

#### DOCUMENT CONTROL

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# Introduction

Blackburn with Darwen Borough Council as the Highway Authority has a statutory duty to maintain the Highway to a safe condition and a duty of care to all users of the highway. The Highway Authority must take steps to ensure that it operates a reasonable system for Highway inspection and repair. The document sets out the procedure by which the authority seeks to achieve this objective.

This policy deals with **Safety Inspections** of the adopted Highway Network. Its aim is to provide assistance and guidance to all officers who are involved with the safety or maintenance of the Highway.

This document has been written with the aim of producing a procedure that is achievable and practical, enabling Blackburn with Darwen Borough Council to maintain the highway to a safe standard using the resources available. Well-managed Highways Infrastructure - Code of Practice, local conditions and knowledge, risk assessment, resources, highway usage and claim history all under pin this policy.

The policy will be reviewed annually and reported to the Executive Member for Regeneration.

The review will be carried out by the Head of Service for Highways in conjunction with a review team which will consist (although not exclusively) of:

Highways Management Lead Highways Inspections Manager Principal Insurance Officer Operations Highway Manager

# **Definitions**

#### Pothole

A defect in the highway surface which in general is circular in shape and is deeper than the wearing course.

#### Actionable defect

A failure in the highways surface that meets the Investigatory Levels in appendix 3 and has validated by risk assessment to require repair.

#### **Dangerous Defects**

A failure in the highways surface that meets the tolerance for "Dangerous Defects" in appendix 3.

#### **Non-Dangerous Defects**

A failure in the highways surface that is less than the tolerance for "Dangerous Defects" and greater than the tolerance for "Non-Dangerous Defects" in appendix 3.

#### **Highways Inspections System**

This refers to the electronic systems used for recording information on site. Inspections are recorded using S41 app and Defect completions using RTA (gangs app).

#### **Highway Management System**

This refers to Exor by Bentley. This is a national recognised Highways Asset Management System. This forms the basis for the Highways Information Systems.

#### **Maintenance Category**

The group name given to sections of highway that indicate the frequency of inspection and time scale for non-dangerous repairs.

#### **Utility Apparatus**

Items located on the highway that are owned and operated by statutory bodies. The owner is responsible for maintenance of these items.

#### S.81 Defect

Defects issued to statutory bodies under Section 81 of the New Roads and Streetworks Act 1991.

# **Functional Hierarchy**

Well Managed Highway Infrastructure Code of Practice recommends that network hierarchy should be based on asset function. It suggests that any hierarchy '...*reflects the whole highway network and the needs, priorities and actual use of each infrastructure asset*....' and goes on to explain that factors such as routes leading to a major hospital or industrial estate, busy shopping streets, etc. would be used to define carriageway hierarchy in addition to the more normally used traffic volumes. Considering this wider range of factors is looking at the 'functionality' of the highway.

The hierarchies below have been developed to reflect the functionality of the highway taking into account the authority's network management duties, protected streets, traffic sensitive streets, etc.

# **Carriageway Hierarchy**

Category	BwD Ref	Type of Road General Description	Description
Main Distributor	1	Major Urban Network and Inter-Primary Links.	Primarily, but not exclusively, the principal road network of 'A' class roads. In urban areas parking is restricted at peak times and there are positive measures for pedestrian safety such as controlled crossing points. Roads are often traffic sensitive, HGV generators and provide access to strategic buildings i.e. educational establishment, hospital and fire station. These roads will be included in the resilient highway network defined for gritting.
Secondary Distributor	2	B and C class roads and some unclassified urban routes carrying bus, HGV and local traffic with frontage access and frequent junctions	Roads in urban areas providing supplementary through route access to compliment the Main Distributor Network. Medium to high volume levels of traffic. On-street parking is generally unrestricted except for safety reasons. In rural areas, these roads link the larger villages, bus routes and HGV generators to the Main Distributor Network. These roads will generally be included in the resilient highway network defined for gritting.
Local Distributor	3	Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions	In urban areas, these are residential or industrial interconnecting (or "spine") roads providing local access into areas, random pedestrian movements and uncontrolled parking. In rural areas, these roads link the smaller villages to the main and secondary distributor roads. These roads can be of varying widths and provide access to village facilities / amenities e.g. sports facilities, community hubs, transport interchanges and social centres.
Local Network	4	Roads serving limited numbers of properties carrying only access traffic	In urban areas, these roads tend to be residential streets providing access to homes and individual industrial units. In rural areas, these roads serve small settlements and provide access to individual properties and land. They are often only single lane width and unsuitable for HGVs.
Minor road	5	Little used roads serving very limited numbers of properties.	Mainly back streets

# Footway/Footpath Hierarchy

Category	BwD Ref	Description
Prestige Walking Zones	6	Very busy areas of towns with high quality public space and street-scene contribution. Generally heavy footfall due to seasonal markets, public events, including large capacity educational establishments and access to strategic buildings.
Primary Walking Routes	7	Busy urban shopping and business areas and main pedestrian routes. Generally heavy footfall due to seasonal markets, public events, including large capacity educational establishments and access to strategic buildings. E.g. football stadium, parks, etc.
Link Routes	8	Linking local access footways through urban areas and busy rural footways. Generally, estate footways providing links to bus stops, car parks, community parks, schools, village facilities, amenities e.g. sports facilities, community hubs, transport interchanges and social centres.
Local Access	9	Footways and footpaths associated with low usage, short estate roads to the main routes and cul-de-sacs. They are generally residential / estate roads and may include local amenities.

n.b. the above hierarchy does not apply to the Definitive Public Rights of Way Network

Each street and footpath on the adopted highway network will be risk assessed and allocated the appropriate functional categories from the above hierarchies. The risk assessment will be carried out as per the proforma outlined in Appendix 1.

The risk assessment will consider the network hierarchy, network resilience, use, characteristics, characteristics of adjoining network elements approach of adjoining highways authorities and inspection history. The risk assessment and street register is held by the asset management team and updated as necessary.

# Inspections

## **Inspection frequencies**

The inspection frequencies have been set based on maintenance experience of the highway network, claim history, usage and the recommendations set out in the national guidance document, Well-managed Highways **Infrastructure -** Code of Practice.

Identified in the table below are the inspection categories and the interval of inspection for each network category (both carriageway and footway/footpath). Unless otherwise stated all adopted pedestrian areas as well as the adopted footways, carriageways and verges will be inspected. Streets with footways adjacent to the carriageway will be inspected at the interval with the highest frequency whether that be from the carriageway category or the footway category, i.e. a carriageway which acts as a local distributor (BwD 3 – IC 4) may have an adjacent footway which acts as a main pedestrian route (BwD 7 – IC 2), in which case the whole street would be inspected at the higher frequency of 'once every 13 weeks'.

Category	Inspection Interval	Related Hierarchy Categories		
		Carriageway	Footway/Footpath	
IC-1	once every 4 weeks with a tolerance of +/– 3 working days		BwD 6	
IC- 2	once every 13 weeks with a tolerance of +/– 5 working days.	BwD 1	BwD 7	
IC - 3	once every 26 weeks with a tolerance of +/– 10 working days.	BwD 2		
IC - 4	once every 39 weeks with a tolerance of +/– 10 working days.	BwD 3	BwD 8	
IC - 5	once every 52 weeks with a tolerance of +/– 10 working days.	BwD 4	BwD 9	
IC - 6	on a reactive basis only	BwD 5		

The extent of the inspection area is recorded in the council's GIS system.

# **Inspection Scheduling**

A system of recording the inspection date and the date for re-inspection will be operated and monitored. This system will ensure that repeat inspections are carried out within the designated frequencies and tolerances. There may be events outside of the authority's control that impact the inspection schedule. If this delays the inspection the cause will be recorded and the frequency extended.

# **Method of Inspection**

The Senior Inspector or Inspections Manager will issue the Highway Inspector with the routes or areas to be inspected.

Unless otherwise instructed by the Senior Inspector or Inspections Manager, only the designated areas and highways, in accordance with their relevant inspection frequencies should be inspected. If the Highway Inspector considers that a particular highway should be included that is not on their list, they should record their reasons as to why the particular highway should be added and discuss this with the Senior Inspector or Inspections Manager as soon as is reasonably practicable. The Inspections Manager will consider the reasons and determine if the particular highway should be added.

Except for driven safety inspections or unless authorised by the Senior Inspector or Inspections Manager, the Highway Inspection should be carried out on foot. The Highway Inspector should first walk up one side of the highway inspecting the footway and/or verges where applicable, including the carriageway up to the centre line. After completing the first half of the highway the inspector should return back along the street inspecting the opposite footway and/or verges where applicable, and including the remainder of the carriageway. This method should not be altered or changed without prior consent from the Senior Inspection or Inspections Manager.

Driven inspections authorised by the Senior Inspector or Inspections Manager should be inspected from a slow moving vehicle. These highways tend to be within the rural areas of the borough and normally do not have footways. The correct safety measures should be utilised when carrying out an inspection from a slow moving vehicle and the inspections should be undertaken in accordance with the DfT publication "Safety at Street Works and Road Works", with a qualified traffic management operative driving the vehicle and one inspector recording the inspection. The routes should be travelled in both directions to ensure that a thorough inspection is carried out.

The type of defect that the inspector is looking for should be in accordance with the classifications and Investigatory Levels laid down in the Defect Criteria (Appendix 3).

The inspector should however use their discretion and risk assessment techniques to take the necessary action to rectify any problem that they consider to be a risk or potential risk to a user of the highway. If the inspector determines that a non-dangerous defect has a significant contributing risk factor the defects repair response should be upgraded to a priority two. This upgrade can only be applied if the risk factor is clearly apparent at the time of the inspection. The problem, cause and the action taken should be recorded in the Highway Inspection System. This includes such things as utility workings or reinstatements, traffic signs or signals, streetlights, crash barriers, skips and scaffolding, and overhanging trees or bushes etc. Should the inspector require it, further advice can be sought from either the Senior Inspector or Inspections Manager.

The inspector should endeavour to start the inspection at a consistent point on each street. If the inspector needs to break off from the inspection of a street before it is complete they must record the exact point at which they have stopped and ensure that they resume at that point. This is necessary to ensure consistency and to prevent any part of a street being omitted from the inspection.

# **Method of Recording Inspections**

The information identified during the inspection of the highway needs to be recorded as per the procedure set down below:-

The Highway Inspection System should be used to record the information found during the inspection of a street (See Appendix 2 for user guide)<sup>1</sup>. Defects recorded should be categorised following the risk assessment guidance outlined in Appendix 3.

<sup>&</sup>lt;sup>1</sup> If the electronic Highways Inspection System fails the inspector should revert to recording defects using the paper forms as provided in appendix 5, 6 and 7. It is recognised that while operating a paper system only the information available can be recorded.

It is important to note that notebooks and diaries may be admissible as evidence in any litigation by a member of the public. These are **not** used for recording information from inspections etc.

**All** parts of the form must be completed if applicable. The following information is captured automatically for every inspection: -

Full name of inspector Street name & part/length of street inspected Route/Zone Date and Time

Clear, concise and accurate information should be given which must include the name of the street and the length or area of the street being inspected. The **precise** location, a GPS position and a photo of any defect found should be recorded in the Highways Inspection System. The nature, type and extent of the defect should be recorded and the inspector should, for works programming purposes, indicate the probable repair type on the inspection sheet.

It is important to positively record, so therefore if there are no defects found then it is important to record this fact. This should be done by clearly stating 'No Actionable Defects' that require action and the Street name part/length of street inspected is recorded.

No 'opinions' as to the condition of a street should be given e.g. "in my opinion" or "I feel".

If there is going to be any alteration or change to the information found on site or changes to the proposed action the reasons for this should be discussed with the Senior Inspector or Inspections Manager as soon as possible.

On completion of each street inspection the mobile device synchronises with the Highway Management System. The Claims Investigation Team will carry out a quality check of each inspection within one business day and take any suitable remedial action. A full inspection report can be obtained electronically. See sample Appendix 8.

If the Highway Inspector considers a length or part of a street to be in an extremely bad condition, and thus needs to be considered for substantial maintenance repairs or even re-surfacing, it should be marked as a Priority 8. A note should be made of the start and end of the area to be considered together with whether it is a footway and/or carriageway that needs attention. This information should be passed to the Highways Asset Manager. The Highway Inspector should still endeavour to remove all Dangerous Defects from the street while the street is reviewed for substantial maintenance.

# Works Ordering

All works associated with and arising from inspection carried out under the highway safety inspection procedure should be processed in the following way.

#### **Dangerous Defects**

#### Identified on site

The Inspector will telephone the operational office team with details of the defect and the necessary remedial works required.

Details of the defect along with the time that the remedial works are requested should be captured by the Highway Inspection System.

The operational works team should carry out remedial works **within 4 hours**. The operational team will aim to undertake a first-time permanent repair. If this is not possible they will undertake a temporary repair or erect barriers until a permanent repair can be undertaken.

On completion of the works the operations team will update the Highways Information System with the completion date and time along with any further information or feedback within one business day.

#### Received via public complaint/Report

Please refer to the Fault Reporting Procedure

## Non-Dangerous Defects that meet the intervention level

#### Identified on site

Street inspections are carried out as per the previous section. On completion of each street inspection the mobile device synchronises with the Highway Management System which in turn generates the appropriate works order within approximately half a working day.

Remedial works to be carried out in accordance with response times in Appendix 3. All non-dangerous defects will be repaired on a first-time permanent basis. If a permanent repair cannot be achieved due to site conditions a temporary repair should be done within the response times and a follow-up permanent repair undertaken within a reasonable time scale.

#### **Received via Public Complaint/Report**

Please refer to the Fault Reporting Procedure.

#### **Miscellaneous Defects**

If during the course of an inspection the inspector comes across something that is not mentioned in the Defect Criteria and they consider it to be a risk or potential risk to a user of the highway, the inspector should assess the potential risk that may arise by the time the next inspection is due and take the necessary action to rectify that problem and make the highway safe. Once made safe and the owner of the item is notified the asset owner will be responsible for the permanent repair. The problem, cause and action taken should be recorded in the Highways Inspections System. Further advice can be sought from either the Senior Inspector or Inspections Manager. This is applicable to such things as utility workings or reinstatements, traffic signs or signals, streetlights, crash barriers, skips and scaffolding and overhanging trees or bushes etc.

# **Utility Defects on the Highway**

Since the introduction of the New Roads and Street Works act in 1991 utility companies have a statutory responsibility for the work they undertake on the highway. This is especially with regard to reinstating their excavations and the repair and maintenance of their apparatus as defined under section 81 of the New Roads and Street Works act in 1991.

All utility defects should be recorded on the Highways Inspection System.

If the defect is considered to be a risk and an immediate hazard, the inspector should contact the appropriate utility company immediately detailing the immediate remedial works to be carried out and requesting that within two hours they inform the Highway Authority of the action taken.

If the utility company notifies the authority that it is unable to comply within the timescale or if the utility company cannot be contacted, the defect will be dealt with as a P1 defect and made safe. The Highway Authority will recharge the utility company for any such works carried out in default.

For those utility defects which fall within the intervention defect Investigatory Levels are recorded as a Priority 5 on the management information system and then passed to the Statutory undertaker via the S.81 Electronic Transfer of Notices (EToN) in line with the timescales for the maintenance category in which the defective apparatus is situated.

# S.81 Defect (Utility Apparatus)

Type of defect	Action
Dangerous Defect	Missing/broken lids or apparatus that fall within the following Investigatory Levels Carriageway >150mm Footway >100mm must be made safe with 2 hours by Statutory Undertaker
Non-Dangerous Intervention level	Defective apparatus that falls between the following Investigatory Levels Carriageway >=40mm and <150mm Footway >=25mm and <100mm Issued to Statutory undertakers to repair in line with Blackburn with Darwen repair timescales for the maintenance category in which the defective apparatus is situated.

# **Appendices**

Ар	ре	nd	İX	1
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# **Street Risk Assessment**

Street Name: .....ABBEY CRESCENT, DARWEN

2013 Inspection frequency 52 week(s)

# Carriageway

Carriageway Hier	archy Category	BwD 4
Any adjacent Traffic Generators?	None	
Traffic Flow Volume	Local	
Is the street Traffic Sensitive?	No	
Road Classification	Unclassified	
Is the street on the Resilient Network?	No	

# Footway

Footway Hierarchy	Category BwD	9
Any adjacent Footfall Generator?	None	
Walking Route (pedestrian flow level)L	_OW	
High Quality Public Realm?	No	

# Inspection

Using the table on Page 8 of the Highway Safety Inspection Procedure, the Inspection Category and Inspection Frequency based on the above carriageway and footway categories are as follows:

Inspection Category .....IC 5 Inspection Frequency ......52 weeks week(s)

# Appendix 2 Highways Inspections System – User Guide

Web Interface

Senior inspector is to log in and use the "Due for inspection" list to allocate streets for inspection by zone.

Welcome paul.withington@capita.co.uk Logout

CAPITA | Mobile Resource

Streets		RTA Home	S41 Home Admin	RTA Admin S41 A	Admin	
Cones No Filter Selected -						
No Filter Selected Blackburn Town Centre zone 1		Zone	unique int cod	le Last Inspection Da	te Next Inspection Due	
Blackburn Town Centre zone 2	RK) ,TOCKHOLES	Rural Roads		16/05/2017	16/05/2018	
Darwen 1 Darwen 10	BURN	Zone North East 4		15/06/2017	15/06/2018	
Darwen 11	URN	Zone North East 4		15/06/2017	15/06/2018	
Darwen 13	- URN	Zone North East 4		15/06/2017	15/06/2018	
4637 OAK STREET, BLACK	BURN	Zone North East 4		15/06/2017	15/06/2018	
4262 TENBY CLOSE, BLAC	KBURN	Zone North East 4		15/06/2017	15/06/2018	
1668 MANDELA COURT, BL	ACKBURN	Zone North East 4		15/06/2017	15/06/2018	
2 3 4 5 6 7	8 9 10					
			Make All Filtered Streets	Available To Assign N	lake Selected Streets Available To	o Assign

Each inspector is to log in and use the "Available workload list" to select the individual streets for inspection. And allocate them to their mobile device. This can be filtered by zone. The inspections should be done in the order they are due.

Select Resource         Assigned inspections         Select Resource         Select Resource           Reproduct         Select Resource         Select Resource         Select Resource           Reproduct         Assigned inspections         Select Resource         Select Resource           Reproduct         Select Resource         Select Resource         Select Resource           Reproduct         Select Resource         Select Resource         Select Resource           Resource         Assigned Inspections         Select Resource         Select Resource           Select Resource         Marcia Street Darwen         Select Resource         Select Resource           Select Resource         Assigned Inspection Resource         Select Resource         Select Resource           Select Resource         Assigned Inspection Resource         Select Resource         Select Resource           Select Resource         Darwen		×		Resource	Assign to I	CAPIT	
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NED     Street Name     50066     ALFRED STREET DARWEN     5002016     Astat inspection Due     Astat ins			16/06/2018	MARTIN DRIVE, DARWEN	26966	Available World * 208	
00005         WESTNORLAND CLOSE, DARVEN         10002018         10002018           00005         LOWER BARN STREETDARWEN         10002018         10002018           00005         CUMBERLAND CLOSE, DARWEN         10002018         10002018           00005         CUMBERLAND STREETDARWEN         10002018         10002018           00005         AUCHLAND STREETDARWEN         10002018         10002018           00005         AUCHLAND STREETDARWEN         10002018         10002018           00005         THE CLOSE, DARWEN         10002017         10002018           00005         THE CLOUGH LDARWEN         Darwen 5         10002017         10002018           01005         THE CLOUGH LDARWEN         Darwen 5         10002017         10002018	Next Inspection Due Assigned To	100	16/06/2018	ALFRED STREET, DARWEN	30866	Street Name	NEID
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SKR7         GREENFIELD STREET DARWEN         16062018         16062018           SKR7         GUIMBERLAND CLOSE, DARWEN         26513         WOODVILLE TERRACE DARWEN         16062018         16062018           SKR5         CUIMBERLAND CLOSE, DARWEN         2650         MEADOW STREET, DARWEN         16062018         16062018         16062018           SKR5         FORTLAND STREET DARWEN         SKR5         16062018         16	6/06/2018		16/06/2018	MARTON WALK, DARWEN	28515	OWER BARN STREET, DARWEN	5079
2 3         2653         WOODVILLE TERRACE DARWEN         16062018         16062018           2650         MEADOW STREET,DARWEN         2650         16062018         16062018           2650         AUCKLAND STREET,DARWEN         16062018         16062018         16062018           2650         AUCKLAND STREET,DARWEN         Meanow Street,DARWEN         16062018         16062018           2650         AUCKLAND STREET,DARWEN         Meanow Street,DARWEN         16062017         16062018           2         3         Complete Resting P1         Meanow Street,DARWEN Presting P1         16062017         16062018	6062018		16/06/2018	MELBOURNE STREET, DARWEN	26611	GREENFIELD STREET DARWEN	
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2626         AUCKLAND STREET,DARWEN         16062018         16062018           1189         KIRKDALE CLOSE, DARWEN         16062018         18062018           66017         WATER/FIELD AVENUE, DARWEN         18062018         18062018           1605         THE CLOUGH, DARWEN         26020         18062017         18062018           1605         THE CLOUGH, DARWEN         Darwen 5         19062017         19062018           2         3	606/2018		16/06/2018	MEADOW STREET, DARWEN	26610	DANEL STREET DARWEN	
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#### Mobile Application



#### S41 Inspection Home ÷ Notifications 5 Inspections Public Enquiries $\bigcirc$ Ad-Hoc Inspection w View Map O Sync Device 0 Update Streets 0 Sync Public Enquiries Help Inspection Log Application Logs 20 Settings

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Defects



The user logs in using the email address and assigned pin. This will connect and retrieve the required inspections.

The user initials are set but the user account that logged in with the option to select a second inspector if appropriate. The Initiation type, weather and road surface condition is selected by the user.

Swiping from the left edge of the screen to the right will reveal the user menu. For routine inspections the user selection inspections and will be presented with the list of inspection assigned from the web interface. From this screen the user can also change second inspector, the initiation type, the weather and the road surface condition.

	Done	
DRY	Road Surface Condition	•
FINE		•
SAF	Weather	*
Select	Initiation Type	
Select	2nd Inpectors Initials	*
PW	Inspectors Initials	÷

Inspections
Set Inspection Details
MARTON WALK, DARWEN
SYDNEY STREET, DARWEN Darwen 5
ALFRED STREET, DARWEN Darwen 5
AUCKLAND STREET, DARWEN Darwen 5
MARIA STREET, DARWEN Darwen 5
MARTIN DRIVE, DARWEN Darwen 5
MELBOURNE STREET, DARWEN
MEADOW STREET, DARWEN Darwen 5
WOODVILLE TERRACE, DARWEN Darwen 5

Once an inspection is started the user is shown an aerial view of the area they are

stood in and the adopted extent of the highway. Tapping the adopted area will tell the user the name of the adopted section. Defects can be recorded by long pressing in a location to locate the defect. This long brings up a new form to record the defects details. This

form will not save without the mandatory records being completed including a photograph.

At the bottom of the for is an "Issue Notice" check box. If this is selected when the record is saved it will trigger a dialog box to send

an immediate electronic notice to a statutory undertaker or an immediate email with the location, photo and any additional text required to the selected organisation. New organisations can be added the user should approach the Inspection manager for any additions.

efects	N 🆘 J 50% 🖬 13:37
Create Section 81 Not	ice
Sending from Organis	ation 2372
District 010	7
Send to :	
Vodafone	-
Prease note this has to identified as a safety of to the highways users must be complete wit XXXXX. Location Outs Description of defect 1 marked defect in cent carriageway. Issued 1 David James contact 01204 459483	and hin side 23. Repair re of ogged by number
Outside 23	
Submit	
ogle	ATTE-



#### Inspection State

ABBEY CRESCENT, DARWEN Darwen 3



Once a defect is logged a marker is left on the screen coloured by priority. This can be edited with a long press and moved if required. Once the inspection is finished the user should press the back button to return to the Start, Pause and Finish page. The stop button should be pressed this will send all defects up to the server.



If the sync is not complete due to insufficient data connection it will stay on the device and try again when data is available. The user can force a sync at any time by selecting Sync device at any time.

## Appendix 3 Investigatory Levels, Defect Actions and Response Times

#### Investigatory Levels

Location	Non-Dangerous Defect	Dangerous Defect
Footways	Trip height/depth >=25mm and < 100mm	Trip height/depth 100mm or greater <i>or</i> A defect that is likely to cause a threat to life or limb.
Carriageways	Trip height/depth >=40mm and < 150mm	Trip height/depth 150mm or greater <i>or</i> A defect that is likely to cause a threat to life or limb.

#### **Defects Actions**

Type of defect	Action
Dangerous Defect	An immediate instruction given to the Environment Department to repair/make safe within 4 hours
Actionable Non- Dangerous Defect	Works instruction generated from the Highways Management System upon completion of the inspection. Remedial work carried out in accordance with response times below.

#### Guidance for risk assessing defects

The risk assessment matrix below considers the likelihood and consequence of an event occurring and should be used by inspectors in their risk assessment to determine response priority.

#### Likelihood of events occurring

The Likelihood of an event occurring is linked to the volume of pedestrian or vehicular traffic that utilise the street. Each street has been risk assessed and assigned an inspection category. This inspection category represents the level of risk attributed to the street due but not limited to the network hierarchy, network resilience, street usage, street characteristics, characteristics of adjoining network elements approach of adjoining highways authorities and inspection history.

#### Consequence of event occurring

The consequence of an event occurring is based on the severity of the defect. The main indicator is the depth of the defect or the height of the trip. Investigatory levels are listed above with an additional easy guide in Appendix 4. The inspector should apply an on-site risk assessment technique based on known or apparent features. An example of a non-dangerous defect that may be considered to have a significant additional risk factor would be a defect that measures in the upper limit of the tolerance and is directly outside the main entrance to an elderly care home.

All non-dangerous defects identified as having a significant additional risk factor are to be assigned a Priority 2 defect response time. Whilst for some of the defects with a low priority response time this may seem excessive, it is to simplify the process/instruction to the teams and thus ensuring a consistent application and giving the safest outcome for the highway user.

			LIKELIHOOD	OF EVENT O	CCURRING	
		NEGLIGIBLE	LOW	MEDIUM	HIGH	SEVERE
		MC-5	MC-4	MC-3	MC-2	MC-1
E OF RING	Low (meets non-dangerous investigatory level)	Priority 7	Priority 6	Priority 4	Priority 3	Priority 2
SEQUENC T OCCUR	Medium (meets investigatory level and has a significant additional risk factor)	Priority 2				
CON! EVEN	High (Urgent \Dangerous)	Priority 1				

#### Risk assessment matrix for defect repair response times

The inspector's risk assessment of individual defects should be carried out following the flow chart below.

Should however the inspector consider that a length or part of a street needs to be considered for substantial maintenance repairs or even re-surfacing (see Method of Recording Inspections Section), then the area should be marked as a Priority 8 defect. These areas will be considered as high priority by the Highways Asset Manager for inclusion within any planned maintenance or resurfacing programme as budgets permit.



An easy guide to the Intervention Levels for common types of defect is included in Appendix 4 although where they feel that a defect does not lie within one of these 'common types', inspectors should assess the potential risk and take the necessary action to rectify the defect and make the highway safe.

#### **Response Times**

These times are the **MAXIMUM** permitted response times from date of inspection.

Inspection Category of street	Response/Zone	Priority
All	Repair/make safe within 4 hours	1
All	Repair carried out within 3 working days	2
IC-1	Repair carried out within 3 working days	2
IC-2	Repair carried out within 12 working days	3
IC-3	Repair carried out within 16 working days	4
IC-4	Repair carried out within 20 working days	6
IC-5	Repair carried out within 20 working days	6
IC-6	Repair carried out within 25 working days	7
	Inspection Category of streetAIIAIIIIIC-1IC-2IC-3IC-4IC-5IC-6	Inspection Category of streetResponse/ZoneAIIRepair/make safe within 4 hoursAIIRepair/make safe within 4 hoursAIIRepair carried out within 3 working daysIC-1Repair carried out within 3 working daysIC-2Repair carried out within 12 working daysIC-3Repair carried out within 16 working daysIC-4Repair carried out within 20 working daysIC-5Repair carried out within 20 working daysIC-6Repair carried out within 25 working days

<sup>&</sup>lt;sup>2</sup> If the inspector determines that a non-dangerous defect has a significant contributing risk factor it should be upgraded to a priority two response.

# Appendix 4 Easy Guide to Investigatory Levels and Defect Types

NOTE – This is NOT a full and comprehensive list of defect definitions. It is merely a guide.

## **Footway Investigatory Levels**

## Modular Paving / Rigid Construction

Description	Dangerous Defect	Non-Dangerous Defect
Trips in paving or concrete	>=100mm	>=25mm and <100mm
Rocking paving causing trip	>=100mm	>=25mm and <100mm
Damaged / broken paving with displacement causing trip	>=100mm	>=25mm and <100mm
Pothole	>=100mm	>=25mm and <100mm

#### **Flexible Construction**

Description	Dangerous Defect	Non-Dangerous Defect
Pothole	>=100mm	>=25mm and <100mm
	>=100mm and extending	>=25mm and <100mm and
Rapid change of footway profile	in plan direction less than	extending in plan direction less
	600mm	than 600mm

# Kerbing

Desc	ription	Dangerous Defect	Non-Dangerous Defect
Kerbs at pedestrian	Damaged kerb with displacement causing trip	>=100mm	>=25mm and <100mm
crossing points Rocking kerbs causing trip	>=100mm	>=25mm and <100mm	
Missing Kerb		Should be Classed as a Dangerous Defect and the appropriate action taken	n/a
Kerb defects at non-pedestrian crossing points		Defects within the investigatory levels should be appropriately recorded. However as pedestrians are alr aware of a 100mm change in level between c/w and f/v these locations the risk assessment may indicate that repair is not necessary.	

#### Drainage

Description	Dangerous Defect	Non-Dangerous Defect
Cracked / broken gully grates / missing gully grates	Should be classed as a Dangerous defect and the	n/a
Defects causing flooding of property	appropriate action taken	

# Guard-rails and safety fences

Description	Dangerous Defect	Non-Dangerous Defect
Damaged but not causing a danger or excessively bent	n/a	Notify asset owner that investigation is required
Damaged and causing a danger	Should be classed as a Dangerous Defect and the appropriate action taken	n/a

# **Carriageways Investigatory Levels**

## **Flexible Construction**

Description	Dangerous Defect	Non-Dangerous Defect
Pothole	150mm or greater	>40mm and <150mm
Rapid change of carriageway profile	150mm or greater and extending in plan direction less than 600mm	>50mm and <150mm and extending in plan direction less than 600mm

# Modular Paving / Rigid Construction

Description	Dangerous Defect	Non-Dangerous Defect
Damaged / Broken paving with displacement causing trip	150mm or greater	>=40mm and <=150mm
Pothole	150mm or greater	>=40mm and <=150mm
Damaged / cracked / broken concrete with displacement causing trip	150mm or greater	>=40mm and <=150mm

## Drainage

Description	Dangerous Defect	Non-Dangerous Defect	
Cracked / broken / missing gully grates	Should be classed as a Dangerous Defect and the appropriate action taken	n/a	

# Verges and Miscellaneous

Description	Dangerous Defect	Non-Dangerous Defect
Sharp protruding objects or deep sided depressions or holes > 150mm	Should be classed as a Dangerous Defect and the appropriate action taken	n/a
Knocked down, missing or acutely angled bollards	Should be classed as a Dangerous Defect and the appropriate action taken	<u>n/a</u>

Inspection ID No:		Inspectors Full Name:		Zone:	
Street Name:			Town:		
Length/Area Inspected:			Date & Time	Inspected:	

# Appendix 5 Highway Inspection Sheet (DANGEROUS DEFECTS)

Location	Cw Fw	Description	Area/ No	Trip Heiaht	Comments	Time passed to HAMIS Team

**DECLARATION:** Street Inspected in accordance with the safety inspection procedure

Insp Signature: -

Inspection ID No:	Inspectors Full Name:			Zone:	
Street Name:	ne:				
Priority:	Length/Area Inspected:		Date & Time I	nspected:	

Appendix 6Highway Inspection Sheet (SAFETY DEFECTS)

Location	Cw Fw	Description	Material Type	Repair Type	Area/ No	TM req <sup>d</sup>	Trip Height	Comments

**DECLARATION:** Street Inspected in accordance with the safety inspection procedure

Insp Signature: -

Inspection ID No:		Inspectors Full Name:		Zone:	
Street Name:			Town:		
Length/Area Inspected:			Date & Time	Inspected:	

# Appendix 7Highway Inspection Sheet (Miscellaneous)

Location	Cw Fw	Description	Comments	Action taken	Date & Time Completed

DECLARATION: ALL above issues dealt with

Insp Signature: -

# Appendix 8 Sample Full Inspection Report from Highway Management System

Inspection Date	Inspection ID	Defect Id	Defect Priority	Specific Location	Special Instruction	Defect Description	Defect Area	Defect Height	Defect Length	Defect Number	Status Code	Defect Completion Date	Inspector Name	Initiati on Type
26-Jul- 2012	81561	131708	5	o/s 167	EMAIL UU	UU Barriers need picking up	-	-	-	-	AVAILABLE	-		PE
17-Sep- 2012	82322	133392	1	o/s 144	make safe DSO 481	gully cover missing	-	-	-	-	COMPLETED	17-Sep- 2012		PE
12-Oct- 2012	82846	134390	4	o/s 138	1m2	f/w sunk at kerb f/w	-	30	-	-	COMPLETED	26-Oct- 2012		SAF
	82846	134391	4	junc Perry St	1m2	c/w potholes x 2	-	40	-	-	COMPLETED	26-Oct- 2012		SAF
	82846	134392	4	op 101	0.5 m2	c/w pothole in hump	-	45	-	-	COMPLETED	26-Oct- 2012		SAF
16-Oct- 2012	82900	134488	4	rear 21	noticed when passing	c/w pothole at gulley1m2	-	50	-	-	COMPLETED	05-Nov- 2012		PE
	82900	134489	4	rear 39	1,5 m2	c/w pothole	-	40	-	-	COMPLETED	05-Nov- 2012		PE
	82900	134492	1	rear 27	3m2 DSO 553	c/w pothole	-	90	-	-	COMPLETED	17-Oct- 2012		PE
08-Jan- 2013	89196	137208	4	O/s No. 231	Patch 0.5 x 0.5	10mm Bitmac Pothole c-way	-	44	-	-	COMPLETED	14-Jan- 2013		PE
14-Jan- 2013	89488	137840	5	All speed humps / Junc Tables	Between dates 14th - 16th January 2013	c/way potholes have been repaired by repair gang on a find and fix basis	-	-	-	-	AVAILABLE	-		PE
24-Apr- 2013	93473	144582	4	junc Cornfiel d St	1.5 m2	multi patch to speed table at crossing point	-	30	-	-	COMPLETED	13-May- 2013		SAF
	93473	144583	4	junc Higher Perry	1.5 m2 crossing point	multi c/w patch to speed table	-	46	-	-	COMPLETED	13-May- 2013		SAF

# Addendum Appendix 9 DATE CHANGE REASON