



# TII Pilot and Trial Projects

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ARUP

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# What is considered a pilot or trial?



## Pilot or Trial?

- Pilot Project – is an initiative that is outside of current TII publications, policy and management systems (including IT), or any other initiative other than products or materials.
- Trial Project – is the testing of a product or material that is currently not compliant with TII Publications.

## Sample Pilot Project – N4 Leitrim



# Sample Pilot Project – N4 Leitrim

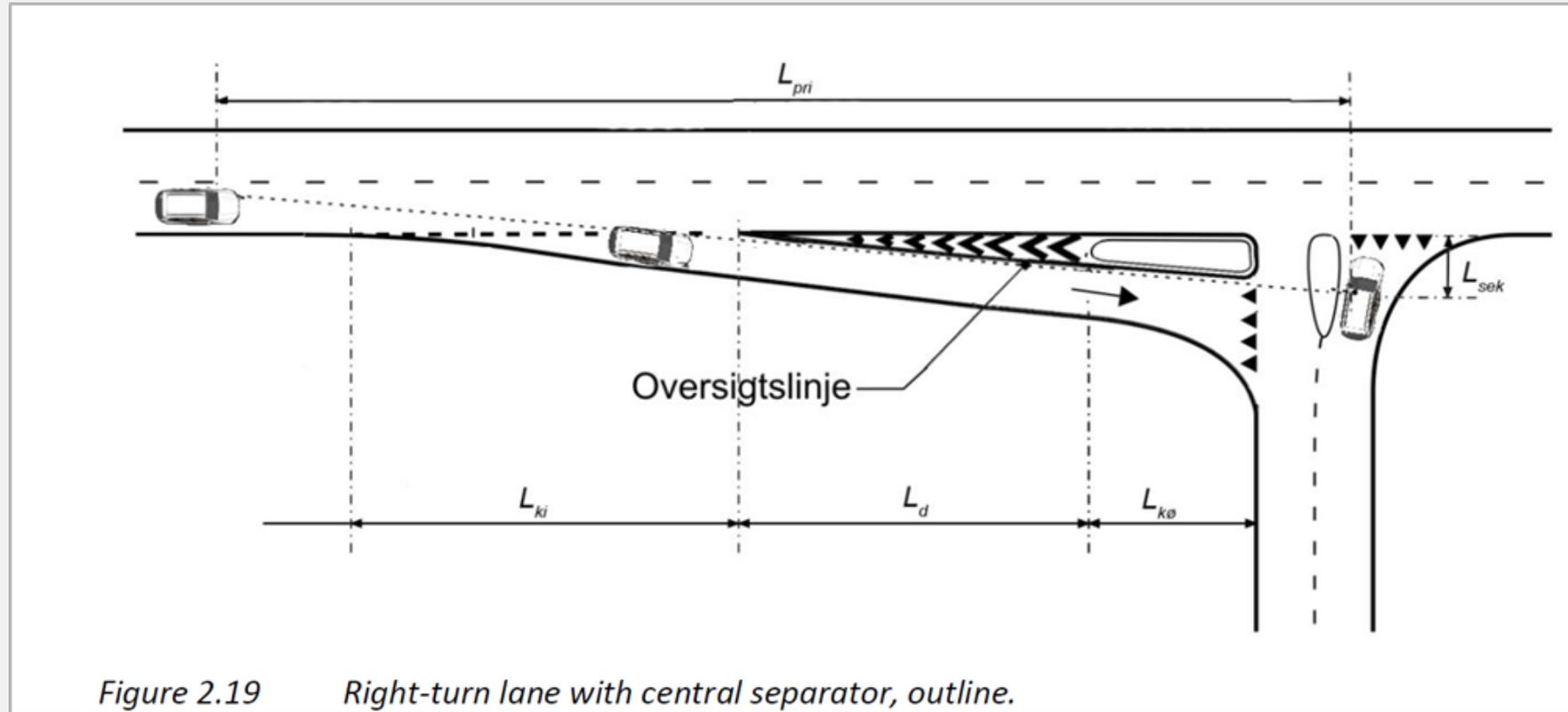


Year	Severity	Details
2010	minor injury	Car exiting minor junction turning right
2011	minor injury	Right turn at junction coming from Mohill
2012	material damage	Side impact
2013	material damage	Driver error at junction
2014	material damage	Rear end straight 100kph angled right turn
2014	material damage	Side swipe dark (17.00 hrs)

## Sample Pilot Project – N4 Leitrim

	Main road	AADT (Avg.)	Minor road	Collisions	Main collision circumstances
Junctions with deceleration lane	N22	19,680	R585 to Crookstown	2 material damages only, 5 minors, 1 serious injuries, 1 fatal	Angle right turns & Side impacts
	N20	18,350	Local road to Grenagh	4 minors, 2 serious injuries, 2 fatal	Angle right turns
	N28	23,700	R610 to Monkstown	3 material damages only, 6 minors, 1 serious injuries	Angle right turns & Angle both straights

## Sample Pilot Project – N4 Leitrim

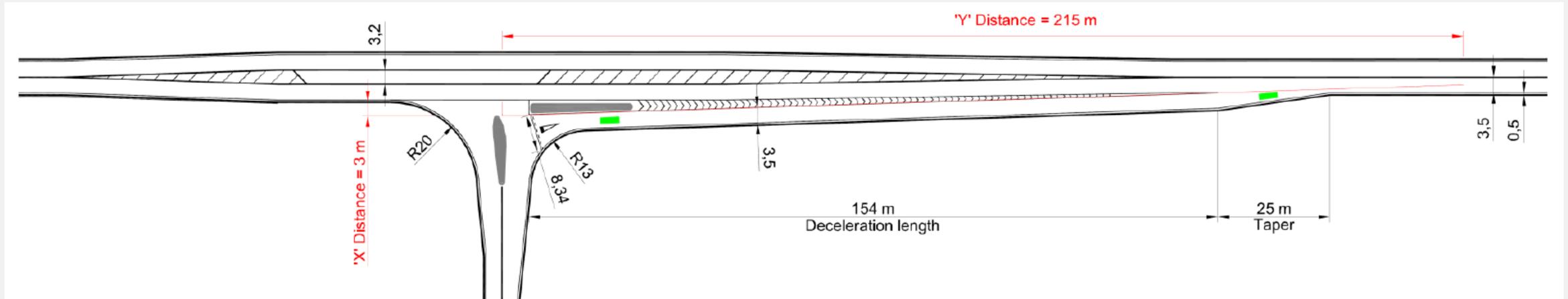


- Visibility must be provided from a stop position past a vehicle in the right-turn lane.

# Sample Pilot Project – N4 Leitrim

## Offset Left Turn Lane – Geometry

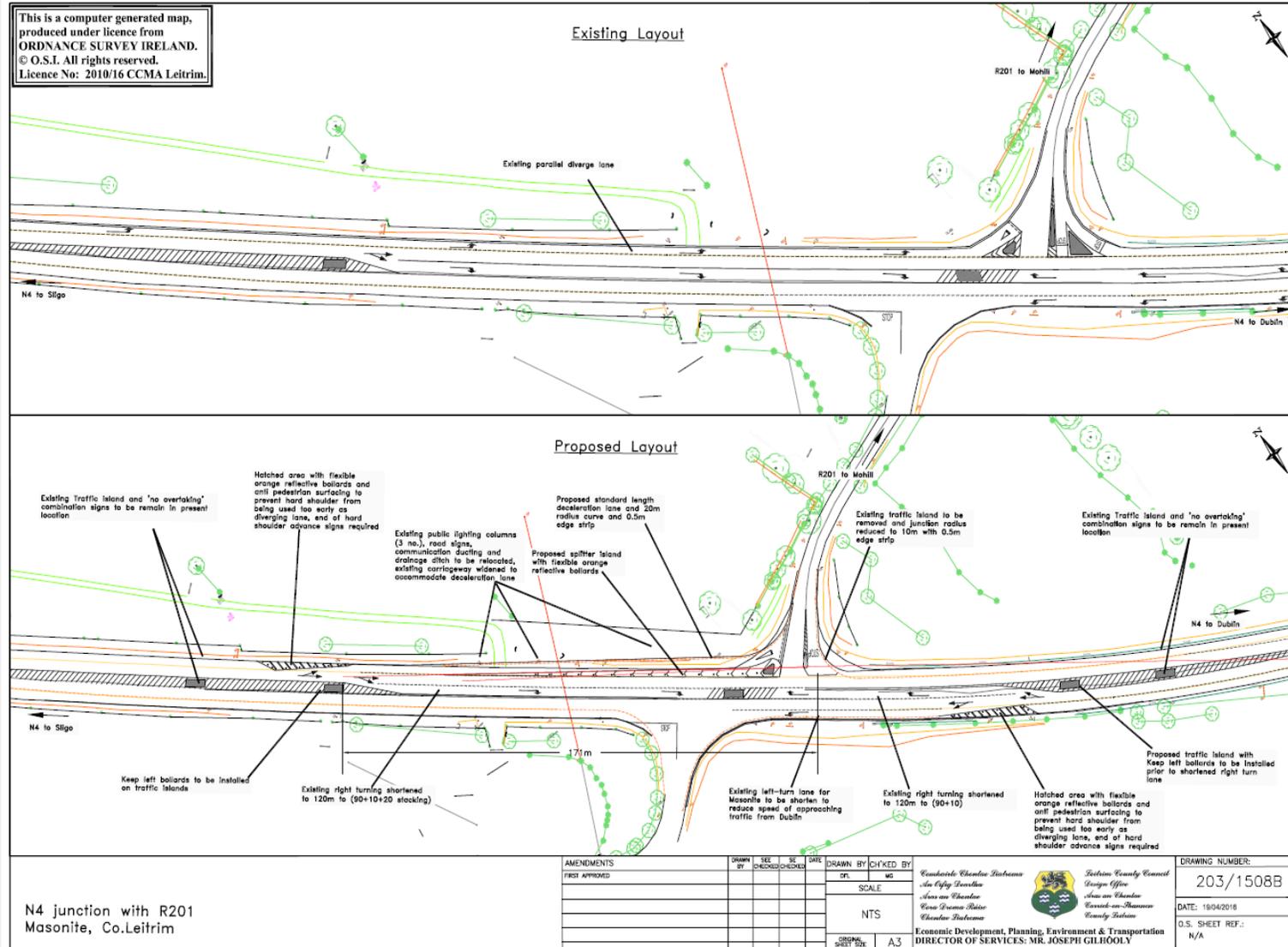
Y = 215m (desirable minimum SSD for 100kph design speed)



	"Y" Distance (m)	Offset left turn lane (m)
0.5m hard strip	215	154
0.5m hard strip	160	113
2.5m hard shoulder	215	168
2.5m hard shoulder	160	130

NOTE: Offset left turn lane dimension excludes 25m direct taper

# Sample Pilot Project





# Needs and aims of the system

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- The need for the system was identified in 2013 when it was discovered that there were 34 pilot projects and 51 trial projects that were active or proposed. At the time there was no central database, no way to track the projects nor their outcomes.

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**WORK PACKAGE WP 11D  
MISCELLANEOUS (PILOTS & TRIALS PROCEDURE)**

**LIST OF PAST, ONGOING AND POSSIBLE FUTURE  
NRA PILOTS & TRIALS (SAMPLE ONLY)**

**1.0 PILOTS**

**1.1 PAST OR ONGOING PILOTS**

- Type 2+1 Road (brochure produced in 2004 but since withdrawn);
- Divided road types: Type 2 and 3 Dual Carriageways (see [brochure](#) via link);
- Type 3 Low Flow Single Carriageway Road (National Secondary schemes);
- Dublin to Galway National Cycle Scheme;
- N7 Travel Time Pilot (c 2004/5) – managed by IBI/Arup;
- Microwave Vehicle Detector – Renewable Energy-powered and 3G Comms – Renmicks;
- Warm mix in a number of local authorities;
- Low ground pressure cycle track Galway;
- Low energy pavements N70 Cork and N15 Sligo;
- IAN 85 alignment schemes;
- Drainage detailing M1 and M4 – use of mesh and grass blocks;
- Traffic Signs Maintenance Contract;
- Design of motorway emergency chainage markings and signs on the M7;
- Design of standard junction lining and signing at a number of grade separated junctions;
- Traffic Signs & Lines - Traffic Management Document;
- Pilot Maintenance Project (Starting with 3 Counties 2009, Currently being rolled out Nationwide);
- Bridge routine maintenance pilot Works contract Donegal 2008 (tested the use of bespoke Conditions of Contract, contractor interest and efficiency of the private sector in delivering a bridge maintenance contract);
- Concrete flexiarch pilot Works scheme Sligo 2010 (tested the performance and durability of a new form of concrete arch and the ability of its producer to deliver to pressurised commercial timescales rather than an academic environment. Tested the efficiency of a LA undertaking works contract by direct labour); and
- Masonry arch bridge repair trials Kerry 2004 (considered various lime and cementitious mortar mixes, application methods and machinery to repair masonry arches which exhibited loss of mortar);
- Effectiveness of bridge strengthening using externally bonded FRP;
- Effectiveness of hydrophobic pore liners on concrete durability;
- N11 Glen of the Downs, Wicklow - pilot scheme to evaluate a Power Controller system which enables the control and remote monitoring of public lighting, therefore reducing energy consumption, energy costs and

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maintenance costs. Installed. Operational since 2011. Assessment report complete.

- N51 Navan, Meath - pilot scheme to evaluate Mains Borne Communication technology for public lighting. This technology enables remote control and monitoring functionality on public lighting networks, by means of data communication over power cabling and can assist in reducing energy and maintenance costs. Operational since 2011. Assessment report not yet complete.
- N25 Ashfield Cross Roundabout, Wexford - pilot scheme to evaluate Wireless Communication technology for public lighting. This technology enables remote control and monitoring functionality on public lighting networks, by means of wireless data communication and can assist in reducing energy and maintenance costs. Operational since 2012. Assessment report not yet started.
- N25 Mahon Interchange, Cork City – pilot scheme to evaluate LED technology for public lighting at motorway/dual carriageway interchanges. Operational since 2012. Assessment report not yet started.
- N5 Lawn Road, Castlebar, Mayo – pilot scheme to evaluate LED technology for public lighting at lower classes of lighting than motorways/dual carriageways. Operational since 2013. Assessment report not yet started.
- M8 Cashel South, junction 9, South Tipperary, – pilot utilising ‘micro-generation’ wind power to contribute to the power required to facilitate public lighting. Vertical axis wind turbine. Operational since 2012. Assessment report not yet started;
- M8 Cahir North, junction 10, South Tipperary, – pilot utilising ‘micro-generation’ wind power to contribute to the power required to facilitate public lighting. Horizontal axis wind turbine. Operational since 2012. Assessment report not yet started; and
- Pilot Maintenance Project (Starting with 3 Counties 2009), Currently being rolled out Nationwide.

## 1.2 POSSIBLE FUTURE PILOTS

- Motorway lighting low-traffic level dimming / switch-off (Need to implement energy saving technology on NRA managed motorways and dual carriageways in order to meet National Energy Efficiency Action Plan energy reduction targets);
- Turbo Roundabout Scheme;
- Use of natural aggregate in HFS – Kelly Bros request;
- Lining Maintenance Contract; and
- Development of light weight gantry structures for use on the national network – similar to the lattice type gantry’s used on the continent where they are not designed for impact.

## 2.0 TRIALS

### 2.1 PAST OR ONGOING TRIALS

- Permanent Repair Materials (informal on draft procedures – M40);
- Pavement patch-repair systems (historical);

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- Surfacing material trials (HRA v pmSMA?);
- Edge delineators in scenic areas (N70 scheme in Kerry)
- Use of Musoir Poles for delineation (M50 junctions);
- Grassed surface water channels (on N17 Gort to Crusheen scheme);
- Average speed detection in tunnel;
- Use of 100% electric vehicles for maintenance staff;
- Virtualisation of tolling servers and database;
- Customer Care Line to report Motorway incidents & Issues;
- Smartphone Application for Motorway Travel-Time;
- Fog Detection and Warning System (Stephen Smyth – ongoing);
- Intelligent Public Lighting (Anne Mac Dermott – ongoing);
- NRA Traffic App – ongoing;
- Recycling trial as part of CEDR research;
- Formal Road stud trials (to EN 1463 BSI EN);
- Informal studs and lining Trials;
- 301 type road studs M50 to N7 Dublin Kildare border and M9 south;
- Glass dome road studs - various locations;
- Ground screws for post installation;
- Ground vane anchor systems for post installation;
- Printed sign face materials. - We have two manufacturers using a new printing process;
- Prismatic sign face materials. There are many new materials with CUAP approvals;
- Profiled thermoplastic markings - N67 Corkscrew;
- Water jetting;
- Tape markings durability and wet retroreflectivity in urban areas old N11; Mount Merrion to Foxrock;
- Agglomerate road markings durability and wet retroreflectivity in urban areas Foxrock to Loughlinstown;
- High quality thermo road markings durability and wet retroreflectivity in urban areas Belfield;
- Tape markings durability and wet retroreflectivity in urban areas Dublin Airport;
- QMS water based paint;
- We have a number of bollards on trial at various compact grade junctions and motorway rest areas;
- Various types of post retention sockets;
- Light truss sign supports;
- Various types of passive post systems;
- Warm Mix Trial (N80 Derryclure, Tullamore);
- Warm Mix Trial (N59 Moycullen, Galway);
- Cold Mix Trial (N13 Bohullion / Newtowncunningham. Foammix and Stabilised Wet Mix);
- Crack relief material (N81 Spawell to M50 RA);
- Recycling of C1505 Filter Drain Material (M4);
- Use of precast columns and cross heads on the M50 D&B Contract; and
- Use of Screwpile foundation details ([www.screwfast.com](http://www.screwfast.com));

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- The need for the system was identified in 2013 when it was discovered that there were 34 pilot projects and 51 trial projects that were active or proposed. At the time there was no central database, no way to track the projects nor their outcomes.

- Weight-in-Motion (WIM) installations – 6 total have been recently installed on the network. These will be used to capture vehicle silhouette data and the information gained from that could feed back into standard and specification development;
- Portable Bridge WIM Data Collection strategy for Secondary Roads – one of the deliverables completed within a PhD recently. Useful if you want to cover an entire secondary road network with WIM (as opposed to fixed pavement WIMs);
- Development of an Abnormal Load Permitting system for use on the MIU – commercial project currently nearing completion (should be finished July 2013) to aid authorities in assessing whether an abnormal load vehicle should be issued a permit based on the design capacity of the structures located on that network; and
- N20 Ballybeg using gritting to newly laid PMSMA to improve early life skidding resistance.

## 2.2 POSSIBLE FUTURE TRIALS

- Permanent Repair Materials (formal against published procedures);
- Use of HGV speed detection VMS on tight loops;
- Use of Sloping Musoir Poles for delineation (M7 at Rathcoole);
- Bluetooth based real-time travel time information (Aecom preparing);
- Social Networking for travel information and advice; and
- Joint sealants/Overbanding.

# Needs and aims of the system

- The need for the system was identified in 2013 when it was discovered that there were 34 pilot projects and 51 trial projects that were active or proposed. At the time there was no central database, no way to track the projects nor their outcomes.
- The aims of the system are to:
  - Inform the development of Standards and Technical Documents for TII Publications.
  - Update existing Standards and Technical Documents for TII Publications.
  - Inform policy changes.
  - Provide documentary evidence to facilitate approval of products or processes where CE marking does not apply.

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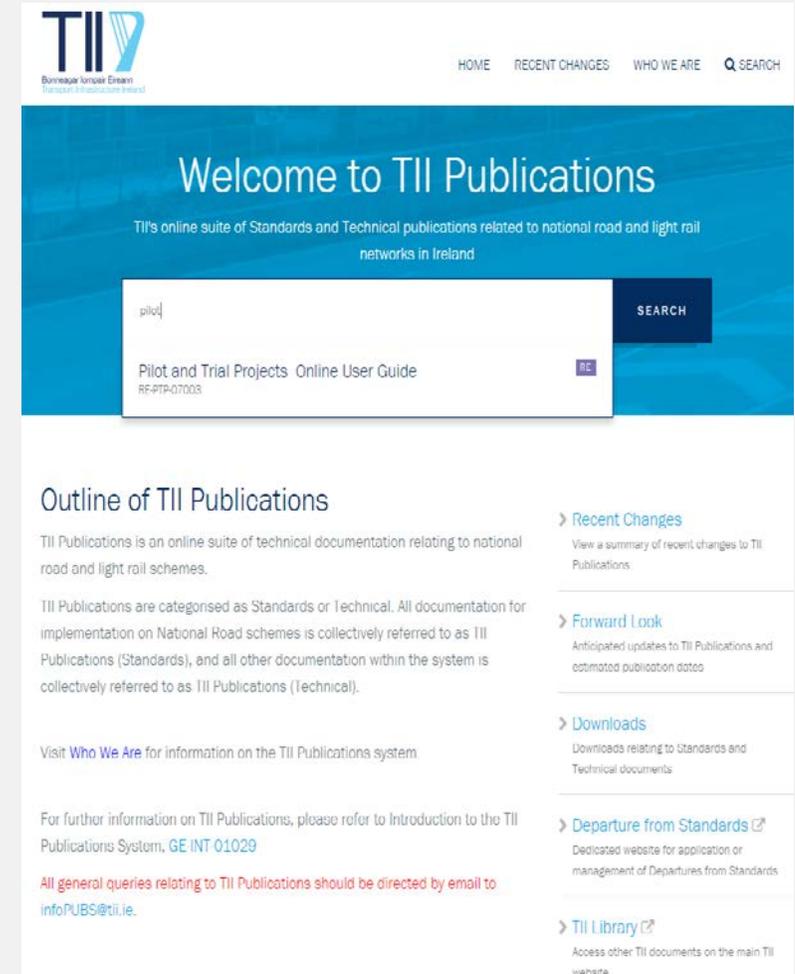
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# Accessing the guidelines and online user manual

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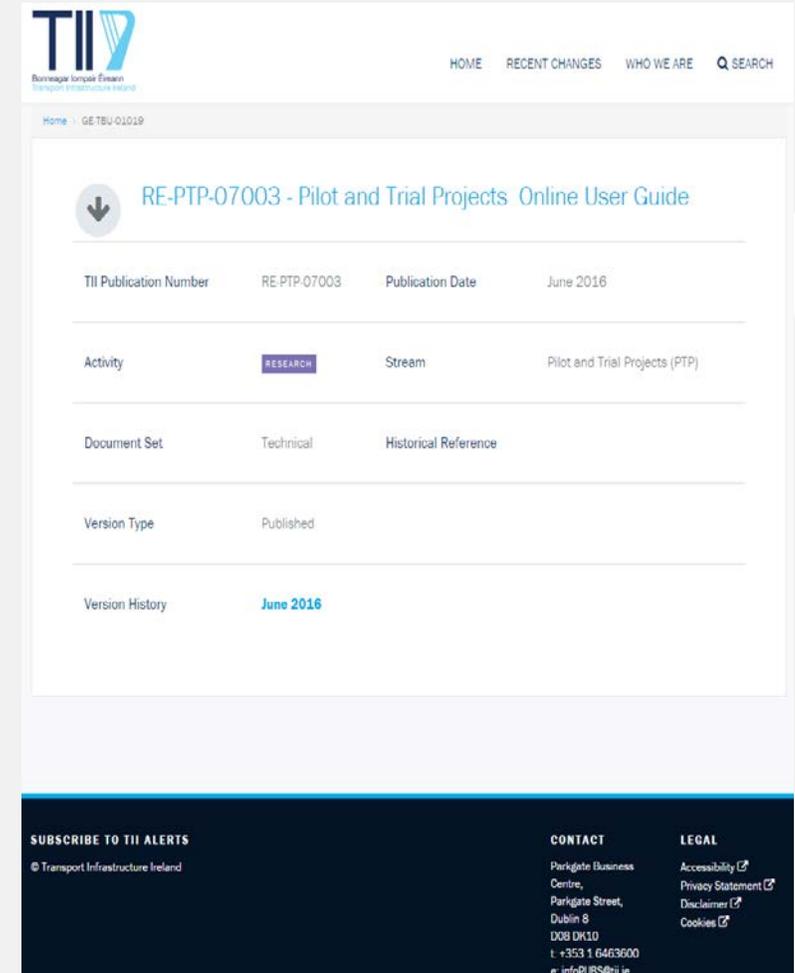
- Navigate to <http://www.tiipublications.ie/> and type “pilot”. The pilot and trial projects online user guide is the only entry that will appear.



The screenshot shows the TII Publications website interface. At the top left is the TII logo with the text 'Bonneagar Iompar Eireann' and 'Transport Infrastructure Ireland'. To the right are navigation links: HOME, RECENT CHANGES, WHO WE ARE, and a SEARCH icon. The main header area is blue and contains the text 'Welcome to TII Publications' and 'TII's online suite of Standards and Technical publications related to national road and light rail networks in Ireland'. Below this is a search bar with the text 'pilot' entered and a 'SEARCH' button. A search result is displayed below the bar: 'Pilot and Trial Projects Online User Guide' with the reference number 'RF-PTP-07003'. To the right of the search bar is a 'RE' button. Below the search bar is the 'Outline of TII Publications' section, which includes a brief description of the system, a note about categorization (Standards vs. Technical), and a link to 'Who We Are'. To the right of the outline are four sidebar links: 'Recent Changes', 'Forward Look', 'Downloads', and 'Departure from Standards'. At the bottom of the main content area, there is a link to 'Introduction to the TII Publications System, GE INT 01029' and a note that general queries should be directed to 'info:PUBS@tii.ie'. The 'TII Library' link is also present in the sidebar.

# Accessing the guidelines and online user manual

- Navigate to <http://www.tiipublications.ie/> and type “pilot”. The pilot and trial projects online user guide is the only entry that will appear.
- Selecting the link will lead you to this page:



The screenshot shows the TIIP website interface. At the top left is the TIIP logo with the text 'Transport Infrastructure Ireland'. To the right are navigation links: HOME, RECENT CHANGES, WHO WE ARE, and a SEARCH icon. Below the navigation is a breadcrumb trail: Home > GETBU-01019. The main content area features a large blue arrow icon pointing down, followed by the title 'RE-PTP-07003 - Pilot and Trial Projects Online User Guide'. Below this is a table of metadata:

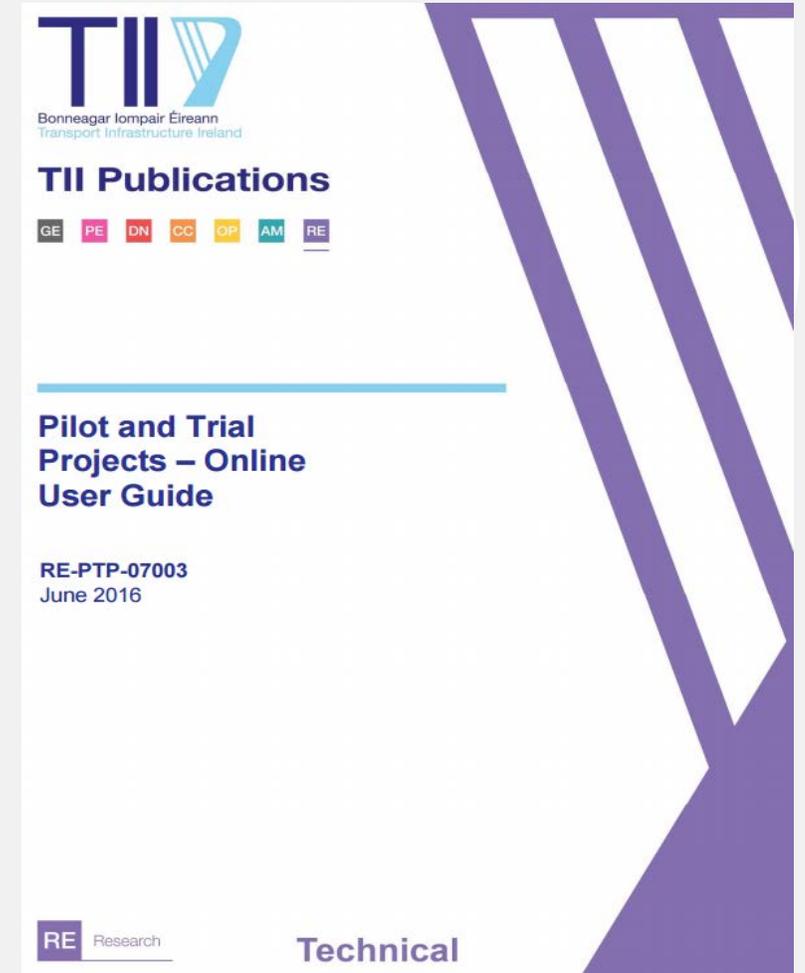
TII Publication Number	RE-PTP-07003	Publication Date	June 2016
Activity	RESEARCH	Stream	Pilot and Trial Projects (PTP)
Document Set	Technical	Historical Reference	
Version Type	Published		
Version History	June 2016		

At the bottom of the page, there is a dark blue footer with three columns of information:

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- CONTACT**  
Parkgate Business Centre,  
Parkgate Street,  
Dublin 8  
D08 DK10  
t: +353 1 6463600  
e: info@tii.ie
- LEGAL**  
Accessibility [↗](#)  
Privacy Statement [↗](#)  
Disclaimer [↗](#)  
Cookies [↗](#)

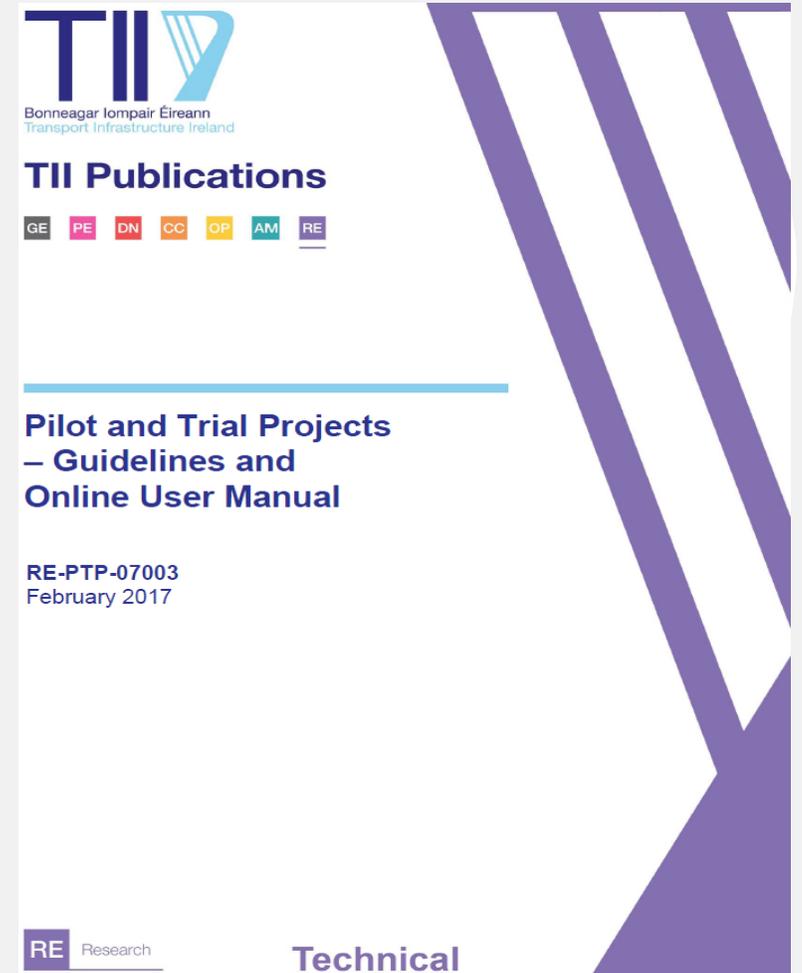
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- Selecting the link will lead you to the online user guide (RE-PTP-07003):



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- Selecting the link will lead you to this page:
- Selecting the link will lead you to the online user guide (RE-PTP-07003):
- A further revision (Guidelines and Online User Manual) will be published this month (RE-PTP-07003):





# Accessing and using the system

## Accessing and using the system

- Both intranet and extranet versions of the pilot and trial projects website have been developed:
- TII personnel: <http://inet/pilots/> - Single Sign-On using your TII network username and password

# Accessing and using the system

The screenshot shows a web browser window with the URL <https://web.nra.ie/pilots/>. The page title is "Pilot & Trials Projects Form". The navigation bar includes "Pilot & Trials", "Work List", and a search box. A user is logged in as "Thomas Connell".

Welcome to the TII Pilots & Trials Projects website. The site has been prepared to allow for ease of access and control of all information related to Pilot and Trial Projects on the National Roads network. If you have any queries in relation to Pilot or Trial Projects, please send them to [infoPUBS@tii.ie](mailto:infoPUBS@tii.ie) marked for the attention of the TII Publications Manager.

The stages of data entry for a Pilot or a Trial project are set out below, together with a brief indication of what the stage comprises.

**Step A Assessment**

Step A is the first step of the project, intended to assess suitability. Complete the basic information to have the project logged and a unique Pilot and Trial Project (PT) reference assigned. Approval from the TII Publications Manager is required to progress to Step B.

**Step B Preparation**

Step B is focussed on Preparation of all necessary elements to ensure the project is set-up appropriately. Key project requirements are set-down, together with objective measures of performance. Project participants and Stakeholders should also be know at this stage. Approval from the TII Publications Manager is required to progress to Step C.

**Step C Installation & Operation**

Step C covers the Installation (or putting into use) of the project, together with the Operation (or running) of the project as part of the network. All relevant details regarding site conditions, Installation works, testing, etc... should be recorded here, together with ongoing monitoring & final monitoring details. Approval from the TII Publications Manager is required to progress to Step D.

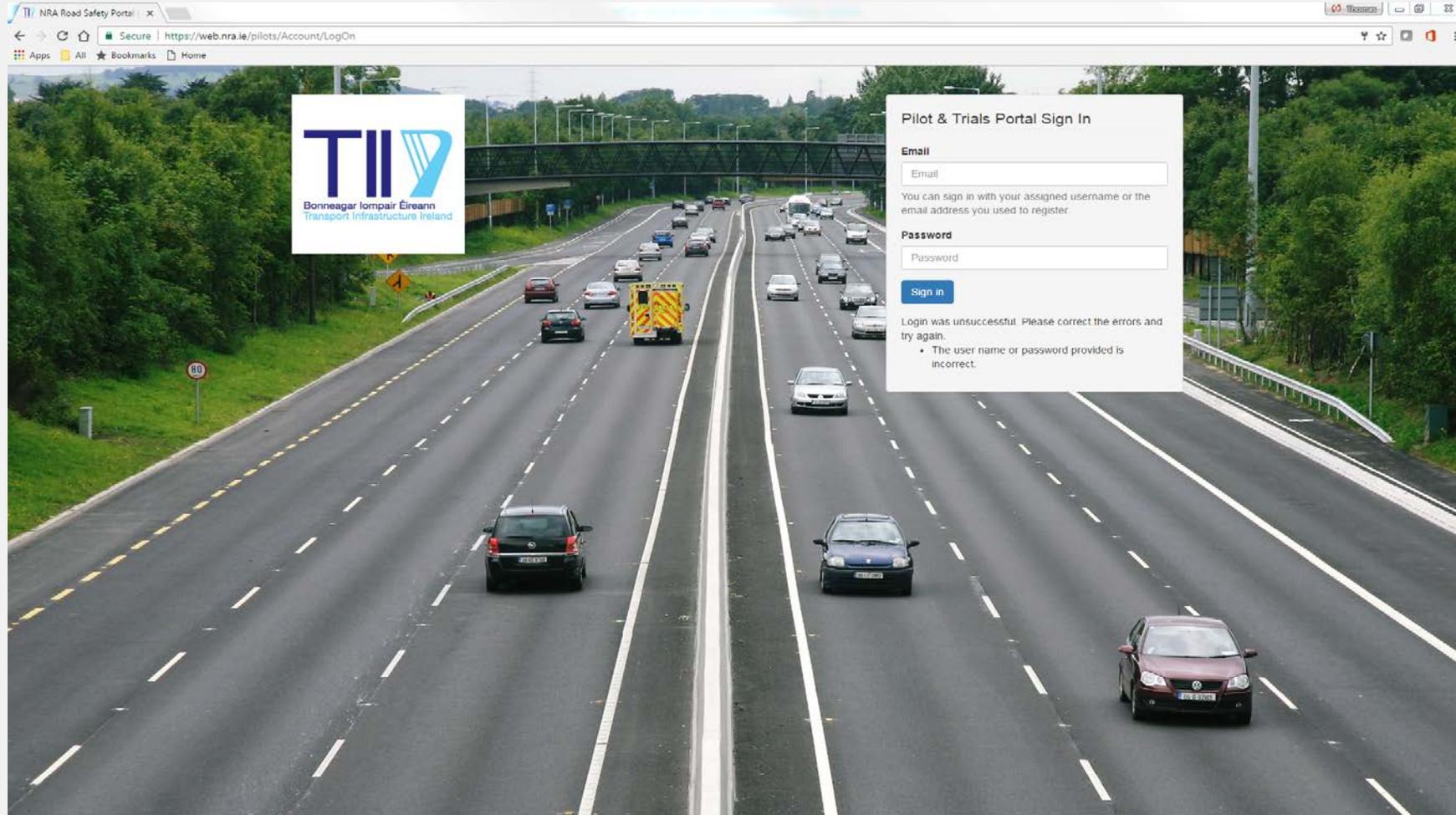
**Step D Completion**

Step D is the final step of the project, where Completion is confirmed. A summary of the project findings, together with conclusions and recommendations should be recorded here. Approval from the relevant TII Publications Manager is required to implement recommendations.

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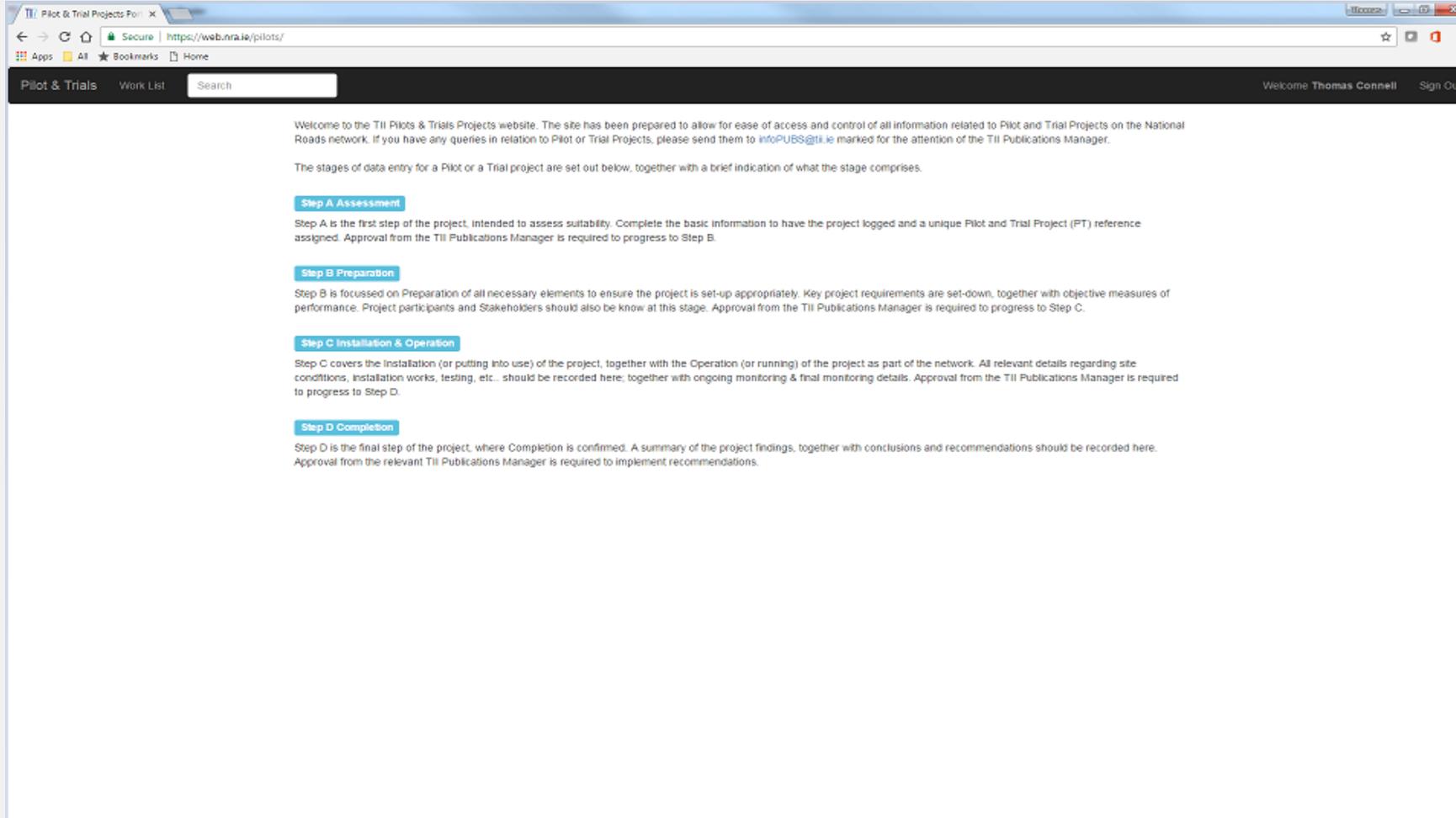
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  - Requires a Web Portal account. Users wishing to register can email [itsupport@tii.ie](mailto:itsupport@tii.ie) requesting permission to use the Pilots and Trials website.

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**Step C Installation & Operation**

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  - Users who have registered for an account previously can use their existing Web Portal account to access the system but will still need to contact [itsupport@tii.ie](mailto:itsupport@tii.ie) to request permission.



# Overview of the process and steps to be taken

## Overview of the process and steps to be taken

- The Pilots and Trials website comprises four stages of data entry:
- Step A (Assessment) is the first step of the project, intended to assess suitability and approval in principle. Basic project details are recorded and a unique Pilot and Trial Project (PT) reference number is assigned.

**Step A (Assessment)**  
**Assess Suitability & Approval in**  
**Principle. Project detail & PT**  
**reference no. is assigned**

## Overview of the process and steps to be taken

- The Pilots and Trials website comprises four stages of data entry:
- Step A (Assessment) is the first step of the project, intended to assess suitability and approval in principle. Basic project details are recorded and a unique Pilot and Trial Project (PT) reference number is assigned.



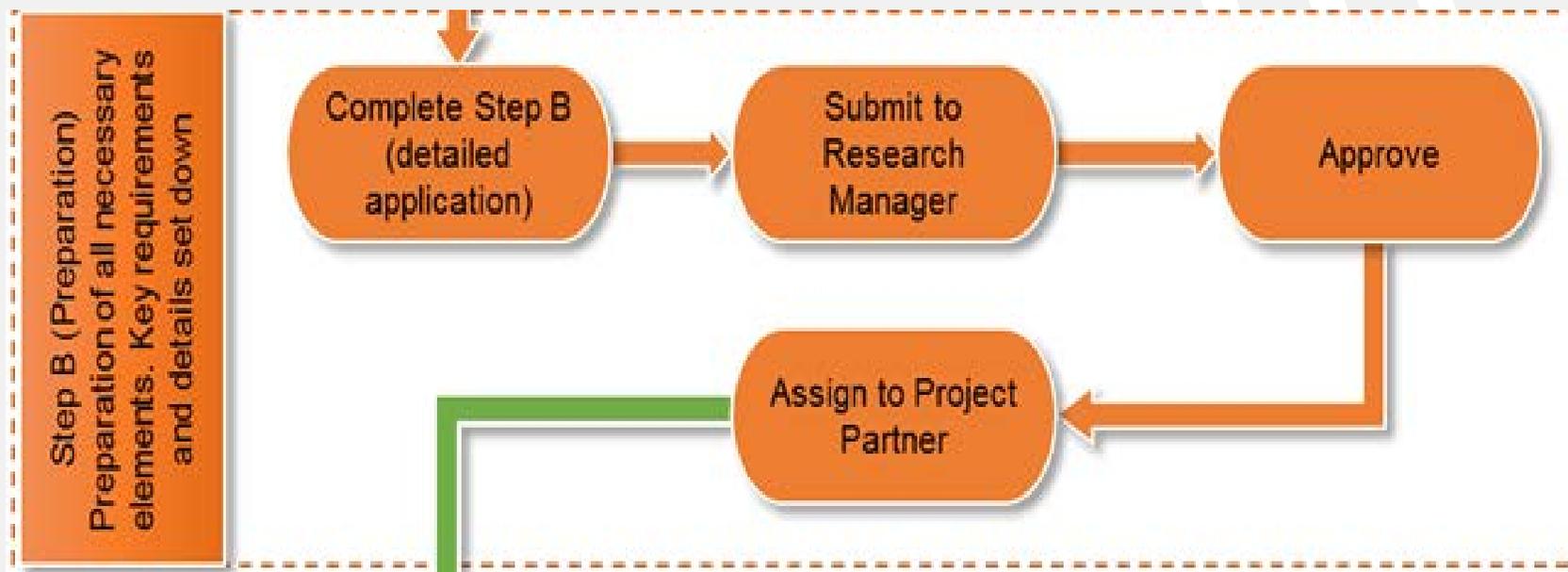
## Overview of the process and steps to be taken

- Step B (Preparation) is focused on the preparation of all necessary elements to ensure the project is set-up appropriately. Key project requirements and details are set-down together with objective measures of performance.

**Step B (Preparation)**  
Preparation of all necessary  
elements. Key requirements  
and details set down

## Overview of the process and steps to be taken

- Step B (Preparation) is focused on the preparation of all necessary elements to ensure the project is set-up appropriately. Key project requirements and details are set-down together with objective measures of performance.



## Overview of the process and steps to be taken

- Step C (Installation and Operation) covers the installation/implementation of the project, together with the operation of the project on the network. All relevant details regarding site conditions, installation works, testing, etc. are recorded here, together with ongoing monitoring and final monitoring details.

Step C (Installation & Operation) Covers installation/Implementation of the project together with operation on the network

## Overview of the process and steps to be taken

- Step C (Installation and Operation) covers the installation/implementation of the project, together with the operation of the project on the network. All relevant details regarding site conditions, installation works, testing, etc. are recorded here, together with ongoing monitoring and final monitoring details.



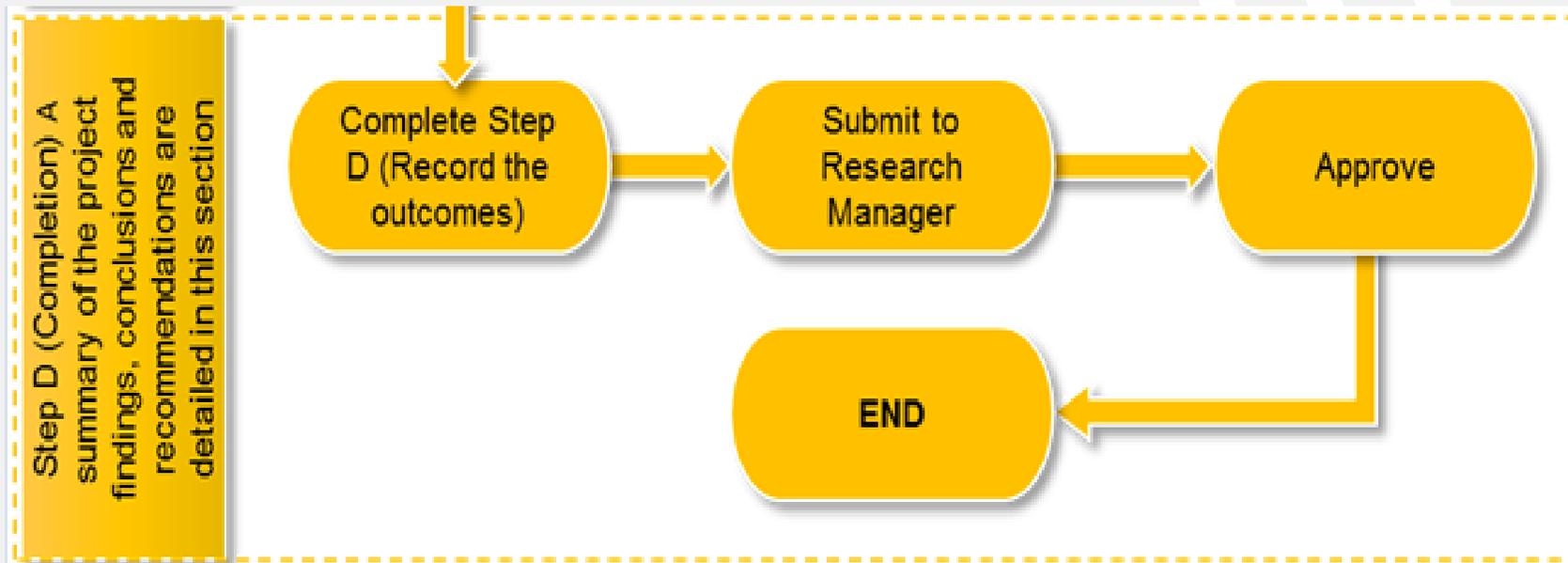
## Overview of the process and steps to be taken

- Step D (Completion) is the final step of the project, where completion is confirmed. A summary of the project findings, together with conclusions and recommendations are recorded.

**Step D (Completion) A summary of the project findings, conclusions and recommendations are detailed in this section**

## Overview of the process and steps to be taken

- Step D (Completion) is the final step of the project, where completion is confirmed. A summary of the project findings, together with conclusions and recommendations are recorded.



## Overview of the approval process

- Following the completion of each step an application for approval must be submitted to the Research Manager. (Each step can only be submitted by the Project Leader).

# Overview of the approval process

## Assessments for Standards & Research Managers Decision

Project ID	Project Category	Project Title	Project Status	
NRA-PT-000038			Submitted for Approval	<a href="#">View</a> <a href="#">Add Decision</a>
NRA-PT-000052	Pilot	re- check - gw	Submitted for Approval	<a href="#">View</a> <a href="#">Add Decision</a>

## Preparations for Standards & Research Managers Decision

**No Preparations** There are no preparations assigned for Standards & Research Manager approval

## Installations for Standards & Research Managers Decision

Project ID	Project Category	Project Title	Project Status	
NRA-PT-000005	Pilot	This is a project title	Submitted for Approval	<a href="#">View</a> <a href="#">Add Decision</a>
NRA-PT-000030		Test 2	Submitted for Approval - Comments Addressed	<a href="#">View</a> <a href="#">Add Decision</a>

## Completions for Standards & Research Managers Decision

Project ID	Project Category	Project Title	Project Status	
NRA-PT-000018	Pilot	test	Submitted for Approval	<a href="#">View</a> <a href="#">Add Decision</a>
NRA-PT-000028	Pilot	Test1	Submitted for Approval	<a href="#">View</a> <a href="#">Add Decision</a>
NRA-PT-000029		Test 1	Submitted for Approval	<a href="#">View</a> <a href="#">Add Decision</a>
NRA-PT-000031		Test Submit	Submitted for Approval	<a href="#">View</a> <a href="#">Add Decision</a>
NRA-PT-000033	Pilot	test 1	Submitted for Approval	<a href="#">View</a> <a href="#">Add Decision</a>

## Overview of the approval process

- Following the completion of each step an application for approval must be submitted to the Research Manager. (Each step can only be submitted by the Project Leader).
- In reviewing the application the Research Manager can either:
  - Approve the application allowing it to proceed to the next Step.
  - Return to the user for further information.
  - Reject the application.

Decision

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A.15.2 Decision of NRA Standards & Research Manager:

A.15.3 Recommendation of NRA Standards & Research Manager:

A.15.4 Close out of Step A:  Step B  
 More Information  
 Refuse

# Overview of the approval process – more information

## Assessment - Input Form (Step A)

### Project Introduction

**Project Status**

**Submitted for Approval**

#### A.1 Project Basics

A.1.1 Project ID:	NRA-PT-000052
A.1.2 Project Category:	Pilot
A.1.3 Project Title:	re- check - gw
A.1.4 Brief Description of Project:	gw uuuuuu
A.1.5 Discipline / Area of interest:	Information Technology Systems
A.1.6 Project Leader Name:	Geraldine Walsh
Project Leader Section:	Unknown Dept.
Project Leader Email:	gwalsh@nra.ie

#### A.2 Aims & Objectives

A.2.1 General:  
A.2.2 Specific:  
A.2.3 User Needs:  
A.2.4 Anticipated Outcome for the NRA  
DMRB and/or NRA MCDRW:  
A.2.5 Other Anticipated Outcome:

No File Attached This section does not have any attachments available for viewing.

Comment:

Please provide further information

Save



# Role of the Project Leader

## Role of the Project Leader

- A Project Leader is the TII staff member leading the pilot or trial.
  - Initiates the project.
  - Provides information, where available, to set down the aims, objectives and user needs to be addressed by the project.
  - Identifies any anticipated outcomes on current standards.
  - Provides a sound justification for carrying out the project.
  - Records background information to show that the project builds on previous experience and that any alternative options to the project are identified and assessed.
  - Sets out the project programme, requirement for support personnel and the total GROSS project cost.
  - Determines the form of agreement and procurement.



## Role of the Project Leader

- Indicates which parties to the project are carrying the key risks.
- Selects the project participants.
- Indicates any guarantee, warranty, license, or the like to cover liability in the absence of a form of agreement.
- Undertakes and documents preliminary risk assessments.
- Determines suitable sites for the implementation of the pilot or trial.
- Identifies the need for a safety audit.
- Consults the RSC for projects on the rail network.
- Assigns the project to a project partner where applicable.





# Role of the Project Partner

## Role of the Project Partner

- A Project Partner can be a TII staff member or third party (Service Provider, Local Authority, Contractor, Operator or Supplier/Manufacturer).
  - Is assigned a project by the project leader following Step A approval.
  - Directly involved in undertaking, installing or monitoring the pilot or trial.
  - Progresses the project through each stage of data entry. (The project leader is required to submit for approval at the end of each stage).





# Worked Example



## Worked Example - Information

- To assist the user, information is available via floating notes on the online system by hovering the cursor over the sub headings on the left hand side of the screen

### Project Introduction

#### Project Status

A unique Project ID will be generated automatically when you click 'Next' below

A.1.1 Project ID:

TII-PT-000060

A.1.2 Project Category:

Pilot

Trial

#### Work In Progress

# Worked Example – Step A (Assessment)

[View Print Version](#)

Step AStep BStep CStep D

## Assessment - Input Form (Step A)

### Project Introduction

#### A.1 Project Basics

Project Status	Step B
<b>A.1.1 Project ID:</b>	NRA-PT-000047
<b>A.1.2 Project Category:</b>	Pilot
<b>A.1.3 Project Title:</b>	The use of transverse road markings as a speed reduction measure on motorway ramps and freeflow loops.
<b>A.1.4 Brief Description of Project:</b>	The aim of this pilot scheme is to investigate the effectiveness of transverse road markings as a means of controlling vehicle speeds on motorway ramps and freeflow loops, particularly where vehicles are transitioning from a high speed environment (such as the motorway mainline).
<b>A.1.5 Discipline / Area of interest:</b>	Signs and Road Markings
<b>A.1.6 Project Leader Name:</b>	Kevin O Rourke
<b>Project Leader Section:</b>	Network Operations
<b>Project Leader Email:</b>	korourke@nra.ie

#### A.2 Aims & Objectives

<b>A.2.1 General:</b>	To reduce collisions and improve road safety for vehicles using the motorway network.
<b>A.2.2 Specific:</b>	To determine whether the introduction of transverse road markings will be an effective factor in the reduction of speed related collisions.
<b>A.2.3 User Needs:</b>	There have been a number of single vehicle collisions on freeflow loops on the M50 in recent times. Data has been gathered in relation to the southbound freeflow loop from the M50 to the N3 showing 16 single vehicle collisions over an 11 month period.
<b>A.2.4 Anticipated Outcome for the NRA DMRB and/or NRA MCDRW:</b>	Possible change to the relevant NRA design standard for road markings at motorway freeflow loops and possibly at off ramps.
<b>A.2.5 Other Anticipated Outcome:</b>	Reduced collisions and improved road safety.

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step A (Assessment)

## A.3 Project Justification

### A.3.1 Statement on the Benefits of Project:

If successful, the project would reduce collisions which would enhance road safety. Also, as freeflow loops are generally a single lane cross section, collisions at these locations can cause a disproportionately high level of traffic disruption. It is expected that traffic disruption would therefore be significantly reduced by this project.

**No File Attached** This section does not have any attachments available for viewing.

## Project Background

### A.4 Project Relevant Previous Experience

#### A.4.1 Previous experience of the product in use:

No previous experience .Chapter 7 of the Traffic Signs Manual (November 2010) does permit the use of transverse road markings in certain circumstances on the approaches to roundabouts but the criteria listed therein would not include motorway freeflow loop

#### A.4.2 Details of Other Known Products, Materials or Initiatives:

There has been an initiative for use of HGV activated warning signs in some locations on the M50. These however are limited to HGV in high winds

#### A.4.3 Details of Previous Pilot or Trial Project(s):

none specific to this product however see A.4.2 above

**No File Attached** This section does not have any attachments available for viewing.

### A.5 Project Alternatives or Options

#### A.5.1 Do Nothing Option:

The consequences of doing nothing would be a risk of high levels of single vehicle collisions in certain locations.

#### A.5.2 Similar or Alternative Options:

"Automated flashing signs warning drivers to slow down are an alternative. There are some disadvantages of these such as:

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step A (Assessment)

## Project Details

### A.6 Estimated Project Programme

A.6.1 Start Date (Initiation):	01/03/2012 00:00:00
A.6.2 Step A (Start/Date / Close-out Date):	15/03/2012 00:00:00
A.6.3 Step B (Start/Date / Close-out Date):	14/05/2012 00:00:00
A.6.4 Step C (Start/Date / Close-out Date):	28/05/2012 00:00:00
A.6.5 Step D (Start/Date / Close-out Date):	30/01/2015 00:00:00
A.6.6 Completion Date (Archive):	16/01/2015 15:37:37

No File Attached This section does not have any attachments available for viewing.

### A.7 Estimated Project Resources

A.7.1 Project Leader:	2 days
A.7.2 Project Support 1:	Atkins - Dave Kelly - 5 days
A.7.2 Project Support 2:	not applicable

No File Attached This section does not have any attachments available for viewing.

### A.8 Estimated Project Costs

A.8.1 Gross (€ including VAT):

No File Attached This section does not have any attachments available for viewing.

# Worked Example – Step A (Assessment)

## A.9 Proposed Form of Agreement

<b>A.9.1 Risk Transfer:</b>	Workmanship is M50 CL. Initiative is NRA
<b>A.9.2 Use of Guarantee, Warranty License, etc.:</b>	Not applicable
<b>A.9.3 Agreement (Part of a main Contract, mini-Contract or exchange of correspondence):</b>	Project Support will be provided under the existing MCASS contract with Atkins Consulting. The physical works is carried under an existing PPP contract with M50 Concession Ltd.

**No File Attached** This section does not have any attachments available for viewing.

## Project Site

### A.10 Location(s)

<b>A.10.1 Project Site on Road Network (Yes/No):</b>	Yes
<b>A.10.2 Site Location 1:</b>	M50 Southbound to N3 Westbound Loop
<b>A.10.3 Site Location 2:</b>	
<b>A.10.4 Site Location 3:</b>	

**No File Attached** This section does not have any attachments available for viewing.

### A.11 Project Safety Issues

<b>A.11.1 Confirm 'Client' for Safety Issues:</b>	M50 Concession Ltd
<b>A.11.2 Key Safety Risks (All Stages)</b>	
<b>A.11.3 Who is the PSDP and/or PSCS:</b>	M50 Concession Ltd
<b>A.11.4 Safety &amp; Health Plan:</b>	M50 Concession Ltd
<b>A.11.5 Is a Safety Audit Required:</b>	No

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step A (Assessment)

## A.12 Network Issues

### A.12.1 Operational Liason with Local Authorities/PPP Concessionaires:

All liason will be with M50 Concession Ltd. As the pilot is being carried within their operational area, there is no other liason required. M50 Concession Ltd arrange and road space bookings as required for the works.

**No File Attached** This section does not have any attachments available for viewing.

## Project Participants

### A.13 Project Partners

#### A.13.1 Project Partners (Yes/No):

Yes

#### A.13.2 Project Partner 1:

Atkins

#### A.13.3 Project Partner 2:

#### A.13.4 Project Partner 3:

**No File Attached** This section does not have any attachments available for viewing.

### A.14 Stakeholders

#### A.14.1 Stakeholders (Yes/No):

Yes

#### A.14.2 Stakeholder 1:

M50 CL - PPP company

#### A.14.3 Stakeholder 2:

#### A.14.4 Stakeholder 3:

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step B (Preparation)

[View Print Version](#)

Step A   **Step B**   Step C   Step D

## Preparation - Input Form (Step B)

### Project Requirements

#### B.1 Specific Technical Requirements - Design Stage

**B.1.1 Design Stage Requirements (Yes/No):** Yes

**B.1.2 Design Requirement 1:** A design is necessary for the layout and spacing of the road markings..test

**B.1.3 Design Requirement 2:**

**B.1.4 Design Requirement 3:**

**No File Attached** This section does not have any attachments available for viewing.

#### B.2 Specific Technical Requirements - Installation Stage

**B.2.1 Installation Stage Requirements (Yes/No):** Yes

**B.2.2 Installation Requirement 1:** The road markings are to be installed at the trial location.

**B.2.3 Installation Requirement 2:**

**B.2.4 Installation Requirement 3:**

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step B (Preparation)

## B.3 Specific Technical Requirements - Monitoring Stage

**B.3.1 Monitoring Stage Requirements (Yes/No):** Yes

**B.3.2 Monitoring Requirement 1:** The frequency of single vehicle collisions is to be monitored over a period of time (6 months) after the installation of the trial.

**B.3.3 Monitoring Requirement 2:**

**B.3.4 Monitoring Requirement 3:**

**No File Attached** This section does not have any attachments available for viewing.

## B.4 Specific Technical Requirements - Operation/Maintenance Stage

**B.4.1 Operation/Maintenance Stage Requirements (Yes/No):** No

**B.4.2 Operation/Maintenance Requirement 1:** There are no maintenance requirements anticipated within the lifespan of the trial. If adopted, the road markings will have the same normal maintenance requirements for all road markings i.e. periodic cleaning and cyclical replacement.

**B.4.3 Operation/Maintenance Requirement 2:**

**B.4.4 Operation/Maintenance Requirement 3:**

**No File Attached** This section does not have any attachments available for viewing.

## B.5 Specific Technical Requirements - Special Requirements

**B.5.1 Special Requirements (Yes/No):** No

**B.5.2 Special Requirement 1:**

**B.5.3 Special Requirement 2:**

**B.5.4 Special Requirement 3:**

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step B (Preparation)

## Project Agreements & Performance

### B.6 Specific Contractual Requirements (Including Commercial & Risk)

**B.6.1 Specific Contract Requirements (Yes/No):** No

**B.6.2 Specific Contract Requirement 1:** These works are being implemented under the existing PPP Contract with M50 Concession Ltd. There are no additional contractual requirements.

**B.6.3 Specific Contract Requirement 2:**

**B.6.4 Specific Contract Requirement 3:**

**No File Attached** This section does not have any attachments available for viewing.

### B.7 Performance Management - Interim

**B.7.1 Specific Interim Performance Measures (Yes/No):** Yes

**B.7.2 Specific Interim Performance Measures 1:** The frequency of single vehicle collisions is to be monitored over a period of time (6 months) after the installation of the trial.

**B.7.3 Specific Interim Performance Measures 2:**

**B.7.4 Specific Interim Performance Measures 3:**

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step C (Installation & Operation)

[View Print Version](#)

Step AStep BStep CStep D

## Installation & Operation - Input Form (Step C)

### Pre-Installation Certification / Testing

#### C.1. Certification - Design ✦

C.1.1 Design Certification (Yes/No):	No
C.1.2 Design Certification - Element 1:	Design certification is not applicable as the purpose of this trial is to develop the current design standard.
C.1.3 Design Certification - Element 2:	
C.1.4 Design Certification - Element 3:	

**No File Attached** This section does not have any attachments available for viewing.

#### C.2. Certification - Existing Site ✦

C.2.1 Existing Site Certification - Location 1:	N/A
C.2.2 Existing Site Certification - Location 2:	N/A
C.2.3 Existing Site Certification - Location 3:	N/A

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step C (Installation & Operation)

## C.3. Certification - Materials and Methods

**C.3.1 Materials and Methods Certification / Testing (Yes/No):** No

**C.3.2 Materials and Methods Certification / Testing - Element 1:** This trial involves the use of materials and application methods which are already well established, therefore no certification required.

**C.3.3 Materials and Methods Certification / Testing - Element 2:**

**C.3.4 Materials and Methods Certification / Testing - Element 3:**

**No File Attached** This section does not have any attachments available for viewing.

## C.4. Certification - Equipment/Software

**C.4.1 Equipment / Software Certification (Yes/No):** No

**C.4.2 Equipment / Software Certification - Element 1:** This trial does not involve the use of any innovative equipment or software, therefore no certification required.

**C.4.3 Equipment / Software Certification - Element 2:**

**C.4.4 Equipment / Software Certification - Element 3:**

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step C (Installation & Operation)

**C.5. Certification - Other Features** 

**C.5.1 Other Features Certification (Yes/No):** No

**C.5.2 Other Features Certification - Element 1:** Not Applicable

**C.5.3 Other Features Certification - Element 2:**

**C.5.4 Other Features Certification - Element 3:**

**No File Attached** This section does not have any attachments available for viewing.

**Site Installation Monitoring / Testing**

**C.6. Installation Monitoring Records** 

**C.6.1 Monitoring Against Interim Performance Measures (IPMs) (Yes/No):** No

**C.6.2 IPM 1 and Monitoring Result:**

**C.6.3 IPM 2 and Monitoring Result:**

**C.6.4 IPM 3 and Monitoring Result:**

**No File Attached** This section does not have any attachments available for viewing.

**C.7. Monitoring Records Commentary** 

**C.7.1 Comments Required (Yes/No):** Yes

**C.7.2 Summary Comments:** Monitoring has been carried out and details of the results are contained in the attached report.

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step C (Installation & Operation)

## Operational Monitoring / Measurement / Testing

### C.8. Monitoring Records - Operations (Period 1)

C.8.1 Monitoring Against Interim Performance Measures (IPMs) (Yes/No): No

C.8.2 IPM 1 and Monitoring Result:

C.8.3 IPM 2 and Monitoring Result:

C.8.4 IPM 3 and Monitoring Result:

**No File Attached** This section does not have any attachments available for viewing.

### C.9. Monitoring Records Commentary - Operation (Period 1)

C.9.1 Comments Required (Yes/No): No

C.9.2 Summary Comments:

**No File Attached** This section does not have any attachments available for viewing.

### C.10. Additional Monitoring Periods

C.10.1 Additional Monitoring Period Required (Yes/No) (Yes/No): No

**No File Attached** This section does not have any attachments available for viewing.

### C.11. Monitoring Records - Operations (Period 2)

C.11.1 Monitoring Against Interim Performance Measures (IPMs) (Yes/No): No

C.11.2 IPM 1 and Monitoring Result:

C.11.3 IPM 2 and Monitoring Result:

C.11.4 IPM 3 and Monitoring Result:

# Worked Example – Step C (Installation & Operation)

## C.12. Monitoring Records Commentary - Operation (Period 2)

C.12.1 Comments Required (Yes/No): No

C.12.2 Summary Comments:

**No File Attached** This section does not have any attachments available for viewing.

## Operational Management and Maintenance

### C.13. Operational Management / Maintenance Issues

C.13.1 Operational Management / Maintenance Issues (Yes/No): No

C.13.2 Operational Management / Maintenance Issue 1:

The trial areas are located within the M50 Concession Ltd PPP and the PPP company shall be responsible for ongoing inspection and maintenance of the trial areas.

C.13.3 Operational Management / Maintenance Issue 2:

C.13.4 Operational Maintenance Issue 3:

**No File Attached** This section does not have any attachments available for viewing.

## Operation Phase Completion

### C.14. Final Monitoring Records

C.14.1 Monitoring Against Final Performance Measures (Yes/No): No

C.14.2 FPM and Monitoring Result 1: See attached report

C.14.3 FPM and Monitoring Result 2:

C.14.4 FPM and Monitoring Result 3:

# Worked Example – Step C (Installation & Operation)

## C.15. Decommissioning

---

C.15.1 Decommissioning Requirements(Yes/No): No

C.15.2 Decommissioning Requirement 1:

C.15.3 Decommissioning Requirement 2:

C.15.4 Decommissioning Requirement 3:

**No File Attached** This section does not have any attachments available for viewing.

## C.16. Monitoring Records Commentary

---

C.16.1 Comments Required: Yes

C.16.2 Summary Comments: See attached report for results at all locations included within this trial.

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step D (Completion)

[View Print Version](#)

Step A Step B Step C Step D

---

## Completion - Input Form (Step D)

### Conclusions

D.1. Performance Outcomes 📌

---

D.1.1 Outcome of Performance Yes

Measures (IPMs) (IPMs) (Yes/No):

D.1.2 IPM 1 and Outcome:

D.1.3 IPM 2 and Outcome:

D.1.4 IPM 3 and Outcome:

**No File Attached** This section does not have any attachments available for viewing.

D.2. Conclusions Commentary 📌

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D.2.1 Outcome of Project: Almost at an end

D.2.2 Final Programme:

D.2.3 Final Cost:

D.2.4 Other Summary Comments:

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step D (Completion)

## Lessons Learnt

### D.3. Step A (Assessment) Issues

D.3.1 Step A Lessons Learnt (Yes/No): Yes

D.3.2 Step A Lessons Learnt 1:

D.3.3 Step A Lessons Learnt 2:

D.3.4 Step A Lessons Learnt 3:

**No File Attached** This section does not have any attachments available for viewing.

### D.4. Step B (Preparation) Issues

D.4.1 Step B Lessons Learnt (Yes/No): Yes

D.4.2 Step B Lessons Learnt 1:

D.4.3 Step B Lessons Learnt 2:

D.4.4 Step B Lessons Learnt 3:

**No File Attached** This section does not have any attachments available for viewing.

### D.5. Step C (Installation & Operation) Issues

D.5.1 Step C Lessons Learnt (Yes/No): Yes

D.5.2 Step C Lessons Learnt 1:

D.5.3 Step C Lessons Learnt 2:

D.5.4 Step C Lessons Learnt 3:

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step D (Completion)

## Next Steps

### D.6. Project Recommendations

**D.6.1 Project Recommendations (Yes/No):** Yes

**D.6.2 Summary Comments:**

**No File Attached** This section does not have any attachments available for viewing.

### D.7. Next Steps - NRA Policy & Procedures

**D.7.1 Update to NRA Policy and Procedure (Yes/No):** Yes

**D.7.2 Note NRA Policy Issues:**

**D.7.3 Note NRA Standards Update Issues:**

**D.7.4 Note Other NRA Internal Update Issues:**

**No File Attached** This section does not have any attachments available for viewing.

### D.8. Next Steps - Dissemination

**D.8.1 Dissemination of the Project Findings (Yes/No):** Yes

**D.8.2 NRA Internal Dissemination:**

**D.8.3 External Local Authority Dissemination:**

**D.8.4 External Dissemination to Others:**

**No File Attached** This section does not have any attachments available for viewing.

# Worked Example – Step D (Completion)

## D.9 Other Items of Note

D.9.1 Other Items of Note (Yes/No): Yes

D.9.2 Other Items of Note - Comments:

**No File Attached** This section does not have any attachments available for viewing.



# Questions & Answers



# TII Pilot and Trial Projects

## Thank you