Swindon Borough Council

Carriageway and Footway Defects Management Plan

2018 - 2022

Swindon
Borough Council

Contents

1.0 Context

1.1 The Vision for Swindon 2030 sets out how Swindon Borough Council (SBC) will shape the borough and deliver the growth to allow:

- Communities to prosper;
- Families to live healthy and happy lives; and
- Children to fulfil their potential.

1.2 To deliver the vision, SBC has developed priorities and pledges, which will enable councillors and officers to prioritise their work.

1.3 The priorities and pledges championed within the Vision for Swindon 2020 are affected through a series of objectives in the SBC Plan. These documents are supported by a Highway Infrastructure Asset Management (HIAM) Policy and Strategy which identify how efficient and sustainable management of highway assets can contribute to the overall Vision for Swindon 2030.

1.4 The Highway Asset Management Policy was approved by Cabinet in October 2015 and the Highway Asset Management Strategy (version 2) was approved in January 2018. Both documents cover the period 2016-20 and are available to view on the SBC website. Both documents will be reviewed periodically as required.

1.5 The Highway Asset Management Strategy sets out the development of a suite of linked documents including a:

- Performance Management Framework;
- Communication Strategy;
- Highway Information Strategy;
- Individual Highway Asset Management Plans for each core asset group; and
- Operational, Inspection and Maintenance Plans.

1.6 This Carriageway and Footway Management Plan is one of the key operational, inspection and maintenance plans.

1.7 A summary of the framework and hierarchy of these documents is shown below in figure 1.

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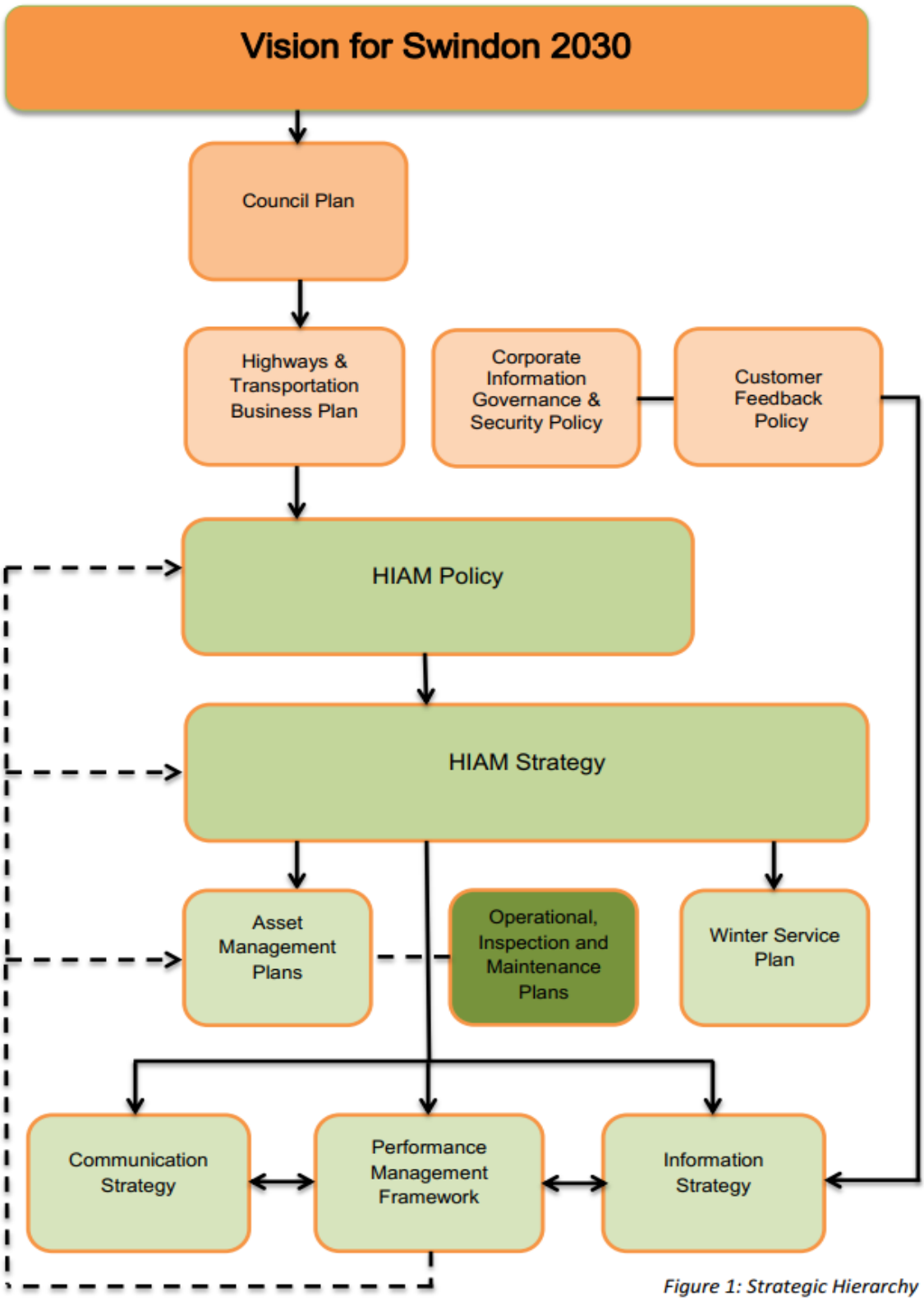

Figure 1: Strategic Hierarchy

2.0 Purpose

2.1 Swindon's highway infrastructure is the biggest capital asset that SBC manages and is vital to the economic and social prosperity of the town. Our highway network continues to grow as new businesses and residents are attracted to Swindon.

2.2 In order to promote sustainable highways asset management and ensure that risks are mitigated across the whole highway network and for all asset groups, the Department for Transport (DfT) commissioned the UK Roads Liaison Group (UKRLG) to develop a code of practice entitled 'Well-Managed Highway Infrastructure'. The first edition of this code was published in 2016 and is available to download.

2.3 The financial pressures we face; combined with an increase in extreme weather events across the country mean that we must become smarter, more flexible and innovative in our approach to managing our highway assets to ensure that they continue to support our aspirations for the town.

2.4 For this reason, we have now developed a risk-based carriageway and footway management plan which meets with the latest Department for Transport (DfT) guidance including the new Code of Practice: 'Well Managed Highway Infrastructure' to collect information about highways assets and assess defects against an appropriate hierarchy. This approach considers the severity of the defect in addition to locational context to determine where defects may cause significant risk to users of the highway.

2.5 By prioritising our resources to these risk-based areas, collecting data to continually refine our approach and publishing and monitoring our performance against defined levels of service, the authority has balanced the needs of communities and the council's aspirations, with the resources that are available to ensure that highway asset networks continue to contribute to the success of the town.

2.6 This guide is not intended to cover inspections of:

- Public rights of way (generally un-metalled rural footpaths and bridleways) as shown on the definitive map record;
- Highway subject to Developers Agreement (Section 38, Highways Act 1980);
- Major Maintenance and Construction Sites;
- Statutory Undertakers Works - New Roads and Street Works Act 1990 and Traffic Management Act 2005 (NRSWA);
- Winter Service;
- UK Pavement Management Services (UKPMS);
- Tree inspections (although obvious hazards will be expected to be noted); and
- Serviceability inspections.

2.7 Although the M4 motorway and A419 trunk roads run through the borough of Swindon, both are the responsibility of Highways England and are therefore not inspected by SBC.

2.8 This is a controlled document and circulation records including updates are maintained to ensure the current version is being used at all times.

3.0 Aims and Objectives

3.1 The aim of this Carriageway and Footway Management Plan is to link the Vision for Swindon 2030 through to the operational delivery of the highways service. The plan has been designed to ensure that an appropriate regime is adopted for the assets we maintain to:

- Comply with statutory obligations, including Section 41 Highways Act, 1980;
- Deliver of Council objectives;
- Assess and manage risks;
- Monitor, manage, report and benchmark performance;
- Provide evidence relating to the management of 3rd party claims; and
- Facilitate communication.

3.2 The plan describes SBC's policy and procedures relating to the management of carriageways and footways.

3.3 It is intended to be used by those managing these assets including those responsible for and carrying out highway safety inspections, and those responsible for ordering and delivering defect repairs. It sets out the approach to highway safety inspections and the consistent investigatory levels to be applied across the highway network and the approach to defect repairs.

4.0 Asset Information and Data

4.1 The highway network in Swindon has developed over many centuries and historic construction records detailing the type or condition of many highway assets are sparse. However, current records provide base information detailing the geometry; age; construction materials and condition of many highways assets.

4.2 The guidance published by the DfT recognises this vulnerability and recommends that all authorities make the best use of emerging technology to collect gaps in data and, in the interim, to develop a sustainable management plan based upon known data and an assessment of risk.

4.3 Data will continue to be collected wherever it is required to facilitate highway improvement schemes or prioritised for collection across the borough using the risk-based approach developed in this document.

4.4 A summary of the key carriageway and footway assets is shown below in table 1.

Asset	Length (km)	Area (m^2)
Carriageways	832	5,777,910
Footways	1092	2,320,946
Cycle tracks	158	512,525

Table 1: Swindon Borough Council key Carriageway and Footway Assets

5.0 Risk Assessment

5.1 The management of carriageways and footways is based on a hierarchy of risk detailed in table 2.

Hierarchy of Risk	Risk Management Process
Level 1: Risk Identification	Routine inspections
Level 2: Risk Analysis, Impact	Defect investigatory levels
Level 2: Risk Analysis, Likelihood	Network hierarchy
Level 3: Risk Evaluation	Actions
Level 4: Risk Decision	Target response times
Level 5: Risk Mitigation	Management plan and processes
Level 6: Monitoring and review	Performance management

Table 2: Hierarchy of Risk

6.0 Risk Identification: Routine Inspections

6.1 Asset Inspection Methodology

6.1.1 Under Section 41 of the Highways Act 1980, SBC as a highway authority has a statutory duty to maintain highways maintainable at the public expense. Neglecting this duty can lead to claims against SBC for damages resulting from a failure to maintain the highway.

6.1.2 The Code of Practice 'Well Managed Highway Infrastructure – A Code of Practice for Highway Maintenance Management' states:

> *'Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network or the wider community'.*

6.1.3 In order to manage the inspection process, the borough has been split into three areas. For each area, a list of weekly inspection routes is detailed in the master inspection file. Each route is supported with a detailed colour map depicting the exact extent of the highway. These routes are also available on the authority's Information Asset Management System (IAMS).

6.1.4 Following completion of an inspection, both the paper-based Inspection Summary Sheet and the authority's IAMS must be updated within five working days.

6.1.5 Defects identified during an inspection as meeting the default investigatory criteria are recorded in the inspector's note book. The following details are included:

- Date;
- Walked or driven inspection;
- Inspected by (both inspectors if driven);
- Location;
- Nature of defect;

- Proposed action; and
- Proposed priority.

6.1.6 The following are also noted:

- When no defects are found during an inspection, an entry of 'No Defects' is made against that section of highway;
- All defects which meet or exceed the investigatory levels are recorded;
- Works incomplete from the previous inspection must be recorded as incomplete work and must be brought to the attention of the highway operations team.

6.1.7 Defects which do not meet the investigatory levels but which are considered by an inspector to require action, or where the inspector considers that a default action or target response is not appropriate will be recorded on paper copies of the Dynamic Risk Assessment Evaluation Record using the template and process detailed in appendix 4. Evaluation Records will be attached to the weekly inspection record for future reference.

6.1.8 There is currently an on-going project to introduce a GIS based hand-held data collection device so that data may be recorded directly into the authority's Information Asset Management System (IAMS) from site. Once the new electronic system becomes operational it will improve the positional accuracy of defect records and maximise efficient working of the Inspection Team. At this juncture the use of notebooks will be phased out and this plan will be updated as necessary.

6.1.9 Regular highway inspections will be undertaken at frequencies determined by the network hierarchy as recorded in table 4 and 5 of this document.

6.2 Other Factors

6.2.1 Most highways have been established for many years with features or a layout that would not be acceptable in current highway design. This may include steps or cellar openings; natural stone surfaces; granite setts; raised footways; tree pits and/or drainage arrangements that might present potential trip situations in excess of the normal investigatory level. When inspected, these issues shall be recorded, however as the highway has been established with these encumbrances the public must take appropriate care.

6.3 Other Inspections

6.3.1 The inspection team undertakes inspections of some non-highway council assets such as surface level car parks and areas of housing land accessible by the general public. These areas are inspected at a locally agreed frequency in line with their hierarchy on the behalf of the asset-owning team. As funding for any identified work is separately applied for from the appropriate service area manager, the repair response times may not follow the same criteria as those for highway works. For further information on the hierarchy and response times for these assets, please contact the asset owner.

6.4 Inspection Calendar Tolerances

6.4.1 It is not always possible for all inspections to be carried out in their programmed week due to sickness; holiday or staff leave; inclement weather; training etc. When an inspection is missed, every effort is made to ensure its completion within the grace period timescales shown in table 3. Failure to do so will render an inspection missed and may have implications upon the defence of third party claims. Similarly, inspections may, upon specific agreement with the Inspectors' Line Manager, be carried out before their programmed week in accordance with the grace periods shown.

Inspection frequency	Grace period
1 month	2 weeks
3 month	6 weeks
6 month	12 weeks
12 month	12 weeks

Table 3: Inspection Tolerance

6.5 Inspector Training

6.5.1 To ensure consistency in inspector's records, all inspectors will undergo City and Guilds Highway Inspector Training and Street Works Training at Supervisor Level as well as regular in-house training and informal discussions during the regular team meetings. Inspectors will compare approaches between their teams and areas on an annual basis to enable self-auditing of the inspection system.

6.6 Undertaking Inspections

6.6.1 Highway Safety Inspections require the recording of defects that are potentially hazardous to road users but not at the expense of the inspector's own safety or that of others using the highway. Standard procedures to undertake inspections safely are recorded in appendix 5. If an Inspector feels that the standard procedures do not provide sufficient protection at a specific location, they will bring the matter to the attention of their Line Manager.

6.7 Customer Interactions

6.7.1 Customer reports will be prioritised upon receipt by the highways inspectors and all reports will be investigated within 10 working days by a qualified inspector. All customer contacts are recorded on the authority's Customer Relationship Management (CRM) system and will be allocated to an appropriate highway inspector. These will then be processed following the same procedure as defects identified during safety inspections.

7.0 Risk Analysis, Impact: Defect Investigatory Levels

7.1 Defect Investigatory Levels

7.1.1 For the most common types of highway defects, SBC has defined defect investigatory levels as set out in appendix 1. The defect investigatory levels are regularly reviewed. The last review was completed in March 2018 as part of the update of this document when it was determined that the existing levels did not require amending. The next review is scheduled for 2021.

7.1.2 The criteria and data that are considered in undertaking a review are:

- Operational performance against current investigatory levels;
- The financial sustainability of the current investigatory levels;
- Customer and key stakeholder service expectations;
- Complaints and third-party claims history; and
- Operational delivery implications of changed investigatory levels.

7.2 Dynamic Risk Assessment

7.2.1 The defect investigatory levels have been tested in the courts over many years and have been found to represent a proportionate response to risk. On occasion however, an inspector may observe a defect for which a defect investigatory level has not been pre-determined, or may consider that the defect investigatory level is insufficient to mitigate the risk posed by a defect.

7.2.2 To ensure that every decision taken is suitable, even when unusual conditions are observed or defect investigatory levels have not been pre-determined, each decision is evaluated by means of a dynamic risk assessment process and recorded using a 'Dynamic Risk Assessment Evaluation Record' as detailed in appendices 4A; 4B and 4C.

8.0 Risk Analysis, Likelihood: Network Hierarchy and Inspection Frequency

8.1 Network hierarchies provide the initial assessment of the likelihood of risk across the network. Therefore, carriageways and footways/cycleways have been assigned a hierarchy to help prioritise maintenance and investment and to manage risk.

8.2 SBC updated the highway network hierarchy in 2018 using a risk-based approach developed collaboratively with the South West Highways Alliance. The resultant local network hierarchy has been subjected to external review and a further review of the network hierarchy is scheduled for 2021.

8.3 The risk-based process used to develop the network hierarchy considered criteria including strategic importance; traffic flow and other local considerations. The full evaluation criteria are set out in tables 4 and 5 and the network hierarchy maps are depicted in appendix 3.

8.4 For carriageways, footways and cycleways the inspection frequencies are based on the network hierarchy and reflect the relative likelihood of defects occurring. The inspection frequencies are regularly reviewed. The last review was completed in March 2018 as part of the update of this document when it was determined that the existing frequencies did not require amending. The next review is scheduled for 2021.

8.5 The criteria and data that were considered in undertaking the review are:

- Operational performance against current frequency;
- The financial sustainability of the current frequency;
- Customer and key stakeholder service expectations; and
- Complaints and third-party claims history.

8.6 Safety Inspections are generally carried out by driven inspection. Where a highway would qualify for a monthly inspection, in a twelve month period it would receive ten driven inspections and two detailed walked inspections.

8.7 Cycle routes which form part of, or are adjacent to the carriageway will be inspected at the same frequency as that of a carriageway. The data reviewed above indicates this is providing an appropriate level of risk management. Future reviews will also give careful consideration of the data relating to cycleways.

8.8 Footways adjacent to carriageways are inspected at the same time as the carriageway although they will be walked. The data reviewed as above indicates this is providing an appropriate level of risk management. Future reviews will also give careful consideration of the data relating to footways.

Route Classification	Description	Safety Inspection Frequency	Detailed Inspection Frequency
2 - Strategic Route	Principal roads between Primary Destinations	1 month	6 month
3 – Main Distributor	Major Urban Network and Inter Primary Links. Short to medium distance traffic	1 month	6 months
4 – Secondary Distributor	Classified Road (B and C class) and unclassified urban bus routes carrying local traffic with frontage access and frequent junctions	1 month	6 months
5 – Link Road	Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions	3 months	6 months
6 – Local Link Road	Roads connecting Link Roads and other Distributor Roads. Local Link Roads usually have frontage access and junctions onto Local Access Roads	6 months	6 months
7 – Local Access Road	Roads serving limited numbers of properties carrying only access traffic	12 months	12 months
8 - Minor Road	Local roads serving an extremely limited number of properties or agricultural land.	12 months	12 months
9 - Lanes	Minor routes and low use tracks that provide access to isolated buildings.	12 months	12 months
10 - Green Lanes and Tracks	Lanes and tracks that are unsuitable for vehicular traffic	Not Inspected	Not Inspected
11 - Disused Tracks	Unmetalled tracks that are unrecognisable as a road	Not Inspected	Not Inspected

Table 4: Carriageway Hierarchy

Route Classification	Description	Inspection Frequency
1a	Prestige Walking Zones	1 month walked
1	Primary Walking Routes	1 month walked
2	Secondary Walking Route	3 months walked
3	Link Footways	6 months walked
4	Local Link Footway	6 months walked
5	Local Access Footways, Footpaths and Backways	12 months walked
B	Cycle routes remote from carriageway	6 monthly cycled or walked

Table 5: Footways and Cycleways Hierarchy

9.0 Risk Evaluation: Actions

9.1 Default Actions

9.1.1 As a practical tool to assist the risk evaluation of many of the common highway defects, SBC has defined default actions based upon the investigatory levels as set out in appendix 1.

9.1.2 The default actions are regularly reviewed. The last review was completed in March 2018 as part of the update of this document when it was determined that the existing default actions did not require amending. The next review is scheduled for 2021.

9.1.3 The criteria and data that were considered in undertaking the review are:

- Any advancements in technology, processes or materials that enable improved actions to be taken;
- Operational performance against current actions;
- The financial sustainability of the current actions;
- Customer and key stakeholder service expectations;
- Complaints and third-party claims history; and
- Operational delivery implications of changed actions.

9.2 Dynamic Risk Assessment

9.2.1 The default actions have been tested in the Courts over many years and have been found to represent a proportionate response to risk. On occasion however, an inspector may observe a defect for which a default action has not been pre-determined, or may consider that the default action is insufficient to mitigate the risk posed by a defect.

9.2.2 To ensure that every action is suitable, even when unusual conditions are observed or default actions have not been pre-determined, each action is evaluated by means of a dynamic risk assessment process and recorded using a 'Dynamic Risk Assessment Evaluation Record' as detailed in appendices 4A; 4B and 4C.

10.0 Risk Decision: Response Target Times

10.1 Defect Response

10.1.1 SBC assesses risk to determine the priority of defects on its network as some defects need to be treated more urgently than others. Defect response target times are set out in table 6 below. These are regularly reviewed. The last review was completed in March 2018 as part of the update of this document and the next review is scheduled for 2021.

10.1.2 The criteria and data that were considered in undertaking the review are:

- Operational performance against current target times;
- The financial sustainability of the current target times;
- Customer and key stakeholder service expectations;
- Complaints and third-party claims history;
- Operational constraints e.g. time needed to arrange permits or suspend parking restrictions to accommodate repair works; and
- Operational delivery of changed response times.

Maintenance Requirement	Priority	Description
Safety Works	**Call Out**	Attendance on site within 1 hour, make safe, temporary or permanent repair.
	U	Temporary or permanent repair within the next working day
	E	Permanent repair within 7 working days
	A	Permanent repair within 10 working days
	B* (town centre)	Permanent repair with 4 weeks
	B	Permanent repair within 6 weeks
Minor Works or defects not repairable within 6 weeks.	**X**	Programmed Works
	Y	Specialist materials/repair processes
	Z	Minor Patching works

Table 6: Defect Response Target Times

10.1.3 The default target response times are regularly reviewed. The last review was completed in March 2018 as part of the update of this document when it was determined that the existing default target response times did not require amending. The next review is scheduled for 2021.

10.1.4 The criteria and data that are considered in undertaking a review are:

- Operational performance against current target response times;
- The financial sustainability of the current target response times;
- Customer and key stakeholder service expectations;
- Complaints and third-party claims history;
- Operational constraints e.g. time needed to arrange permits or suspend parking restrictions to accommodate repair works; and
- Operational delivery of changed target response times.

10.2 Dynamic Risk Assessment

10.2.1 The default target response times have been tested in the Courts over many years and have been found to represent a proportionate response to risk. On occasion however, an inspector may observe a defect for which a default target response action has not been pre-determined, or may consider that the default target response time is insufficient to mitigate the risk posed by a defect.

10.2.2 To ensure that every target response time is suitable, even when unusual conditions are observed or default target response times have not been pre-determined, each target response time is evaluated by means of a dynamic risk assessment process and recorded using a 'Dynamic Risk Assessment Evaluation Record' as detailed in appendices 4A; 4B and 4C.

11.0 Service Levels

11.1 Levels of service have been developed by a group of stakeholders in order to translate the high-level vision and policy statements into an operational context. The current levels of service are detailed in table 7 below.

11.2 The levels of service have a direct influence upon the management of highway assets and are broken down into 15 tangible measures of performance. These measures of performance provide a facility to systematically monitor and track service delivery over time and are recorded in the Performance Management Framework depicted in appendix 2.

11.3 Achievement of many of the levels of service and performance targets relies upon timely and thorough highway inspections followed by prompt and effective defect repairs. These activities help to ensure that the network remains safe; accessible and resilient for all highway users.

Vision Priority	HIAM Policy Statement	Service Level
1) Improve infrastructure and housing to support a growing, low carbon economy.	1) By adopting a long-term approach to asset management, we will increase the resilience of the network; promote consistent journey times and utilise sustainable solutions including low and zero carbon energy technology to reduce waste; environmental impact and whole life costs.	1) Ensure resilience on the network
2) Offer education opportunities that lead to the right skills and right jobs in the right places.	2) Our long-term approach to asset management; partnership working; development and maintenance will promote sustainable recruitment practices and enable skilled resources to be employed in the right place at the right time.	2) Promote sustainable solutions
3) Ensure clean and safe streets and improve our public spaces and local culture.	3) We will adopt a risk-based approach to asset management and will regularly inspect and maintain highway infrastructure assets to keep our highway network safe and working; reduce accidents; crime; the fear of crime and antisocial behaviour.	3) Sustain a safe & working network
4) Help people to help themselves while always protecting our most vulnerable children and adults.	4) We will regularly engage with the communities we serve by surveying public opinion to ensure that our strategy and supporting commissioning; financial and delivery plans work effectively as a whole, and that their combined effect meets agreed levels of service	4) Provide an accessible network
		5) Engage with stakeholders

Table 7: Levels of Service

12.0 Performance Management Process

12.1 Performance reports will be made available to senior decision makers at the frequencies detailed in the performance management framework document for the key performance indicators set out in appendix 2.

12.2 The review process will be contextualised by using the results of any benchmarking detailed in the performance management framework together with any other operational and business efficiency measures, for example the effect upon the service of implementing:

- Changes to the operational service delivery arrangements;
- Suggestions shared by supply chain partners;
- Any recommendations made by transformational reviews;
- Collaborative working arrangements; and
- Procurement changes

12.3 The review process will identify strengths and weakness and action plans will be developed as required. Any lessons learned will be documented and fed into staff appraisal and development discussions or used to refine policies, strategies and plans; including reviewing the performance management framework as appropriate.

12.4 Investment decisions related to maintaining the highway asset are agreed annually by Cabinet as part of the Local Transport Plan (LTP) Implementation Plan. The Implementation Plan includes a three year indicative programme of works, subject to the annual resource decisions of the council.

12.5 The performance report will be considered in depth as part of the annual strategic investment planning process to determine how historic investment decisions have impacted upon the performance of the network and to determine whether future investment decisions may be refined to increase performance and ensure that work activities remain aligned with the council vision.

13.0 Evaluation and Review

13.1 This Carriageway and Footway Management Plan will be reviewed in consultation with the Cabinet Members during 2021 for adoption in 2022.

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Appendix 1: Default Defect Investigatory Levels

Carriageway Inspection: Default Defect Investigatory Levels				
Surface Defects				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
>41mm deep	Pothole Repair	1 – next working day	Call Out or U	Permanent repair to be completed on 1st visit unless other work required.
31-40mm deep	Permanent Repair	6 weeks	B	
0-30mm deep	No Action			
Surface Profile (Surface intact but dipped or raised)				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
>41mm deep over a 600mm straight edge	Pothole repair	next working day	U	Permanent repair to be completed on 1st visit unless other work required.
0 - 40mm deep over a 600mm straight edge	No action			
Cracks				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
>26mm wide and >26mm deep	Crack repair	6 weeks	B	
0 - 25mm wide	No Action			
Ironwork – Utility Owned				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Missing	Make safe	1 hour	Call Out	Inform utility by Dangerous Section 81 Notice, re-evaluate category of defect following temporary repair as necessary
Sunken/Raised >40mm	Consider location and make safe or see additional notes	1 – next working day	Call Out or U	Inform utility by Dangerous Section 81 Notice, re-evaluate category of defect following temporary repair as necessary

Carriageway Inspection: Default Defect Investigatory Levels				
Sunken/Raised 31-40mm	Consider location	next working day	N/A	Inform utility by Dangerous or Standard Section 81 Notice, re-evaluate category of defect following temporary repair as necessary
Sunken/Raised 21-30mm	See additional Notes			Inform utility by Standard Section 81 Notice, re-evaluate category of defect following temporary repair as necessary after 28 days
Sunken/Raised 0 – 20mm	No Action			
Ironwork – Highway Responsibility				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Missing	Make safe	1 hour	Call Out	Complete as per pothole defect requirement
Sunken/Raised >40mm	Consider location and make safe	1 – next working day	Call Out or U	Complete as per pothole defect requirement
31-40mm	Permanent Repair	6 weeks	B	
0 – 30mm	No Action			
Kerbing – Adjacent Footway				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Missing or displaced	Make safe	1 – next working day	Call Out or U	Complete as per pothole defect requirement
Out of alignment vertically or horizontally >26mm	Re-align	6 weeks	B	
Out of alignment vertically or horizontally 0 – 25mm	No Action			
Chips >26mm deep and >26mm wide	Mortar Fillet	6 weeks	B	
Chips 0 - 25 deep or 0 – 25mm wide	No Action			
Kerbing – Adjacent Verge				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Missing or displaced	Make safe	1 – next working day	Call Out or U	Complete as per pothole defect requirement

Carriageway Inspection: Default Defect Investigatory Levels				
Out of alignment horizontally >26mm	Re-align	6 weeks	B	
Out of alignment horizontally 0 – 25mm	No Action			
Chips	No Action			
Road Markings				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Give Way or Stop Markings less than 50% clear	Reline	7 -10 days	E	Weather dependant
Give Way or Stop Markings less than 30% clear	Reline	6 weeks	B	
Lines for parking restrictions gaps or less than 30% clear	Reline	6 weeks	B	

Footway, Footpath, Cycleway and Backway: Default Defect Investigatory Levels (excluding town centre)				
Surface Defects				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
>41mm deep	Pothole Repair	1 – next working day	Call Out or U	Complete as per pothole defect requirement
26-40mm deep	Permanent Repair	6 weeks	B	
0-25mm deep	No Action			
Surface Profile (surface intact but dipped or raised)				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
>41mm deep over a 600mm straight edge	Pothole repair	next working day	U	Complete as per pothole defect requirement
26 – 40mm deep over a 600mm straight edge	Permanent Repair	6 weeks	B	
0 - 25mm deep over a 600mm straight edge	No action			
Cracks				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
>26mm wide and >26mm deep	Crack repair	6 weeks	B	
0 - 25mm wide	No Action			
Ironwork – Utility Owned				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Missing	Make safe	1 hour	Call Out	Inform utility by Dangerous Section 81 Notice, re-evaluate category of defect following temporary repair as necessary
Sunken/Raised >40mm	Consider location and make safe or see additional notes	1 – next working day	Call Out or U	Inform utility by Dangerous Section 81 Notice, re-evaluate category of defect following temporary repair as necessary
Sunken/Raised 26 - 40mm	Consider location	next working day	N/A	Inform utility by Dangerous or Standard Section 81 Notice, re-evaluate category of defect following temporary repair as necessary
Sunken/Raised 0 – 25mm	No Action			

Footway, Footpath, Cycleway and Backway: Default Defect Investigatory Levels (excluding town centre)				
Ironwork – Highway Responsibility				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Missing	Make safe	1 hour	Call Out	Complete as per pothole defect requirement
Sunken/Raised >40mm	Consider location and make safe	1 – next working day	Call Out or U	Complete as per pothole defect requirement
Sunken/Raised 26 - 40mm	Permanent Repair	6 weeks	B	
Sunken/Raised 0 – 25mm	No Action			
Verge				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Ruts >100mm deep	Topsoil/stone	6 weeks	B	Consider location and action where evidence of regular over-running occurring, or where carriageway width is <6m
Ruts 0 – 100mm deep	No Action			
Tree Pits				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Soil/stone lower than adjacent footway >40mm	Inform Grounds			
Soil/stone lower than adj footway 0-39mm	No Action			

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Highway Features: Default Defect Investigatory Levels				
Traffic Signs				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Warning or Regulatory Signs misaligned	Re-erect	1 hour	Call Out	
Warning or Regulatory Signs previously made safe or missing	Replace/re-erect	10 days	A	
Information and Direction signs made safe or missing	Replace/re-erect	6 weeks	B	Fabrication delay may result in a reasonable delay
Any sign faded or obliterated to <30% visible	Replace	6 weeks	B	
Bollards, Posts, Fences and Barriers (for sign posts refer to Traffic Signs)				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Missing/broken leaving trip or hole or structurally unsound	Make safe	1 hour	Call Out	See below for follow up
Out of alignment and causing obstruction	Remove and make safe	next working day to 10 days	U - E	Consider location, make safe/barrier off where appropriate, follow up with removal, as required
Deterioration due to fatigue (rust)	Replace	6 weeks	B	Consider location and make safe if posing risk to public safety
More than 3 recorded times damaged	Report to Traffic for redesign			
Out of alignment but sound and not causing obstruction	No action			
Gullies				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Causes flooding over more than 33% of carriageway width on major road	Cleanse	next working day	U	Refer to gully management plan
Causes flooding over more than 33% of carriageway width estate road	Cleanse	7 days	E	Refer to gully management plan

Highway Features: Default Defect Investigatory Levels				
No flooding or less than 33% of carriageway affected	No action			Refer to gully management plan - Programme will resolve in due course
Street Lighting				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Day burner	Report to Street Lighting			Refer to street lighting management plan
Door off	Report to Street Lighting	2 Hrs	Call Out	Refer to street lighting management plan
Bowl hanging	Report to Street Lighting	2 Hrs	Call Out	Refer to street lighting management plan
Column in structurally poor condition	Report to Street Lighting			Refer to street lighting management plan
Highway Structures				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Safety Fences damaged - hazardous	Make safe – barriers, traffic management as appropriate	1 hour	Call Out	Report to Structures Team – Refer to structures management plan
Safety Fences damaged – not immediately hazardous	Report to Structures Team			Report to Structures Team – Refer to structures management plan
Bridge Parapets damaged - hazardous	Make safe – barriers, traffic management as appropriate	1 hour	Call Out	Report to Structures Team – Refer to structures management plan
Bridge Parapets damaged – not immediately hazardous	Report to Structures Team			Report to Structures Team – Refer to structures management plan
Street Seats				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Damaged with features potential to cause injury	Make safe	1 hour	Call Out	Complete as per pothole defect requirement
Missing slats	Repair/replace	6 weeks	B	
Slats showing deterioration	Re-varnish	6 weeks	B	Complete Apr-Sept. At other times evaluate requirement

Enforcement Issues: Default Defect Investigatory Levels				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Hazardous Basement Openings	Make safe	1 hour	Call Out	Call on or write to owner, liaise with StreetWorks and Structures Team
Dangerous Structures adjacent the Highway	Make safe, barriers traffic management	1 hour	Call Out	Inform Building Control
Dangerous trees (Highway)	Call Tree Gang	1 hour	Call Out	Refer to tree management plan
Dangerous Trees (not Highway)	Pass to Arboricultural Officer	next working day	N/A	Refer to tree management plan
Deposit of Objects on the Highway (such as unofficial signs, rocks etc.)	Consider location and remove immediately if necessary.			If not immediately hazardous, contact owner to inform of removal or advise to remove
Fly Tipping	Inform Cleansing	next working day	N/A	
Illegal Vehicle Crossing – causing damage to footway or verge	Inform Street Works	next working day	N/A	
Mud/Debris on the Highway - hazardous	Seek source/ arrange sweeping	1 hour	Call Out	If possible the source of the mud should arrange for the sweeping to take place all details needed for a recharge should be gathered if sweeping is to be arranged by officer
Overgrown Vegetation obstructing footway by 1/3	Issue letter to resident	next working day	N/A	Follow up in 2 weeks of letter and issue further letter as required

Town Centre Pedestrianised Areas: Default Defect Investigatory Levels				
Surface Defects				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
>21mm deep	Pothole Repair	1 – next working day	Call Out or U	Complete as per pothole defect requirement
13 - 20mm deep	Permanent Repair	4 weeks	B*	
0 - 12mm deep	No Action			
Surface Profile (surface intact but dipped or raised)				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
> 26mm deep over a 600mm straight edge	Permanent Repair	4 weeks	B*	
0 - 25mm deep over a 600mm straight edge	No action			
Cracks				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
>13mm wide and >13mm deep	Crack repair	4 weeks	B*	
0 - 13mm wide	No Action			
Ironwork – Utility Owned				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Missing	Make safe	1 hour	Call Out	Inform utility by Dangerous Section 81 Notice, re-evaluate category of defect following temporary repair as necessary
Sunken/Raised >21mm	Consider location and make safe or see additional notes	1 – next working day	Call Out or U	Inform utility by Dangerous Section 81 Notice, re-evaluate category of defect following temporary repair as necessary

Town Centre Pedestrianised Areas: Default Defect Investigatory Levels				
Sunken/Raised 13 - 21mm	Consider location	next working day	N/A	Inform utility by Dangerous or Standard Section 81 Notice, re-evaluate category of defect following temporary repair as necessary
Sunken/Raised 0 – 13mm	No Action			
Ironwork – Highway Responsibility				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Missing	Make safe	1 hour	Call Out	Complete as per pothole defect requirement
Sunken/Raised >21mm	Consider location and make safe	1 – next working day	Call Out or U	Complete as per pothole defect requirement
Sunken/Raised 13 - 21mm	Permanent Repair	4 weeks	B*	
Sunken/Raised 0 – 13mm	No Action			
Tree Pits				
Description	**Action**	**Default Time Frame**	**Order Cat**	**Additional Notes**
Soil/stone lower than adjacent footway >21mm	Inform Grounds			
Soil/stone lower than adjacent footway 0 - 21mm	No Action			

Service Level	Ref	Description	Measurement Criteria	Report Frequency	Levels of Risk			Performance - January 2018			Team Responsible
					Low	Medium	High	Trend	Current	Target	
1. Ensure resilience on the network	1.1	% of carriageways within the resilient network in good condition	'Good' is the % of the network where maintenance is not considered as defined by the national indicator Carriageway length and hierarchy as reported for WGA purposes. 'Resilient network' as published on the SBC web-site.	Annually	>90%	80-90%	<80%	↓	73.40%	85.00 %	HIAM
	1.2	% of gullies within the resilient network operating as required	'Resilient network' as published on the SBC web-site. Measure records the percentage of gullies which were attended during the reporting period, were able to be cleaned and did not surcharge when flushed.	Annually	>95%	85-95%	<85%	↑	99.80%	95.00 %	HCS
2. Promote sustainable solutions	2.1	% of excavated material from carriageway resurfacing works being recycled	Measure records materials which have been removed during carriageway resurfacing works. 'Recycled' includes excavated materials which have been re-used using in-situ and ex-situ methods, together with material transported to a licensed transfer station for use elsewhere.	Bi-Annually							HCW / HPPD
	2.2	% of lighting stock using energy efficiency lighting measures	'Stock' is the number of lanterns maintained by the highway authority, irrespective of mounting type or proximity to the adopted highway. 'Energy efficiency lighting measures' includes LED lights and control measures such as dimming and trimming.	Annually	>50%	25-50%	<25%	↑	7.00%	35.00 %	HIAM
3. Sustain a safe & working network	3.1	No. of insurance claims paid	Total number of claims citing poor condition of the highway network which are paid during the reporting period.	Annually	<15%	15-30%	>30%	↓	26.00%	15.00 %	Insurance
	3.2	No. of reported killed and seriously injured road casualties	Incidents as recorded on the STATS 19 Police reports	Monthly	<5	5-10	>10	↔	4	4	Traffic
	3.3	% of carriageway network in good condition	'Good' is the % of the network where maintenance is not considered as defined by the national indicator, irrespective of road class. Carriageway length and hierarchy as reported for WGA purposes.	Annually	>80%	70-80%	<70%	↑	77.40%	75.00 %	HIAM
	3.4	% of footway network in good condition	Measure is the aggregated length of functionally impaired and structurally unsound footways as recorded against UKPMS FNS criteria.	Annually	>90%	80-90%	<80%	↔	81.70%	85.00 %	HIAM
	3.5	% of structures in good condition	Measurement in accordance with BCI system of Inspections. Good condition where BCIav score >80	Annually	>90%	80-90%	<80%	↓	84.90%	85.00 %	HIAM
	3.6	% of lighting columns which have not reached their estimated lifespan	Number of assets and estimated lifespan as defined for WGA calculations.	Annually	<25%	25-50%	>50%		62.00%	35.00 %	HIAM
	3.7	% of traffic signals which have not reached their estimated lifespan	Number of assets and estimated lifespan as defined for WGA calculations. Calculations for traffic signals per approach and pedestrian crossings per site.	Annually	>85%	85-75%	<75%		85.65%	80.00 %	HIAM
4. Provide an accessible network	4.1	% of street works completed on time	'Street works' include works carried out by Statutory Undertakers and major council highway projects. 'On time' is in accordance with the programme approved by the street works team.	Quarterly							Street-Works
	4.2	% of highway structures without formal restrictions	The term 'restrictions' includes restriction to the width, weight or height of vehicles who may wish to traverse the structure.	Annually	>95%	95-85%	<85%		100.00%	100.00 %	HIAM
5. Engage with stakeholders	5.1	No. of subscribers to SBC 'Highways News'	The measure records subscribers who receive the highways newsletter by email.	Monthly	>1750	1750-1250	<1250	↑	1769	2000	HPPD
	5.2	Level of customer satisfaction with condition of roads	Satisfaction criteria as defined within the national NHT survey question 6.01	Annually	>50%	49-40%	<40%	↑	40.00%	50.00 %	HIAM

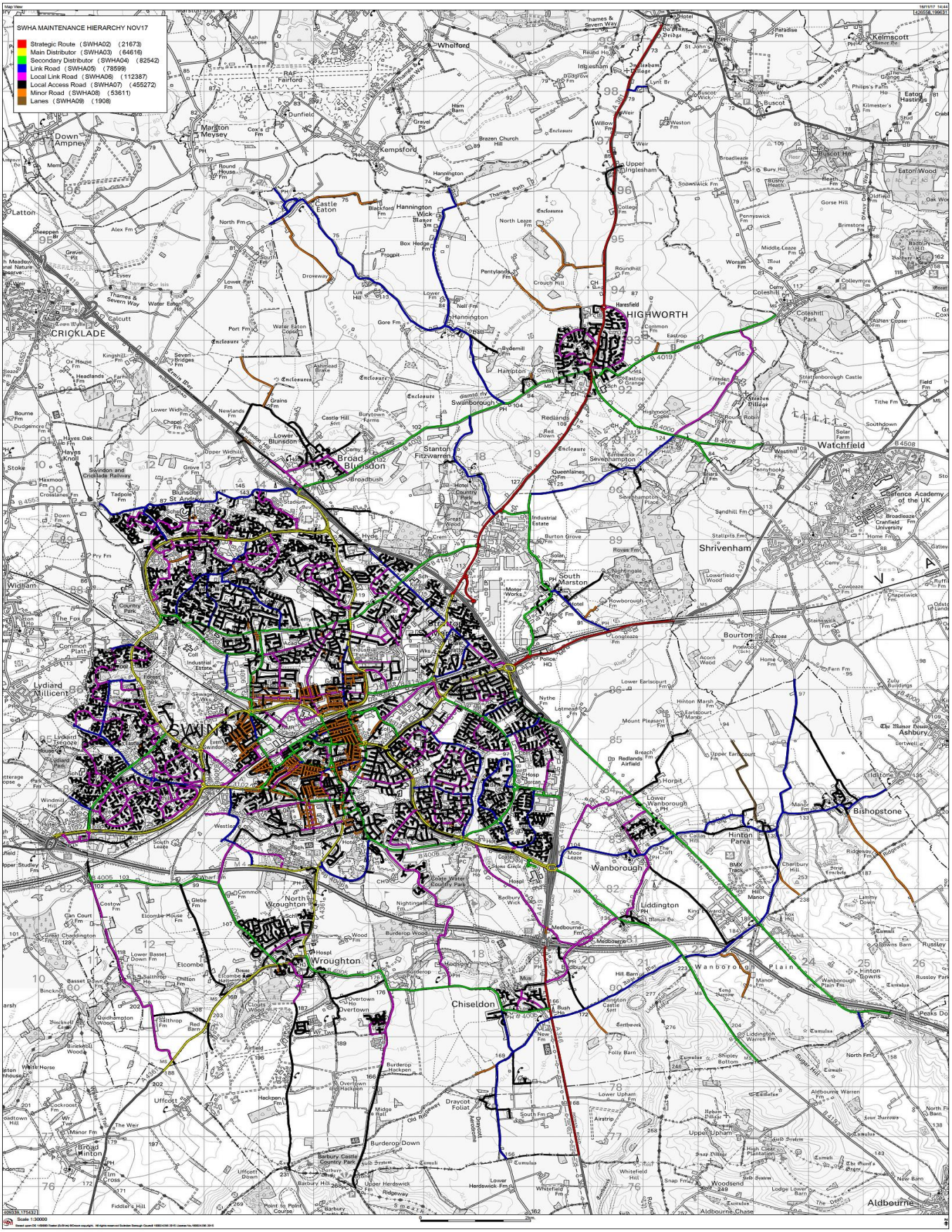
Appendix 2: Key Performance Indicators

Risk Categories Key	
RISK	**HIGH LIKELIHOOD OF:**
LOW	Some minor impact on service OR less than £50k financial loss OR interest contained within the department OR litigation claims £5k to £50k OR minor personal injury
MED	Disruption to service OR £50k to £500k financial loss OR local public or press interest OR litigation claims £50k to £500k OR major personal injury
HIGH	Serious disruption to service OR greater than £500k financial loss OR national public or press interest OR litigation claims greater than £500k OR serious personal injury

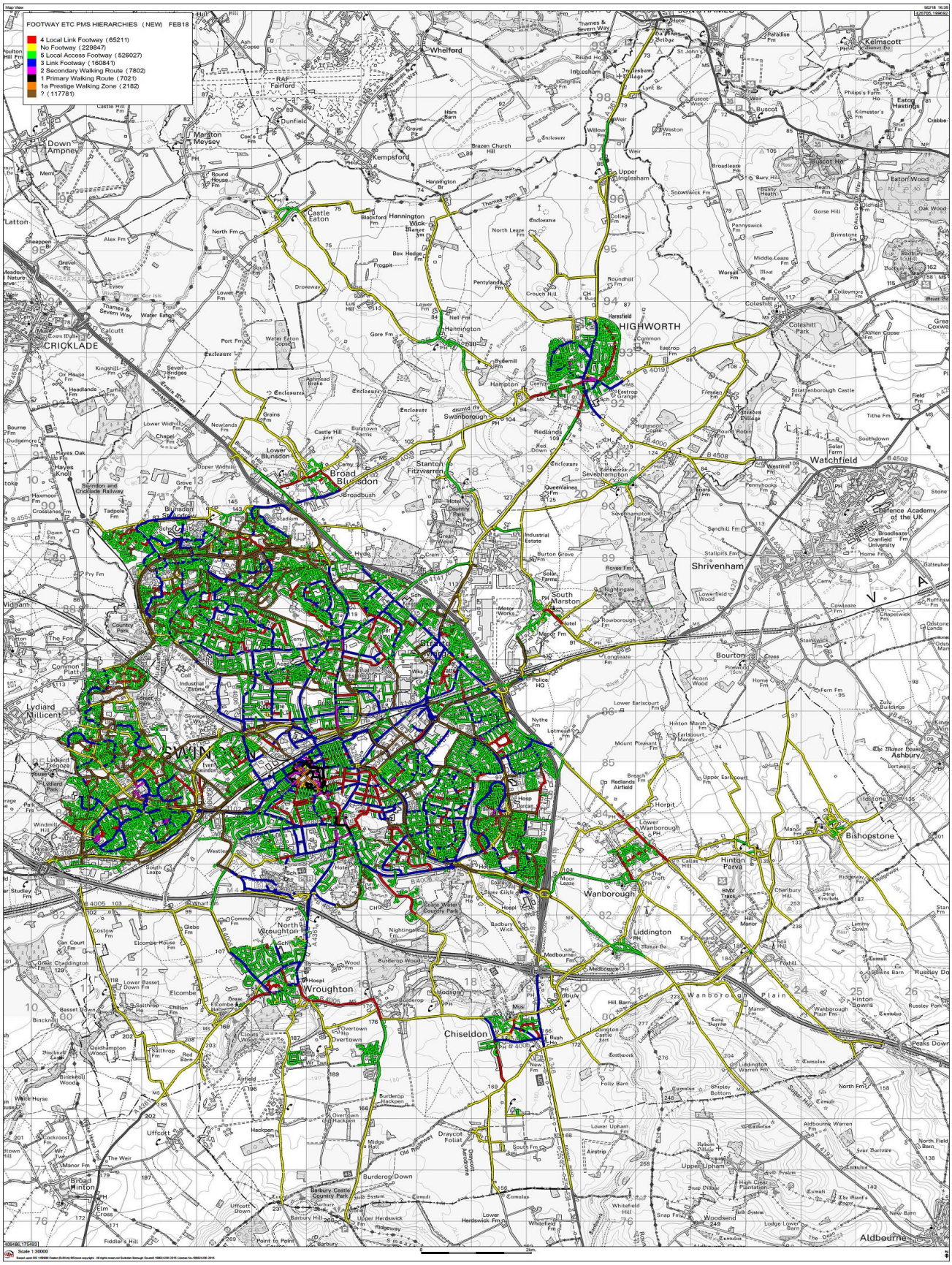
Notes

- Base date for completion of annual reports is 1 month before the LTP Annual Implementation Plan is presented to the Leadership team for approval.
- Bi-annual and quarterly reports to be made at 3 monthly and 6 monthly intervals from the base date. monthly reports will be collated by the Highway Asset Manager for discussion at the Service Manager meeting as appropriate
- Monthly reports will be collated by the Highway Asset Manager for discussion at the Service Manager meeting as appropriate.

Appendix 3: Network Hierarchy Maps



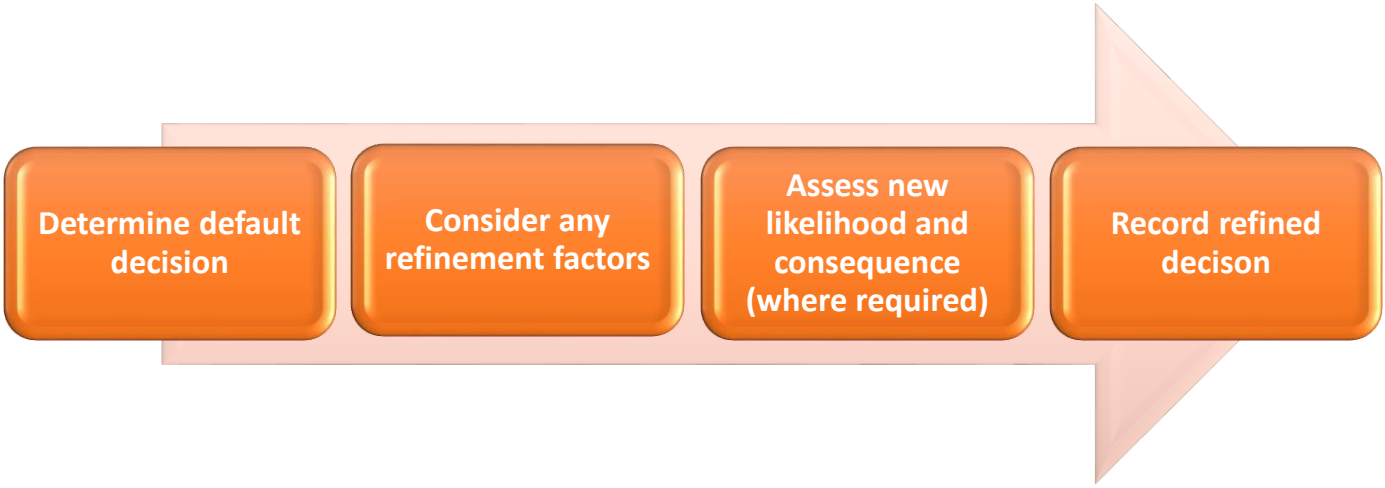
Appendix 3: Network Hierarchy Maps



Appendix 4A: Dynamic Risk Assessment Process

When assessing a defect, an inspector should consider the default investigatory levels; actions and target response times detailed in appendix 1. These have been tested in the Courts over many years and have been found to represent a proportionate response to risk in the majority of situations.

To ensure that decisions are always suitable when unusual conditions are observed and to account for defects where a default decision has not been pre-determined, each decision will be refined by means of a dynamic risk assessment process as detailed in figure 2 below:



When carrying out a dynamic risk assessment, an inspector should apply their knowledge and experience to ensure that the decision sufficiently mitigates the risk posed by the defect in relation to the surrounding environment. To assist inspectors in this regard, a non-exhaustive checklist of refinement factors that may influence their decision to refine any actions or target response times is incorporated within the Dynamic Risk Assessment Evaluation Record in appendix 4b.

Once the inspector has determined whether any factors are present that indicate the default decision should be refined, the resultant likelihood and impact of the defect to cause injury or damage should be evaluated using the Dynamic Risk Assessment Matrix in appendix 4c and an appropriate action and target response time should be determined and recorded on the Dynamic Risk Assessment Evaluation Record.

If the inspector is in any doubt regarding any aspect of this process or the correct action to take, they should seek advice from their supervisor.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Appendix 4B: Dynamic Risk Assessment Evaluation Record

Swindon Borough Council Dynamic Risk Assessment Evaluation Record		
Defect Observed:	**Inspection Number:**	
Location:	**Network Hierarchy:**	
Default Action:	**Default Target Response Time:**	
Refinement Factors: Likelihood of Defect to Cause Injury		
Usage volume: Is the vehicular or pedestrian flow at the defect location higher than usual for the hierarchy of the street? *If yes, record the reason – Is the defect located in a usage hotspot e.g. outside a local shop or in an area that is to be used for a large event on an otherwise residential street for example?*	**Yes**	**No**
Highway Users: Does the mobility, vision and comprehension of risk of highway users at the defect location present more likelihood of injury than usual for the hierarchy of the street? *If yes, record the reason – Is the defect located adjacent to a facility that highway users with physical or mental impairments are likely to access frequently e.g. a medical Centre on an otherwise residential street for example?*	**Yes**	**No**
Defect Position: Does the position of the defect in the highway present more likelihood of injury than usual for the hierarchy of the street? *If yes, record the reason. Is a carriageway defect at a crossing point or is an ACO channel cover missing in the centre of a footway?*	**Yes**	**No**
Visibility (good): Is it difficult to see the defect in daylight hours in time to avoid it? *If yes, record the reason - Is the defect on a sharp bend or crest for example?*	**Yes**	**No**
Visibility (reduced): Is the defect difficult to see during the hours of darkness in time to avoid it? *If yes, record the reason - Is it in an unlit area or shrouded by trees for example?*	**Yes**	**No**

Other Observations: Are there any other reasons why the defect is more likely to cause injury than is typical for the hierarchy of the street? *If yes, record the reason*	**Yes**	**No**

Refinement Factors: Potential Impact

Size: Are the dimensions of the defect far larger than the default investigatory level? *If yes, record the reason – Is the defect so unusually large or hazardous that it requires an immediate road closure or sign and guarding for example?*	**Yes**	**No**
Risk avoidance: Is the defect difficult to avoid without adding further risks? *If yes, record the reason – Are alternative routes restricted by the highway width; street furniture or high speed traffic for example?*	**Yes**	**No**
Risk accumulation: Is there a risk of a minor incident escalating into a more serious injury than is typical for the investigatory level? *If yes, record the reason – Is a footway defect close to the carriageway edge at a crossing point where a trip may result in falling into the carriageway for example?*	**Yes**	**No**
Risk transfer: Does the defect affect other assets at the defect location? *If yes, record the reason – Has the defect exposed other assets such as high voltage cables or led to large structures being undermined or security being compromised for example?*	**Yes**	**No**
Other Observations: Are there any other reasons why an injury is likely to be more serious than is typical for the investigatory level? *If yes, record the reason*	**Yes**	**No**

Refined Decision (Refer to Risk Matrix in Appendix 4C)

Likelihood score:	**Impact Score:**	**Total risk factor:**

Decision Maker:	Date:	Time:
Action:	Target Response Time:	

Appendix 4C: Dynamic Risk Assessment Matrix

Likelihood of Event Occurring	Consequence of Event Occurring				
	Negligible	**Very Low**	**Low**	**Medium**	**High**
	No consequence of note	*No personal injury. Extenuated vehicular wear and tear*	*Minor injuries. Vehicular damage to easily repairable consumable components*	*Moderate injury swiftly recoverable. Vehicular damage requiring replacement components*	*Serious injury with significant recovery time. Serious vehicular damage or damage to other assets requiring extensive repair.*
Negligible *(Defect will hardly ever affect highway users)*	**1**	**2**	**3**	**4**	**5**
Very low *(Defect is unlikely to affect highway users)*	**2**	**4**	**6**	**8**	**10**
Low *(Defect could foreseeably affect highway users)*	**3**	**6**	**9**	**12**	**15**
Medium *(Defect fairly likely to affect highway users)*	**4**	**8**	**12**	**16**	**20**
High *(Defect highly likely to affect highway users)*	**5**	**10**	**15**	**20**	**25**

Risk Factor				
Very Low – Consider no action; monitoring or action with long term target response Cat X/Y/Z	Low -Consider action with long term Cat B/B* target response	Moderate – Consider action with priority Cat E target response	High – Consider action with urgent Cat U target response	Critical – Consider action with call out target response

Adapted from UKRLG Asset Management Guidance 2011, Figure 10, Page 79

Appendix 5: Highway Safety Inspections – Standard Procedures

Driven Inspections

- Highway Safety Inspections should be avoided during the hours of darkness/dusk or under conditions of poor visibility, e.g. snow, fog or heavy rain;
- A roof mounted flashing light bar will be provided for use on all inspection vehicles. The vehicle must have clearly visible reflective markings, including sign(s) reading 'Highway Maintenance' affixed to the rear of the vehicle. The vehicle must carry signing to Chapter 8 of the Traffic Signs Manual when Find and Fix operations are being undertaken i.e. those defects that are required to be rectified immediately;
- When conducting inspections from a moving vehicle, this will be a two Inspector operation with the passenger carrying out the survey and recording the detail;
- Vehicles will be driven at speed suitable to enable the identification of defects and should not exceed 25mph. On some roads this may cause tailbacks of following vehicles;
- High visibility jackets to Class A (BS EN ISO20471) must be worn whenever Inspectors alight from the vehicle;
- Where possible the Inspection vehicle should allow such tailbacks to pass at the earliest opportunity;
- When it is necessary to stop, it is preferable to position the vehicle off the carriageway. If this is not possible, then there should be clear visibility in both directions, the beacon should be switched on and passing vehicles should not be forced to cross continuous white lining. When the above requirements cannot be met, then advance signing must be put in position or the vehicle should be placed in a safe location and the location in question accessed by foot; and
- When conducting part of the inspection on foot in the carriageway then adequate signing should be provided. For short duration stops, the placing of signs may be more hazardous than conducting the inspection. Inspectors should assess each location and if they feel that the placing of signs is more hazardous, bring the location to the attention of the Inspectors' Line Manager.

Walked Inspections

- High visibility jackets to Class A must be worn;
- Surveys should be conducted from footways or verges where possible, i.e. minimise time walking in the carriageway; and
- Periods of high pedestrian/traffic flows should be avoided where possible.

Cycled Inspections

- High visibility jackets to Class A and cycle helmets must be worn;
- Surveys should be conducted at a speed suitable for the identification of defects; and
- Periods of high pedestrian/traffic flows should be avoided where possible.

Swindon Borough Council