NRA HD 16
Temporary Safety Measures
Inspections

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National Roads Authority

National Roads Authority – Standards Section
Training for New Developments
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What is NRA HD 16

- Temporary Safety Measures Inspections
- In other words - Traffic Management Inspections by the Road Authority
- Deals with Safety at Road Works for primarily road users and also road workers.
Why NRA HD 16?

- This Directive applies to roads which are part of the trans-European road network (TERN).
- In Ireland Temporary Safety Measures Inspections are required on all National Roads.
Current Guidance

- Best practice on implementation of traffic management measures included in:
  - Chapter 8 of the Traffic Signs Manual, and,
  - Guidance For The Control And Management Of Traffic At Road Works
  - (aka the Ashbourne document)
### Who does the Inspections?

<table>
<thead>
<tr>
<th>Who undertakes the inspection</th>
<th>Temporary Safety Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Roads Authority</td>
<td>Projects procured by the National Roads Authority</td>
</tr>
<tr>
<td>Local Authority</td>
<td>Projects sanctioned and/or procured by the Local Authority</td>
</tr>
<tr>
<td>Statutory undertaker/road operator (e.g. PPP)</td>
<td>Projects under their management.</td>
</tr>
</tbody>
</table>
Periodic inspections of temporary safety measures at roadwork sites are carried out on all projects sanctioned and/or procured by them, to confirm that the Requirements are being implemented.
## Frequency of Inspections

<table>
<thead>
<tr>
<th>Duration of Road Works</th>
<th>% of sites to be inspected per annum</th>
<th>Frequency of Inspection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceeding 1 year in duration</td>
<td>100% of sites to be inspected</td>
<td>Quarterly</td>
</tr>
<tr>
<td>1 month to 1 year in duration</td>
<td>30% to 40% of sites to be inspected</td>
<td>Twice per year</td>
</tr>
<tr>
<td>Greater than 1 day, less than 1 month</td>
<td>10% to 20% of sites to be inspected</td>
<td>Single Inspection</td>
</tr>
<tr>
<td>1 day in duration</td>
<td>Random</td>
<td>Single Inspection</td>
</tr>
</tbody>
</table>
Role of Local Authority and Utility Companies

- Local Authorities should advise any person or body undertaking roadworks on their roads (eg. Road Opening Licensee), that this Directive is now in place.
- Utilities to inspect their own sites in accordance with the Guidelines.
Role of the Authority (NRA)

- Prepare Web-based database to track all roadworks on National Roads
- Carry out random inspections of Local Authority and statutory undertaker’s Temporary Safety Measures inspection systems.
- Inspect Works Procured directly by NRA
How to Notify the NRA?

- Web-based database
- Registered by Project Manager in Local Authority
- Notification to be done prior to commencement of construction
Map Portal Sign In

Username or Email

You can sign in with your assigned username or the email address you used to register.

Password

Sign In
Map of your Region
Identify Planned Works Location
Choice of Map/Aerial Photograph
## Saved Works

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relining Section of Road</td>
<td>Planned Works</td>
</tr>
<tr>
<td>Trial Works BS</td>
<td>Planned Works</td>
</tr>
<tr>
<td>Test Adb</td>
<td>Planned Works</td>
</tr>
<tr>
<td>Test</td>
<td>Planned Works</td>
</tr>
<tr>
<td>Test 2 AcB</td>
<td>Planned Works</td>
</tr>
</tbody>
</table>
Create a New Works Record

Works Description: M6 Relining of Motorway

Direction Description: Enfield to Kilcock

If Works will be carried out on only one side of the road, indicate the direction by naming the next town along the route or state both to indicate both directions.

Applicant: Westmeath County Council

Start Date: 08-04-2013

Finish Date: 23-04-2013

Enter the date the Works are scheduled to be completed. If not known, enter an estimated date. The finish date can be

Map showing Ireland with a marked location.
Contractor Contact: Contractor 10

Name, Email and Phone Number of Contractor's Nominated contact:

Contractor Email: swhelan@dataworks.ie

Contractor Phone: 051876555

PSCS Contact Name: [Input field]

- PSCS 1
- PSCS 10
- PSCS 11
- PSCS 12
- PSCS 13
- PSCS 14
- PSCS 15
- PSCS 16

HSA AF1 Submitted?

- Static
- Mobile
- Lane Closure
- Diversion
## Worklist

### Works in Progress

<table>
<thead>
<tr>
<th>#</th>
<th>Route</th>
<th>Description</th>
<th>Feature</th>
<th>Contractor</th>
<th>Start/Finish</th>
<th>Update</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>191</td>
<td>Placeholder While Testing</td>
<td>M9 test AdB</td>
<td>LineString</td>
<td>Contractor 11</td>
<td>26/03/2013 - 17/04/2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>212</td>
<td>Placeholder While Testing</td>
<td>M5 Relining of Motorway</td>
<td>Point</td>
<td>Contractor 10</td>
<td>08/04/2013 - 23/04/2013</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Worklist

### Works in Progress

<table>
<thead>
<tr>
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<th>Feature</th>
<th>Contractor</th>
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</tr>
</thead>
<tbody>
<tr>
<td>191</td>
<td>Placeholder While Testing</td>
<td>M9 test AdB</td>
<td>LineString</td>
<td>Contractor 11</td>
<td>28/03/2013 - 17/04/2013</td>
</tr>
<tr>
<td>212</td>
<td>Placeholder While Testing</td>
<td>M6 Relining of Motorway</td>
<td>Point</td>
<td>Contractor 10</td>
<td>08/04/2013 - 23/04/2013</td>
</tr>
<tr>
<td>198</td>
<td>Placeholder While Testing</td>
<td>TestbyFirefox</td>
<td>LineString</td>
<td>Contractor 10</td>
<td>25/03/2013 - 05/04/2013</td>
</tr>
</tbody>
</table>
Example of Inspection form used by NRA
# TEMPORARY SAFETY MEASURES (TSM) INSPECTION SYSTEM REPORT

**Location:**
- **Road:** [Road Name]
- **Section:** [Section Name]

**Date:** [Date]

**Inspection Details:**
- **Inspector:** [Name]
- **Inspector Email:** [Email]
- **Inspector Phone:** [Phone]

**Temporary Safety Measures:**

<table>
<thead>
<tr>
<th>TSM</th>
<th>Description</th>
<th>Condition</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSM 1</td>
<td>[Description]</td>
<td>[Condition]</td>
<td>[Notes]</td>
</tr>
<tr>
<td>TSM 2</td>
<td>[Description]</td>
<td>[Condition]</td>
<td>[Notes]</td>
</tr>
<tr>
<td>TSM 3</td>
<td>[Description]</td>
<td>[Condition]</td>
<td>[Notes]</td>
</tr>
</tbody>
</table>

**Maintenance Details:**

- **Location:** [Location]
- **Distance:** [Distance]
- **Type:** [Type]
- **Date:** [Date]

**Photos:**

- [Photo 1]
- [Photo 2]
- [Photo 3]
- [Photo 4]
- [Photo 5]

**Approach from Tailgate:**
- [Photo 6]
- [Photo 7]

**Recommendations:**

- [Recommendation 1]
- [Recommendation 2]
- [Recommendation 3]

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**Appendix:**

- [Appendix 1: TSM Details]
- [Appendix 2: Maintenance Records]
<table>
<thead>
<tr>
<th>TSM</th>
<th>Temporary Safety Measures (TSM) for Roadworks</th>
<th>N/R</th>
<th>R</th>
<th>O</th>
<th>G</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSM.1</td>
<td>Evidence available that sufficiently trained staff are present to design and implement the TSM?</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.2</td>
<td>Does the Design conform to the Traffic Signs Manual (DoT) and does the TSM's installed conform to the design layout and parameters?</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.3</td>
<td>Have all hazards been assessed in the TSM?</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.4</td>
<td>Has allowance been made for the delivery and removal of materials, and have these been adequately signed?</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.5</td>
<td>Have Gardai been informed of any traffic lights or stop/go system in use?</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.6</td>
<td>Have Gardai been informed of speed limits being introduced for the duration of the works?</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.7</td>
<td>Are all traffic management equipment in good condition/fit for purpose (easily understood be the general road user) and in accordance with the Traffic Signs Manual (i.e. size/height, colour, reflectivity)?</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.8</td>
<td>Are sign sightlines in accordance with the requirements of the TSM and are sightlines adequate for all other signs (i.e. free from bends, hill/ dips in the road, parked vehicles, hedges etc)?</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.9</td>
<td>Will the site be safe during hours of darkness and adverse weather conditions?</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.10</td>
<td>Is the carriageway/footway being kept clear of mud and surplus equipment?</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.11</td>
<td>Are materials/plant correctly and safely stored?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.12</td>
<td>Is there safe access/egress to adjacent private premises and local roads/junctions?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.13</td>
<td>Does signing and guarding meet the changing site conditions?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.14</td>
<td>Are traffic control arrangements working at their optimum level to reduce traffic delays?</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSM.15</td>
<td>Have all misleading permanent signs &amp; road markings covered?</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>TSM.16</td>
<td>Have the needs of pedestrians and other vulnerable road users (disabled pedestrians, blind, cyclists, horses etc) been addressed in the layout? If existing public routes have been blocked, has suitable alternatives been provided?</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>TSM.17</td>
<td>Is the Work Area clearly defined to the road user?</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>
Summary of Inspection:

Approach from Galway:
- Photo TSM 1 - 1200mm 'Roadworks Ahead' signage with supplementary plate.
- Photo TSM 2 - 1200mm 'Offside Lane Closed' signage with supplementary plate. TM ahead transfers fast lane to slow lane (fast lane and hard shoulder closed) and then slow lane to fast lane (hard shoulder and slow lane closed) prior to Junction 13.
- Photo TSM 3 - 1200mm 'Offside Lane Closed' signage with supplementary plate.
- Photo TSM 4 - 1200mm 'Offside Lane Closed' signage with supplementary plate. Plate colour not in accordance with P001 (refer to Table 8.2.2 of Chapter 8).
- Photo TSM 5 - 1200mm 'Offside Lane Closed' signage with supplementary plate.
- Photo TSM 6 - 'End of Hard Shoulder' supplementary plate. Note 100m distance plate on verge.
- Photo TSM 7 - Advance warning of hard shoulder closure and commencement of fast lane taper. No lamps to taper. This location is unlit. Does not comply with the recommendations of Table 8.3.5, paragraph 8.2.5.6 and paragraph 8.2.8.3 of Chapter 8.
- Photo TSM 8 - Hard shoulder taper. Cones in taper appear to be approx. 3m c/c. Table 8.3.5 of Chapter 8 recommends 1.5m c/c.
GOOD and BAD Practices
Bad Practice

• No Reflective markings or signage on truck
• Insufficient cones
• No Safe Zone
• No pre-warning
Good Practice

- Good Reflective markings on vehicle
- Cones well defined and deliniated
- Safe Zone
Good Practice

- Clear layout
- Reflectors on cones
Bad Practices

• Conflicting signage
• No Alternative Route indicated
• Sign on non-reflective board
Bad Practices

Insufficient Definition
Bad Practices

• Old lining not removed
Bad Practices

• Inadequate signage

• No delineation

• Road markings on new section visible to motorist
Good Practice

How it should be done!!
Bad Practices

- 100km/h sign not covered in middle of roadwork's
- Advertisement within confines of roadworks
Good Practice

Fenced parking area created for operatives. Side road left clear from parked vehicles. Common hazard removed.
Temporary Safety Measures
Inspections

THANK YOU
ANY QUESTIONS??

National Roads Authority - Standards Section
Training for New Developments
April 2013