and longevity of assets
Highway Engineers	To develop appropriate policies and procedures to support a risk-based approach	Significant experience in managing and maintaining Highway Assets Knowledge and experience in implementing and managing a risk-based approach to Highway Assets Highway Law and Administration Measurement and materials recognition
Highway Inspectors	To undertake inspections of the highway asset to ensure they are safe	Knowledge of the authority's risk-based approach Well Maintained Roads – Code of Practice for Highway Maintenance Local inspection policy procedures and guidelines Safety at Street and Road Works: A code of practice Defect recognition Claims investigation Court proceedings Tree condition awareness On the register for highways safety inspectors

Customer Service Advisors	Routinely receiving calls from the public to report a highway defect	Training requirements of the call centre

1.2. Training

The training required to deliver the work will be retained and developed through on or more of the following:

- Structured learning / classroom based with approved supplier;
- Experience of doing the role; and
- Learning from peers through Continuing Professional Development.

Redbridge will undertake a periodic refresher session of the Safety Inspectors to ensure consistency of inspections. This update will also provide a point in time to optimise the inspection process, adapt to any lessons learned and ensure continuous improvement.

Annual staff appraisals will ensure training is appropriate and up to date.

2. Inspectors' Duties

2.1. Inspectors' Duties

The Safety Inspector is responsible for ensuring that Redbridge is meeting its statutory duties and complying with regulations for its highways and footways network. This includes (but is not limited to) the following duties:

- Inspect and monitor the borough's highway network to ensure it is maintained in a safe and serviceable condition and report any non-compliance under the Highways Act;
- Inspect the integrity and structure of the council's highway network, determine any appropriate remedial action that is required and raise task orders instructing the council's contractor to take action;
- Inspect and monitor the Highways contractor's work on the public highway to ensure compliance with permit requirements and the council's network management responsibilities;
- Communicate effectively with Highways Traffic and Highways Improvement colleagues and stakeholders in the delivery of the service;
- Keep accurate records of inspections and maintain and update Highways records; and
- Provide advice on the Highways Maintenance Contract and to service colleagues, elected members, internal departments and members of the public and ensure effective communication with all stakeholders.

2.2. Other Inspectors' Duties

2.2.1. Works around Trees

During highway inspections, the inspector may encounter defects requiring work around highway trees.

The following shall be used as a decision-making process that inspectors should follow with regards to instructing works around trees:

- If a vacant tree pit is noted in the footway, then the Trees team will be notified. Within the following 24 hours, the Highways team will be advised about the next course of action.
- If there is a vacant tree space in a soft landscape that has sunk which represents a possible trip hazard to the public, then it shall be reported to the Tree team so that it is permanently fixed by providing top-up with soil.
- If the stump of a cut tree is still evident, it should be noted on the safety inspection.
- Any trees that are on or adjacent to the highway that are in a dangerous condition, show a potential hazard, have been vandalised, or have an obvious disease shall be reported to the Trees team and noted on the inspection.
- Any highway trees obstructing streetlights or signs shall be reported to the Trees team.
- Any private trees obstructing streetlights or signs shall be reported to the Neighbourhood Street Scene team.

3. Conducting Inspections

3.1. Mode of Inspection

Highway safety inspections comprise of predominantly walked visual surface assessments carried out on both the carriageway and the adjacent footways, with driven inspections undertaken on roads without a footway. If present, adopted footpaths and cycle tracks will be inspected at the same time. Both sides of the road will be walked where there is a footway.

3.2. When to Inspect

Frequency of inspections is based on the management hierarchy of the road section. The inspection due date is automatically calculated based on the frequency of inspection for a given road and the last inspection date. Confirm® will automatically assign the inspection due dates for each road section and footpath depending on its inspection frequency.

3.3. Items to be Inspected

- Carriageways
- Pedestrian crossings
- Footways
- Cycleways
- Kerbing
- Ironwork
- Drainage

- Private attributes (e.g. pavement lights, coal plates and building access hatches)
- Grass verges
- Road markings
- Signs
- Bollards
- Streetlights
- Illuminated signs
- Signals
- Safety fence and barriers
- Pedestrian guardrails
- Trees and vegetation
- Highways general (e.g. obstructions, poor reinstatements, enforcement issues)

3.4. Risk Based Approach

Deciding if a defect requires treatment is based on the safety of the travelling public whether by vehicle, on foot, bike, or other mode of transport. Considering risk will, as far as is reasonably practical, follow the workflow and risk matrices below. However, in some circumstances a defect identified may require more urgent attention or, if risk is deemed low, may be assessed for future treatment – in all cases of departure, suitable records must be made through notes, photographs (as necessary) or other supporting information.

The workflow of the decision process is outlined below.

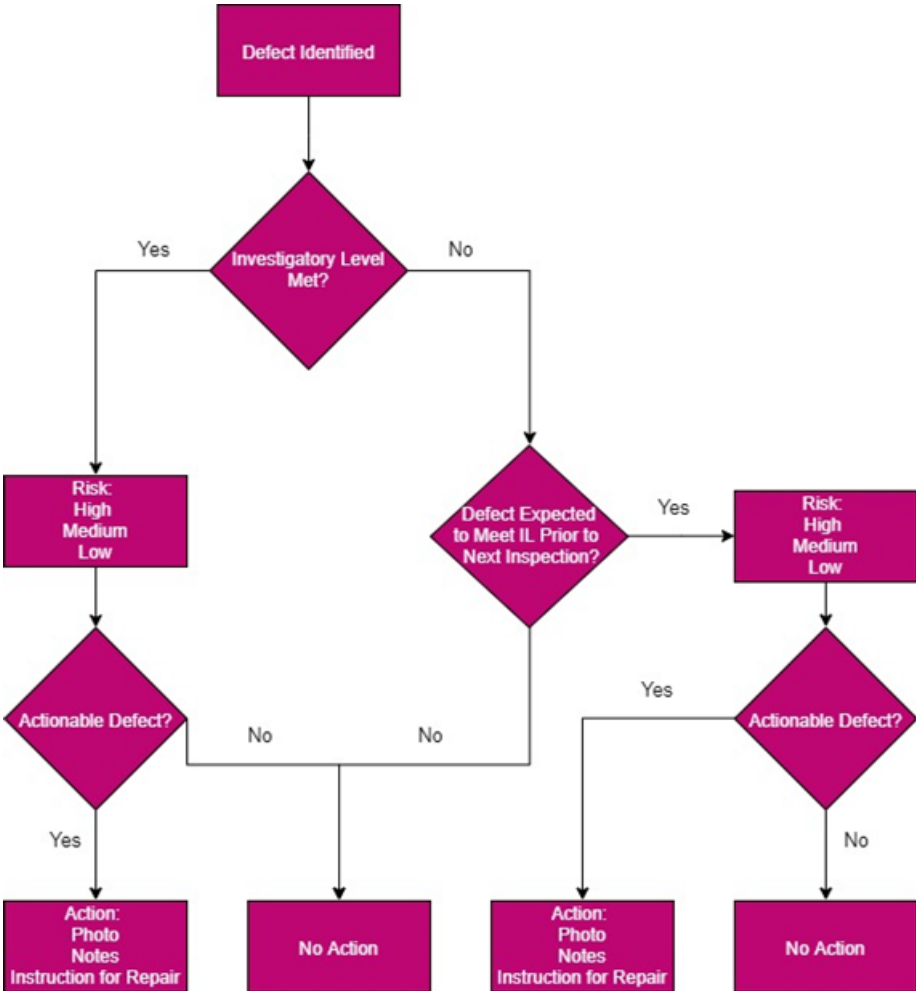


Figure 1: Risk Based Approach

The level of risk is the relationship between likelihood and severity. Where a defect meets the investigatory level through the risk process the following tables will determine the appropriate response for that defect. If the defect does not meet the investigatory level, the inspector will assess whether the defect will meet the investigatory level prior to the next inspection and carry out a risk assessment accordingly. In all cases the response to the defect will be determined by the Safety Inspector dependent on location and risk to the public.

The response times will be guided as follows; the safety inspector can select a response time that better suits the defect if required.

Table 10: Risk Matrix

Impact	Probability				
	Very Low (1)	Low (2)	Medium (3)	High (4)	Very High (5)
Negligible (1)	1	2	3	4	5
Low (2)	2	4	6	8	10
Noticeable (3)	3	6	9	12	15
High (4)	4	8	12	16	20

Impact	Probability				
	Very Low (1)	Low (2)	Medium (3)	High (4)	Very High (5)
Extreme (5)	5	10	15	20	25

Table 11: Risk Definition

Priority Response	Response Time	Definition
P1	2 hours	Attend to and make safe within 2 hours.
P2	24 hours	Attend to and repair within the next working day.
P3	3 days	Attend to and repair within 3 working days.
P4	28 days	Attend to and repair within 28 working days.
P5	Planned Repair	Repair to be programmed where funds permit.

3.5. Photographs

Photographs of each defective area should be taken, where appropriate, with reference to the site, location and date of inspection. The photographs should provide sufficient information to highlight the scale of the defect and its location.

Photographs of notable defects that are deemed to be in lower risk situations may be taken, where practicable.

3.6. Raising Defect Notifications

Defect notifications are raised on Confirm® using the electronic hand-held devices as soon as a defect is identified or as soon as is reasonably practicable. All the necessary fields on the defect notification sheet within the hand-held are completed outlining the defect identified, its location, remedial work necessary. A brief description of the defect identified is also be included in the respective field.

3.7. Works Ordering

Works are ordered through Confirm® and sent to the contractor for action. When the contractor completes the work, they upload evidence into Confirm® and close the works order.

3.8. New Roads and Streetworks Act of 1981 (NRSWA) Section 81 Defects

As the inspectors conduct their inspections, they may come across statutory utility defects such as trips, polished covers, or cracked, broken, missing or damaged covers. Inspectors log these issues as external defects and pass them on to the NRSWA team.

In the event that the defect identified is an immediate hazard, the inspector will also ensure that the site in question is safe prior to continuing the inspection. This may mean closing the highway or implementing forms of traffic management. All costs incurred by Redbridge will be passed on to the utility undertaker as set in NRSWA.

3.9. NRSWA Section 72 Defects

As the inspectors conduct their inspections, they may come across statutory utility reinstatement defects such as subsided trenches and failed patches. Inspectors are to log these issues as external

defects and refer to the NRSWA inspectors to investigate further the origin of the reinstatement so that any costs can be passed on to the utility undertaker if appropriate.

In the event that the defect identified is an immediate hazard, the inspector will also ensure that the site in question is made safe prior to continuing the inspection and refer to the NRSWA inspector to investigate further. This may mean closing the highway or forms of traffic management. All costs incurred by Redbridge will be passed to the utility undertaker as set in NRSWA.

3.10. Road Works During Inspections

Redbridge will set out a Detailed Local Operating Agreement (DLOA), as presented in Appendix B, highlighting arrangements for the inspection strategy for sites where long-term roadworks for road alterations are being carried out by a third party. Redbridge may choose one of the following arrangements:

- Redbridge to continue inspecting and rectifying defects as per this document;
- Redbridge to continue to inspect but to pass rectification to the contractor on site; or
- Redbridge to hand over the inspection and defect rectification to the third party.

Where short-term road works impede inspections, these will be deferred to the next available date.

3.11. Bad Weather

During bad weather such as snow days and heavy rainfall, it may not be possible to inspect the carriageways and footways. Roads which cannot be inspected due to bad weather, will be inspected as per 3.12 below.

3.12. Missed Inspections

Redbridge will aim to carry out any missed monthly as soon as practicable, and quarterly, bi-annual and annual inspections in the first two weeks of the following month.

3.13. Other Inspections and Surveys

3.13.1. Service Inspections

Service inspections focus on ensuring the Redbridge network meets the needs of the user, comprising of more detailed, specific inspections of particular highway elements to ensure they meet the level of service defined in the Highway Asset Management Strategy (HAMS). These inspections seek to assess the network integrity by identifying network serviceability issues which have an effect on the quality, accessibility and reliability of the network.

Activities include electrical and structural testing for street lighting and illuminated signs; checking for issues involving licensed / unlicensed use of the highway such as scaffolding or skips creating hazards or obstructing the highway, and; inspections for defects under Section 72 and Section 81 of NRSWA.

3.13.2. Condition Assessment of Carriageways and Footways

As well as undertaking routine safety inspections, Redbridge has a pavement condition assessment regime in place. These condition surveys support the identification of prioritised schemes, as well as Redbridge's short-term and long-term maintenance needs

and the corresponding funding requirement. Similarly, condition surveys generate national Best Value Performance indicators for authorities to use in benchmarking and comparing with others.

The types of surveys carried out include:

- Course Visual Inspections (CVI)
- Detailed Visual Inspections (DVI)
- SCANNER Machine based Vehicle Survey
- Deflectograph
- Skid Resistance – SCRIM
- Skid Resistance – Grip Tester
- Ground Radar
- Falling Weight Deflectometer (FWD)

4. Customer Queries

4.1. Investigating Customer Services Queries

Redbridge receives enquiries by members of the public in many forms including by email, telephone and the council website.

All enquiries related to Highways are logged into Confirm® where systems have been developed and implemented to be assigned to an officer. Highway-related enquiries are assessed against the conditions/scenarios highlighted in Part A, Table 7: Investigatory Levels. If the incident is deemed an emergency, then an emergency defect is issued to the contractor.

4.2. Emergency Out-of-Hours Call-Outs

Between the hours of 6pm and 8.30am Monday to Friday and all-day Saturday, Sunday and bank holidays, Redbridge appointed Out-of-Hours call handlers will handle customer query calls. For customer enquiries logged through the Contact Centre during out-of-hours, the contractor will be notified and will attend to these enquiries within 2 hours, taking action as necessary. A Redbridge officer will log the details of the emergency call out and work undertaken the next working day. The process is shown in Appendix C.

5. Audit

5.1. Internal Audit Process

To ensure consistency in highway safety inspections and customer enquiries, regular auditing by senior highway officers will be carried out. This will cross-check uniformity in the type of defects that are being raised and the way they are reported between the various inspectors.

Redbridge will also carry out a periodic “Inspections Workshop” where all inspectors will go through a set of images collected over the previous years and work together through their assessment with the aim of achieving a common approach to risk rating.

6. Changes in Network Use

6.1. Identifying Need for Change

The Highways Asset Manager will periodically liaise with Redbridge Council's planning team to assess any future changes to the network especially with regards to third party developments. This will in turn inform the need to change network hierarchies and inspection regimes once the highway becomes adopted.

6.2. Making Changes

Any changes to the network affecting its hierarchy and inspection regimes set in this document will be carried out when private highway is adopted. This document will be checked (and amended as appropriate) to ensure that it still meets Redbridge's requirements.

Appendix A – Risk Assessments

RISK ASSESSMENT CARRIAGEWAYS – DEFECT INVESTIGATORY LEVEL	Date: January 2020 Prepared By: AB Approved By: DS

Scope: To determine the appropriate investigatory level for carriageway defects.

Supporting Information:

	2017	2018	2019
Defect (No.)	14,470	12,426	22,608
Claims (No.)	4	8	18
Repudiation (%)	95	76	81

On analysis of the repudiation rates, Redbridge are confident that there is no increased risk to the public in our current approach.

Therefore, the risk level remains constant in informing the response times, investigatory levels and inspection frequencies.

Consistency with neighbouring highway authorities:

Redbridge has liaised with Highways England, Transport for London, London Borough of Havering, London Borough of Barking and Dagenham, London Borough of Newham, London Borough of Waltham Forest and Essex County Council. This has helped provide an understanding of the approaches adopted by neighbouring and similar highway authorities.

Inspection Frequencies The hierarchy and classification are based on Redbridge's risk assessment and the available resources. The hierarchy is based on the LoTAG document "Guidance on Developing a Highway Management Hierarchy" which has been endorsed by all 33 London Boroughs. The associated inspection frequencies are in accordance to the risk levels identified.

Investigatory Levels Investigatory Levels for carriageways in the neighbouring authorities and London is generally set at 40mm as per the findings of the LoTAG Benchmarking Report where 10 of 15 respondents have 40mm as the investigatory level. Redbridge acknowledges that at crossings and where cycling is prevalent the risk is different and therefore will set the defect investigatory level at 20mm.

Response Times Response times reflect the nature of the risk posed by the defect. Redbridge have set an immediate response in line with all neighbouring authorities and will utilise a 1-day or 3-day response and a 28-day response to defects where foresight of the defect developing into something more hazardous can be mitigated.

RISK ASSESSMENT CARRIAGEWAYS – DEFECT INVESTIGATORY LEVEL	Date: January 2020 Prepared By: AB Approved By: DS

Redbridge Action:

Investigatory Level **40mm** will be the investigatory level at which point the Inspector decides the course of action based on risk of the defect. Defects that pose a risk but do not meet the investigatory levels should also be investigated.

Inspection Frequency

Hierarchy B	Twelve (12) times a year
Hierarchy C	Four (4) times a year
Hierarchy D	Twice (2) a year
Hierarchy E	Annually

Redbridge action will be reviewed on a periodic basis

RISK ASSESSMENT **FOOTWAYS – DEFECT INVESTIGATORY LEVEL**	**Date:** January 2020 **Prepared By:** AB **Approved By:** DS

Scope: To determine the appropriate investigatory level for footway defects.

Supporting Information:

	2017	2018	2019
Defect (No.)	14,470	12,426	22,608
Claims (No.)	4	8	18
Repudiation (%)	95	76	81

On analysis of the repudiation rate, Redbridge are confident that there is no increased risk to the public in our current approach.

Therefore, the risk level remains constant in informing the response times, investigatory levels and inspection frequencies.

Consistency with neighbouring highway authorities:

Redbridge has liaised with Highways England, Transport for London, London Borough of Havering, London Borough of Barking and Dagenham, London Borough of Newham, London Borough of Waltham Forest and Essex County Council. This has helped provide an understanding of the approaches adopted by neighbouring and similar highway authorities.

Inspection Frequencies The hierarchy and classification are based on Redbridge's risk assessment and the available resources. The hierarchy is based on the LoTAG document "Guidance on Developing a Highway Management Hierarchy" which has been endorsed by all 33 London Boroughs. The associated inspection frequencies are in accordance to the risk levels identified.

Investigatory Levels Investigatory Levels for carriageways in the neighbouring authorities and London is generally set at 20mm as per the findings of the LoTAG Benchmarking Report where 10 of 15 respondents have 20mm as the investigatory level. This is also in line with the requirement set for carriageway defects where pedestrians are likely to be crossing.

Response Times Response times reflect the nature of the risk posed by the defect. Redbridge have set an immediate response in line with all neighbouring authorities and then utilise a 1-day or 3-day and a 28-day response to respond to defects where foresight of the defect developing into something more hazardous can be mitigated.

RISK ASSESSMENT **FOOTWAYS – DEFECT INVESTIGATORY LEVEL**	**Date:** **January 2020** **Prepared By:** **AB** **Approved By:** **DS**

Redbridge Action:

Investigatory Level **20mm** will be the investigatory level at which point the Inspector decides the course of action based on risk of the defect. Defects that pose a risk but do not meet the investigatory levels should also be investigated.

Inspection Frequency

Hierarchy B	Twelve (12) times a year
Hierarchy C	Four (4) times a year
Hierarchy D	Twice (2) a year
Hierarchy E	Annually

Redbridge action will be reviewed on a periodic basis

RISK ASSESSMENT **CYCLEWAYS – DEFECT INVESTIGATORY LEVEL**	**Date: January 2020** **Prepared By: AB** **Approved By: DS**

Scope: To determine the appropriate investigatory level for cycleway defects.

Consistency with neighbouring highway authorities:

Redbridge has liaised with Transport for London, London Borough of Havering, London Borough of Barking and Dagenham, London Borough of Newham, London Borough of Waltham Forest and Essex County Council. This has helped provide an understanding of the approaches adopted by neighbouring and similar highway authorities.

Inspection Frequencies Not applicable as cycleways are part of the carriageways and footways assets

Investigatory Levels As per risk assessment for carriageways and footways

Response Times As per risk assessment for carriageways and footways

Redbridge Action:

Investigatory Level **20mm** will be the investigatory level at which point the Inspector decides the course of action based on risk of the defect. Defects that pose a risk but do not meet the investigatory levels should also be investigated.

Inspection Frequencies As per carriageways and footways.

Response Times As per risk assessment for carriageways

Redbridge's action will be reviewed on a periodic basis

Appendix B – Road Works During Inspections (Long-Term Works Agreement)

Purpose

The purpose of this procedure is to document roles and responsibilities for the performance of the statutory duty to maintain the highway when construction work is undertaken by any Contractor other than the routine maintenance Contractor.

Background / Scope

When construction work on the highway is undertaken by Contractors other than Redbridge's routine Maintenance Team it becomes important to clarify the respective roles and responsibilities of the various parties.

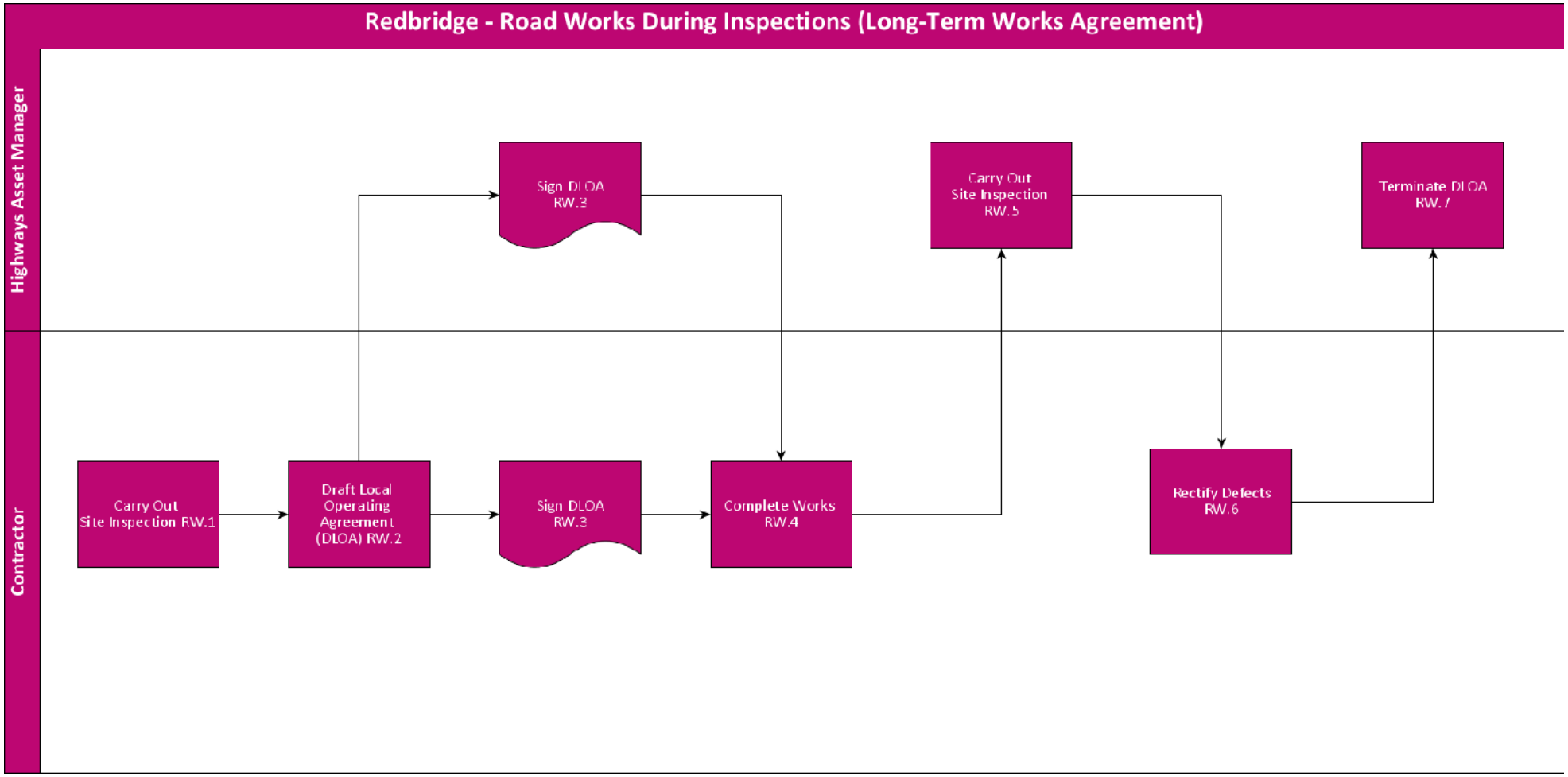
The New Roads and Streets Works Act 1991 (Section 65) requires any undertaker executing works on the highway to ensure the areas affected are adequately guarded and lit and that sufficient traffic signs are placed and maintained for guidance or direction of persons using the street.

Upon completion of works, it is the duty of the undertaker to reinstate the street, either permanent or interim, to the required specification of materials to be used and the standards of workmanship to be observed, as stated by Section 70 and Section 71 of the Act. The highway authority may carry out inspections of the reinstatement works. If it was discovered that the undertaker has failed to comply with his duties with respect to reinstatement, he shall bear the cost of any reinstatement and any further inspections by the highway authority in accordance with Section 72.

The responsibilities of maintaining the highway within the site must be clearly defined in the form of a Detailed Local Operating Agreement (DLOA) and agreed by the main stakeholders.

The hand back of the completed scheme must be formally completed and again agreed by the main stakeholders.

Procedure Flow Diagram



Procedure

RW.1 – Carry Out Site Inspection

The Asset Manager and the Principal Contractor attend the Condition Survey. The extent of works are also agreed at this meeting. The extent of the works includes traffic management areas and any adjacent area that is impacted by the redirected traffic. Any defects identified will be photographed with date stamps and included in the Detailed Local Operating Agreement (DLOA). The DLOA shall specify:

- The site extents
- The accountabilities for inspections, recording of defects and rectification
- Agree any preventative remedials that may be required

RW.3 – Draft Local Operating Agreement (DLOA)

The DLOA shall record all agreements with special focus on:

- Existing conditions of highway assets within the site;
- Local constraints;
- Site boundary and duration of the works;
- Phasing of works;
- Roles and responsibilities of all parties such as which party has responsibility for each asset at any particular point during the works;
- Arrangement in place to maintain any equipment that remains on the network during the construction works;
- Agreement on inspection schedule;
- Agreement on defect repair and reporting;
- Defects liability period for all assets;
- Handover arrangements, i.e. sectional or scheme handover
- Other pertinent agreements

There are three options regarding the arrangement of the highway maintenance duty:

- Option 1 (Preferred) – Redbridge Council to maintain highway inspection duty, and the Principal Contractor implements the required works/repairs. Any area that are inaccessible on the day of the inspection will be recorded.
- Option 2 – Redbridge Council discharges all highway maintenance duty to the Principal Contractor.
- Option 3 – Redbridge Council to maintain highway inspections and implements the required works/repairs. Any area that are inaccessible on the day of the inspection will be recorded.

Once completed, the Principal Contractor issues the DLOA to the Highway Asset Manager.

RW.3 Sign DLOA

Once all amendments have been made and all parties accept the proposed DLOA, the Principal Contractor will sign the DLOA and issue it to all parties to sign.

RW.4 Complete Works

The Contractor completes the work. During the works the DLOA is the sole agreement relevant to the management of the highway.

RW.5 Carry Out Site Inspection

Once the works are complete (or at sectional handover) the Highway Asset Manager Inspects the site and raises any residual defect notices to the Contractor.

RW.6 Rectify Defects

The Contractor rectifies the defects raised and provides evidence and necessary as-builts etc.

RW.7 Terminate DLOA

Site is handed back and return to normal operation and adopt any amendments to the highway (S38 Highways Act 1980). The DLOA is therefore ended.

Appendix C – Customer Enquiries

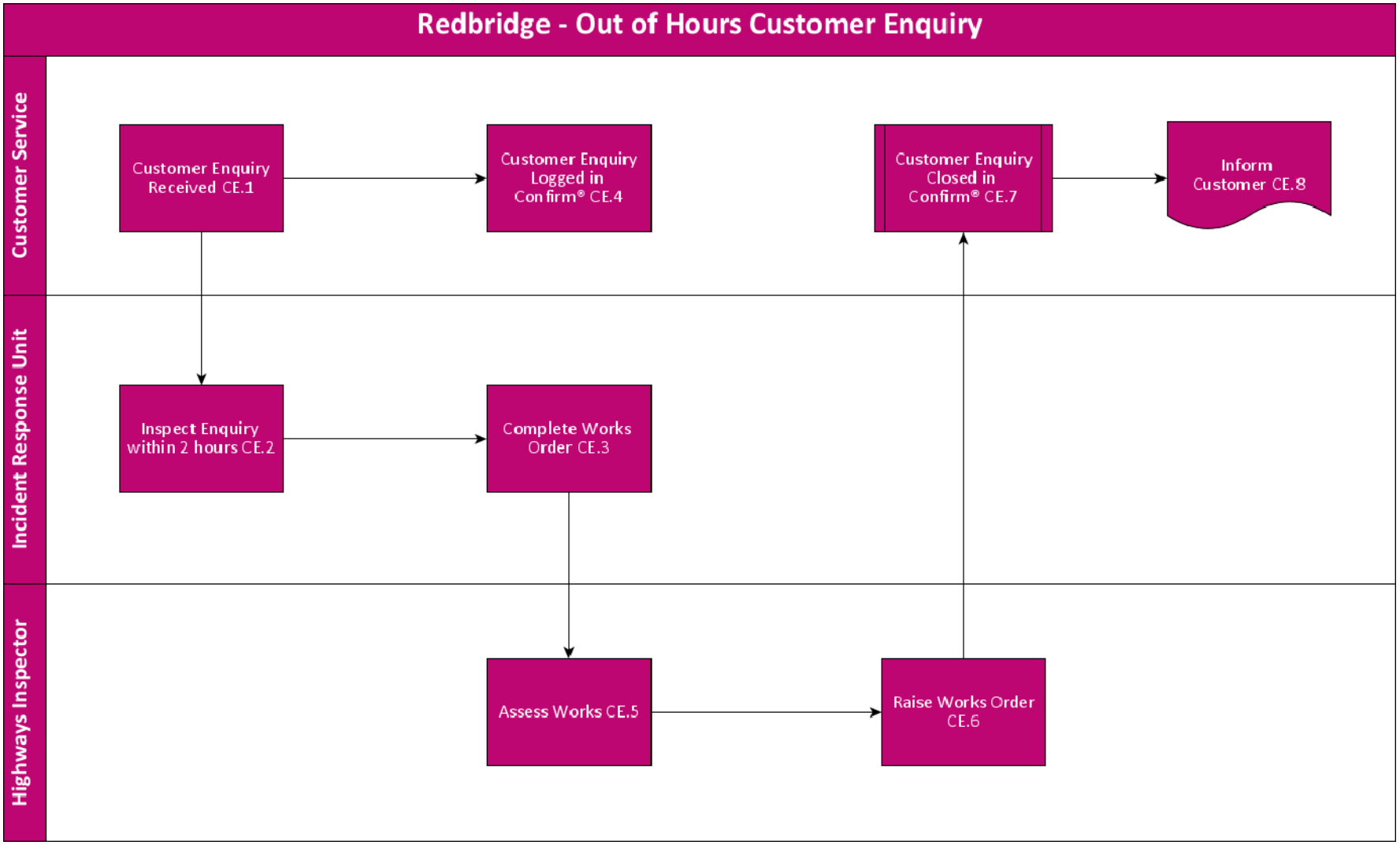
Purpose

This document describes the process for Redbridge Council to act upon highway related customer enquiries

Background / Scope

By reference to Section 36 of the Highways Act of 1980, Redbridge Council shall maintain the public highway at the public expense. As such Redbridge Council shall treat customer enquiries relating to the highway as part of the day-to-day duties and shall act upon receipt of customer enquiries as described in this document.

Procedure Flow Diagram



Procedure

CE.1 – Customer Enquiry Received

A customer enquiry relating to highways is received through telephone call, email, councillor or through the web site ("Highways Report It").

CE.2 – Inspect Enquiry within 2 Hours

The contractor inspects the site within 2 hours of being informed.

CE.3 – Complete Works

Contractor completes works and logs information.

CE.4 – Log Enquiry in Confirm®

Council Officer logs query in Confirm® the next working day.

CE.5 – Assess Works

Highway Inspector assesses works to ensure completed and process payments etc.

CE.6 – Raise Works Order

Works Order for payment is retrospectively raised.

CE.7 – Close Enquiry in Confirm®

The query is closed in Confirm®.

CE.8 – Inform Customer

The customer is informed of the resolution.