

# Code of Practice

## Highways inspections



| Ref | Date         | Revision Details                                                                                                                                                                                                                                                                         | Reviewed By                                      | Approved By    |
|-----|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------|
| 1   | April 14     | Issued at start of Contract – dated October 2013 – Version 2                                                                                                                                                                                                                             | Danny Mullins                                    | Andy Dickinson |
| 2   | Sept 14      | Updated format; added in details regarding Confirm connect as per new contract processes; updated quality control processes; updated note 1 in defect categorisation; updated info required on defect; inclusion of defect codes form confirm; updated tolerance of inspection due dates | Andy Dickinson/<br>Hannah Shires                 | Andy Dickinson |
| 3   | Dec 14       | Clarification of Desire lines, inclusion of Kerb defect tables, inclusion of bollards and potholes in priority criteria, inclusion of laybys in priority hierarchy, inclusion of policy approaches to Snow conditions and high-density defect areas                                      | Andy Dickinson/<br>Hannah Shires                 | Andy Dickinson |
| 4   | Feb 16       | Include defect matrix                                                                                                                                                                                                                                                                    | Andy Dickinson/<br>Patrick Connolly              | Andy Dickinson |
| 5   | November 16  | Review Draft Changes – Version 4.2                                                                                                                                                                                                                                                       | Andy Dickinson/<br>Patrick Connolly              | Andy Dickinson |
| 6   | January 17   | Issued Final Copy – Version 4.3 – Dated November 16                                                                                                                                                                                                                                      | Andy Dickinson/<br>Patrick Connolly              | Andy Dickinson |
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| 9   | February 19  | Update defect process flow - Draft                                                                                                                                                                                                                                                       | Andy Dickinson                                   | Andy Dickinson |
| 10  | April 19     | Final Version to include defect process flow – Version 4.6                                                                                                                                                                                                                               | Andy Dickinson/ Patrick<br>Connolly              | Andy Dickinson |
| 11  | December 19  | Update on bollards (7.2 and 8) following HSE safety alert – Version 4.7                                                                                                                                                                                                                  | Andy Dickinson                                   | Andy Dickinson |
| 12  | March 20     | National ‘Lockdown’ Covid 19 pandemic – Statement Emergency works only – Version 4.7.1                                                                                                                                                                                                   | Brian Varney                                     | Andy Dickinson |
| 13  | April 20     | National ‘Lockdown’ Covid 19 pandemic – Emergency works, restricted inspections plus enquiry responses only – Version 4.7.2                                                                                                                                                              | Brian Varney                                     | Andy Dickinson |
| 14  | August 20    | Review existing CoP (version 4.7) to implement following lifting of last ‘Lockdown’ restrictions, increase in enquiries and financial requirements imposed by authority.                                                                                                                 | D. Smith/ R.<br>Moffoot/Andy Dickinson           | Andy Dickinson |
| 15  | September 20 | Issued reviewed Code of Practice – Version 4.8                                                                                                                                                                                                                                           | D. Smith/ R.<br>Moffoot/Andy Dickinson           | Andy Dickinson |
| 16  | April 21     | Review matrix risk tables and associated definitions – Version 4.9 plus review programming dates                                                                                                                                                                                         | A Dickinson/ D. Smith                            | Andy Dickinson |
| 17  | April 21     | Add specifics regarding Bus Shelters. Version 4.9.1                                                                                                                                                                                                                                      | A. Dickinson                                     | Andy Dickinson |
| 18  | July 21      | Review pothole sections and priorities to include larger patches.                                                                                                                                                                                                                        | A. Dickinson/ M.<br>MacDonald                    | Andy Dickinson |
| 19  | October 21   | Review of prioritisation target dates                                                                                                                                                                                                                                                    | M. MacDonald                                     | Andy Dickinson |

|    |              |                                                                                                        |              |                |
|----|--------------|--------------------------------------------------------------------------------------------------------|--------------|----------------|
| 20 | May 22       | Inclusion of Visual Risk Assessment Matrix and Update of Asset Management System – Version 4.9.3 DRAFT | M. MacDonald | Andy Dickinson |
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| 22 | January 2023 | Review CoP for new Contract – Version 5.0.0 Final                                                      | M. MacDonald | Andy Dickinson |
| 23 | January 2025 | Review CoP for Contract – Version 5.0.1 DRAFT                                                          | M. MacDonald | Andy Dickinson |
| 24 | April 2025   | Confirm updates – Version 5.0.2 Final                                                                  | M. MacDonald | Andy Dickinson |

| Title                         | Code of Practice for Highway Inspections                                                                            |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------|
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## Contents

|                                                           |    |
|-----------------------------------------------------------|----|
| 1. Introduction .....                                     | 5  |
| 2. Definitions and Responsibilities.....                  | 8  |
| 3. Budgets and Resources .....                            | 9  |
| 4. Definition of Carriageway and Footway Categories ..... | 13 |
| 5. Frequencies of Inspection .....                        | 14 |
| 6. Quality Control .....                                  | 16 |
| 7. Methodology for Inspections .....                      | 16 |
| 8. Defects Identified during Safety Inspections .....     | 21 |
| 9. Information to be Added to the Defect.....             | 28 |
| 10. Defects not under the ownership of the Council .....  | 31 |
| 12. Defects – Investigatory Levels.....                   | 36 |
| Location .....                                            | 44 |
| 13. Examples of Prioritisation of Defects .....           | 47 |

# 1. Introduction

The Council has a duty to maintain its highways as outlined within Section 41 of the Highways Act 1980. For the purpose of Section 58 of the same, which provides for a special defence, Milton Keynes City Council (MKCC) carries out cyclic highway safety inspections of all its adopted highways.

This Code of Practice has therefore been developed with the primary aim of providing assistance to those carrying out highways safety inspections on behalf of MKCC, in order that they may carry out their duties with consistency and to clearly recognised and understood criteria.

This code has been developed and reviewed by a working group of officers and inspectors who are directly involved at varying levels of responsibility in the function of highway related maintenance, inspections, claims and management. This code gives due regard to the Council's duties and has taken reference from other codes of practice and appropriate legislation.

MKCC's code is based on the "UK Roads Liaison Group Well-Managed Highways Infrastructure Code of Practice for Highways Maintenance Management" (2016) and amendments. This document gives guidance for the delivery of a safe and well-managed highway network relying on good evidence and sound engineering judgement. The intention of this Code is that Authorities will develop their own levels of service, and therefore provides guidance for authorities to consider when developing their approach in accordance with local needs, priorities and affordability. This code makes specific recommendations in Section A.5 'Risk Based Approach' with regard to surveys and inspections using a risk-based approach.

Our methodology is to undertake safety inspections as follows;

- Planned cyclic safety inspections to identify potential hazards proactively.
- Reactive safety inspections following customer enquiries logged in respect of defects reported on the highway.

Records of cyclic safety inspections and reactive safety inspections are maintained on a service specific computer database.

This code sets out investigatory levels and operational processes that are considered appropriate and reasonable, taking into account the safety of highway users and the constraints placed upon the Council to manage public funds responsibly within defined budgets.

Safety inspections are carried out to specified frequencies, dependent upon the hierarchy of each part of the highway in line with the guidance in the Code of Practice for Highway Maintenance Management. During the inspection, defects are identified for investigation

where they meet the investigatory levels as outlined within this code, and jobs are raised, prioritised and processed for repair.

## Annual review of Code of Practice for Highway Inspections

This Code of Practice for Highway Inspections is reviewed annually. The review process involves feedback from the Highway Inspectors, a group review in a weekly meeting and then a follow up session once the new code has been adopted to explain the main changes and expectations, and identify any further training requirements.

## Highways Maintenance Efficiency Programme (HMEP) Pothole Review - MK Highways Statement

In April 2011 the Government announced an initiative to review the pothole problem under the umbrella of the Department for Transport sponsored Highways Maintenance Efficiency Programme (HMEP). A Project Board involving a range of key stakeholders from the public and private sectors, including road, footway and cycle user groups was set up in August 2011.

The Review has considered how local highway authorities in England currently deal with potholes, as well as wider stakeholder views and implications. The focus of the Review has been to identify good practice through consultation, and to demonstrate how potholes and other related aspects of highway maintenance may be dealt with more efficiently and effectively. This will also enable sharing of knowledge between authorities, including lessons learnt. MK Highways team contributed to this review.

Following the completion of this review and the publishing of the final document there are three key messages:

1. **Prevention is better than cure** – intervening at the right time will reduce the number of potholes forming and prevent bigger problems later.
2. **Right first time** – do it once and get it right, rather than face continuous bills. Guidance, knowledge, and workmanship are the enablers to this.
3. **Clarity for the public** – local highway authorities need to communicate to the public what is being done and how it is being done.

We have procured and commenced a new term service contract in September 2024, and we have changed the approach within the scope specification for highway repairs requiring a “right first time” approach from the contractor and a minimum 2 year warranty on all repairs to improve quality.

Within the contract the highways repair service has been outlined with the ‘Contract Scope’ and all maintenance is delivered within Core Service 009 – Routine, Reactive Highway Repairs and Emergencies. The contractor is to provide an effective response to emergencies

and to undertake routine and reactive maintenance on highway assets within appropriate timescales in accordance with the Milton Keynes Code of Practice for Highways Inspections to ensure a safe highway network is maintained.

## 2. Definitions and Responsibilities

### Definitions

|                                                         |                                                                                                                                                                                                                                   |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Client                                              | Milton Keynes City Council Highways Service Team.                                                                                                                                                                                 |
| Highways Liaison Team                                   | The Highways Liaison Team provide a support function to the Highway Inspectors in delivering the inspection service                                                                                                               |
| The Contractor                                          | Ringway Infrastructure Services Ltd                                                                                                                                                                                               |
| Hazard                                                  | In the terminology of this document a hazard is defined as an issue or defect on the network that has potential to cause harm to highway users.                                                                                   |
| Investigatory Level                                     | Depth/size at which a defect is then subject to a risk assessment as to whether it poses a hazard to the highway user.                                                                                                            |
| Defect                                                  | In the terminology of this document a defect is defined as a logged defective element of a highways asset and has an associated defect code and priority ranging from below investigatory level to high priority.                 |
| Risk matrices for defects and visual risk assessment    | Risk matrices that consider the probability and the impact of a defect identified for investigation. Following the risk assessment, the defect is assigned a priority and raised as a Works Required for repair.                  |
| Works Required                                          | In the terminology of this document a Works Required is defined as the action raised from a defect or a hazard that will be completed by the contractor. All works will be completed in accordance with works scheduling process. |
| Asset Management System – AMX (Asset Management Expert) | The highways asset infrastructure management system that captures all details of hazards, defects, and Works Required.                                                                                                            |
| AMX mobile application                                  | The mobile version of the Asset Management System (AMS) that allows inspections to be carried out electronically on site.                                                                                                         |

### Key Responsibilities

The **Client** has a responsibility to undertake inspections in accordance with this Code of Practice and provide guidance to ensure the contractor has clear instruction to deliver the Highways Repairs Service.

The **Contractor** has a responsibility to deliver the repair service in line with this Code of Practice and achieve the quality standards and objectives (SPI - Service Performance Indicators and KPI – Key Performance Indicators) outlined in the contract scope.

Further responsibilities for other parties are outlined in the detail contained within this Code of Practice.

### **3. Budgets and Resources**

To deliver its 'duty of care' to users of the highway, and to ensure best value in public service, the Council provides financial resources to ensure that inspections and operations can be carried out in both a planned and reactive manner to maintain its highway in a safe condition. Clearly, reactive and planned programmes of work to remedy defects are dependent on the resources available to the authority to manage the risks that defects may present. This manual therefore provides guidance on the appropriate identification, assessment, and classification of defects to be repaired; with priority decided following a defect-specific visual risk assessment by the inspector.

#### **a. Budgets**

Each year the Council determines the allocation of its financial resources with due consideration to its strategic aims and priorities. The highway maintenance budget is one area of allocation, which is split into a number of core service delivery areas, each with its dedicated budget. An allocation of budget is specifically set aside for undertaking routine, reactive and emergency repairs identified during all safety inspections.

#### **b. Resources**

A team of competent Highways Inspectors are used to undertake cyclic safety inspections and reactive ad-hoc inspections. This team currently consists of four full time Highway Inspectors. The Highway Inspectors are supported by a line manager to provide guidance, advice and supervision. The Service Manager is also available for guidance and to implement changes to the Code of Practice that need to be contractually communicated. The Highway Inspectors are provided with an electronic tablet to carry out inspections, availability of a Chapter 8 liveried vehicle for driven inspections, and full Personal Protective Equipment in accordance with Health and Safety Policy.

Additional resource in the form of the Highways Liaison Team has been assigned to support the Highways Inspectors. Milton Keynes has been divided into 4 areas, each with a dedicated inspector and liaison officer assigned, to manage highway enquiries, escalations, inspections and complaints.

#### **c. Competency**

Both new and existing Highway Inspectors are required to work remotely and independently when undertaking site inspections, interpret guidance documents, apply codes of practice, identify appropriate repair solutions, understand their role in terms of laws that affect the highway and asset management principles to ensure good management of assets. They are also required to give evidence and represent the Council in line with data they have generated and decisions made.

In order to evidence competency of inspectors we have reviewed the UKRLG 'Highway Inspector Competence Framework' and applied elements of this to our own inspection team. This will assist inspectors' development and ensure consistency in approach and that all inspectors have a minimum level of training and assessed competency.

This will include;

- Industry level training
- Internal asset system (AMX) training
- Desk based defect assessment sessions
- Site audits defect assessments
- Training on construction processes and materials
- Weekly inspector team meetings
- Monthly 1 to 1 identifying team objectives/training requirements/skills gaps/actions
- Annual review and training on Code of Practice for Highway Inspections
- Create individual competency statement

Each inspector will hold all training and competency assessment material in the Highways Inspection team folder on Sharepoint. New inspectors will receive additional support during induction and will be subject to a training plan incorporating the above.

## **Industry Level Training**

### **City and Guilds 6033**

#### **Unit 301, Health and Safety and Unit 311 Highway Safety Inspection**

These courses are designed to assess the inspector's ability to work safely on the highway and to provide a qualification that will prove the inspector's knowledge with respect to undertaking safety inspections.

#### **NRSWA Supervisors Accreditation (add awarding body)**

Inspectors are expected to have, or to attain this accreditation whilst in post. The course can be taken by a day release method, or a one-off week's training course.

#### **Lantra T7**

Traffic Management course designed to give the Inspector the ability to determine traffic management requirements.

#### **Court Training**

Training to be undertaken in order to expose the inspector to court scenarios and prepare them for the process of a legal court and cross examination by legal counsel.

## **Asset System Training**

Milton Keynes City Council operates a combined works management and asset management system called AMX. This system is used to manage all aspects of the highways service including highway inspections. All inspectors have to attend internal training sessions and have training videos on the use of the councils SharePoint system for reference.

## **Desk/Site based Audit Assessments**

In order to establish and monitor competency of inspectors MKCC carries out an annual desk-based competency exercise with the inspectors as a group involving defect identification/prioritisation in line with this Code of Practice. In addition the inspectors will also be subject to a site based audit to establish competency in multiple areas.

## **Training on Construction Processes and Materials**

MKCC and its contractor undertake learning through specific training courses to introduce and understand application of different products/ processes the inspectors are always encouraged and expected to attend these courses. Details added to individual 1 to 1 training programmes.

## **Weekly Inspector Team Meetings**

A weekly Inspector team meeting is held with the Highways Liaison team and is chaired by the Highways Service Manager/Asset Engineer. The purpose of this is to plan activities for the following week, confirm resilience cover for leave, and raise any issues encountered during the previous week. It is also an opportunity to communicate areas of open discussion on key issues to enable shared learning such as case law pertaining to highway claims.

## **Formal 1 to 1 Staff Appraisals**

An appraisal in the form of a one to one is held in accordance with MKCC guidelines, both to provide the appraisee with an opportunity to discuss any training requests, developmental needs, and issues, and for the Manager to talk about performance and any issues related to work.

## **New Inspectors Induction Training in addition to the above**

### **Managers Introduction and Briefing**

All new members of staff engaged in highway inspections undergo a manager's briefing and introduction on starting. This would include.

- a) A brief overview of the Council and its objectives
- b) A briefing on highway procedures and protocol
- c) A health and safety Induction
- d) An introduction into IT procedures
- e) An induction into the workplace

## **Work Shadowing**

Dependent on the knowledge and experience of the new inspector, work shadowing can be arranged. This entails 'shadowing' an existing highways inspector to gain first-hand knowledge of procedures and actions taken. No new inspector will be allowed to carry out inspections until he has been assessed as competent and holds the core qualification of C & G 6033 as a minimum.

## **Code of Practice for Highway Inspections**

Any new member of staff will be provided with this document, but also shown the Code of Practices for Highway Maintenance Management, and where it is kept. This document will form the basis of highway inspections for Milton Keynes.

## **IT courses**

These courses are run in-house, and most Microsoft products are covered, i.e., Excel, Word, and Outlook. Courses can be undertaken at all levels from basic to advanced.

## 4. Definition of Carriageway and Footway Categories

Milton Keynes City Council has considered the guidance in 'Well Managed Highway Infrastructure' in terms of local application and developed a road and footway category and hierarchy as shown below.

### a. Carriageways

|             |                       |                                                                             |
|-------------|-----------------------|-----------------------------------------------------------------------------|
| Category 1  | Motorways             | None                                                                        |
| Category 2  | Strategic             | All 'A' roads                                                               |
| Category 3a | Main Distributor      | Grid roads that are not 'A' roads and 'B' roads within the designated area. |
| Category 3b | Secondary Distributor | 'B' roads outside the designated area & all 'C' roads.                      |
| Category 4a | Link Road             | Bus service routes                                                          |
| Category 4b | Local Access Road     | All other roads                                                             |

### b. Footways

|                    |                         |                                                         |
|--------------------|-------------------------|---------------------------------------------------------|
| Category 1a        | Prestige Walking Zone   | None                                                    |
| Category 1 Primary | Walking Route           | All defined Primary Routes                              |
| Category 2         | Secondary Walking Route | Local Centres and other shopping areas. Other CMK areas |
| Category 3         | Link Footways           | School main entrances                                   |
| Category 4         | Local Access Footways   | All other footways                                      |
| Category 5         | Public Rights of Way    |                                                         |

### c. Redways (Cycleways)

|             |                                                 |
|-------------|-------------------------------------------------|
| Category a  | Cycleways that form part of the carriageway     |
| Category b1 | Primary redways, identified in salting routes   |
| Category b2 | All other redways                               |
| Category c  | Leisure Routes – not normally MK responsibility |

### d. Laybys & Car Parks on adopted highway

To be treated as Carriageway Category that the layby or car park is attached to and shall be inspected as part of that inspection frequency. Inspectors may vary the priority of a defect repair in a layby or car park based on Table 3 (Visual Risk Assessment) if they consider that it presents a greater risk to pedestrians.

## 5. Frequencies of Inspection

All highways are assigned a frequency of inspection that can vary dependent upon a number of factors, including:

- Classification of road
- Amount of pedestrian traffic
- Location

A particular highway may in some instances have varying frequencies of inspections along its length.

Safety Inspections must be completed within a tolerance of +/- 5 calendar days of their scheduled date. The Service Manager may alter the due date of a Safety Inspection for operational reasons, but any such alteration will be subject to a documented risk assessment.

Compliance with the required frequencies is monitored at a corporate level by MKCC's Quarterly Performance Data report.

These categories and priority for inspection are reviewed annually in order to take into account changes of use, new infrastructure in existing streets, and adopted areas as a result of development. This review will be undertaken by the Asset team and recorded changes added to the AMX system which will then be adopted as the new inspection regime.

The general frequencies are as follows:

### a. Carriageways

| Category    | Frequency | Method of Inspection                                                                        |
|-------------|-----------|---------------------------------------------------------------------------------------------|
| Category 2  | Monthly   | Driven                                                                                      |
| Category 3a | 3 Monthly | Driven                                                                                      |
| Category 3b | 3 Monthly | Driven                                                                                      |
| Category 4a | 6 Monthly | Driven                                                                                      |
| Category 4b | Annually  | Urban - Walked in conjunction with the footway inspections.<br>Rural - Driven<br>See Note A |

Note A: for serviceability inspections all driven inspections shall be undertaken with a recordable AI system in the vehicle.

## **b. Footways**

| Category          | Frequency | Method of Inspection |
|-------------------|-----------|----------------------|
| Category 1        | Monthly   | Walked               |
| Category 2 Others | 3 Monthly | Walked               |
| Category 2 CMK    | 4 Monthly | Walked               |
| Category 3        | 6 Monthly | Walked               |
| Category 4        | Annually  | Walked               |

## **c. Redways**

| Category    | Frequency | Method of Inspection |
|-------------|-----------|----------------------|
| Category b1 | 6 monthly | Walked/Cycled        |
| Category b2 | Annually  | Walked/Cycled        |

## 6. Quality Control

Quality Audits on the defects and jobs raised during an inspection will be undertaken throughout the year by MKCC line manager in line with competency assessments.

## 7. Methodology for Inspections

### a. Method of carrying out Inspections

The inspections for both footways and carriageways in Central Milton Keynes, town centres, estates and rural footpaths are undertaken on foot.

Each Highways Inspector is responsible for a dedicated area within Milton Keynes, with the aim of improving efficiency and consistency through local knowledge. Where operationally possible, all cyclical and reactive inspections within the dedicated area will be carried out by the same Highways Inspector.

Principal roads, classified roads, bus routes, grid roads and rural unclassified roads are driven. All driven inspections are carried out by two persons – a driver and a dedicated observer. The observer will always be a competent Highways Inspector, and all Inspectors are expected to carry out this function on a rota basis.

*See Note A – Section 5a – Carriageways.*

Redways are either cycled or walked.

### b. System recording of Inspections

Inspection information is entered onto electronic data capturing equipment (tablet). These devices are set up with the AMX system and are continually synchronized with the 'host' system for processing throughout the day. Inspections are undertaken with due regard to staff safety and in accordance with the appropriate procedures.

During the inspections, the Highways Inspectors add defects in accordance with the defect codes available using the mapping functions on AMX (Table 1 – Defect Codes – Page 22 & 23). Priority codes are then added to the defects by the Highways Inspectors in accordance with the guidance contained in this Code of Practice. Photographs are taken of each defect raised to help show location and severity of the defect. These are all stored and accessible in AMX.

Reactive Inspections as a result of an enquiry are sent to the appropriate Highways Inspector who is inspecting the relevant area. It will appear on AMX Mobile as an "enquiry" and the

Highways Inspector will respond appropriately by either closing down the enquiry with appropriate information and photograph, or raise a defect associated with the enquiry. In some circumstances they may need to be referred to a third party and if this is the case then they will still capture as much information on site as possible.

## 7.1 Risk Management of Defects

In accordance with the new national guidance on risk management of the highway assets, MKCC has updated this code of practice for highway inspections to adopt the investigatory principle that replaces the intervention level. This is the primary change to the document and requires the highway inspector to apply a judgement using the risk matrix tables rather than only taking action when a defect reaches a set trigger. This is to ensure all risk factors are taken into consideration and all defects are given the appropriate repair priority in accordance with the risk assessment. Section 12 indicates investigatory levels used to trigger a visual risk assessment which is then carried out in accordance with table 3.

## 7.2 Investigatory level

The investigatory level is the point at which a risk assessment should be conducted. It must be stressed that these investigatory levels are for purposes of guidance **only**, and that in particular circumstances, inspection items with a lesser degree of deficiency, may pose an equal or greater safety hazard. Note: this is a visual risk assessment (VRA) see table 3.

A Highway Inspector's on-site judgement will always need to take an account of the circumstances that prevail. For example, the degree of risk from a pothole depends upon not only its depth, but also on its surface area and location, and as such may warrant differing response times. When a defect is imminently approaching, has reached, or is in excess of the investigatory level, the highway inspector should conduct a VRA in order to determine the appropriate level of response. See table 3.

The following steps should be used to determine what action, if any should be taken when a defect is identified during an inspection.

- a) **Risk Identification:** As stated previously, this is any inspection item with a defect level that is imminently approaching, has reached, or is in excess of the stated defect investigatory level in the risk matrix tables – Section 12.
- b) **Risk Evaluation:** All identified risks have to be evaluated in terms of their significance, which means assessing the likely impact should the risk occur and the probability of it actually happening. See table 3.
- c) **Risk Impact/Probability:** The impact is quantified by assessing the extent of damage likely to be caused should the risk become an incident. As the impact is likely to increase with increasing speed, the amount of traffic and type of road are clearly

important considerations in the assessment. The probability is quantified by assessing the likelihood of users, passing by or over the defect, encountering the risk. As the probability is likely to increase with increasing vehicular or pedestrian flow, the network hierarchy and defect location are, consequently, important considerations in the assessment. Examples are shown in the tables on the next page. Note this list are examples only, and do not cover all impacts or probabilities possible during the VRA. See table 3.

| Defect                                         | Impact Risk – factors to consider                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Users                                          | <ul style="list-style-type: none"> <li>• Type of user i.e., vehicles/pedestrians/cyclists/wheelchairs</li> <li>• Shared surfaces e.g., Redways or CMK Underpasses can be used by pedestrians and cyclists and have differing risks</li> <li>• Vulnerable users – Wheelchairs, visually impaired, prams/buggies, the elderly</li> <li>• Electric Scooters – These are being trialled in MK from 2020, pending review and legalisation</li> </ul> |
| Trips/gaps/rocking slabs                       | <ul style="list-style-type: none"> <li>• Damage to clothing</li> <li>• Sprained ankles</li> <li>• Broken wrists, arms etc</li> <li>• Complications to elderly could be serious</li> </ul>                                                                                                                                                                                                                                                       |
| Potholes                                       | <ul style="list-style-type: none"> <li>• Damage to car tyres, wheels etc</li> <li>• Loss of control and serious or fatal injury</li> <li>• Risk to cyclists/motorcyclists is higher</li> <li>• Structural damage (bridge surface/joints)</li> </ul>                                                                                                                                                                                             |
| Poor surface friction                          | <ul style="list-style-type: none"> <li>• Skidding, serious injuries or fatalities owing to extreme deceleration from high speeds or crushing owing to side impact.</li> </ul>                                                                                                                                                                                                                                                                   |
| Missing/ Damaged Street Furniture/Bus Shelters | <ul style="list-style-type: none"> <li>• Road Traffic Collisions/impact with traffic islands</li> <li>• Uncontrolled pedestrians crossing carriageway leading to serious injury</li> <li>• Damaged bollard falling and causing injury</li> <li>• Pedestrian injury caused by defective elements on Bus Shelters</li> <li>• Vehicle Restraint System/Bridge Parapets</li> </ul>                                                                  |
| Standing Water                                 | <ul style="list-style-type: none"> <li>• Aquaplaning can occur at speeds above 40 mph. Serious injuries or fatalities owing to extreme deceleration from high speeds or crushing due to side impact. See Code of Practice for Drainage Maintenance</li> </ul>                                                                                                                                                                                   |
| Obstructions                                   | <ul style="list-style-type: none"> <li>• Any obstruction on the highway has the possibility to impact any highway user ranging from trips for pedestrians to impact collision for vehicles/motorcycles, ranging from minor to serious or fatal.</li> </ul>                                                                                                                                                                                      |

| Defect                                                                   | Probability – factors to consider                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Users                                                                    | <ul style="list-style-type: none"> <li>• Certain defect types may affect wheeled transport such as cycles/scooters i.e., gaps in modules/slabs and will have higher risk to that user group</li> <li>• Visually impaired/wheelchair users will be affected to a higher degree by obstructions</li> </ul>               |
| Trips/gaps/<br>rocking slabs                                             | <ul style="list-style-type: none"> <li>• High footfall pedestrianised area</li> <li>• Category of footway</li> <li>• Major pedestrian route for events</li> <li>• Route to school</li> <li>• Vicinity to vulnerable users</li> </ul>                                                                                   |
| Potholes                                                                 | <ul style="list-style-type: none"> <li>• Category of carriageway</li> <li>• Location of defect on carriageway e.g., wheel track/roundabout</li> <li>• Size of defect i.e., overall dimension/delamination &gt;300mm</li> <li>• Highly trafficked route</li> <li>• Adjacent to ironwork exposing metal edges</li> </ul> |
| Poor surface<br>friction                                                 | <ul style="list-style-type: none"> <li>• Category of carriageway</li> <li>• Location e.g., bend/braking area/junction</li> </ul>                                                                                                                                                                                       |
| Missing/Damaged<br>Street<br>Furniture/Bus<br>Shelter                    | <ul style="list-style-type: none"> <li>• Approaches to roundabouts/junctions in high category carriageways/car parks/service roads</li> <li>• Controlled crossing points near high use pedestrianised areas</li> <li>• Bus Shelter structure used by pedestrians</li> </ul>                                            |
| Standing Water<br>See Code of<br>Practice for<br>Drainage<br>Maintenance | <ul style="list-style-type: none"> <li>• Category of carriageway</li> <li>• Speed of carriageway</li> <li>• Location on carriageway e.g., bend/junction</li> </ul>                                                                                                                                                     |
| Obstructions                                                             | <ul style="list-style-type: none"> <li>• Category of footway/carriageway i.e., use/speed</li> <li>• Location of obstruction e.g., in middle of footway, on bend</li> <li>• Size of obstruction and impact on users</li> </ul>                                                                                          |

#### d) Risk Matrices

Actionable repairs identified during safety inspections fall into five categories (see table 2 – Defect Categorisation – page 30) each defect will be visually risk assessed (see table 3) and will be given a time category for repair if appropriate.

The categories directly relate to the considered degree of danger presented by a defect following the visual risk assessment (see table 3), and as such the timescale for repair to remove the identified risk to the highway user.

This is defined in more detail in Section 12 - Risk Matrix Tables.

## 8. Defects Identified during Safety Inspections

These are a list of examples of the types of defects to be considered during a safety inspection. They are examples and cannot cover all hazards likely to be observed. See **Note 1** after this table.

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                         |                                                                                                                                                  |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Footway     | <ul style="list-style-type: none"> <li>• Potholes</li> <li>• Trips</li> <li>• Areas of Depression</li> <li>• Damaged Bollards</li> </ul>                                                                                                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>• Missing/Rocking Slabs</li> <li>• Gaps in modules/slabs</li> <li>• Flooding</li> <li>• Debris</li> </ul>        | <ul style="list-style-type: none"> <li>• Cracking</li> <li>• Poor Surface Condition</li> <li>• Ironwork missing, broken, too high/low</li> </ul> |
| Kerbing     | <ul style="list-style-type: none"> <li>• Poor Condition</li> <li>• Missing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>• Broken</li> <li>• Dislodged</li> </ul>                                                                         | <ul style="list-style-type: none"> <li>• Loose/Rocking</li> <li>• Uneven</li> </ul>                                                              |
| Carriageway | <ul style="list-style-type: none"> <li>• Pothole</li> <li>• Flooding</li> <li>• Areas of Depression</li> <li>• Delamination</li> </ul>                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>• Rutting</li> <li>• Gaps/Cracks</li> <li>• Edge Damage</li> <li>• Debris</li> <li>• Damaged Bollards</li> </ul> | <ul style="list-style-type: none"> <li>• Cracking</li> <li>• Poor Surface Condition</li> <li>• Ironwork missing, broken, too high/low</li> </ul> |
| Verges      | <ul style="list-style-type: none"> <li>• Rutting</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>• Obstructions</li> </ul>                                                                                        | <ul style="list-style-type: none"> <li>• Damage</li> </ul>                                                                                       |
| Overall     | <ul style="list-style-type: none"> <li>• Overhanging Vegetation</li> <li>• Obstructions</li> <li>• Damaged or non-operational traffic lights</li> <li>• Damaged or missing road signs/name plates</li> <li>• Damaged litter bins</li> <li>• Streetlights, bollards, electrical street furniture, missing covers/day burners</li> <li>• Guard railing/VRS/Parapets</li> <li>• Damaged structures e.g., retaining walls /bus shelters</li> <li>• Trees exhibiting potential risk to highways users</li> </ul> |                                                                                                                                                         |                                                                                                                                                  |
| Lining      | <ul style="list-style-type: none"> <li>• Safety related</li> <li>• Give way lines</li> <li>• Stop lines</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                         |                                                                                                                                                  |
| Signs/SNPs  | <ul style="list-style-type: none"> <li>• Safety related</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                         |                                                                                                                                                  |

**Note:** Please note that this table is not an exhaustive list, but covers typical items inspected in a safety inspection on the highway. It is a requirement of a competent highways inspector to identify all potential hazards and make either a judgement or seek additional assistance in the event they encounter a potential hazard that is outside of their expertise. Hazards that are not a highway responsibility will be passed to the appropriate department or organisation

although if there is an immediate risk and the 3<sup>rd</sup> party cannot attend it is the duty of the Highways Service to temporarily make safe the area and if appropriate recharge any costs – The primary concern is to safeguard highway users, and this must be the priority for the highway inspector.

Defect types that are available to the highways inspectors to select on AMX on site are as per table 1 – pages 22 & 23. Where it is felt a defect code does not match the defect presented then the closest defect type should be used, and the issue reported back to line manager for further guidance.

#### **a. Snow/Floodwater Covering Highway Inspection Area**

During periods of snowfall or highway flooding, to the extent that the highway surface is covered rendering it unviable to safely inspect the highway and identify defects, the highways inspectors are to make the judgement, record and document the decision on AMX system and notify the Highways Service Manager immediately in writing.

The MKCC Highways Service Manager will be responsible for submission of a recovery plan to the Contract Service Manager for approval in line with the annual inspection programme (section 2 – roles & responsibilities), with an associated method statement within 24 hours of making the aforementioned decision. The recovery plan, dependent upon duration and location of lying snow/floodwater, should be a risk-based approach, targeted to the completion of highway inspections on those highways with a high and medium route risk.

#### **b. Approach to Areas of High-Density Levels of Carriageway Potholes and Surface Materials – Proximity Repairs**

Where there are areas identified with a high density of carriageway potholes at or below investigatory levels, it may not be cost effective or asset efficient to only repair those that are considered safety defects. Therefore, when an actionable pothole is identified in an inspection, if additional defects are also identified within 10 m<sup>2</sup> of said pothole that fall into the ‘planned works’ green category – Table 2 – Defect Categorisation Page 26, they shall also be repaired. Where the inspector judges that the surface condition over a larger area shows evidence of significant deterioration it may be more cost effective to repair only the safety critical defects and seek Highways Service Manager guidance on the most appropriate treatment for the larger area concerned and classified/raised as an 84-day priority repair – table 2 – defect categorisation.

#### **c. Works outside the Scope of the Defect Matrix**

Works identified that are outside the scope of the defect matrix are to be discussed with the Highways Service Manager and included in a planned works programme if budgets allow.

#### **d. Hazards Responsibility of other Council Services**

Any hazards identified that are the responsibility of associated council services shall be recorded and emailed to MKCC Customer Contact Centre (CCS) for re-allocation to the relevant department e.g., trees, bus shelters, broken glass, streetlights out etc. Where these result from a customer enquiry, the enquiry can be automatically rerouted to the responsible department via AMX.

Highway inspectors are undertaking regular surveillance of the highway network as part of their safety inspections and will report any obvious defects on structures that require urgent attention to the structures team; or if immediate action is needed (i.e., out of hours), they shall arrange for traffic management to isolate the structure and then inform the structures team.

## Table 1 - Defect Codes on AMX

Defects are raised in AMX using a Schedule of Activities as detailed below. The Schedule items are mirrored in the Contractor's system to allow reporting on quantities and costs.

| Code      | Description                                        |
|-----------|----------------------------------------------------|
| 240031100 | COR-003 Drainage Maintenance REVENUE               |
| 240031101 | DCWG - Carriageway Gully                           |
| 240031102 | DAHG -Ad hoc Gully Attendance                      |
| 240031103 | DCKW - Carriageway Kerb Weirs                      |
| 240031104 | DFG - Footway / Redway Gully                       |
| 240031105 | DCMK -CMK Underpass Footway Gully                  |
| 240031106 | DRP - Drainage Pipes                               |
| 240031107 | DRM - Manholes                                     |
| 240031108 | DRCP - Catch pits                                  |
| 240031109 | DRHW - Headwalls                                   |
| 240031110 | DRCUL - Culverts <900mm                            |
| 240031111 | DRTS - Trash Screens                               |
| 240031112 | DRSUB - Electric Subway Pumps                      |
| 240031113 | DRSK - Soakaways                                   |
| 240031114 | DRDIT - Ditches                                    |
| 240031115 | DRFD - Filter Drains                               |
| 240031116 | DRGR - Grips                                       |
| 240031117 | DRKD - Linear Kerb Drainage                        |
| 240031118 | DRLD - Linear Drainage e.g. ACO                    |
| 240031119 | DRCH - Channelised Concrete Ditches                |
| 240031120 | DRBP - Wet / Dry Balancing Ponds                   |
| 240042000 | COR-004 Road Markings REVENUE                      |
| 240051801 | Basic Facility                                     |
| 240051802 | WSRT - Route Treatment                             |
| 240051803 | WSSBR - Additional Salt Bin Refill                 |
| 240051804 | WSISB - Provide & install salt bin                 |
| 240051805 | WSDSB - Remove & dispose salt bin                  |
| 240051806 | WSHS - Hand salting                                |
| 240060700 | COR-006 Structures Routine & General Maint.REVENUE |
| 240071400 | COR-007 Street Lighting REVENUE                    |
| 240071401 | SLC - Lighting Columns                             |
| 240071402 | SLU - Underpass/Structures Lighting                |
| 240071403 | SLL - Lanterns                                     |
| 240071404 | SLET - Electrical Testing                          |
| 240071406 | SLFP - Feeder pillars                              |
| 240071407 | SLCMS - Nodes/Base Stations                        |
| 240071409 | SIB - Illuminated bollards                         |
| 240071410 | SIS - Illuminated Signs                            |
| 240071411 | SNB - Non illuminated bollards                     |
| 240071412 | SLDNO - DNO Transfers                              |
| 240071413 | SLFL - Floodlights                                 |
| 240071414 | SLCCTV - Mobile CCTV Cameras                       |

|             |                                                    |
|-------------|----------------------------------------------------|
| 240071415   | SLEMERG - Street Lighting Emergency                |
| 240082300   | COR-008 Traffic Signals REVENUE                    |
| 240082305   | TSBB - Belisha Beacons                             |
| 240082306   | TSVMS - Static Variable Messaging Signs            |
| 240082307   | TSCL - Traffic Counter Loops                       |
| 240082308   | TSVAS - Vehicled Actuated Signs                    |
| 240082309   | TSWW - School crossing flashing signs (wigwags)    |
| 240090100   | COR-009 Highway Emergency Response REVENUE         |
| 240090200   | COR-009 Highway Routine & Reactive Maint. REVENUE  |
| 240090204   | HWSF - Street Furniture                            |
| 242500001   | Carriageway Surface Treatment Improvements         |
| 242500002   | Bridges & Highway Structures Schemes               |
| 242500003   | Drainage Improvement Schemes                       |
| 242500004   | Street Lighting Improvements                       |
| 242500005   | Traffic Signs & Street Name Plates                 |
| 242500006   | Traffic Management Schemes                         |
| 242500007   | Traffic Signal Improvements                        |
| 242500008   | Road Safety Schemes                                |
| 242500009   | Vehicle Safety Fencing Upgrades                    |
| 242500010   | Major Projects                                     |
| 242500011   | Carriageway Construction / Improvements            |
| 242500012   | Early Contractor Involvement                       |
| 242500013   | Carpark Maintenance & Improvements                 |
| 242500014   | Accessibility Improvements                         |
| 242500015   | Footway Redway Construction / Improvements         |
| 242500016   | Developer Projects                                 |
| 242500017   | Other Projects (Parish Landscape External Bodies)  |
| 240042001A  | RMWL: Linear White Lining                          |
| 240042001B  | RMYL: Linear Yellow Lining                         |
| 240042001C  | RMS: Shape                                         |
| 240042001D  | RMA: Arrow                                         |
| 240042001E  | RM<5: Words less than 5 letters                    |
| 240042001F  | RM>5: Words more than 5 letters                    |
| 240060701A  | HSCVCS - Clear Vegetation from Concrete Structures |
| 240060701AA | HSRAC - Repair Anti-slip Coating                   |
| 240060701B  | HSCVMS - Clear Vegetation from Masonry Structures  |
| 240060701BB | HSBR - Bagwork Repair                              |
| 240060701C  | HSCVTF - Clear Vegetation from Timber Footbridges  |
| 240060701CC | HSTNBS - Parapet Nuts and Bolts Specialist         |
| 240060701D  | HCKS - Cut and Kill Sapling                        |
| 240060701DD | HSPM - Parapet Mesh repair Specialist              |
| 240060701E  | HSCTB - Cut tree branch                            |
| 240060701EE | HSTNB - Tighten Nuts and Bolts General             |
| 240060701G  | HSDCD - Drainage Cleansing Deck                    |
| 240060701H  | HSDCWP - Drainage Cleansing Weep pipes             |
| 240060701J  | HSCBS - Cleaning Bearing Shelves                   |
| 240060701K  | HSBCG - Bearing Cleaning and Greasing              |
| 240060701L  | HSCDEJ - Cleanse Deck Expansion Joints             |

|             |                                            |
|-------------|--------------------------------------------|
| 240060701M  | HSWB - Watercourse Blockages               |
| 240060701N  | HSMR - Minor Repointing                    |
| 240060701P  | HSMMR - Minor Masonry Repair               |
| 240060701Q  | HSMCR - Minor Concrete Repair              |
| 240060701R  | HSTGR - Minor Tubular Guardrail repair     |
| 240060701S  | HSMRTG - Mesh Repair Tubular Guardrail     |
| 240060701T  | HSMPT - Minor Painting Timber              |
| 240060701U  | HSMPS - Minor Painting Steel               |
| 240060701V  | HSRTDP - Replace Timber Deck Plank         |
| 240060701W  | HSRGDP - Replace GRP Deck Plank            |
| 240060701X  | HSTPI - Replace Timber Parapet Infill      |
| 240060701Y  | HSTPI - Replace GRP Parapet Infill         |
| 240060701Z  | HSRGGs - Replace GRP Grip Strip            |
| 240060702F  | HSRMPC - Routine Maintenance Porte Cochere |
| 240071405A  | SLCG - Control gear                        |
| 240071405B  | SLCO - Cut-Out/Isolator                    |
| 240071408A  | SLPC - Highway private cable               |
| 240071408B  | SLPJ - Highway private cable Joint         |
| 240082301A  | TSGL: Green Lamp/Lens Out                  |
| 240082301B  | TSAL: Amber Lamp/Lens Out                  |
| 240082301C  | TSRL: Red Lamp/Lens Out                    |
| 240082301D  | TSCN: Controller Faulty/Damaged            |
| 240082301E  | TSPF: Power Failure                        |
| 240082301F  | TSGML: Green Man Out                       |
| 240082301G  | TSML: Multiple Lamp/Lens Out               |
| 240082301H  | TSSL: Red/Green Lamp/Lens Stuck On         |
| 240082301K  | TSWL: Wait Lamp Out                        |
| 240082301L  | TSDFPB: Detector Fault Push Button         |
| 240082301M  | TSDFU: Detector Fault Unspecified          |
| 240082301N  | TSLCG: Lights Constantly Changing          |
| 240082301P  | TSMF: Miscellaneous Fault (Unknown)        |
| 240082301Q  | TSPPF: Pedestrian Phase Fault              |
| 240082301R  | TSH: Signal Head Damaged                   |
| 240082301T  | TSP: Signal Pole Damaged                   |
| 240082301U  | TSSC: Signal Sequence Check Required       |
| 240082310J  | TSUTC: UTC Failure                         |
| 240090101A  | HW EMERG: Hway Emergency                   |
| 240090101FF | HSEMERG - Highway Structures Emergency     |
| 240090201A  | CWB: Cway Black < 1m <sup>2</sup>          |
| 240090201B  | CWW: Cway White < 1m <sup>2</sup>          |
| 240090201B  | HWIR: Highway Ironworks                    |
| 240090201C  | HWCK: Highway Kerbs Edgings                |
| 240090201CE | CWCE: Cway Comp. Event                     |
| 240090201D  | HWMIP: Highway Mastic Ironwork Patch       |
| 240090201E  | HWMP: Highway Mastic Patch                 |
| 240090202A  | FWB: Fway Black < 1m <sup>2</sup>          |
| 240090202B  | FWW: Fway White < 1m <sup>2</sup>          |
| 240090202CE | FWCE: Fway Comp. Event                     |

|             |                                   |
|-------------|-----------------------------------|
| 240090203A  | RWB: Rway Black < 1m <sup>2</sup> |
| 240090203B  | RWW: Rway White < 1m <sup>2</sup> |
| 240090203CE | RWCE: Rway Comp. Event            |
| 242500999   | Third Party Green Claims          |

## 9. Information to be Added to the Defect

To enable the repair teams to undertake effective repairs on the first visit, it is imperative that certain key information is passed on to the Contractor. It should be recorded in clear and concise fashion to aid accurate location, to determine traffic management requirements and correct materials to repair the defect effectively.

This information must be recorded during the inspection on site, and it is vital therefore, that the information is recorded accurately. The guidance within this code will assist in the process.

Critical pieces of information are required. These are:

- a. Location
- b. Type of defect and extent of repair
- c. Category of defect
- d. Materials required for the repair
- e. Any other site-specific details
- f. Photograph of defect

### a. Location

Defects are logged electronically and as such have associated coordinates that are provided to the Contractor's tablets. Photographs are also taken of the defects. However, where appropriate, defects shall be marked with temporary road marking paint as this will help the repair team to quickly locate a defect.

To locate a defect efficiently, the repair teams require four pieces of information:

- Street name
- The position of the defect within the street
- The position of the defect on the highway, e.g., by kerb, near centre line, to side of gully
- Type of defect

Location information should use a combination of the following:

- House number
- Streetlamp column number
- Building name
- Road junction
- Clear un-moveable landmark

What if there are no houses in the street?

Where no houses exist, use streetlamp column numbers.

What if there are no houses and no lamp columns?

Where neither houses nor lamp columns exist, mark the defects with road marking paint and number where necessary. Use other information as much as possible, e.g., junction of road, distance from a landmark object, telegraph pole ref. no.

#### Using building names

Building names are often more difficult to locate especially on long roads, so if it is necessary to give a building name it would help the repair team to have some additional information such as 'Fairhaven between L/Col 21 and L/Col 23'.

#### Examples

- Outside 17
- Adjacent to 21
- Junction with ....
- 5 metres from L/Col 16

Position information should use a combination of the following:

- Channel of carriageway
- At rear of footway
- Adjacent to
- Edge of kerb
- At radius
- On verge
- Central reservation
- On vehicle crossing

This list is by no means definitive. However, by using combinations of these and other similar terms it is possible to give simple but clear instructions on a works order to assist the repair team to quickly locate the defect.

#### Examples

- Outside 21, pothole in channel of carriageway
- Property Mansion House, between L/Col 15 and L/Col 17 sunken slabs to kerb edge
- Opposite junction with Milton Drive, sunken kerb

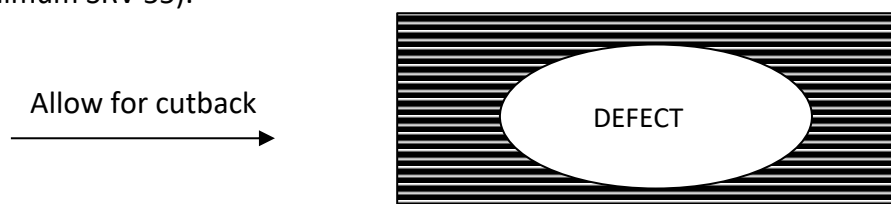
## **b. Type of Defect and Extent of Repair**

After selecting the appropriate defect type code from AMX, it is advisable to detail in the description any further information regarding the type of defect, in addition to the materials that you will list, for example: 240090201B HWIR: Highway Ironworks is the selected schedule of activity (SoA), then add to the description what type and size of ironworks it is that is missing.

In many instances the team will be unable for practical reasons to repair the precise area of defective highway. It may be necessary for instance, to cut back on a defective area of bituminous surface beyond the defect itself to remove loose surfacing which is not visible to

the eye. The equipment necessary to undertake a repair may also require a minimum space to carry out its role effectively.

As a general rule, for the permanent repair to potholes; areas should be recorded at a minimum 300mm x 300mm and an allowance for cut back of 100 mm on all sides should be made to create a square edged repair. All carriageway patches in bituminous shall be over banded (minimum SRV 55).



For repairs to flagged and bituminous surfacing the measures should be as accurate as possible as they give a good indication as to the materials required and will diminish the need for variation payments when the works order is completed.

### c. Traffic Management

A full TM assessment will be undertaken at planning/scheduling stage by the contractor. All TM costs are included in the identified annual lump sum (see Contract Scope).

### d. Materials

Where it is apparent that materials are necessary to carry out a repair, the materials should be stated e.g., take up and relay two sq. metres of uneven paving, replace 1 no 600 x 600 x 50mm silver grey slab.

When describing defects, it will be necessary to refer to the particular materials which are affected by the defect. In some cases, the defect may affect several materials, and these will also need to be covered within the description.

e.g., Outside 27 – depression in bitmac footway 0.3 sq. m, 2 sunken pcc kerbs, also 2 sq. m, of rocking pcc slabs and 1 no 150 x 150 sunken service box.

Such information is particularly helpful to the teams and reduces unproductive time. Where it is necessary to replace an item, if possible, the product type and/or size should be given.

e.g.:

- 5 x 10 (125 x 255) PCC bull nose kerb
- Road gully cover 255 x 300 x 100mm
- PCC footway dished channel 150 wide
- PCC slab 600 x 600 x 50mm, note any finish/colour/type

Where there are items of defective street furniture it is important that the particular type of street furniture is noted. Photographs should always be taken to aid identification.

### **e. Other Site-Specific Details**

Any further details that may help service delivery should be included, in the descriptions. This includes proximity to schools, requirement for coning an area off the night prior to ensure full access to site, and any other such local information that could be useful to the contractor.

## **10. Defects not under the ownership of the Council**

During an inspection, defects may be identified which are not the responsibility of the Council to repair. The Council does however have a duty of care to the users of the highway. The staff involved in this activity shall therefore take steps to ensure that the party responsible for the repair are made aware of the defect and if necessary, take interim action to make a defect temporarily safe if appropriate/possible.

### **a. Statutory Undertakers**

#### **Defective apparatus**

Where Highways Inspectors come across defective utility apparatus, they will access Digdat and other online utility asset information to ensure the defect is utility owned, and then contact the relevant team stating what type of cover/defective apparatus it is e.g., foul, or clean water. The team will issue a Section 81 notice to the utility company with the correct information in line with the procedures agreed by the New Roads and Streetworks Act (NRSWA) section.

#### **Defective reinstatements**

Where a Highways Inspector identifies a defective reinstatement suspected of belonging to a Statutory Undertaker this is recorded, stating where possible the undertaker concerned. This information is passed on to the NRSWA team who review whether it is still within the guarantee and if appropriate will serve the undertaker with a defect notice requiring them to take remedial action. Photographs should also be sent to assist the NRSWA team. If it is not within the guarantee period, then the defect will be passed back to the contractor to action.

Any emergency defects in reinstatements will be dealt with in accordance with this Code of Practice irrespective of the ownership to ensure the ultimate safety to the travelling public.

### **b. Unknown parties**

Any emergency defect, where the owner is unknown, shall be recorded and action taken to make the defect safe. Investigations shall then be undertaken by the Inspector/MKCC to locate the responsible party.

Note: Hazards that are not a highway responsibility will be passed to the appropriate department or organisation, although if there is an immediate risk and the 3<sup>rd</sup> party cannot attend it is the duty of the Highways Service to temporarily make safe the area and if appropriate recharge any costs. The primary concern is to safeguard highway users and this must be the priority for the Highway Inspector.

## 11. Defect Categorisation – Table 2

| Priority                                                                                                                            | Timescale for Defect Repair                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No stand-alone defects. Undertaken as proximity carriageway pothole repairs works if location contains adjacent actionable repairs. | Defects under investigatory level – No action if visual risk assessment eliminates need for repair.<br>Note: Carriageway Potholes identified that are under investigatory levels but are located within 10m <sup>2</sup> of investigatory level defects will be repaired at the same time as other higher priority pothole repairs (proximity pothole repairs – see section 8b).                                                                                                                                                                                                                                                                                                     |
| 84-day Works (84 days shall be defined as 84 calendar days)<br><br><b>See Note 1</b>                                                | Carriageway, footway, and all other categories:<br><br>A defect that, in the judgment of the inspector following visual risk assessment, should be included in the 84-day works programme– see section 8.b<br><br><b>Note 1:</b> Defects in the yellow category shall be designated as 84-day priority– see process in Section 13. For example a large area of carriageway/footway may show an overall deterioration in condition with localised safety defects that can be temp filled under higher priority (only actionable defects), the larger area is then prioritised as a 84 day permanent programmed job if it will deteriorate and further actionable defects will appear. |
| 28-day Works (28 days shall be defined as 28 calendar days)<br><br><b>See Note 2</b>                                                | Carriageway, footway, and all other categories:<br><br>A defect that, in the judgment of the inspector following visual risk assessment, should be included in the 28-day planned works programme,<br><br><b>Note 2:</b> Defects in the amber category shall be designated as 28-day priority– see process in Section 13, however the inspector will have the discretion to increase/decrease the defect as a                                                                                                                                                                                                                                                                        |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | <p>greater/lesser hazard to users of the highways. For example, an access frequented by vulnerable users would attract a higher priority whereas a defect at the end of an alleyway with no pedestrian through traffic would be considered a lower priority and categorised accordingly. Any discretion used to change a defect priority as described above MUST include a note on AMX from the inspector, giving reasons for the decision to either increase or decrease the priority.</p> |
| Cat-1 (24 hours) or 1A (2 hours) | <p>Carriageway and footway and all other categories:</p> <p>A defect that, in the judgment of the inspector following visual risk assessment, should be repaired or made safe within 2 hours (CAT 1A) or 24 hours (CAT 1). All defects that are only made safe are to be repaired permanently by inclusion in the 28/84 day planned works programme unless otherwise directed by the Service Manager.</p>                                                                                   |

**Table 3 - Visual Risk Assessment Matrix (VRA)**

|                | Probability | Very Low (1) | Low (2) | Medium (3) | High (4) | Very High (5) |
|----------------|-------------|--------------|---------|------------|----------|---------------|
| Impact         |             |              |         |            |          |               |
| Negligible (1) |             | 1            | 2       | 3          | 4        | 5             |
| Low (2)        |             | 2            | 4       | 6          | 8        | 10            |
| Noticeable (3) |             | 3            | 6       | 9          | 12       | 15            |
| High (4)       |             | 4            | 8       | 12         | 16       | 20            |
| Very High (5)  |             | 5            | 10      | 15         | 20       | 25            |

To be used in conjunction with Section 12 defects – Investigatory Levels.

**Note: Use of the VRA**

The above table should be used by the inspector to carry out an assessment of the observed defect in relation to its risk profile. This table is built into the mobile version of AMX for use during inspections so all works required raised by inspectors will include this.

Once the defect has been identified as at, or approaching investigatory level, the inspector will determine the likelihood and severity of harm (Probability vs Impact).

Once the defect has been evaluated and given a risk score, this will be applied to the respective tables in Section 12 to set the priority of the repair if appropriate.

As stated in the “green” section of Table 2, if the defect does not meet investigatory levels and/or returns a low VRA score, no action is required for a standalone defect.

## 12. Defects – Investigatory Levels

### Carriageways - Potholes

| Carriageway<br>Hierarchy<br>Depth | Local Access Road –<br>4b<br>(annual)                                                            | Link Road – 4a<br>(6 monthly) | Secondary Distributor<br>– 3b<br>(3 monthly) | Main Distributor – 3a<br>(3 monthly) | Strategic Route<br>(monthly) |
|-----------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------|--------------------------------------|------------------------------|
| < 40mm                            | No action for standalone defects. Subject to assessment in section 7. See definition in Table 2. |                               |                                              |                                      |                              |
| ≥ 40mm - < 50mm                   | 28-Day – See Note 2 – Table 2 – Defect Categorisation                                            |                               |                                              |                                      | Cat-1 or 1A                  |
|                                   | 84 Day– See Note 1- Table 2 – Defect Categorisation                                              |                               |                                              |                                      |                              |
| ≥ 50mm - < 75mm<br>≤ 30mph        | 28-Day– See Note 2 – Table 2 – Defect Categorisation                                             |                               |                                              |                                      | Cat-1 or 1A                  |
|                                   | 84 Day– See Note 1- Table 2 – Defect Categorisation                                              |                               |                                              |                                      |                              |
| ≥ 50mm - < 75mm<br>> 30mph        | 28-Day – See Note 2 – Table 2 – Defect Categorisation                                            |                               | Cat-1 or 1A                                  |                                      |                              |
|                                   | 84 Day – See Note 1- Table 2 – Defect Categorisation                                             |                               |                                              |                                      |                              |

| Carriageway<br>Hierarchy<br>Depth | Local Access Road –<br>4b<br>(annual) | Link Road – 4a<br>(6 monthly) | Secondary Distributor<br>– 3b<br>(3 monthly) | Main Distributor – 3a<br>(3 monthly) | Strategic Route<br>(monthly) |
|-----------------------------------|---------------------------------------|-------------------------------|----------------------------------------------|--------------------------------------|------------------------------|
| ≥ 75mm                            | Cat-1 or 1A                           |                               |                                              |                                      |                              |

### Pothole Definition:

A pothole is a sharp-edged depression >300mm diameter anywhere in the carriageway where part or all of the surface layers have been removed including carriageway collapses, surrounds to ironwork and missing cats' eyes. Particular attention must be given to delamination of surfaces greater than 300mm diameter and the impact on highway users when visually risk assessing a pothole for action.

At controlled pedestrian crossings and other designated crossing points, investigatory levels shall be as for the adjacent footways. Where potholes are identified within utility reinstatements reference shall be made to Section 10 of this manual to ensure that the NRSWA Streetworks are notified.

## Carriageways - Road Defects – Concrete / Blockwork

| Carriageway Hierarchy<br>Depth | Local Access Road – 4b<br>(annual)                                                               | Link Road – 4a<br>(6 monthly) | Secondary Distributor – 3b<br>(3 monthly) | Main Distributor – 3a<br>(3 monthly) | Strategic Route<br>(monthly) |
|--------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------|--------------------------------------|------------------------------|
| < 40mm                         | No action for standalone defects. Subject to assessment in section 7. See definition in Table 2. |                               |                                           |                                      |                              |
| ≥ 40mm - < 75mm<br>≤30mph      | 28-Day – See Note 2 – Table 2 – Defect Categorisation                                            |                               |                                           |                                      | Cat-1 or 1A                  |
|                                | 84 Day – See Note 1- Table 2 – Defect Categorisation                                             |                               |                                           |                                      |                              |
| ≥ 40mm - < 75mm<br>> 30mph     | 28-Day– See Note 2 – Table 2 – Defect Categorisation                                             |                               | Cat-1 or 1A                               |                                      |                              |
|                                | 84 Day – See Note 1- Table 2 – Defect Categorisation                                             |                               |                                           |                                      |                              |
| ≥ 75mm                         | Cat-1 or 1A                                                                                      |                               |                                           |                                      |                              |

**Note:** Gaps in blockwork or expansion joints in concrete may pose a different level of impact and probability to certain road users e.g., cyclists. This must be taken into consideration when visually risk assessing any defects in relation to gap and width of a tyre on a cycle. Note tyre widths vary from 25mm upwards there is no average width. The alignment of the gap is also important i.e., is it in line with direction of travel? Gaps in excess of 25mm should be considered for a Visual Risk Assessment 84-day priority works: See section 8 b) and c) and table 2 – defect categorisation note 1.

## Footways – Surface defect in asphalt / paving and blockwork

| <div>Footway</div> <div>Hierarchy</div> <div>Depth</div> | Category 4<br>(annual)                                                                           | Category 3<br>(6 monthly) | Category 2<br>(3 monthly)<br><br>Other (4 monthly CMK) | Category 1<br>(monthly) |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------|-------------------------|
| < 20mm                                                   | No action for standalone defects. Subject to assessment in section 7. See definition in Table 2. |                           |                                                        |                         |
| ≥ 20 mm - < 25 mm                                        | 28-Day – See Note 2 – Table 2 – Defect Categorisation                                            |                           |                                                        |                         |
|                                                          | 84 Day – See Note 1- Table 2 – Defect Categorisation                                             |                           |                                                        |                         |
| ≥ 25 mm - < 40mm                                         | 28-Day – See Note 2 – Table 2 – Defect Categorisation                                            | Cat-1 or 1A               |                                                        |                         |
|                                                          | 84 Day – See Note 1- Table 2 – Defect Categorisation                                             |                           |                                                        |                         |
| ≥ 40 mm                                                  | Cat-1 or 1A                                                                                      |                           |                                                        |                         |

### Description:

In asphalt a defect is determined as a sharp-edged depression anywhere in the footway where part or all the layers have been removed, that is likely to cause a hazard. In either paving and/or blockwork surfaces, it will be where there is a sharp edge caused by either raising and/or sinking of a unit relative to the surrounding surface. The defect will be determined as requiring a visual risk assessment when the vertical difference either approaches or exceeds 20mm or more in depth.

At controlled crossings, investigatory levels will be as for the corresponding adjacent footway.

A depression will be identified as requiring a visual risk assessment when it is approaching 40mm or more in depth and has a maximum horizontal measurement less than 300mm. Where potholes are identified within utility reinstatements reference shall be made to Section 10 of this manual to ensure that the NRSWA Streetworks Team are notified.

Gaps in blockwork or slabs may pose a different level of impact and probability to certain road users e.g., cyclists on shared surfaces such as CMK underpasses. This must be taken into consideration when visually risk assessing any defects in relation to gap and width of tyre on a cycle. Note tyre widths vary from 25mm upwards there is no average width. Gaps in excess of 25mm should be considered for a Visual Risk Assessment 84-day priority works: See section 8 b) and c) and table 2 – defect categorisation note 1.

## Redways – asphalt / blockwork

| <div>Redway</div> <div>Hierarchy</div> <div>Depth</div> | Category b2<br>(annually)                                                                        | Category b1<br>(6 monthly) |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------|
| < 20mm                                                  | No action for standalone defects. Subject to assessment in section 7. See definition in Table 2. |                            |
| ≥ 20 mm - < 25 mm                                       | 28-Day – See Note 2 – Table 2 – Defect Categorisation                                            |                            |
|                                                         | 84 Day – See Note 1- Table 2 – Defect Categorisation                                             |                            |
| ≥ 25 mm - < 40mm                                        | 28-Day – See Note 2 – Table 2 – Defect Categorisation                                            |                            |
|                                                         | 84 Day – See Note 1- Table 2 – Defect Categorisation                                             |                            |

| <div>Redway</div> <div>Hierarchy</div> <div>Depth</div> | Category b2<br>(annually) | Category b1<br>(6 monthly) |
|---------------------------------------------------------|---------------------------|----------------------------|
| ≥ 40 mm                                                 | Cat-1 or 1A               |                            |

**Note:**

Particular attention should be given to longitudinal cracking in asphalt surfaces. Cracks wider than 25mm should be subject to a VRA and if categorised as a hazard following the VRA, sealing the crack with an overbanding should be considered.

Gaps in blockwork may pose a different level of impact and probability to certain road users e.g., cyclists on shared redway surfaces, this must be taken into consideration when visually risk assessing any defects in relation to gap and width of tyre on a cycle. Note tyre widths vary from 25mm upwards there is no average width. The alignment of the gap is also important i.e., is it in line with direction of travel? Gaps in excess of 25mm should be considered for a Visual Risk Assessment 84-day priority works: See section 8 b) and c) and table 2 – defect categorisation note 1.

## Carriageway - Kerbing/Channels

| CW Hierarchy<br>Depth | Local Access Road –<br>4b<br>(annual)                                                            | Link Road – 4a<br>(6 monthly) | Secondary Distributor<br>– 3b<br>(3 monthly) | Main Distributor – 3a<br>(3 monthly) | Strategic Route<br>(monthly) |
|-----------------------|--------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------|--------------------------------------|------------------------------|
| < 40mm                | No action for standalone defects. Subject to assessment in section 7. See definition in Table 2. |                               |                                              |                                      |                              |
| ≥ 40mm - < 75mm       | 28-Day – See Note 2 – Table 2 – Defect Categorisation                                            |                               |                                              |                                      |                              |
| ≤30mph                | 84 Day – See Note 1- Table 2 – Defect Categorisation                                             |                               |                                              |                                      |                              |
| ≥ 40mm - < 75mm       | 28-Day – See Note 2 – Table 2 – Defect Categorisation                                            |                               |                                              |                                      | Cat-1 or 1A                  |
| > 30mph               | 84 Day – See Note 1- Table 2 – Defect Categorisation                                             |                               |                                              |                                      |                              |
| ≥ 75mm                | Cat-1 or 1A                                                                                      |                               |                                              |                                      |                              |

**Note:**

A defect shall be measured as either a vertical or horizontal displacement. 84-day priority works: See section 8 b) and c) and table 2 – defect categorisation note 1.

## Footway/Redway – Kerbing/Channels (Including CMK)

| Footway<br>Hierarchy<br>Depth | Category 4<br>(annual)                                                               | Category 3<br>(6 monthly) | Category 2<br>(4 monthly- CMK) | Category 1<br>(monthly) |
|-------------------------------|--------------------------------------------------------------------------------------|---------------------------|--------------------------------|-------------------------|
| < 20mm                        | No action for standalone defects. Subject to assessment in section 7. See definition |                           |                                |                         |
| ≥ 20 mm - < 25 mm             | 28-Day – See Note 2 – Table 2 – Defect Categorisation                                |                           |                                |                         |
|                               | 84 Day – See Note 1- Table 2 – Defect Categorisation                                 |                           |                                |                         |
| ≥ 25 mm - < 40mm              | 28-Day – See Note 2 – Table 2 – Defect Categorisation                                |                           |                                | Cat-1 or 1A             |
|                               | 84 Day – See Note 1- Table 2 – Defect Categorisation                                 |                           |                                |                         |
| ≥ 40 mm                       | Cat-1 or 1A                                                                          |                           |                                |                         |

**Note:** In Central Milton Keynes there are a high number of large granite kerbs and channels as part of the construction of the highway. In addition, there are numerous planters constructed of large granite blocks. These units are all subject to displacement by vehicles and as such cause an obstruction in both the carriageways and the service roads/parking areas. If displaced they should be made safe as a CAT1A response, followed up by a permanent repair within either 24 hours or 28 days dependant on the visual risk assessment. 84-day priority works: See section 8 b) and c) and table 2 – defect categorisation note 1

## Street Signs/Furniture

| Location<br>Defect                                               | Grid Road                                             | All Other Roads (Estates,<br>Rural & Industrials) | Redways | Underpasses | CMK |
|------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------|---------|-------------|-----|
| Damaged Reflective Bollard on Island                             | 28-Day – See Note 2 – Table 2 – Defect Categorisation |                                                   |         |             |     |
| Missing Reflective Bollard/STOP/GIVE WAY sign on Island/junction | Cat-1 – see note 15                                   |                                                   |         |             |     |
| Damaged/Missing SNP                                              | Visual Risk Assessment– See note 8                    |                                                   |         |             |     |
| Damaged/Missing Bollard                                          | Visual Risk Assessment or 28/84 Day– See note 14      |                                                   |         |             |     |
| Damaged Bus Shelter/Stop                                         | Visual Risk Assessment – See note 16                  |                                                   |         |             |     |
| Directional/Traffic Sign damaged                                 | Visual Risk Assessment – See note 10                  |                                                   |         |             |     |
| Directional/Traffic Sign missing                                 | See note 11                                           |                                                   |         |             |     |

|                                           |                                                                                   |
|-------------------------------------------|-----------------------------------------------------------------------------------|
| Directional/Traffic Sign dirty/unreadable | Visual Risk Assessment – See Note 12                                              |
| Chevron Sign damaged                      | Visual Risk Assessment – See note 13                                              |
| Chevron Sign missing                      | 28-Day – See Note 2 – Table 2, Page 25 – Defect Categorisation – also see note 13 |

**General Note:** The above matrix is a list of common items found on the highway, the inspector is also expected to identify any other street furniture that is damaged and identified as a hazard. Any electrical furniture should be reported to the Service Information Centre (SIC) for allocation in accordance with the Street Lighting Maintenance Code of Practice for the appropriate action.

**Note 8:** Street Name Plates (SNP) shall be assessed first by a highways inspector to determine conditions prior to any action. If the SNP is damaged to the point that it is a hazard to the public a CAT 1A response shall be raised. The enquiry should then be passed to the relevant client officer for further assessment and any necessary action as capital works in an annual programme.

**Note 9:** Not Used

**Note 10:** Directional/Traffic signs shall be assessed first by a Highways Inspector to determine conditions prior to any action. If the sign is damaged to the point that it is a hazard to the public, a CAT 1A response shall be raised. The enquiry should then be passed to the relevant client officer for further assessment and any necessary action as capital works in an annual programme.

**Note 11:** If the Directional/Traffic sign is missing the site shall be assessed first by a Highways Inspector to determine conditions prior to any action. If the sign infrastructure left is damaged to the point that it is a hazard to the public, a CAT 1A response shall be raised. The enquiry should then be passed to the relevant client officer for further assessment and any necessary action as capital works in an annual programme.

**Note 12:** A visual risk assessment shall be carried out by the inspector, if the sign is unreadable the assessment needs to account for whether this constitutes a hazard to the road user i.e. an unreadable estate local directional sign is clearly not a hazard whereas a speed limit sign outside a school would be considered a hazard. The action may well be simply to clean the sign, alternatively if the sign face has degraded and a new sign shall be required a job shall be raised under the 28/84 day priority.

**Note 13:** A damaged/missing chevron signs shall be assessed first by a highways inspector to determine conditions prior to any action. If the sign is damaged/missing/unreadable to highway users to the point that it is a hazard to the public a CAT 1A response shall be raised. The enquiry should then be passed to the relevant client officer for further assessment and any necessary action as capital works in an annual programme.

**Note 14:** Street bollards shall be assessed first by a highways inspector to determine conditions prior to any action. If the street bollard is damaged to the point that it is a hazard to the public a CAT 1A response shall be raised. Otherwise, job raised as '28/84 Day' category for repair/replacement. Special consideration shall be given to heavy cast iron bollards in CMK that are damaged to determine if they are stable and may be subject to falling either by their own weight or by 3<sup>rd</sup> party action.

**Note 15:** If a reflective bollard/STOP/GIVE WAY sign is missing from an island/junction a CAT1 action to 'make safe' shall be raised i.e., install an A frame with respective missing signface, 1 metre cone with a reflective sleeve to mark the island, this will then be reported to the Ringway Hub who will raise a job in accordance with the street lighting Code of Practice.

**Note 16:** Any bus shelter identified as damaged shall be immediately reported to Passenger Transport team. If it is a hazard to the public the area must be made safe pending instruction from the Client. All records to be provided including photographs and asset record number of bus shelter.

## **Flooding/Drainage**

See Emergency Response Flooding/Drainage – Code of Practice for Drainage Maintenance and Highways Emergency Response Manual

## 13. Examples of Prioritisation of Defects

### CAT – 1A (2 Hours)



Hazards presenting an immediate and imminent hazard or risk to road users. Immediately make safe or repair within 2 hours. Such defects will include (this list is not exhaustive):

#### Carriageway

- Clearing up after RTCs
- Clearance of debris or oil
- Serious subsidence or collapse of road
- Flooding over a large area
- Missing ironwork
- Seriously damaged traffic signals
- Damaged street bollards
- Missing or seriously damaged guardrail
- Potholes – see matrix – potholes – section 12 and Table 3 (VRA)
- Redway/footway bollards missing (where lockable bollard flaps aren't able to make safe the hazard)
- Rapid deterioration of structure/ trees
- Hazardous obstructions left on highway

#### Footways

- Exposed electrical wiring on street furniture
- Rapid deterioration of structure/ trees
- Damaged street bollards/bus shelter

#### Verges

- Hazardous obstructions left on highway

#### Flooding

- See Code of Practice for Drainage Maintenance

*Note – All jobs identified in this category will be phoned directly through to the SIC by the Highways Inspector, who will dispatch a gang to attend as soon as possible. The Highways Inspectors and SIC will coordinate the appropriate recording of the detail in AMX as per this guidance.*

*Emergency Calls relating to defects will be dealt with in accordance with MKC “Emergency Procedures Manual”.*

## **CAT – 1 (24 Hours)**



Defects presenting a hazard or risk to road users. Make safe or repair within 24 hours. Such defects will include:

### **Carriageway**

- Potholes – see matrix – potholes – section 12
- Abrupt level difference – see matrix – road defects – section 12
- Missing unlit bollard on island
- Damaged street bollards
- Hazardous obstructions left on highway

### **Footways**

- Collapse or serious subsidence
- Damaged street bollards/bus shelter
- Missing ironwork
- Seriously damaged street furniture or fencing
- Abrupt level difference/surface defects – see matrix – footways – section 12.

### **Redways**

- Serious subsidence or collapse of redway
- Flooding over a large area
- Missing ironwork.
- Surface defects – see matrix – redways – section 12.

### **Verges**

- Edge deterioration or rut over 150mm in Cat 1 and 2 footways only.
- Verge damage likely to cause a hazard or risk, taking in to account the location and density of use by the public for guidance.
- Hazardous obstructions left on highway

### **Flooding**

- See Code of Practice for Drainage Maintenance



Defects presenting a moderate level of hazard or risk. Such defects will include:

### **Carriageways**

- Missing or dislodged kerbs in carriageway
- Potholes – see matrix – potholes – section 12
- Abrupt level difference – see matrix – road defects – section 12
- Damaged unlit bollard on Island
- Damaged street bollards
- Signs that if missing/unreadable will constitute a hazard

### **Footways**

- Abrupt level difference – see matrix – footways – section 12
- Damaged street bollards/bus shelter
- Missing bollards – where flap is able to make safe, but bollard needs replacing
- Surface defects – see matrix – footways – section 12

### **Redways**

- Abrupt level difference – see matrix – redways – section 12
- Missing bollards – where flap is able to make safe, but bollard needs replacing
- Surface defects – see matrix – footways – section 12

### **Flooding**

- See Code of Practice for Drainage Maintenance

## ***CAT – 84 Day (84 calendar days)***



Defects presenting a lower level of hazard or risk. Such defects will include:

### **Carriageways**

- Large Surface defects/patches – section 12
- Damaged surface – crazing, deformation, rutting, unevenness – section 12
- Abrupt level difference – see matrix – road defects – section 12
- Longer section of kerbs/channels likely to deteriorate if not repaired – section 12
- Damaged street furniture – section 12

### **Footways**

- Large surface defects/patches – section 12
- Damaged street furniture – section 12

### **Redways**

- Large surface defects/patches – section 12
- Damaged street furniture – section 12

## Appendix B – Job Defect Number Matrix

Note – some items in this table are under review and an updated Code of Practice will be issued when confirmed

| Milton Keynes Defect Repair Matrix    |                  |                                         |                                                                           |                                                           |                                  |                        |          |
|---------------------------------------|------------------|-----------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------|------------------------|----------|
| Network Position                      | Surface Material | Defect Type                             | Repair Solution                                                           | Max Size for Defect                                       | Notes                            | Job Type               | SoR Ref  |
| Verge                                 | Soil and Grass   | Rut or depression                       | Fill with top soil, compact and seed                                      | Not exceeding 15 lin m                                    | Please state volume to be filled | PR*                    | Planned  |
|                                       | Siding Out       | Encroachment onto footway               | Cut back and remove soil and vegetation                                   | Not exceeding 15 lin m                                    |                                  |                        |          |
|                                       | Grips            | Blocked Grip                            | Cut grip, stating width - 300/500/1000mm                                  | Individual                                                |                                  |                        |          |
| Footway, Redway, Cycle Tracks         | Bitmac (Footway) | Surface Defect                          | Clean, cut vertical joint, fill with surface course, compact and overband | Individual up to 2m <sup>2</sup> or within 20 lin. m      |                                  | RMFB, RMRB, RMFW, RMRW | DEFOOT   |
|                                       | Bitmac (Redway)  | Surface Defect                          | Clean, cut vertical joint, fill with surface course, compact and overband | Individual up to 5m <sup>2</sup> or within 20 lin. m      |                                  |                        |          |
|                                       | Slabs            | Uneven, loose, rocking or low           | Take up and relay to correct level                                        | Individual or up to 6 adjacent                            |                                  |                        |          |
|                                       |                  | Missing                                 | Renew to match existing                                                   | Individual or up to 6 adjacent                            |                                  |                        |          |
|                                       | CMK Slabs        | Missing, uneven, loose, rocking or low  | Renew to match existing                                                   | Individual slab or up to 6 slabs within 10 m <sup>2</sup> |                                  |                        |          |
|                                       | Insitu Concrete  | Cracks (as per COP)                     | Clean and repair with mortar material                                     | Individual                                                |                                  |                        |          |
|                                       |                  | Surface Irregularities                  | Clean and repair with mortar material                                     | Individual                                                |                                  |                        |          |
|                                       | Block Paving     | Uneven, loose, rocking or low           | Take up and relay to correct level                                        | Up to 1m <sup>2</sup>                                     |                                  |                        |          |
|                                       |                  | Missing                                 | Renew to match existing                                                   | Up to 1m <sup>2</sup>                                     | State colour and thickness       |                        |          |
|                                       | Brick Paving     | Uneven, loose, rocking or low           | Take up and relay to correct level                                        | Up to 1m <sup>2</sup>                                     |                                  |                        |          |
|                                       |                  | Missing                                 | Renew to match existing                                                   | Up to 1m <sup>2</sup>                                     | State exact size and colour      |                        |          |
|                                       | Natural Stone    | Uneven, loose, rocking or low           | Take up and relay to correct level                                        | Up to 1m <sup>2</sup>                                     | State sizes to be handled        |                        |          |
|                                       |                  | Missing                                 | Renew to match existing                                                   | Up to 1m <sup>2</sup>                                     |                                  |                        |          |
| Carriageway                           | Bitmac           | Surface Defect                          | Clean, cut vertical joint, fill with surface course, compact and overband | Individual up to 2m <sup>2</sup> or within 20 lin. m      |                                  | RMCB                   | DECARRW  |
| Kerbs, Edgings and Preformed Channels | Concrete         | Broken, rocking or depressed or missing | Renew and reinstate as necessary                                          | Individual or 5 within 20 lin. m                          |                                  | RMFW, RMRW             | DEKEEDCH |
|                                       |                  | Chipped or damaged but still sound      | Clean and repair with mortar material                                     | Individual or 5 within 20 lin. m                          |                                  |                        |          |
|                                       | Natural Stone    | Rocking or depressed                    | Relay existing                                                            | Individual or 5 within 20 lin. m                          |                                  |                        |          |
|                                       |                  | Broken or missing                       | Renew and reinstate as necessary                                          | Individual or 5 within 20 lin. m                          |                                  |                        |          |
|                                       | Granite Setts    | Rocking or depressed                    | Renew and reinstate as necessary                                          | Up to 1 lin. m                                            |                                  |                        |          |
| Covers, Gratings, Frames and Boxes    | Road Gullies     | Broken or missing                       | Clean and repair with mortar material                                     | Up to 1 lin. m                                            |                                  | RMCB, RMFB, RMRB       | DEBOXES  |
|                                       |                  | Broken or missing gully cover           | Renew and reinstate as necessary                                          | Individual                                                |                                  |                        |          |
|                                       |                  | Settled or rocking gully frame          | Reset using rapid set mortar                                              | Individual                                                |                                  |                        |          |
|                                       | Manholes         | Broken gully frame                      | Renew frame and cover and reinstate as necessary                          | Individual                                                |                                  |                        |          |
|                                       |                  | Broken or missing cover                 | Renew and reinstate as necessary                                          | Individual                                                |                                  |                        |          |
|                                       |                  | Settled or rocking manhole frame        | Reset using rapid set mortar                                              | Individual                                                |                                  |                        |          |
|                                       |                  | Broken manhole frame                    | Renew frame and cover and reinstate as necessary                          | Individual                                                |                                  |                        |          |

## Appendix C – Defect Abbreviations

| Description                                                             |  | Abbreviation | Description                                                                |  | Abbreviation |
|-------------------------------------------------------------------------|--|--------------|----------------------------------------------------------------------------|--|--------------|
| City centre slabs , silver granite on city centre bedding               |  | CC           | Kerbs / Radius add in the discription the type of kerbs i.e HB = Half batt |  | KRB/ RAD     |
| Redway closure                                                          |  | RWC          | Gully covers and frames                                                    |  | GUL          |
| Footpath Closure                                                        |  | FPC          | Carriageway                                                                |  | CW           |
| Footway Closure                                                         |  | FWC          | Roundabout Closure                                                         |  | RBTC         |
| High speed Road closure, I. for inside closure -O. for out side closure |  | LCI / LCO    | Roundabout                                                                 |  | RBT          |
| Road Closures                                                           |  | RC           | Concrete edging or Wooden Edging                                           |  | CEG/WEG      |
| Stop -Stop boards                                                       |  | SSB          | Portable Traffic Lights for 2/3/4                                          |  | 2WL/3WL/4WL  |
| Stop and Go boards                                                      |  | SGB          | Take up and Relay                                                          |  | TURL         |
| Tarmac Footway (6mm or 10mm)                                            |  | TF6 / TF10   | Take up and replace                                                        |  | TURP         |
| Tarmac Redway 6mm                                                       |  | RTF6         | Take up and relay manhole covers                                           |  | TURM         |
| Block Carriageway                                                       |  | BCW          | Give and Take System                                                       |  | GT           |
| Block Footway                                                           |  | BLF          | Priority Boards                                                            |  | PB           |
| Redway                                                                  |  | RWY          | Stats Required                                                             |  | SR           |
| Cone off Night Before                                                   |  | CNB          | soil and seed for city centre                                              |  | SAS          |
| No TM Required                                                          |  | NTM          | Granite kerbs and Granite setts , This can also be used for Granite Blocks |  | GK/GS/GB     |
| Hot Roll Asphalt                                                        |  | HRA          | Heavy lifting Equipment                                                    |  | HLFT         |
| Dense Bituminus Macadam                                                 |  | DBM          |                                                                            |  |              |
| High Stone Content Asphalt                                              |  | HSCA         |                                                                            |  |              |

