

SUMMARY

The requirements of this procedure apply to all relevant Scotland TranServ employees who have a responsibility for complying with the procedures requirements. The purpose of this procedure is to detail how inspections and safety patrols will be undertaken and subsequently reported.

SCOPE

Inspections and safety patrols are undertaken to identify safety related issues and future routine maintenance requirements. This Procedure Includes:

- Safety inspections
- Safety patrols
- Night time safety patrols
- Ad-hoc inspections
- Detailed inspections
- Additional local requirements
- Defects raised by Subcontractors during Cyclic Maintenance activities

The procedure applies to all those involved with undertaking and subsequent reporting of inspections and safety patrols in accordance with the 4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network. This includes additional local requirements specified in Annex 7.1/A of Schedule 7 Part 1 of the 4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network, specifically M8 Manhole Inspections, Monklands Canal Inspections and M74 Cathcart Viaduct inspections.

This procedure does not apply to the inspection of structural elements of bridges or ancillary structures falling within the scope of BD63 of the DMRB Volume 3, Section 1 Part 4.

DEFINITIONS

Safety Inspection: Inspections designed primarily to identify Category 1 Defects, undertaken at frequencies not exceeding 7 days, inspecting all that can be practicably seen from a slow moving vehicle.

Safety Patrol: Patrols designed primarily to identify Category 1 Defects on specific routes, undertaken at intervals of 7 days midway between safety inspections.

Detailed Inspection: Generally walked inspections designed primarily to identify Category 2 Defects, undertaken at various frequencies depending on the inventory item being inspected.

RMMf: Computerised routine maintenance and management function of the Integrated Roads Information System (IRIS).

DCD: Handheld electronic data capture device.

Category 1 Defect (Cat 1): A defect that requires prompt attention because it represents an immediate hazard or potential hazard to users, presents a risk of rapid structural deterioration to the Trunk road or is listed in the Transport Scotland Trunk Road Inspection Manual.

Category 2 Defect (Cat 2): A defect, which is not a Category 1 defect.

Inspector: Any responsible person who undertakes inspections. The driver acts as the checker of data prior to input to RMMf

TM: Traffic management

Link/Section/Chainage: Unique referencing system for any location on the Trunk Road Network.

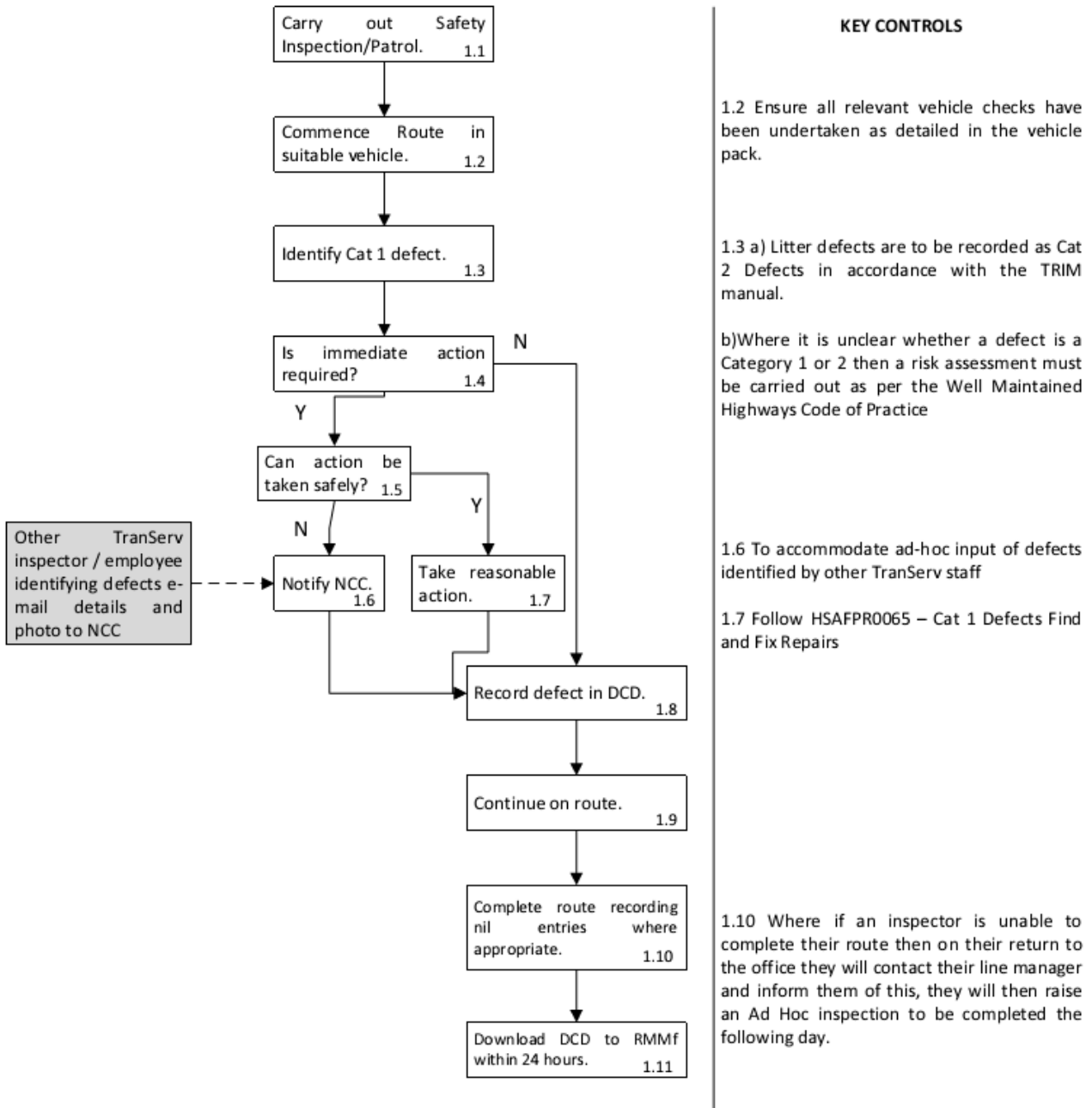
NCC: ScotlandTranServ's Network Control Centre (NCC)

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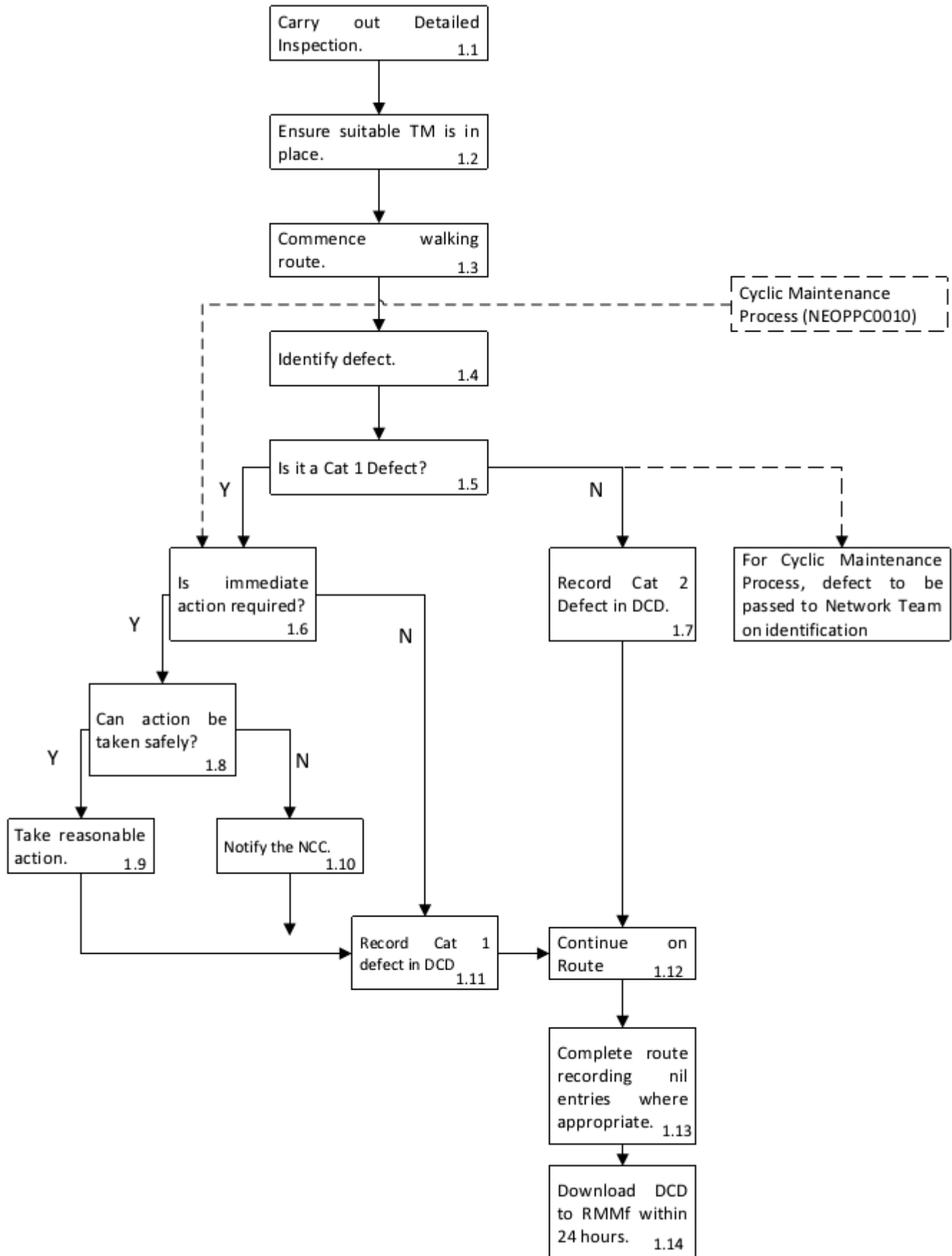
1.0 FLOWCHART

INSPECTIONS AND SAFETY PATROLS

Scope: These flowcharts describe process and key controls for Inspection and Safety Patrols Flow 1 and Detailed Inspection Flow 2.



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2.0 PROCESS

2.1 Responsibilities and Overall Requirements

The Route Manager or nominee is responsible for:

- Ensuring that the requirements of this procedure are complied with
- Ensuring all inspections are carried out at the required frequency
- Ensuring inspection programmes are developed meeting the contractual timescales
- Ensuring that all personnel undertaking Inspections are suitably trained

The Inspector(s) will be responsible for:

- Undertaking Inspections and Safety Patrols
- Complying with this procedure

Safety Inspections, Safety Patrols, night time Safety Patrols, ad-hoc inspections and Detailed Inspections are planned and executed to:

- identify Category 1 and Category 2 Defects, and
- identify and note any new accessibility barriers which are not recorded in the routine maintenance and management function of IRIS.

New accessibility barriers will be added to the routine maintenance and management function of IRIS within 24 hours of completion of the inspection or patrol during on which they were noted.

In addition to the requirements above, during inspections and patrols, Inspectors will collect, collate, and record as a Defect within IRIS information relating to wildlife road-kill incidents involving otter, badger, deer (red, roe and fallow), red squirrel and raptor species. An annual summary of road-kill will be provided to the Director as part of our Landscape Management Report.

Additional inspections and other necessary actions will be undertaken should Severe Weather be forecast by MeteoGroup or the Met Office (via Transport Scotland) in accordance with the requirements of Schedule 7 Part 8. Particular attention will be paid to Disruption Risk Sites where flooding has been identified.

2.2 Vehicles and Equipment

The vehicles utilised for inspections and patrols will be fitted with a global positioning tracking system, be conspicuously coloured, multi-purpose vehicles with high visibility markings, roof bars with rotating/strobe lights and a sign attached to the rear stating 'Motorway Maintenance' or 'Highway Maintenance'. They will have a communication system to allow immediate contact to the central office or Control Room.

Vehicles will generally be of up to 3.5T gross capacity. Signs and cones will be carried to allow defects to be coned off or to advise road users of a hazard. The vehicle will also carry instant road repair material and such tools that will allow repairs to potholes to be undertaken, if it is safe to do so.

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2.3 Safety Inspection and Patrol Guidance

Safety Inspections and Patrols will comply with the Transport Scotland Trunk Road Inspection Manual (TRIM), which gives detailed guidance on all aspects of inspection and defect management, including Defect classification.

Although examples of the types of defects which may constitute a Category 1 Defect are given for each asset type in the appropriate sections of the TRIM, the TRIM does not contain an exhaustive compendium of Defects. In the absence of a description of a Defect, the Inspector will classify the Defect from first principles, using the Defect Risk Assessment guide attached to this procedure, which is based upon and adapted from the principles of Defect risk assessment set out in Chapter 9 of 'Well Maintained Highways – Code of Practice for Highway Maintenance'. The Network Manager will ensure that road Inspectors are provided with clear guidance and training on the use of this Assessment guide and in carrying out Safety Inspections, and that they receive regular refresher training and attend group workshops.

Identified Defects which do not comply with the criteria given within TRIM will be assessed against the Defect Risk Assessment (NETCRM0006) taking into account the following risk impacts:

- Injury to any party using or repairing the trunk road network
- Significant disruption to the normal flow of traffic through the trunk road network
- Significant deterioration of any specific part or infrastructure of the trunk road network
- Damage to a third party's property, livestock or equipment
- Damage to the environment
- Liable to leave Scottish Ministers in breach of one or more of their statutory duties
- Failure to effectively enforce the legality of an asset that has a mandatory or prohibitory function
- Failure of an asset to fulfil its intended function where such an asset protects the road user, maintenance personnel, environment, the trunk road network infrastructure, and/or facilitates the safe use of the trunk road network
- Offence to road users from graffiti that is obscene, blasphemous or otherwise offensive.

Safety Inspections will be carried out once every seven days on each route, by two inspectors, from a slow moving Safety Inspection Vehicle carrying suitable equipment, as detailed above. Safety Patrols will also be carried out every seven days, on the routes listed in Annex 7.1/B of Schedule 7 Part 1 of the 4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network, from similar vehicles midway between Safety Inspections. These inspections and patrols will be carried out during off-peak periods, to minimise traffic disruption.

Where an inspector is unable to complete their route, then on their return to the office they will contact their line manager and inform them of this, they will then complete the inspection as soon as possible and then upload the inspection file to IRIS once complete.

While primarily identifying Category 1 defects, at least two Safety Inspections per annum will be carried out during or immediately following a period of wet weather to identify areas prone to flooding. There will be a minimum period of 3 months between wet weather Safety Inspections.

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These inspections and patrols will be undertaken from the hard shoulder where possible. The speed of these inspections and patrols will be no greater than 30mph on hard shoulders and as close to this speed as is safe to do so, on routes without a hard shoulder. The average inspection duration at this speed is 4.5hrs.

Safety Inspections and Patrols will inspect all that can practicably be seen from a slow moving vehicle from within the boundary of the Trunk Road.

When a Defect has been identified, the Inspector is required to use the guidance outlined in the TRIM and take account of applicable regulations and engineering judgement in deciding when remedial action will be necessary and to make recommendations on the type of work required. A photograph of the defect must be captured and uploaded/attached to the corresponding defect in IRIS.

During inspections and patrols, whenever possible, the inspection team will carry out immediate repairs to Defects with reference to the Find and Fix procedure (HSAFPR0065). Where this is not possible the inspection team will erect warning signs and, if appropriate, fencing to maintain the safety of trunk road users. If a repair cannot be undertaken by the inspection team and the Defect represents an immediate hazard they will contact the NCC to have the appropriate resources dispatched immediately.

Any temporary repair will be designed to last until a permanent repair is effected, ensuring that our inspection regime will address any deterioration in temporary repairs before they affect road users.

Inspection route and Defect data (including a photograph) is validated by the Inspector and Driver and uploaded in IRIS within 24 hours of the Safety Inspection commencing.

Special inspection regimes will be developed, as required, for defects which have potentially serious consequences for trunk road users and have been temporarily repaired. These additional inspections will ensure the continued integrity of warning signage or temporary repairs until a permanent repair has been made.

2.4 Detailed Inspection Guidance

Detailed Inspections shall:

- Identify Defects as described in the Transport Scotland Trunk Road Inspection Manual,
- Further identify the condition of ancillary assets as described in the Trunk Road Condition Manual,
- Validate the accuracy of inventory during Detailed Inspection as described in the Trunk Road Inventory Manual.

Detailed Inspections will be carried out on foot by no less than two inspectors, primarily identifying Category 2 defects. These inspections will be carried out every 12 months, unless otherwise stated in Schedule 7 Part 1 of the 4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network. A Detailed Inspection programme will be produced by the Area Network Managers at the start of each financial year. Our inspection programme will be developed using the RMMf inventory and the relevant inspection frequencies.

On motorways and dual carriageways, inspections will be carried out from the footway, hardshoulder, grass verge, or nearside lane as appropriate. Where inventory items requiring inspection are in or adjacent to the central reserve on a motorway or dual carriageway, and where the Detailed Inspection of these items will require a lane occupation, the Detailed Inspection will be carried out every 24 months. Inspections on motorways or high-speed dual carriageways will be subject to risk assessment.

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Where a Detailed Inspection requires a lane occupation, it will be undertaken during off-peak periods, where possible in conjunction with other Operations and inspections.

Detailed Inspections will be undertaken in accordance with the Specification, or where specified to the requirements of the relevant Departmental Standard in the Design Manual for Roads and Bridges (DMRB). The required equipment will be carried by the inspection team to allow this to be undertaken. This equipment will include but not be limited to: measuring wheel, measuring tape, spirit level, camera, hand held Data Capture Device (DCD).

The condition of ancillary assets shall be collected and recorded as part of Detailed Inspections and recorded in accordance with the provisions of the Trunk Road Condition Manual. Where required by the Trunk Road Condition Manual, associated data such as additional attributes will also be recorded in the routine maintenance and management function of IRIS.

All Detailed Inspection, Defect and ancillary asset condition data shall be uploaded into the routine maintenance and management function of IRIS within four days of the data being gathered.

Any errors or omissions in inventory found shall be raised as a defect in accordance with 'Cat 1 Defect Procedure' (NETCPC0006) and closed within 4 days (S7P1, Cl. 1.18.13). For changes in the inventory following the sign off of the completion certificates for a scheme follow 'Design Procedure' (DESNPC0002).

2.5 Additional Local Requirements

Schedule 7 Part 1 Annex 7.1/A of the 4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network, includes for specific local requirements to be accommodated within inspections. These additional local requirements are as follows:

- M8 Manhole Inspections – Inspections carried out every three months, in accordance with the requirements of the M8 Manhole Report,
- M8 Monklands Canal – Inspections and Maintenance carried out in accordance with the requirements and frequencies of the Monklands Canal Maintenance Manual,
- M74 Cathcart Cut pumping station – Maintenance and breakdown service in accordance with the requirements of the M74 Cathcart Cut pumping station Operation and Maintenance Manual.

2.6 Recording Defects

Category 1 and Category 2 Defects will be recorded during Safety Inspections, Safety Patrols and Detailed Inspections using a DCD. Defects will be recorded using link, section, chainage, cross-sectional position and Ordnance Survey Grid Reference co-ordinates. The DCDs operate in such a manner so as to provide a unique checklist of required information for each defect type.

Two inspectors carry out the inspections one of whom is the driver of the vehicle. The driver acts as the checker and is the person who validates the data prior to upload into the routine maintenance and management function of IRIS.

The inspection information will be downloaded from the DCDs into the RMMf within the required timescales, 24hrs for Category 1 defects and 4 working days for Category 2 defects. To ensure the

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correctness and completeness of the data gathered during inspections and patrols, RMMf will not accept incomplete or incorrect data during the download process.

All inspection and Defect information will be held in the RMMf, accessible to Scotland TranServ, PAG and Transport Scotland. Data gathered in the RMMf will be used to produce reactive and routine maintenance programmes.

Where other TranServ inspectors / employees observe defects relating to road, geotechnical or environmental assets they will photograph said defect and report, by email, to the TranServ NCC who will then take the appropriate action to record.

Where defects are identified by Subcontractors carrying out Cyclic Maintenance, these will be recorded using 'Drainage Record Sheet' (NEOPSF0003) and passed to Network Team to raise defects in accordance with 'Cat 1 Process' (NETCPC0006) and TRIM Manual.

2.7 Flooding

Detailed requirements for managing and reporting flooding incidents are detailed in the Flood Reporting Procedure NETCPC0010. The flooding incident is detailed in a report prepared by the responsible person detailing the cause/(s) using form (NETCSF0041) and a copy will be forwarded to the Director within 14 days of the incident. These reports will not be confined solely to identification during inspection and safety patrols but also, where applicable, from other sources e.g. emergency calls to Operational Control Room, ORI's.

A flooding report shall be completed for each occurrence of flooding and attached to the relevant Defect Record in the routine maintenance and management function of the Integrated Roads Information System within four days. Additional documentation such as photographs, reports and the results of further investigation shall also be attached.

The contractual compliance aspects of flood reporting are monitored by the Network Control Centre Manager who maintains a record on NETCSF0061- Flood Management Control Sheet.

2.8 General Guidance


Where inspections or patrols are continually carried out by the same inspectors, arrangements should be made for an alternate inspector to carry out the inspection once a month, to monitor the accuracy and rigorousness of the inspections and patrols. This change in inspectors should be recorded on the DCD.


During the first annual period the RMMf will be updated with the landscape inventory, detailed inspection and cyclic maintenance requirements.

3.0 ASSOCIATED DOCUMENTS

- **4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network.** Schedule 7 Part 1.
- **NETCPL0003** Incident Response Plan
- **NETCPC0006** Cat 1 Defect Procedure
- **HSAFPR0065** Find and Fix Procedure
- **NETCPC0010** Flood Reporting Procedure
- **NETCSF0041** The flooding incident report
- **NEOPPC0010** Cyclic Maintenance Procedure for Drainage Items

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Procedural Steps	Record	Supporting Information
<p>Commence Inspection / Patrol in suitable vehicle</p> <hr/> <p>Inspector</p>		
<p>If a Cat 1 Defect is found and immediate action is required and it can be actioned safely (HSAFPR0065), then reasonable action is taken and the defect is recorded in the DCD</p> <hr/> <p>Inspector</p>	<p> NETCRM0006 Defect Risk Assessment</p>	
<p>If a Cat 1 Defect is found and immediate action is required and cannot be actioned safely then the NCC is notified</p> <hr/> <p>Inspector</p>		
<p>If a Cat 1 Defect is found and immediate action is not required then the defect is recorded in the DCD</p> <hr/> <p>Inspector</p>		
<p>The inspection is continued and nil entries are recorded where appropriate</p> <hr/> <p>Inspector</p>		
<p>Download DCD to RMMF within 24 hours</p> <hr/> <p>Inspector</p>		

Procedural Steps	Record	Supporting Information
<p>Commence walking route once suitable TM is in place</p> <hr/> <p>Inspector</p>		
<p>If a Cat 1 Defect is found and immediate action is required and it can be actioned safely (HSAFPR0065), then reasonable action is taken and the defect is recorded in the DCD</p> <hr/> <p>Inspector</p>	<p> NETCRM0006 Defect Risk Assessment</p>	
<p>If a Cat 1 Defect is found and immediate action is required and cannot be actioned safely then the NCC is notified</p> <hr/> <p>Inspector</p>		
<p>If a Cat 1 Defect is found and immediate action is not required then the defect is recorded in the DCD</p> <hr/> <p>Inspector</p>		
<p>If the Defect is Cat 2 then it is recorded as a Cat 2 in the DCD</p> <hr/> <p>Inspector</p>		
<p>The inspection is continued and nil entries are recorded where appropriate</p> <hr/> <p>Inspector</p>		
<p>Cat 1 Defects shall be download DCD to RMMF within 24 hours and Cat 2 defects shall be download DCD to RMMF within 4 working days.</p> <hr/> <p>Inspector</p>		