

Part B: Hazard Elimination and Management Schedule

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| Project Title: Managed motorways all lane running (MM-ALR) | Job No.: 1039092 |
| Design Discipline: IAN161/12 | Prepared By: Emma Clutterbuck Updated by Lucy Wickham (August 2013) |
| Checked By: Lucy Wickham John Conquest (August 2013) | |
| <p>This assessment is based on the illustrative drawing of managed motorways all lane running contained in IAN 161/13. The scheme designer must undertake and document the detailed hazard assessment of the scheme specific design proposals in accordance with the requirements of CDM 2007 and other relevant HA standards and guidance. Throughout this document, it is assumed that any person undertaking work on the motorway should receive appropriate training (Motorway Awareness course, Chapter 8 TTM training) and be able to demonstrate competence in these areas. All site works are to be undertaken with appropriate TTM or approved variation thereof. All TTM is to be installed in accordance with Chapter 8 of the Traffic Signs Manual (TSM). Note that the implementation of an MM-ALR scheme does not include the bringing forward of planned major maintenance, unless directed by the Highways Agency. Where current structures or features are fit for purpose, they must not be replaced for the sole purpose of meeting current standards. Contractor to propose safe construction sequence and methods</p> | |

* **Persons at Risk:** (1) Construction workers (2) Members of the Public (3) Maintenance workers

** **Action by:**
 Co-ordinator – include in the pre-construction health and safety plan / health and safety file
 Principal Contractor – manage risk during the construction phase
 Designer – take into consideration when preparing their designs
 Client – pass information to designers / planning supervisor

| Ref. | Activity | Hazard | Persons at Risk * | Design Measures taken, or being taken to eliminate or reduce the hazard | Information on the Residual Risk | Date Issue Raised | Action Required by: ** |
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| INSTALLATION | | | | | | | |
| I-1 | Installation of MS4s, signals and associated equipment and cabling on all cantilever structures and gantries. | Injury to installers or members of public caused by falls from height, objects being dropped or traffic accident | (1) (2) | MM-ALR concept incorporates gantries and cantilevers at a greater spacing than previously utilised (reducing and minimising quantities). Greater use of verge mounted equipment also manages / reduces installation risks. MM-ALR represents a move to carriageway as opposed to lane specific signalling. Generally, the MM-ALR concept incorporates lane specific signalling only at the 'gateway signals and VMS' location and where necessary at intermediate locations. Maximum use will be made of existing gantries. At all other signal locations, verge mounted carriageway signalling is provided. It is assumed that MS4s, signals and | 'Normal' risks associated with working at height and within TTM will remain – to be managed by Principal Contractor through Risk Assessments and Method Statements. Refer also to the documents detailed in the maintenance section below regarding standard taper positions and incorporation of this ethos within the installation sequence where applicable. | November 2011 and updated March 2013 | Designer / Coordinator / Principal Contractor |

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| | | | | <p>associated equipment and cabling will be installed onto gantry / cantilever beams on-site, during the lane / carriageway closure provided for installation of the gantry and cantilever structures (maximising pre-installation to minimise length of exposure during on-site installation activities and avoiding the need for on-site activities e.g.: welding.).</p> <p>TTM comprising closure of the lane over which the equipment is being installed plus a "buffer" lane will be required. On slip/link roads a full closure may be required as it may not be possible to provide the required "buffer" lane.</p> <p>The scheme designer is required to consider the access arrangements to all features to minimise / eliminate requirements in this regard including by reducing need to access equipment at height by providing equipment at ground level and maximising the potential for swap out instead of on-site repair.</p> | | | |
| I-2 | Installation of PTZ CCTV Surveillance cameras | Injury to installers, or members of public caused by falls from height, objects being dropped or traffic incident. | (1) (2) | Pole mounted surveillance CCTV cameras to be specified by scheme designers (in discussion with maintainers) with folding column and wind down mechanism in place of gantry mounted cameras to eliminate the risk of working at height. This allows cameras to be maintained at ground level in the verge, behind safety barrier. | Likelihood will be reduced with mitigation in place Standard risks associated with installing and maintaining roadside infrastructure will remain – to be managed by Principal Contractor through Risk Assessments and Method Statements | November 2011 | Designer/ Coordinator / Client / Principal Contractor |
| I-3 | Gaining access & working adjacent to live carriageway | Vehicular impact causing injury or death. | (1) (2) (3) | It is recognised that a significant risk is represented by TTM operatives having to cross the carriageway. This can be avoided by the use of mobile lane closures to enable signs to be placed in the central reservation during the construction period. All operatives are to use appropriate PPE for works. The Designer will take account of the number of vehicle movements required to gain access to and egress from the works in the development of the design. Design should | Likelihood will be reduced with mitigation in place, to include use of signs and signals. Appropriate verification and controls will be required. Hazard remains throughout the duration of the installation works – therefore minimising duration of construction activities and commensurate vehicle movements is also key in the planning of these activities. | November 2011 and updated March 2013 | Designer / Principal Contractor |

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| | | | | minimise such movements wherever possible.(For example setting bases at GL to minimise arisings for disposal, specification of appropriate retaining solutions (e.g.: sheet piles vs gabions). | | | |
| I-4 | Earthworks | Slope / ground instability. | (1) (2) | Geotechnical review of the generic design undertaken. | Contractor to propose safe construction sequence and methods. | November 2011 | Principal Contractor |
| I-5 | Services (all construction activities) | Damage to underground services - Striking services resulting in disruption and injury. | (1) (2) | Design to account for services known to exist at locations on the site and design out known 'clashes' where they are identified and verified. Contact STATs companies, NRTS and maintenance organisations for plans of services locations. Where information is not available scope of investigation required to be specified and agreed. | Contractor to obtain accurate location of underground services / highway drainage before commencement of construction works and to verify / locate prior to commencement of any construction activity. | November 2011 and updated March 2013 | Designer / Principal Contractor |
| I-6 | Installation of equipment at height on existing / new structures | Possible injury through falling, overstretching, dropping of items. | (1) (2) (3) | Maximise pre-assembly / installation of infrastructure prior to site installation to minimise any requirement to use a MEWP. Maximise pre-testing of equipment to eliminate faults following installation (e.g.: soak testing).Provide appropriate means of edge protection to prevent falls from height. Maximise use of remote monitoring facilities to obviate the need for attendance at site during installation and commissioning phase of the works for fault diagnosis and rectification. (See also I-1 above).The scheme designer is required to consider the access arrangements to all features to minimise / eliminate requirements in this regard. | Possible injury through falling, overstretching, dropping of items. The frequency and likelihood of occurrence will be reduced by the amount of pre-testing and pre-assembly that can be achieved prior to arrival at the site. This therefore needs to be maximised. | November 2011 | Designer, Principal Contractor & Co-ordinator |
| I-7 | The handling and removal and hazardous materials (e.g. Asbestos) | Interaction of potentially hazardous materials | (1) | Designer to be made aware of contents of Asbestos register from maintaining agent. Ensure the safe removing and handling of hazardous materials. Contractors must carry out their own risk assessments for any unidentified materials that might be encountered. | Contamination due to interacting with materials | November 2011 | Designer, Principal contractor & Coordinator |

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| I-8 | Drainage works | Deep excavations and confined space working | (1) (2) | On MM-ALR schemes drainage works / interventions are kept to a minimum. Only operatives who are trained and competent (certified) in confined spaces shall access deep excavations to undertake drainage works. | (Where site conditions permit, the depth of any new drainage to be kept below 2.0m to allow use of standard trench box support. Contractor to propose safe construction sequence and methods. No increase in risk is expected over that which exists in the pre-MM-ALR scenario. | February 2012 and updated March 2013 | Designer, Principal Contractor & Co-ordinator |
| I-9 | Removal of ERTs | 'Installers' being struck by traffic | (1) (2) | Removal of ERTs will reduce the volume of equipment on the network requiring to be maintained. TTM comprising closure of the lane 1 plus a "buffer" lane will be required – pending a site specific assessment by Designers. | Contractor to propose safe construction sequence and methods. No residual risk following removal of all redundant equipment and associated cabling and making good to eliminate any trip hazards. | February 2012 and updated March 2013 | Designer, Principal Contractor & Co-ordinator |
| I-10 | White lining / removal-replacement of road studs | Installers being struck by traffic | (1) (2) | | Contractor to propose safe construction sequence and methods. | February 2012 and updated March 2013 | Designer, Principal Contractor & Co-ordinator |
| I-11 | Road restraint system | Injury to installers, or members of public caused by falls from height, objects being dropped or traffic incident. | (1) (2) | Where current structures or features are fit for purpose, they must not be replaced for the sole purpose of meeting current standards. Where a new road restraint system is required an appropriate foundation should be specified that addresses the risk of any underground obstructions and takes account of ground conditions. The introduction of rigid concrete barrier (RCB) in the central reservation will lead to the optimisation of the design of the central reservation and a consequential reduction in maintenance activities. | Contractor to propose safe construction sequence and methods. | February 2012 and updated March 2013 | Designer, Principal Contractor & Co-ordinator |
| I-12 | Installation of CR signing | Injury to installers, or members of public caused by falls from height, objects being dropped or traffic incident. | (1) (2) | TTM comprising closure of the lane adjacent to the central reserve and possibly "buffer" lane will be required. If work is in a narrow central reserve lane closures on both carriageways may be required. The scheme designer is required to consider the access arrangements to all features to | Inclusion of this feature – to facilitate safe means of access for maintenance – is designed to minimise the need for carriageway crossings by introduction of standard taper positions and remotely operated signage. | February 2012 and updated March 2013 | Designer, Principal Contractor & Co-ordinator |

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| | | | | minimise / eliminate requirements in this regard. It is recognised that a significant risk is in operatives having to cross the carriageway – including this feature will eliminate the need to cross the c/way for maintenance purposes. | Contractor to propose safe construction sequence and methods. | | |
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MAINTENANCE

With the permanent conversion of the hard shoulder to a running lane, all maintenance activities within a managed motorway scheme must be carried out either from a designated area for maintenance, or from a lane closure under TTM. To reduce the impact of lane closures on network performance, the majority of maintenance is expected to be carried out at night, if assessed as safe to do so.

Designers should consider the use of longer life and / or low maintenance items and assets where they need to be replaced or installed as part of the scheme. This consideration should include assets that have extended maintenance interventions. Additionally, designers should consider and discuss with the Agency the need to include maintenance works that the Agency or the maintenance provider were scheduling to take place either in advance of or during or shortly after the implementation of the MM-ALR scheme. Application of a risk based approach in this assessment and decision making process should be applied.

In the development of MM-ALR, the following principles have been determined as a methodology that is deemed appropriate such that the hazards and risks identified can be either eliminated or mitigated so as to be as low as reasonably practicable,:

- Designers have to demonstrate that the road worker safety objective will be met through the development of a holistic scheme specific maintenance strategy for all asset types
- Designers should minimise the number of times TTM has to be installed (through consideration of the removal or relocation of assets, remote fault diagnostics of technology and replacement of assets with longer life alternatives
- Designers should consider providing safe taper positions; use of scheme MS4s for advance signing and installation of remotely controlled advance signing upstream of the safe taper positions.

It is considered feasible to provide TTM for maintenance access within the MM-ALR environment by incorporation of the following measures at the design stage:

- Standard locations for setting out the “taper” (referred to as Safe Taper Positions)
- Procedures to use signs and signals as part of the advance signing for roadworks
- Either the installation of permanent remotely controlled signs to provide the required advance signing; or the implementation of appropriate procedures to create a safe working area whilst portable advance signs are installed and removed.

Designers should be aware of the following HA documents that have been produced in the development of the MM-ALR concept. They contain information and guidance regarding the mitigations discussed and their effectiveness, all of which will be of relevance in the development of scheme specific installation and maintenance hazard elimination and mitigation decisions.

- MM ALR Concept of Operations (to accompany IAN 161) document
- MM ALR. Generic Safety report and MM-ALR. Demonstration of Meeting the Safety Objective report

A MM ALR Maintenance Activities ERIC Assessment (Eliminate, Reduce, Control, Isolate) and a Roadworker Safety Assessment Tool have been undertaken and developed. These two documents have been circulated to designers and scheme Project Managers. These documents are available through the HA Delivery Hub (Operations, Safety and Maintenance TAG)

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| M-1 | Maintenance access to roadside equipment | Maintenance personnel having to travel distances to roadside equipment. Safe means of access to roadside equipment. In the advent of an incident (flying debris, out of control vehicle) limited area to find refuge within. | (3) | Consider provision of safe means of access over longitudinal length of scheme to all equipment (incl. isolated cabinet sites & CCTV cameras). (Due to the absence of hard shoulder on MM-ALR schemes. Scheme designer to assess risks associated with providing safe means of access together with the need to provide appropriate TTM. Scheme designer to consider the use of adjacent local roads and slip roads in this regard. Designers are encouraged to | Increased risk of exposure to maintainers due to distances walked – protection afforded by appropriate barrier where present. Equipment so located to be minimised. Scheme designer to assess risks associated with providing safe means of access and the need to provide appropriate protective TTM. Some increased risks associated with roadside equipment will result – to be managed by Principal Contractor through Risk Assessments and Method | November 2011 and updated March 2013 | Client/ Designer/Coordinator/Technician/MAC/NRTS |
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| | | | | design out the need for any MHS provision. Maximise removal of redundant equipment to obviate the need for on-going visits for maintenance purposes. Investigate the feasibility of off-site access to sites to obviate the need for provision of safe means of access from the carriageway. Maximise the incorporation of remote fault diagnostic and repair capability in items of equipment to minimise the frequency of visits to the roadside. | Statements. | | |
| M-2 | Maintenance of AMIs, MS4s and associated equipment and cabling on gantries and cantilevers. (including CR TTM signage) | Injury to maintenance operatives or members of public caused by falls from height, objects being dropped or traffic accident. | (2) (3) | Use of standard taper positions. TTM comprising closure of the lane over which the equipment is being maintained plus a "buffer" lane will be required. On slip/link roads a full closure may be required as it may not be possible to provide the required "buffer" lane and keep a traffic lane open. The scheme designer is required to consider the access arrangements to all features to minimise / eliminate requirements in this regard. | Normal risks associated with working at height and within TTM will remain – to be managed by the maintenance service provider through Risk Assessments and Method Statements. | November 2011 and updated March 2013 | Designer / Coordinator / Client / TechMAC |
| M-3 | TTM for maintenance activities | Operatives being hit by vehicles. | (3) | It is recognised that a significant risk is in operatives having to cross the carriageway. The elimination of this practice is being pursued through Aiming for Zero initiatives, MM ALR documentation and guidance and the industry. During maintenance the pre-placement of remotely operated signs in the central reserve at defined safe taper locations will eliminate this need. (see introduction to this section) | Risks associated with TTM will remain – to be managed by the maintenance service provider through Risk Assessments and Method Statements. | November 2011 and updated March 2013 | Client/Coordinator / MAC/TechMAC |
| M-4 | Maintenance of ERTs in ERAs / on slip roads / intra-junction | Collision with maintenance vehicle whilst parked in ERA/ on slip road / at intra-junction location caused by public vehicle entering. | (3) | Reduction of routine maintenance frequency of ERTs being investigated to reduce risks. | Risks associated with roadside infrastructure will remain – to be managed by Principal Contractor through Risk Assessments and Method Statements | November 2011 and updated March 2013 | Client/ Coordinator /TechMAC |

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| M-5 | Accessing site for Maintenance | Accessing site when other parties are present. | (3) | Maintenance Team to liaise with the area road space team to secure road space before commencing any works Where possible and safe, liaise with the other parties to share/ gain access to the site | Maintenance service provider to ensure all maintenance activities are conducted in a safe manner. Use form of approved / agreed permit to access system where in place / road space team. | November 2011 and updated March 2013 | Principal Contractor/TechMAC/NR TS / MAC / ASC |
| M-6 | Maintenance of PTZ CCTV surveillance cameras | Injury to maintenance workers caused by falls from height, objects being dropped or being hit by vehicles when maintaining cameras | (3) | Pole mounted surveillance CCTV cameras to be specified by scheme designers (in discussion with maintainers) with folding column and wind down mechanism in place of gantry mounted cameras to eliminate the risk of working at height. This allows cameras to be maintained at ground level in the verge, behind safety barrier. CCTV mounted in the verge will usually require TTM to enable access to be obtained. | Maintenance work carried out at night using appropriate TTM | November 2011 and updated March 2013 | TechMAC |
| M-7 | Maintenance activities | Injury from electrocution. | (3) | Only competent trained operatives are to carry out maintenance works. Compliance with BS7671 Requirement for Electrical Installations 17th Edition is required. | Maintenance service provider to ensure all maintenance activities are conducted in a safe manner | November 2011 and updated March 2013 | Maintenance service provider Maintenance Manager and H&S Manager. |
| M-8 | Maintenance activity - repairing CAT 1 defects | Maintenance operatives being hit by vehicles whilst repairing CAT 1 defects | (3) | Only competent, trained operatives are to Carry out maintenance works. TTM in accordance with chapter 8 will be required to undertake the making safe and permanent repair of defects and third party damage. Damage repair in the central reserve will usually require lane closure to be implemented on both carriageways. (Installation requirement in central reserve to be kept to an absolute minimum). All TTM is to be installed in accordance with Chapter 8 of the TSM. Use of standard taper positions. | Maintenance service provider to ensure all maintenance activities are conducted in a safe manner Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. | January 2012 and updated March 2013 | Maintenance service provider/Maintenance and H&S Manager |

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| M-9 | Annual Inspection of Motorways | Maintenance service provider inspectors being hit by vehicles whilst undertaking detailed inspections of the motorway. (It is usual that the annual inspection is a detailed inspection that will require access to the asset usually by means of TTM.) | (3) | Any person undertaking work on the motorway should receive appropriate training (e.g.: Motorway Awareness course, Chapter 8 TTM training) and be able to demonstrate competence in these areas. All operatives are to use appropriate PPE for works and be able to demonstrate competence in this area. | Maintenance service provider to ensure all maintenance activities are conducted in a safe manner Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. | January 2012 and updated March 2013 | Maintenance service provider Maintenance and H&S Manager |
| M-10 | Routine surveys | Maintenance service provider surveyors being hit by vehicles whilst undertaking deflectograph and falling weight deflectograph surveys | (3) | TTM in the form of lane closures will be required to undertake these surveys. All TTM is to be installed in accordance with Chapter 8 of the TSM. Use of standard taper positions. Only competent, trained operatives to carry out survey works. All operatives are to use appropriate PPE for works and be able to demonstrate competence in this area. | Maintenance service provider to ensure all maintenance activities are conducted in a safe manner. Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. | January 2012 and updated March 2013 | Maintenance service provider/Maintenance and H&S Manager |
| M-11 | Drainage Inspections | Maintenance service provider inspectors being hit by vehicles or falling objects whilst undertaking drainage Inspections. | (3) | TTM in the form of Lane 1 lane closure for drainage in the verge. Lane 4 A and B carriageway (for central reserve drainage) closures will be required to undertake these surveys. | Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |
| M-12 | Gully Cleaning and sweeping of drainage channel | Members of Public colliding into rear of Gully cleaning machine | (2) | TTM should be installed in Lane 1 and/or Lane 4 depending on their location. Use of standard taper positions. | Use risk based approach so that gullies are only cleaned as and when needed. Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |
| M-13 | Assess and record condition of Geotechnical asset (DMRB) | Maintenance service provider assessors being struck by vehicles | (3) | All Assessors are to wear appropriate PPE for works. TTM in the form of Lane 1 and Lane 4 closure will be required to undertake the assessment of Geotechnical assets Use of standard taper positions. | Combine with TTM closures for other works if possible | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |

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| M-14 | General Structure Inspection (every 2 years) | Maintenance service provider inspectors being hit by vehicles or falling objects whilst undertaking Inspections | (3) | TTM in the form of Lane 1 closures will be required to undertake these Inspections. . Only competent trained operatives are to Carry out Inspection works. All operatives are to wear appropriate PPE for works and be able to demonstrate competence in this area. | Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |
| M-15 | Principal Structure Inspection (every 6 years) | Maintenance service provider inspectors being hit by vehicles or falling objects whilst undertaking Inspections | (3) | TTM in the form of Lane closures will be required to undertake these Inspections. Only competent trained operatives are to Carry out Inspection works. All operatives are to wear appropriate PPE for works and be able to demonstrate competence in this area. | Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |
| M-16 | Routine Bridge Maintenance (annually) | Maintenance service provider engineers being hit by vehicles or falling objects whilst undertaking bridge Inspections | (3) | TTM in the form of Lane 1 and Lane 4 closures will be required to undertake these Inspections. | Only competent trained operatives are to carryout maintenance works. | January 2012 and updated March 2013 | Maintenance service provider H&S Manager |
| M-17 | Graffiti removal | Maintenance service provider employees being struck by moving vehicles | (3) | Scheme designers to consider planting / provision of more resilient fencing to break display areas of abutments to discourage artists. Only competent trained operatives are to carry out maintenance works. TTM in the form of Lane closures will be required to undertake these Inspections. Use of standard taper positions. All operatives are to wear appropriate PPE for works. | Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. | January 2012 and updated March 2013 | Maintenance service provider/Maintenance and H&S Manager |
| M-18 | Detailed Inspection of Road Restraint System | Maintenance service provider inspectors being hit by vehicles whilst undertaking Inspections of the Road restraint System | (3) | TTM in the form of Lane 1 and 4 (A and B carriageways) closures will be required to undertake these Inspections. The designers should consider the inspection requirements and specify systems which minimise maintenance requirements. Use of standard taper positions. All operatives are to wear appropriate PPE for works and be able to demonstrate competence in this area. | Combine with TTM closures for other works where possible | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |

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| M-19 | Road Markings and Road Studs Replacement | Members of Public colliding into rear of vehicle | (3) | Vehicle to be in TTM whilst replacing road markings and road studs. Designer to specify long-life resilient products to minimise maintenance requirements. | Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |
| M-20 | Road Traffic Signs Inspection and Testing | Maintenance service provider employees being struck by moving vehicles | (3) | TTM in the form of Lane 1 Lane closures will be required to undertake these Inspections. | Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. Designers to consider the use / specification of self-cleaning sign faces to minimise maintenance requirements. | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |
| M-21 | Road traffic Signals Inspection and testing | Maintenance service provider employees being struck by moving vehicles | (3) | Detailed inspections and maintenance will need TTM lane closures. | Combine with TTM closures for other works where possible | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |
| M-22 | Lighting Inspection and Testing | Maintenance service provider employees being struck by moving vehicle | (3) | TTM in the form of Lane 1 closure will be required to undertake the Inspection and testing of lamp columns in the verge. | Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |
| M-23 | Maintenance activity - Bulk lantern change and cleaning of lamp columns | Maintenance operatives being hit by vehicles whilst changing and cleaning lamp columns in the central reserve | (3) | TTM in the form of lane 1 / 4 (A and B carriageways) closures will be required to undertake this activity. All operatives are to wear appropriate PPE for works. | Combine with TTM closures for other works where possible | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |
| M-24 | Fences, Walls, Screens, and Environmental Barriers Inspections | Maintenance service provider inspectors being hit by vehicles whilst undertaking Inspections | (3) | TTM in the form of Lane 1 closure will be required to undertake the inspection of all fences, walls, screens and environmental barriers that are within the verge. | Maintenance service provider co-ordination and combining of works to minimise the implementation of TTM. | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |
| M-25 | Soft Estate Inspection and Maintenance Litter picking | Maintenance service provider employees being struck by moving vehicles | (3) | TTM in the form of Lane 1 and Lane 4 (A and B carriageways) closure will be required to undertake the Inspection and maintenance / litter picking activity. All operatives are to wear appropriate PPE for works and be able to demonstrate competence in this area. | Combine with TTM closures for other works where possible Reduction in requirement due to the adoption of a risk based approach to this activity. | January 2012 and updated March 2013 | Maintenance service provider Maintenance Manager |

Note

1. In the future TechMAC will be replaced by RTMC