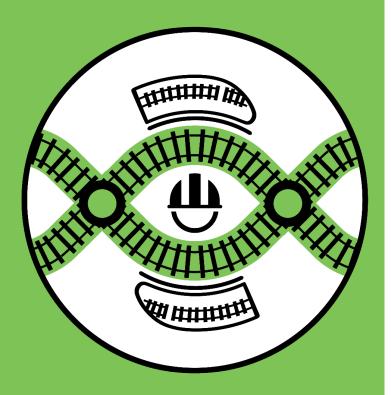
Test Before Touch for Overhead Line Equipment: NR/L3/ELP/27720

Detailed Briefing v0.9





## **Contents**



Providing technical leadershi

# NetworkRail

#### **Contents**

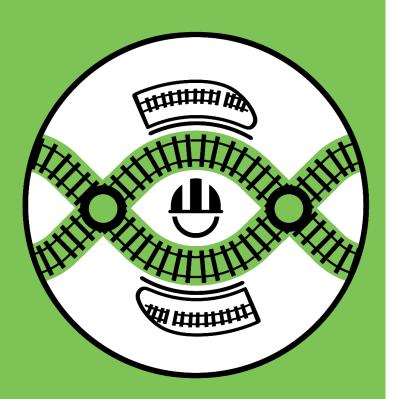
- 1. Background
- 2. General principles and common requirements
- 3. Method 1: Dynamic decision making for Test Before Touch actions
- 4. Method 2: Pre-planned and pre-documented Test Before Touch actions
- 5. Method 3: A pre-planned and pre-documented reduced set of Test Before Touch actions
- 6. Method 4: A Test Before Touch action prior to every occasion where it is planned to touch a conductor



7. Next steps



# Background



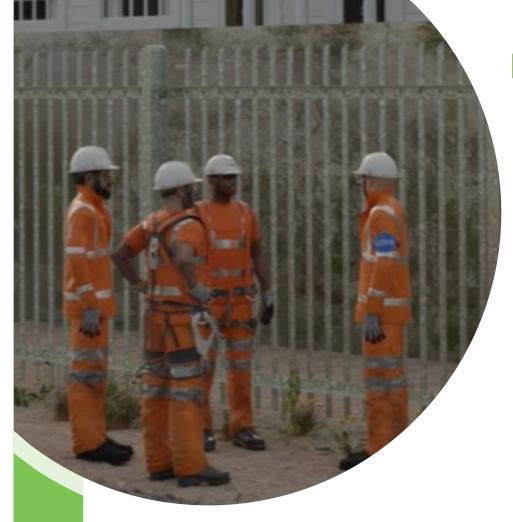
Providing technical leadership





### Purpose of this briefing

- This detailed briefing is for colleagues that holding Nominated Person, Authorised Person or COSS (OLP) competences
- It is also for colleagues that will be carrying out duties as the 'Equipment Competent Person' and colleagues involved in the planning of the implementation of isolations and associated overhead line permits (OLPs)









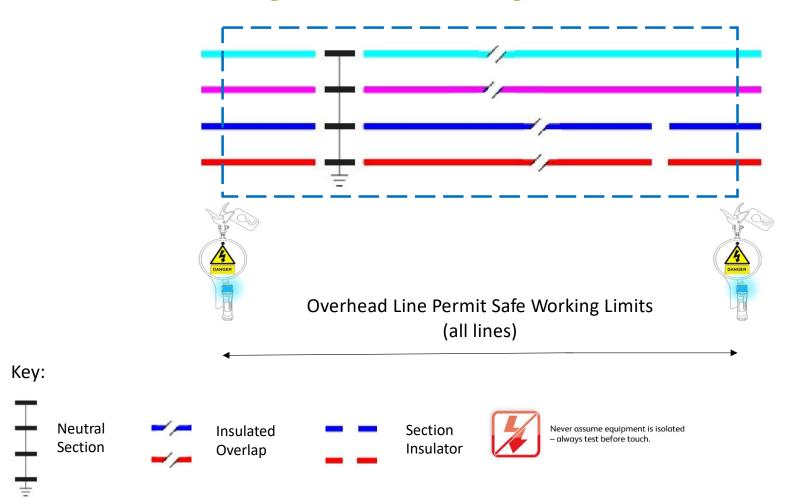
### Purpose of this briefing cont.

- We have developed one set of briefing materials. This is so that the key participants can gain an understanding of their own and each others' duties within the new Test before Touch process
- The briefing has discussion points to aid understanding
- There is no knowledge assessment BUT your attendance at this briefing must be recorded. This is so that an 'Event' can be added to your Oracle/Sentinel profile





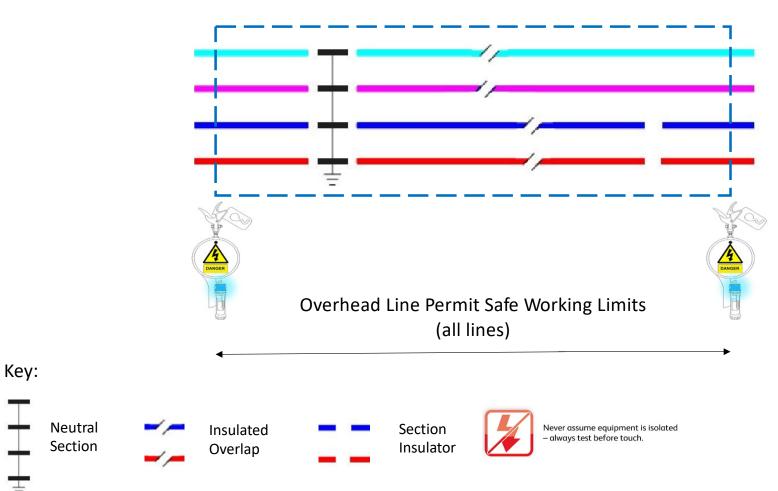
# Discussion: Today, where would you Test Before Touch?







# Discussion: Today, where would you Test Before Touch?









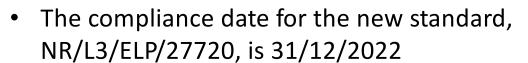
- Too many incidents involving colleagues suffering live changing injuries due to inadvertent contact with Live Overhead Line Equipment (OLE). These would have been avoided if Test Before Touch had been carried out
- The new standard formalises, and improves on, the existing guidance on the Test Before Touch Lifesaving Rule for OLE











Please implement the requirements of this standard as soon as practicable



esdsaisupport@networkrail.co.uk







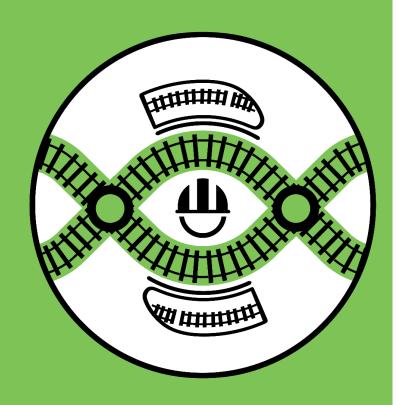
# Why carry out Test Before Touch actions for OLE?

- Undertaking a Test Before Touch action, or set of actions, is an important final step in our isolation process
- It demonstrates to the COSS (OLP) and members of the working party that the OLE is de-energised at the location of the test
- This helps to confirm that working party members are within the safe working limits of the OLP
- Undertaking Test Before Touch actions consistently would have prevented colleagues from touching OLE conductors that were Live at 25,000 Volts





# General principles and common requirements



Providing technical leadership

### Purpose and scope of the standard



The standard provides information to enable Test Before Touch actions to be identified, implemented, witnessed and recorded in a consistent manner

Compliance with this standard will mitigate the risks of electric shock resulting from inadvertent contact with Live OLE. This standard applies to Overhead Line Equipment only

It covers planned work, short notice work and work following an Emergency Switch Off

There are several exclusions from the scope. These are listed in section 2 of NR/L3/ELP/27720 and can also be found in the supporting information section here:

Items excluded from the scope of the standard



# Important definitions used throughout



Term	Definition	Notes / comments
Conductor	Material which permits electricity to flow readily through it. In the context of this standard, a solid or stranded wire forming part of the Overhead Line Equipment and which carries the electric current.	a) Contact wires and catenary wires; b) Bare Autotransformer feeders (ATF); c) Bare cross track feeders; d) Supplementary conductors; e) Sealing end (exposed high voltage cable terminations); f) Booster transformer high voltage (primary) connections; g) Harmonic damper connections; h) Substation risers; and i) Auxiliary transformer high voltage (primary) connections.
Discrete in-line OLE feature	A subcomponent of Overhead Line Equipment including, but not limited to, a: • neutral section; • section insulator; • insulated overlap; • insulated knuckle; • cable sealing end forming part of an auto-transformer feeder.	Images of discrete in-line OLE features



# Important definitions used throughout



Term	Definition
Test Before Touch Action	The action of testing, at a specific location, to confirm before it is touched that a conductor is de-energised while an OLP is in place.
Touch(ing) a conductor	A task or task delivery method where it is planned for a person, tool or item of equipment / plant to come within 600mm (2 feet) of an exposed conductor.







#TestBeforeTouch

### The 4 Test Before Touch methods



A Test Before Touch action, or set of actions, will be implemented whenever an OLP is briefed and issued to a COSS (OLP) by a Nominated Person for tasks where it is planned to **touch** a conductor. The standard details the 4 methods available.

**METHOD 1**: Dynamic decision making for Test Before Touch actions

METHOD 2: Pre-planned and pre-documented Test Before Touch actions

method 3: A pre-planned and pre-documented reduced set of Test Before Touch actions

METHOD 4: A Test Before Touch action prior to every occasion where it is planned to touch a conductor

If there is any uncertainty over whether a task or task delivery method might result in a conductor being touched (coming within 600mm) then it should be assumed to be the case.



### Selection of the Test Before Touch method

The Test Before Touch method to be used is selected by those person(s) responsible for planning the implementation of isolation(s) and associated OLP(s), and the resources that are required

The person selecting the Test Before Touch method should liaise, as necessary, with the representative of the organisation that requires an OLP to be issued where Test Before Touch actions will be required. This is to aid the selection of the most appropriate Test Before Touch method

The selected method is recorded on the Test Before Touch actions form













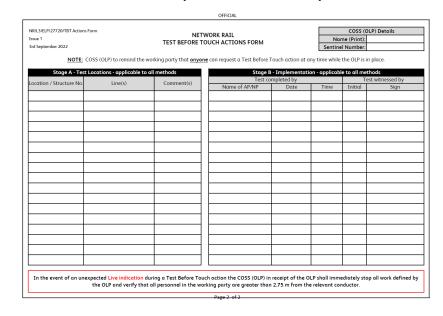






We have introduced a new form to allow Test Before Touch actions to be pre-planned (methods 2 and 3) and their implementation recorded (all methods)

NR/L3/ELP/2772	20/TBT Actions Form	FFICIAL		
ssue 1 Brd September 2	NETWORK TEST BEFORE TOUCH		(Form C) erence	
METHOD S	SELECTION:			
Tick which n	method will be used to identify and record the Test Before Touch action	is in accordance with NR/L3/ELP/2	7720 (Tick one onl	<u>y)</u>
	od 1: Dynamic decision g for Test Before Touch actions  Method 2: Pre-planned and pre- documented Test Before Touch actions	Method 3: Pre-planned an documented reduced Test I Touch actions	Before action	nod 4: A Test Before Touch prior to every occasion where anned to touch a conductor
	necessary information below based of the method selected above. orting visual aids been produced? Yes / No (These are mandated for m	ethod 2 & 3)		
METHOD 1 ONLY	Equipment   I confirm that I:   Competent   1,0 meet the pre-requisites to act as the ECP   (as per NR/L3/ELP/27720); and declaration   2,1 accept the responsibilities of the ECP while the	Name: Sign: OLP is in place Sentinel N	lumber:	Date: Time:
METHOD	Stage A prepared by:	Na	me	Date
2 & 3*	Representative of organisation requiring Test Before	Touch actions:		
ONLY	Will an AP/NP be required to be with the working party for the dura	tion of the OLP to implement Test	Before Touch action	is? (Yes / No)
METHOD	Stage A endorsed by:	Name	Date	Sentinel Number
2 & 3*	Nominated Person (1):			
ONLY	Person responsible for preparing task delivery plan(s):			
METHOD 3°	Planning for a schedule of Reduced Test Before Touch actions	Name	Date	Sentinel Number
ONLY	Nominated Person (2):			
*NOTE: M	lethod 3 shall only be endorsed if the risk assessment justifies this approach. If this	is not the case then the work will need to	be re-planned and a di	ifferent method shall be selected)
	COSS (OLP) I confirm that I accept the responsibility to request a Te	est Before Name:		Date:





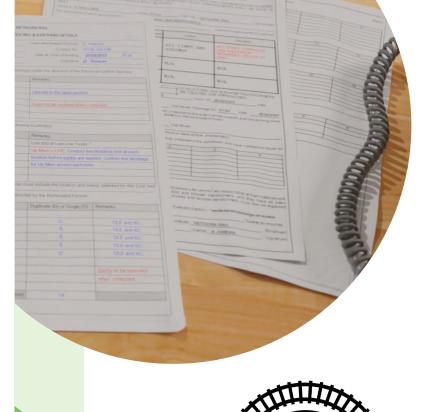




### **Electrical safety**

It is really important that you remember:

- The Overhead Line Permit (OLP) is the point of reference for electrical safety for the COSS (OLP) and members of the working party
- No matter which Test Before Touch method is selected the COSS (OLP), or any other member of their working party, can request a Test Before Touch action
- If there is ever any doubt when it comes to your electrical safety, please 'Choose to Challenge'







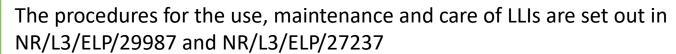
### Implementing a Test Before Touch action

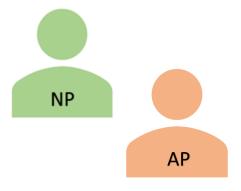
A Test Before Touch action shall only be carried out by a Nominated Person or Authorised Person

Only an approved Live Line Indicator (LLI) may be used

The Live Line Indicator (LLI) must be used in accordance with approved procedures

If replacement or additional LLI devices are needed then details of the approved units can be found here: <u>AC OLE</u> or <u>DC OLE</u>





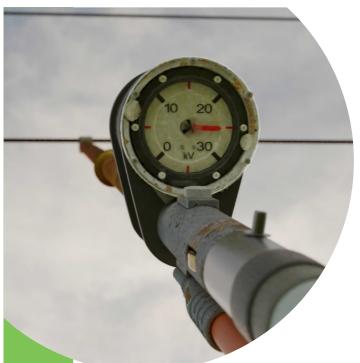




### Position of Test Before Touch actions

- Where a capacitive LLI is used on 25kV OLE then a Test Before Touch action shall take place at a minimum of 3 metres along the conductor away from an OLE structure or item of in-line insulation (if there is sufficient conductor length)
- Where this is not possible, a resistive Live Line Indicator shall be used
- Examples of the '3 metre' requirement can be found here: Position of a Test Before Touch action
- Only resistive LLIs shall be used on DC OLE





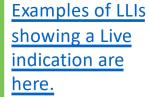
# Irregularities – an unexpected Live indication



- In the event of an unexpected Live indication during a Test Before Touch action, the COSS (OLP) in receipt of the OLP shall:
  - Immediately stop all work defined by the OLP; and
  - Verify that all personnel in the working party are greater than 2.75m from the conductor
- The person who completed the Test Before Touch action which identified a Live conductor must report it to the Nominated Person responsible for the isolation
- The Nominated Person then must:
  - Inform the Electrical Control; and
  - Raise a close call

 Work may only re-start if the Nominated Person identifies that it is appropriate to do so

 The requirements for checking the content of any pre-prepared schedule of Test Before Touch actions and briefing the COSS (OLP) must be repeated before work re-commences









### Witnessing Test Before Touch Actions

 Where practical, each member of the working party should witness each Test Before Touch action as it's completed

 As a minimum, the COSS (OLP) holding the OLP must witness the test(s) and brief the working party

Where the person undertaking the Test Before
Touch action is also the COSS (OLP) then another
member of the working party must witness the
test

 This should be the person supervising the physical task delivery (the person in charge)



NR/L3/ELP/27720/TBT Actions Form

### **Recording Test Before Touch actions**



Name (Print): Marcus Paul

For <u>each</u> completed Test Before Touch action the COSS (OLP) must record:

- the location of the test if it has not been pre-planned (methods 1 and 4);
- the name of the person who carried out the Test Before Touch action;
- the date and time that the action was witnessed;
- their name and signature

Where another member of the working party has witnessed the test(s) instead of the COSS (OLP) their name must be recorded by the COSS (OLP)

		TEST BEFORE TO	UCH ACTIONS FORM			ie (Filit).	IVIAI CUS Pau
3rd September 2022						Number:	738962
NOTE: CO	SS (OLP) to remind the v	vorking party that <b>anyone</b>	can request a Test Before	Touch action at	any time while	the OLP is i	n place.
Stage A - Test La	ocations - applicable to	o all methods	Stage B	· Implementati	ion - applicab	le to all me	thods
ocation / Structure No	Line(s)	Comment(s)		mpleted by	Test witnessed by		
ocation/ Structure 140	Ellic(3)	Commency	Name of AP/NP	Date	Time	Initial	Sign
109/28	Up ATF	South of NS	Amy Rennolds	3/8/22	00:30	MP	M.Paul
109/28	Up Slow	South of NS	u n	u n	00:31	MP	M.Paul
109/28	Down Slow	South of NS	u n	u n	00:33	MP	M.Paul
109/30	Up ATF	North of NS	u n	u n	00:42	MP	M.Paul
109/30	Up Slow	North of NS	u n	u n	00:43	MP	M.Paul
109/30	Down Slow	North of NS	u n	u n	00:45	MP	M.Paul
		+					
					+		

defined by the OLP and verify that all personnel in the working party are greater than 2.75 m from the relevant conductor

NETWORK RAIL

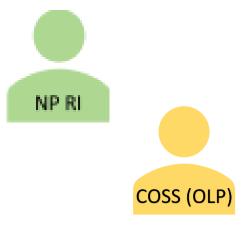




# **Briefing arrangements**

- The Nominated Person responsible for the isolation and issuing the OLP must brief the COSS (OLP) in person on the Test Before Touch arrangements (as set out in each method)
- The Nominated Person must confirm that the COSS (OLP) understands the content of the briefing
- Where a relief COSS (OLP) is to take over responsibility for an OLP they must be briefed on the Test Before Touch arrangements by the Nominated Person responsible for the isolation. This must take place before signing part 2 (Relief of the Permit Holder) of the OLP
- This means that there can be <u>NO</u> COSS (OLP) to COSS (OLP) briefing for Test Before Touch activities







Method 1: Dynamic decision-making for Test Before Touch actions







### Method 1



- Under method 1, all Test Before Touch actions are determined and directed dynamically at the time of the work by an Equipment Competent Person (ECP)
- There is no requirement to pre-plan or pre-document the Test Before Touch actions, but they must be witnessed and recorded

Method 1 'rule set':

- A Test Before Touch action must be completed before the first conductor is touched
- Additional tests are required before any member of the working party touches:
  - A different conductor; or
  - A conductor on a different line; or
  - A conductor beyond a discrete in-line OLE feature: or
  - A conductor forming part of the traction power system



### NetworkRail the OLE

### Method 1 scenario – High level intrusive inspection of the OLE

The work requiring an OLP is to undertake high level intrusive inspection of the OLE. It has been planned that there will be an Equipment Competent Person (ECP) within the working party and so method 1 was selected

The responsibility of the ECP is to 'dynamically' determine and direct the implementation of the required Test Before Touch actions. The ECP must apply the method 1 'rule set' using their knowledge and experience of the OLE

- The competences required to undertake the duty of an ECP are:
  - OLE 2 & OLE 4 (via OLE maintenance 3) and Authorised Person or Nominated Person;



or



OLEC 3 with the minimum elements of 2, 3 & 4 and Authorised Person or Nominated Person







## Where a person does not hold the defined ECP competences



There might be occasions where method 1 is identified as the most appropriate method but there is no one person in the working party that holds the defined competences of an ECP

In this circumstance it is acceptable for the ECP responsibilities to be led by a person just holding:



AP

- OLE 2 & OLE 4 (via OLE Maintenance 3); or

- OLEC 3 elements 2, 3 & 4

This is subject to:

- the person acting as the ECP being assisted by a person holding Nominated Person or Authorised Person competence; and
- the person being asked to act as ECP is informed of their responsibilities when resources are being allocated to the working party







### Nominated Person's and ECP's actions



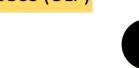
The Nominated Person responsible for issuing the OLP will brief the COSS (OLP) <u>in</u> <u>person</u> on how the Test Before Touch actions will be delivered. The briefing will include, as a minimum, the following:



The name and contact details of the ECP



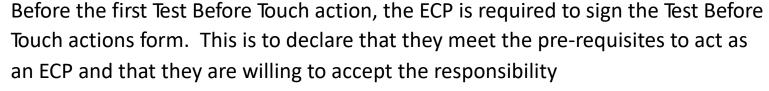
 That the ECP is responsible for identifying and directing the implementation of all Test Before Touch actions



When there might be a requirement to carry out a re-test



- The actions to be taken in the event that an ECP is unavailable
- The process following an unexpected Live indication







NR/L3/ELP/27720/TBT Actions Form Issue 1 3rd September 2022

### NETWORK RAIL TEST BEFORE TOUCH ACTIONS FORM

OLP (Form C) Wk18/01 reference



METHOD	SELECTION:								
Tick which r	method will be used to identify and record the Test Before To	ouch actions in accorda	nce with NR	R/L3/ELP/2	27720 ( <u>Tick one or</u>	ıly)			
Method 1: Dynamic decision making for Test Before Touch actions  Method 2: Pre-planned and pre-documented Test Before Touch actions  Method 3: Pre-planned and pre-documented reduced Test Before Touch actions					Before action	Method 4: A Test Before Touch action prior to every occasion where it is planned to touch a conductor			
	necessary information below based of the method selected			$\neg$					
Have suppo	orting visual aids been produced? Yes / No (These are mand	ated for method 2 & 3)	No						
	Equipment I confirm that I:			Name:	Amy Rennolds	Date:	03/08/2022		
METHOD 1 ONLY	Competent 1.) meet the pre-requisites to act as the Person (ECP) (as per NR/L3/ELP/27720); and	e ECP		Sign:	A.Rennolds	Time:	23:15		
ONLI	declaration (as per NN/ES/EE/27/20), and 2.) accept the responsibilities of the Ed	CP while the OLP is in p	lace	Sentinel Number: 352435					
METHOD	Stage A prepared by:			N	ame	De	ate		
2 & 3*	Representative of organisation requiring T	ast Dafara Tauch action							
	Representative of organisation requiring t	est Berore Touch action	ns:						
ONLY	Will an AP/NP be required to be with the working party for			ement Tes	st Before Touch actio	ons? (Yes / No)			
ONLY		or the duration of the O		ement Tes	st Before Touch actio		el Number		
	Will an AP/NP be required to be with the working party fo	or the duration of the O	LP to imple	ement Tes			el Number		
METHOD	Will an AP/NP be required to be with the working party fo	or the duration of the O	LP to imple	ement Te			el Number		
METHOD 2 & 3*	Will an AP/NP be required to be with the working party for Stage A endorsed by:  Nominated Pe	or the duration of the O  rrson (1):  y plan(s):	LP to imple	ement Tes		Sentin	el Number		
METHOD 2 & 3* ONLY	Will an AP/NP be required to be with the working party for  Stage A endorsed by:  Nominated Person responsible for preparing task delivery	erson (1):  y plan(s):	LP to imple	ement Tes	Date	Sentin			
METHOD 2 & 3* ONLY METHOD 3*	Will an AP/NP be required to be with the working party for Stage A endorsed by:  Nominated Person responsible for preparing task delivery  Planning for a schedule of Reduced Test Before Touch of	or the duration of the O  reson (1):  plan(s):  actions  I  reson (2):	LP to imple		Date Date	Sentin	el Number		
METHOD 2 & 3* ONLY METHOD 3*	Will an AP/NP be required to be with the working party for  Stage A endorsed by:  Nominated Person responsible for preparing task delivery  Planning for a schedule of Reduced Test Before Touch of Nominated Person responsible for preparing task delivery	or the duration of the O  reson (1):  plan(s):  actions  reson (2):  reach. If this is not the case  request a Test Before	LP to imple		Date Date	Sentin	el Number		



OFFICIAL

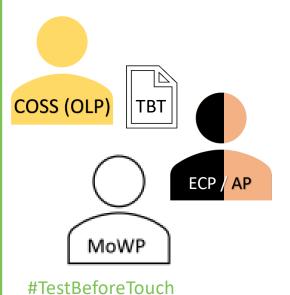


### Actions by the COSS (OLP) and the ECP

Prior to work starting, the COSS (OLP) must brief all members of the working party on the details of the Test Before Touch arrangements

The ECP will identify and direct the implementation of the required Test Before Touch actions as per method 1's 'rule set'

The COSS (OLP) must witness every Test Before Touch action that is completed.



The COSS (OLP) will then update Stage A and Stage B of the Test Before Touch actions form and record:

- The location of the test (line, structure or other location)
- The name of the person who undertook the action
- The date and time of the action
- The COSS (OLP) will also record who witnessed the test (usually the COSS (OLP))



#### OFFICIAL



NR/L3/ELP/27720/TBT Actions Form Issue 1 3rd September 2022

### NETWORK RAIL TEST BEFORE TOUCH ACTIONS FORM

COSS (OLP) Details						
Name (Print): Marcus Paul						
Number: 738962						

NOTE: COSS (OLP) to remind the working party that anyone can request a Test Before Touch action at any time while the OLP is in place.

Stage A - Test Locations - applicable to all methods			Stage B - Implementation - applicable to all methods								
Location / Structure No.		Comment(s)		Test completed by Test witnessed by							
Location / Structure No.		Comment(s)		Name of	AP/NP		)ate	Time	Initial	Sign	
109/28	Up ATF	South of NS		Amy Re	nnolds	3/8	/22	00:30	MP	M.Paul	
109/28	Up Slow	South of NS		u	n	u	"	00:31	MP	M.Paul	
109/28	Down Slow	South of NS		и	"	u	n	00:33	MP	M.Paul	
109/30	Up ATF	North of NS		u	n	u	"	00:35	MP	M.Paul	
109/30	Up Slow	North of NS	] [	u	n	u	n	00:36	MP	M.Paul	
109/30	Down Slow	North of NS	] [	u	"	u	n	00:37	MP	M.Paul	
			] [								
			] [								
			] [								
			] [								



In the event of an unexpected Live indication during a Test Before Touch action the COSS (OLP) in receipt of the OLP shall immediately stop all work defined by the OLP and verify that all personnel in the working party are greater than 2.75 m from the relevant conductor.





### Additional controls for method 1

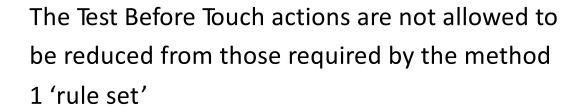


The ECP must not undertake any other duties that would cause them to withdraw or leave the working party



If the ECP has to temporarily withdraw they must inform the COSS (OLP) that the working party must not move position or touch a different conductor

If the ECP becomes permanently unavailable and cannot be replaced then method 4 must be adopted. This must happen before work re-commences and only after speaking with the Nominated Person



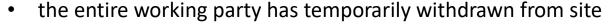


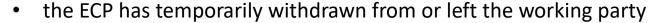




### Requirements to undertake a retest

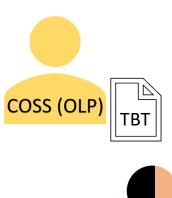
Any retests of Test Before Touch actions that are completed during the work must also be recorded. Reasons for a re-test include:



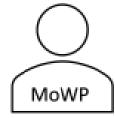


- there was a change in COSS (OLP) or ECP
- there is a change of shift of the working party

If there is a requirement to move back onto a line or location where a conductor has already had a Test Before Touch action completed then the ECP shall check the Test Before Touch action form to confirm if a test is required







If any member of the working party has any doubts whether a conductor is de-energised, then a test or a retest must be carried out

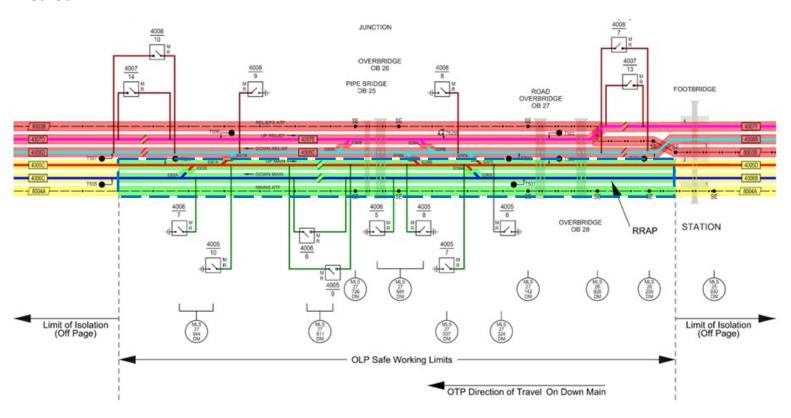




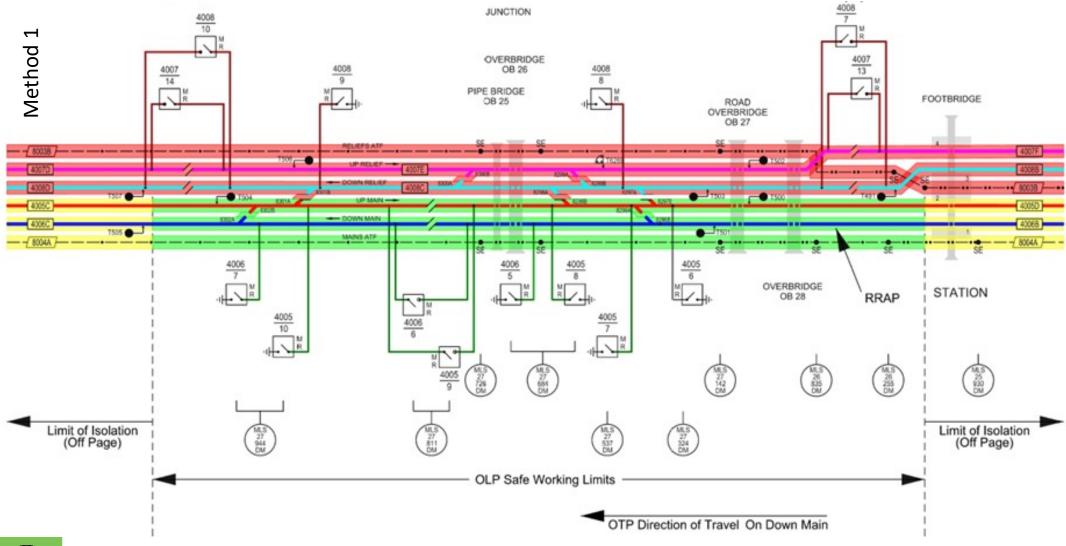


### Discussion point - scenario

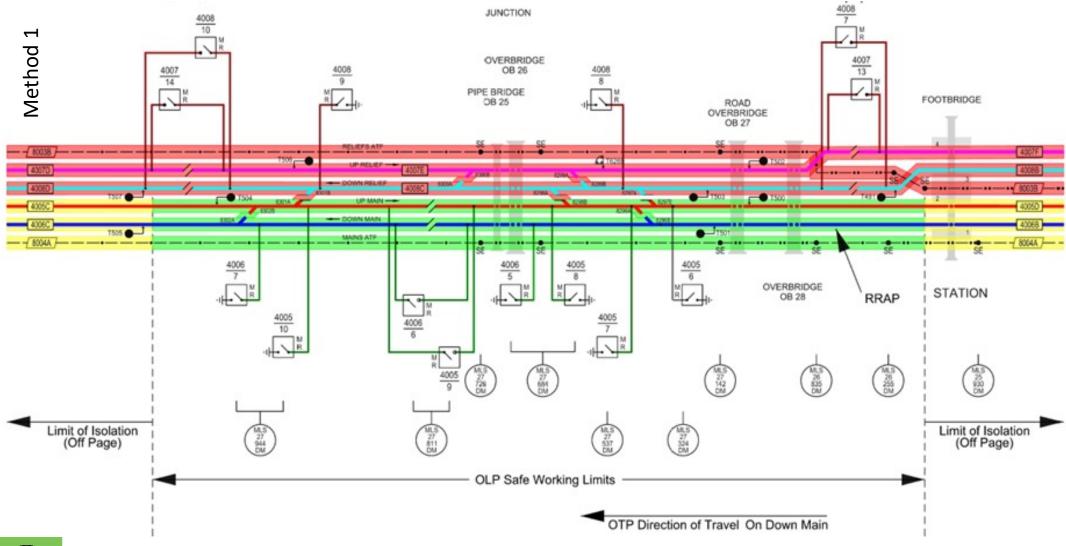
The nature of work is a high level intrusive inspection of the Down Main and Mains ATF (as shown on the diagram below). The RRV is to be on-tracked to the Down Main at the RRAP. Please discuss where you would preform Test Before Touch actions under method 1.



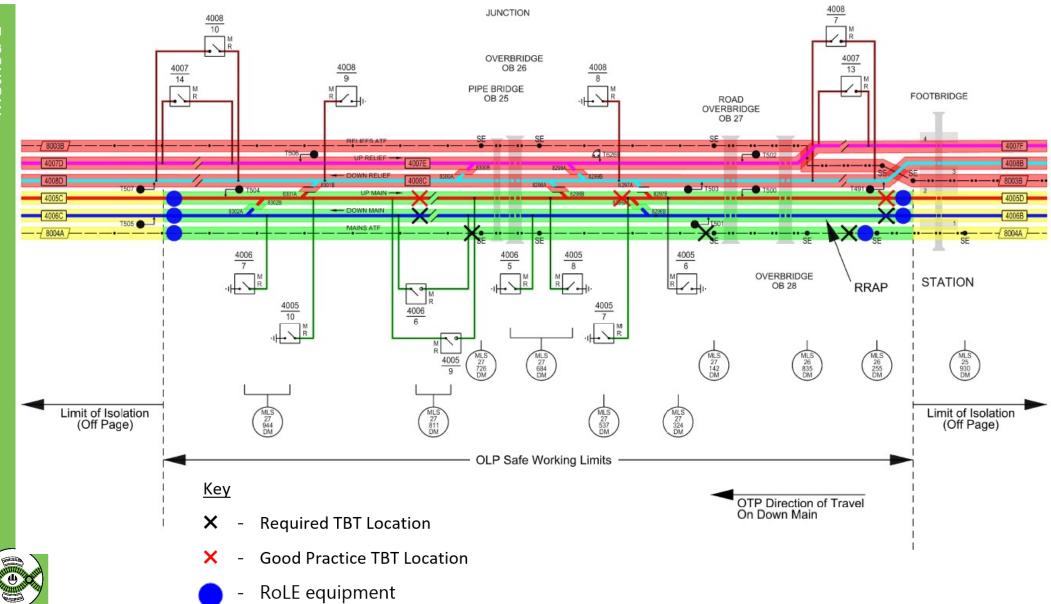




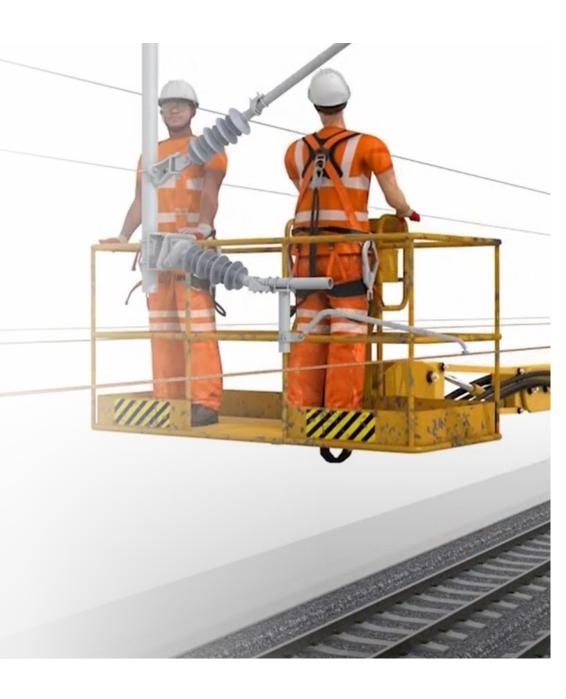








Method 2: Pre-planned and pre-documented Test Before Touch Actions









### Method 2

- All Test Before Touch actions must be preplanned and pre-documented
- There is no requirement to have an Equipment Competent Person (ECP) within the working party
- It has a structured approach to the identification and implementation of Test Before Touch actions
- Method 2 follows six key steps









### Method 2 'rule set'

A Test Before Touch action must be completed before the first conductor is touched.

Additional tests are required before any member of the working party touches:

- A different conductor; or
- A conductor on a different line; or
- A conductor beyond a discrete in-line OLE feature: or
- A conductor forming part of the traction power system

Additionally, the following factors must be assessed to identify any further Test Before Touch actions:

- The tasks and their delivery methods; and
- The nature and complexity of the OLE inside the planned OLP safe working limits



## NetworkRail of to OLE

## Method 2 scenario - Vegetation removal adjacent to OLE

The work requiring an OLP is to remove vegetation that is within 600 mm of an Auto Transformer Feeder (ATF). The working party will not contain an Equipment Competent Person and so method 2 has been selected



A representative from the organisation requiring the OLP completes stage A of the Test Before Touch actions form. This should take account of:

- The access and egress points to be used
- The nature of the task being undertaken
- Plant and materials being used
- The duration of the task delivery
- Resource requirements for example, if there is a requirement for the Nominated Person or Authorised Person to remain with the working party at all times

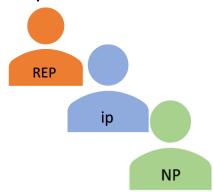




## Compiling the Test Before Touch actions form

The representative signs and forwards the form to the team responsible for planning the implementation of the isolation

They will arrange for stage A to be checked by a Nominated Person (NP). The NP reviews the forms and amends it as required so that the schedule of Test Before Touch actions meets the requirements of the standard



The Nominated Person review of the Test Before Touch action form will also assess:

- if there is a requirement for an Authorised Person or Nominated Person to remain with the COSS (OLP) and the working party throughout the whole shift
- the type of LLI required due to constraints associated with testing

The Nominated Person should, where necessary, liaise with the person who submitted the form to confirm its content. The Nominated Person endorses Stage A once they assess the schedule as meeting the requirements of the standard







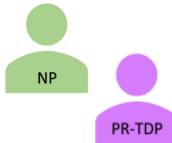
NetworkRail

The Nominated Person who endorsed stage A of the Test Before Touch actions form must then brief the content to the person responsible for the preparation of task delivery plan(s)

The person responsible for the preparation of the task delivery plan(s) must check the Test Before Touch actions. This is to confirm that they are appropriate for the task being delivered and the task delivery method

If they agree, they too endorse Stage A







## NetworkRail

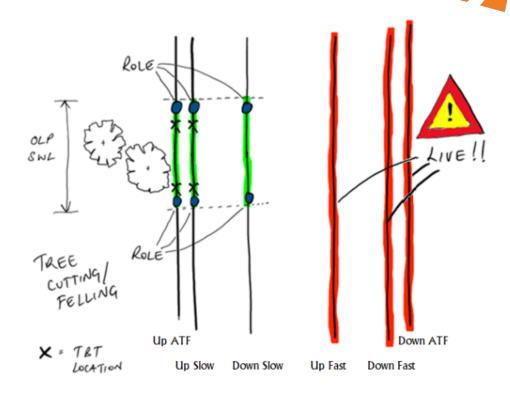
## Supporting visual aids

The use of visual aids is mandated when working under method 2

The visual aids can make use of hand drawn sketches, extracts from the isolation diagrams and instructions, Route View or Google Earth images

The visual aid(s), along with the endorsed Test Before Touch action form, are included in the Safe Work Pack for:

- the Nominated Person responsible for the isolation and issuing the OLP
- the COSS (OLP)
- the person who is responsible for the physical delivery of the tasks (person in charge)







NR/L3/ELP/27720/TBT Actions Form Issue 1 3rd September 2022

### **NETWORK RAIL**

OLP (Form C) reference	Wk19/01			

Sid September 2	TEST BEFORE TOUCH ACTIONS FORM						reference		
			TEST BEFORE TOOCH A	CTIONS FORM					
METHOD SI	ELECTION:								
Tick which m	ethod will be used to	identify	and record the Test Before Touch actions	in accordance with N	NR/L3/ELP/27	720 <u>(Tick</u>	one only)		
	Method 1: Dynamic decision making for Test Before Touch actions  Method 2: Pre-planned and pre-documented Test Before Touch actions  Method 3: Pre-planned and pre-documented Test Before Touch action prior to every occasion where it is planned to touch a conductor								
Fill out the n	ecessary information	below bo	sed of the method selected above.						
Have suppo	rting visual aids been	produced	? Yes / No (These are mandated for met	nod 2 & 3) Yes					
	, ,	confirm			Name:		Dat	te:	
METHOD 1 ONLY	Competent   1 Person (ECP)		he pre-requisites to act as the ECP NR/L3/ELP/27720); and		Sign:		Tim	ne:	
<u></u>	, ,		the responsibilities of the ECP while the	OLP is in place	Sentinel N	umber:			

METHOD	Stage A prepared by:	Name	Date		
2 & 3*	Representative of organisation requiring Test Before Touch actions:	Sam Smith	01/06/2022		
ONLY	Will an AP/NP be required to be with the working party for the duration of the OLP to implement Test Before Touch actions? (Yes / No)				

METHOD	Stage A endorsed by:	Name	Date	Sentinel Number
2 & 3*	Nominated Person (1):	Peter Jones	05/06/2022	625050
ONLY	Person responsible for preparing task delivery plan(s):	Sarah Davies	06/06/2022	

METHOD 3*	Planning for a schedule of Reduced Test Before Touch actions	Name	Date	Sentinel Number
ONLY	Nominated Person (2):			

\*NOTE: Method 3 shall only be endorsed if the risk assessment justifies this approach. If this is not the case then the work will need to be re-planned and a different method shall be selected)

METHOD 4	COSS (OLP)	I confirm that I accept the responsibility to request a Test Before Touch action prior to every occasion where it is planned to touch	Name:	Date:	
ONLY	declaration	a conductor	Signed:	Time:	





NR/L3/ELP/27720/TBT Actions Form Issue 1 3rd September 2022

## NETWORK RAIL TEST BEFORE TOUCH ACTIONS FORM

COSS (OLP) Details			
Name (Print):	Peter Hill		
Number:	738962		

NOTE: COSS (OLP) to remind the working party that anyone can request a Test Before Touch action at any time while the OLP is in place.

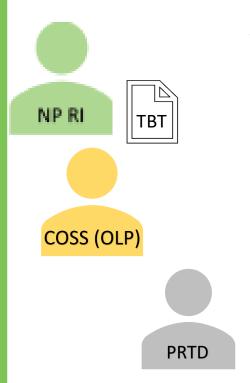
Stage A - Test	Locations - applicable to a	ll methods	Stage B - Implementation - applicable to all methods			nethods	
Location / Structure No.	Line(s)	Comment(s)		completed by			est witnessed by
Location/ Structure No.	Lilie(3)	Comment(s)	Name of AP/NP	Date	Time	Initial	Sign
19/36	Up Slow ATF	At SWL					
19/36	Up Slow	At SWL					
20/03	Up Slow ATF	At SWL					
20/03	Up Slow	At SWL					



In the event of an unexpected Live indication during a Test Before Touch action the COSS (OLP) in receipt of the OLP shall immediately stop all work defined by the OLP and verify that all personnel in the working party are greater than 2.75 m from the relevant conductor.



### **Nominated Person's actions**



The Nominated Person responsible for issuing the OLP must check that the tests detailed on the Test Before Touch actions form remain appropriate

If the Nominated Person determines that the Test Before Touch actions are not appropriate they must:

- amend the schedule to include the additional tests that will make it appropriate; or
- amend the schedule to include Test Before Touch actions in line with method 4; or
- invoke the work safe procedure

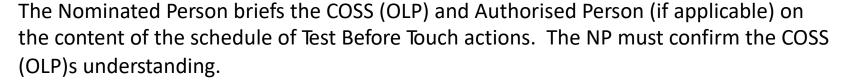
If the Nominated Person determines that the Test Before Touch actions are appropriate they must brief the COSS (OLP) and any Authorised Person that will be undertaking Test Before Touch actions





## Nominated Person's briefing



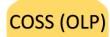




### The briefing will include:

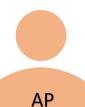


The location and position of Test Before Touch actions making use of the visual aid(s) produced



Access and egress points for all working party members and any OTP

OFFICIAL

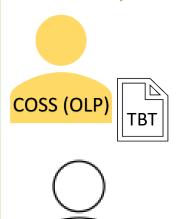


- The requirements to carry out a re-test
- The name and contact information of the person carrying out Test Before Touch actions
- That anyone within the working party covered by the OLP can request additional Test Before Touch actions
- The process following a Live indication





## COSS (OLP)'s actions



MoWP

Prior to work starting, the COSS (OLP) must brief all members of the working party on the details of the Test Before Touch arrangements

The Authorised Person will complete the required Test Before Touch actions inline with the brief from the Nominated Person and discussion with the COSS (OLP)

The COSS (OLP) must witness every Test Before Touch action that is completed

The COSS (OLP) will then update Stage B of the Test Before Touch actions form and record the required information as detailed <u>earlier</u>





NR/L3/ELP/27720/TBT Actions Form Issue 1 3rd September 2022

## NETWORK RAIL TEST BEFORE TOUCH ACTIONS FORM

COSS (OLP) Details			
Name (Print):	Peter Hill		
Number:	738962		

NOTE: COSS (OLP) to remind the working party that anyone can request a Test Before Touch action at any time while the OLP is in place.

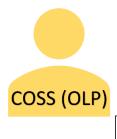
Stage A - Test Locations - applicable to all methods Stage B - Implementation - applical					ole to all methods			
Location / Structure No	Line(s)	Comment(s)	Test completed by			Test witnessed by		
Location / Structure No.	Line(s)	Comment(s)	Name of AP/NP	Date	Time	Initial	Sign	
19/36	<b>Up Slow ATF</b>	At SWL	S Cooper	8/8/22	00:30	PH	P. Hill	
19/36	Up Slow	At SWL	S Cooper	8/8/22	00:31	PH	P. Hill	
20/03	Up Slow ATF	At SWL	S Cooper	8/8/22	00:35	PH	P. Hill	
20/03	Up Slow	At SWL	S Cooper	8/8/22	00:36	PH	P. Hill	

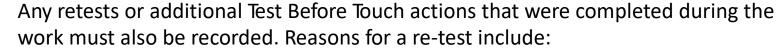


In the event of an unexpected Live indication during a Test Before Touch action the COSS (OLP) in receipt of the OLP shall immediately stop all work defined by the OLP and verify that all personnel in the working party are greater than 2.75 m from the relevant conductor.



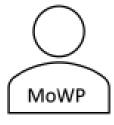
## Requirements to undertake a retest





- the entire working part has temporarily withdrawn
- there is a change in COSS (OLP)
- there is a change in shift of the working party;
- a different access point was used to that stated on the OLP

If there is a requirement to move back onto a line or location where a conductor has already had a Test Before Touch action completed, the COSS (OLP) shall check the Test Before Touch action form to confirm if a test is required

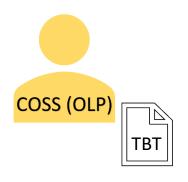


If any member of the working party has any doubts whether a conductor is de-energised, then a retest must be carried out





## Real time changes to the schedule of Test Before Touch actions

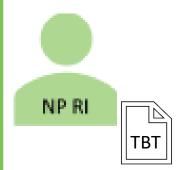


An endorsed Test Before Touch actions form must not be modified to a reduced set of Test Before Touch actions (method 3)

NetworkRail

It is acceptable not to complete a planned Test Before Touch action if the need to touch a conductor is no longer required

This does not mean the schedule of Test Before Touch actions has been modified to a reduced set of actions (as defined in method 3)



The reason for not completing a planned test must be recorded by the COSS (OLP) and the Nominated Person

Additional tests must also be recorded by the COSS (OLP) and Nominated Person

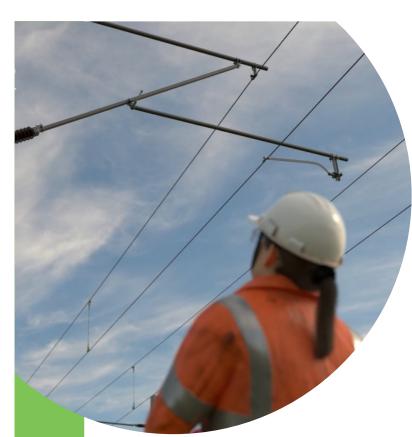


Method 3: A pre-planned and pre-documented reduced set of Test Before Touch actions









## Method 3



Method 3 is like method 2, where all Test Before Touch actions must be pre-planned and pre-documented

There is no requirement for an Equipment Competent Person to be part of the working party

The significant difference between method 2 and 3 is that method 3 allows for a <u>reduced</u> set of Test Before Touch actions to be undertaken

This is subject to a risk assessment and receives additional endorsements during the planning stage

Method 3 follows the same six steps as method 2









## Method 3 'rule set'



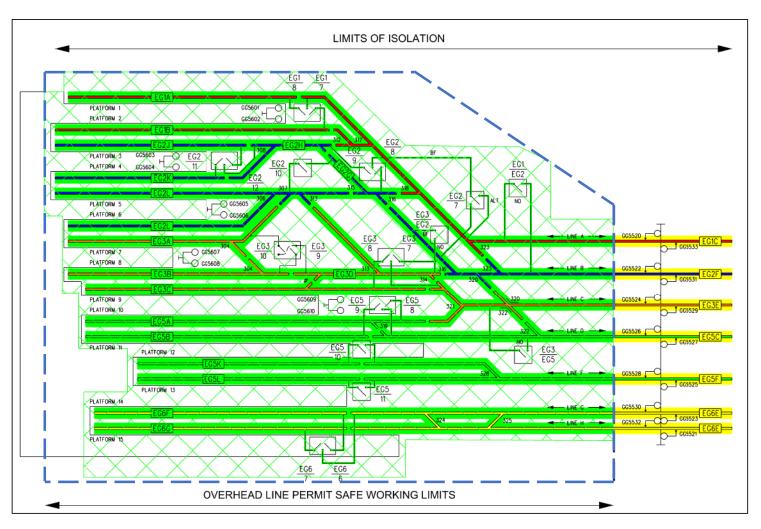
A reduced set of Test Before Touch action can only be undertaken when:

- The OLP is not part of an isolation where it is planned to alter the extent of an existing isolation
- The OLP safe working limits will be a minimum of two span lengths from OLE that is Live at the system voltage
- The reduced set of Test Before Touch actions is documented, reviewed and endorsed
- The approach is justified by a documented risk assessment which shows that the risk of a member of the working party inadvertently coming within 600mm (2 feet) of an exposed Live conductor can be sufficiently controlled
- A Test Before Touch action must be completed before the first conductor is touched
- Further tests shall be planned to demonstrate to the working party that conductors to be touched are de-energised



## Method 3 scenario – High level inspection works at a terminus station









## Initial completion of the Test Before Touch actions form

A representative from the organisation requiring the OLP completes stage A of the Test Before Touch actions form. This should take account of:

- The access and egress points to be used
- The nature of the task being undertaken
- Plant and materials being used
- The duration of the task delivery
- Resource requirements for example, if there is a requirement for the Nominated Person or Authorised Person to remain with the working party at all times





# Risk assessment to justify a reduced set of Test Before Touch actions

NetworkRail

The risk assessment must be completed by a person holding Nominated Person competence. It is used to assess the likelihood of a member of the working party inadvertently coming within 600mm of an exposed Live conductor. This might be due to:

- the inadvertent use of the wrong pedestrian access point(s) or other pedestrian access location(s) by members of the working party; or
- the inadvertent use of the wrong access / egress point(s) for OTP; or
- the presence of Residual Electrical Hazards, and how these will be controlled and highlighted to the COSS (OLP) and members of the working party; or
- one or more members of the working party inadvertently moving beyond the OLP's safe working limits.

Where the risk assessment shows that the risk of a member of the working party inadvertently coming within 600mm of an exposed Live conductor cannot be controlled then Method 3 must not be used





NR/L3/ELP/27720/03 RA Form Issue 1,03/09/2022

## NETWORK RAIL SCHEDULE OF TEST BEFORE TOUCH ACTIONS FORM RISK ASSESSMENT TO JUSTIFY REDUCED TEST BEFORE TOUCH ACTIONS

OLP (Form C) wk26/01 Wk26/01

How <u>likely</u>	is it that members of the working party will inadvertently	encroach within 600mm of an exposed Live conductor while the	OLP is in place?	
Unlikely	There are <b>sufficient</b> controls in place to prevent this, and either all of them would need to fail, or a person would have to deliberately breach the controls			
Likely	Likely  There are insufficient controls in place to prevent this, and a simple misunderstanding, or a person experiencing a momentary distraction or lapse of attention could cause them to fail. Any Unacceptable / 'No' responses requires the schedule to test at EACH location to be touched.			
ID	Hazard cause identification prompts (this list is not exhaustive, add/amend as required)	Hazard cause control measure(s) & notes	Is the risk from this hazard acceptable?	

1	D	Hazard cause identification prompts (this list is not exhaustive, add/amend as required)	Hazard cause control measure(s) & notes	from haz accept	ard
	ot 1 of ex	ould the inadvertent use of the wrong pedestrian access point(s) or ther pedestrian access locations cause confusion and lead a member of the working party to inadvertently come within 600mm of an exposed live (25kV) conductor? If yes, what control measure(s) will be ut in place?	All working party members on foot to access and egress via the station entrance opposite platforms 14 and 15. Access and egress point is clearly defined in the safe work pack and will be briefed to each member of the working party by the COSS (OLP)	Yes	No
	2   ca	ould the inadvertent use of the wrong OTP access or egress point(s) ause confusion / disorientation and lead a member of the working arty to inadvertently come within 600mm of an exposed live (25kV) anductor? If yes, what control measure(s) will be put in place?	MEWP (Unimog) to access via the RRAP at the end of platform 15 where the RRAP is inside the OLP Safe Working Limits.	<b>✓</b>	
	Will there be any Residual Electrical Hazards? If yes, what are they and what control measure(s) will be put in place to prevent a member of the working party from inadvertently coming within 600mm of an exposed live (25kV) conductor?		There will be no Residual Electrical Hazards within the safe working limits of the OLP.	✓	
		pecial attention should be paid to the identification and ssessment of REHs in the form of Live cable sealing ends	Reminder of Live Exposed (RoLE) equipment will be used at the safe working limits of the OLP		

Continued on Page 2.

NetworkRail

NR/L3/ELP/27720/03 RA Form Issue 1,03/09/2022

## NETWORK RAIL SCHEDULE OF TEST BEFORE TOUCH ACTIONS FORM RISK ASSESSMENT TO JUSTIFY REDUCED TEST BEFORE TOUCH ACTIONS

OLP (Form C) Wk26/01 reference

ID	Hazard cause identification prompts (this list is not exhaustive, add/amend as required)	Hazard cause control measure(s) & notes	Is the from haz	this ard
4	Could the proximity of exposed live (25kV) conductors to the OLP's safe working limits lead a member of the working party to inadvertently come within 600mm of an exposed live (25kV) conductor? Is the distance to exposed live conductor(s) appropriate to the area of work, the complexity of the electrification, the task delivery method(s) and site access arrangements? Could the proximity of exposed live (25kV) conductors be increased from the minimum (see standard) as a further risk control method?	The safe working limit at the country end is greater than two structures in from Live 25kV	<b>*</b>	
5	Could the nature of the task(s) or task delivery method(s) lead to a member of the working party inadvertently coming within 600mm of an exposed live (25kV) conductor? If yes, what control measure(s) will be put in place? Could the task delivery method be changed to eliminate this?	There are no Residual Electrical Hazards contained with the safe working limits of the OLP. The OLP safe working limits will have RoLE equipment applied. Working party will be briefed and their understanding checked.	<b>✓</b>	
6	Could the number of items of OTP and the requirement for multiple OLPs lead to confusion over which conductors have been tested which leads to a member of the working party to inadvertently come within 600mm of an exposed live (25kV) conductor? If yes, what control measures will be put in place?	There is only 1 item of OTP within the area of work, this is our Unimog	<b>✓</b>	
7	Given the nature of the area of work, the task(s) and task delivery method(s) and the complexity of the electrification, are there any other causes that might lead member(s) of the working party to inadvertently approach a live (25kV) conductor? If yes, what are they and what control(s) will be put in place?	The configuration of OLE is complex but it is all isolated and earthed and defined on the OLP. No residual electrical hazards present.	<b>✓</b>	
8 9 10	Use further rows as required.			

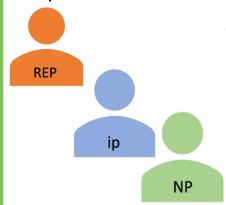




## Compiling the Test Before Touch actions form

The representative signs and forwards the form onto the team responsible for planning the implementation of the isolation

They will arrange for stage A to be checked by a Nominated Person (NP). The NP reviews the form and amends it as required so that the schedule of Test Before Touch actions meets the requirements of the standard



The Nominated Person review of the Test Before Touch action form will also assess:

- if there is a requirement for an Authorised Person or Nominated Person to remain with the COSS (OLP) and the working party throughout the whole shift
- the type of LLI required due to constraints associated with testing

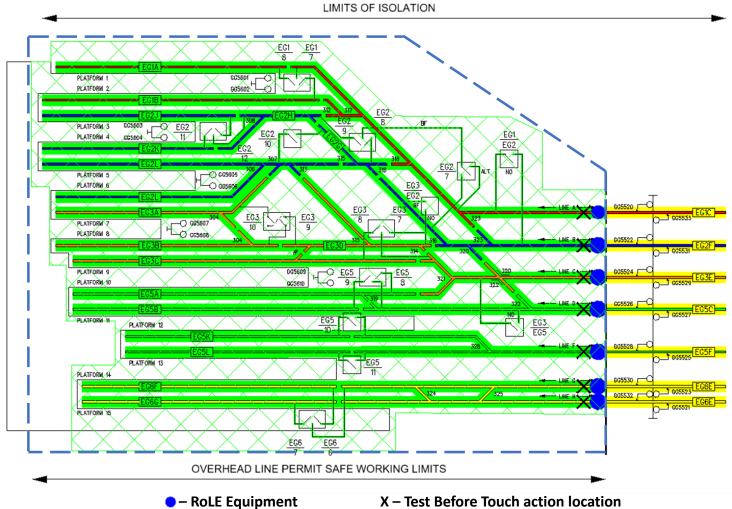
The Nominated Person should, where necessary, liaise with the person who submitted the form to confirm its content. The Nominated Person endorses Stage A once they assess the schedule as meeting the requirements of the standard







## A reduced set of Test Before Touch actions





X – Test Before Touch action location



NR/L3/ELP/27720/TBT Actions Form Issue 1 3rd September 2022

## NETWORK RAIL TEST BEFORE TOUCH ACTIONS FORM

COSS (OLP) Details						
Name (Print):						
Number:						

NOTE: COSS (OLP) to remind the working party that anyone can request a Test Before Touch action at any time while the OLP is in place.

Stage A - Test	Locations - applicable to a	Stage B - Implementation - applicable to all methods						
					mpleted by			est witnessed by
Location / Structure No.	Line(s)	Comment(s)		Name of AP/NP	Date	Time	Initial	Sign
00/155	Line H	At OLP SWL						
00/155	Line G	At OLP SWL						
00/155	Line F	At OLP SWL						
00/155	Line D	At OLP SWL						
00/155	Line C	At OLP SWL						
00/155	Line B	At OLP SWL						
00/155	Line A	At OLP SWL						



In the event of an unexpected Live indication during a Test Before Touch action the COSS (OLP) in receipt of the OLP shall immediately stop all work defined by the OLP and verify that all personnel in the working party are greater than 2.75 m from the relevant conductor.







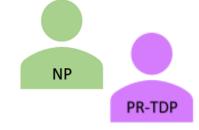
The Nominated Person who endorsed stage A of the Test Before Touch actions form must then brief the content to the person responsible for the preparation of task delivery plan(s)

The person responsible for the preparation of the task delivery plan(s) shall check the Test Before Touch actions

This is to confirm that it is appropriate for the task being delivered and the task delivery method

If they agree, they too will endorse Stage A



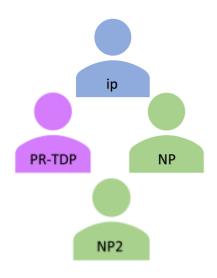




### Additional endorsement

A second Nominated Person is required to review the Test Before Touch action form along with the associated risk assessment. This is to confirm it is suitable for the task and task delivery method

Once the second Nominated Person agrees with the plan they also endorse Stage A



If the second Nominated Person does not agree that the reduced set of Test Before Touch actions are suitable:

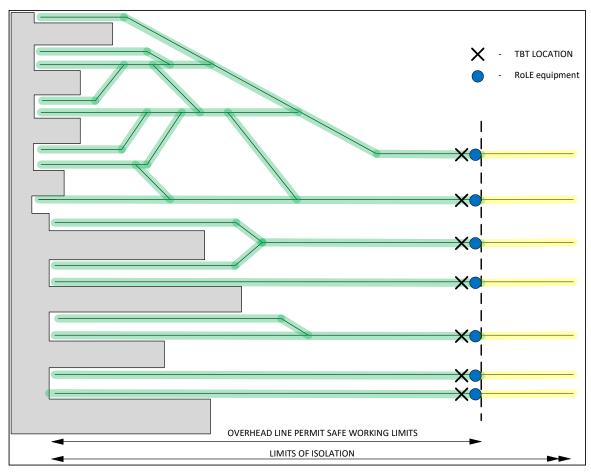
- an alternative reduced set of Test Before Touch actions shall be agreed or
- an alternative Test Before Touch method shall be implemented





## NetworkRail

## Method 3 scenario - An example of a supporting visual aid





#TestBeforeTouch



NR/L3/ELP/27720/TBT Actions Form Issue 1 3rd September 2022

#### **NETWORK RAIL** TEST BEFORE TOUCH ACTIONS FORM

TEST BEFORE TOUCH ACTIONS FORM								
METHOD SELECTION:								
Tick which method will be used to identify and record the Test Before Touch actions in accordance with NR/L3/ELP/27720 (Tick one only)								
Method 1: Dynamic decision making	Method 1: Dynamic decision making Method 2: Pre-planned and pre- Method 3: Pre-planned and pre- Method 4: A Test Before Touch							
for Test Before Touch actions documented Test Before Touch documented reduced Test Before action prior to every occasion where								
	actions		T <u>ouch actio</u> ns		it is planne <u>d to touch</u> a conductor			

OLP (Form C)

reference

Wk26/01

Fill out the necessary information below based of the method selected above.

Have supporting visual aids been produced? Yes / No (These are mandated for method 2 & 3)

	Equipment	I confirm that I:	Name:	Date:
METHOD 1	Competent	1.) meet the pre-requisites to act as the ECP	Sign:	Time:
ONLY	Person (ECP)	(as per NR/L3/ELP/27720); and	Jigii.	Time:
	declaration	2.) accept the responsibilities of the ECP while the OLP is in place	Sentine	Number:

METHOD	Stage A prepared by:	Name	Date					
2 & 3*	Representative of organisation requiring Test Before Touch actions:	Jamie Paul	05/08/22					
ONLY	Will an AP/NP be required to be with the working party for the duration of the OLP to implement Test Refore Touch actions? (Yes / No.)							

METHOD	Stage A endorsed by:	Name	Date	Sentinel Number
2 & 3*	Nominated Person (1):	Alex Smith	06/08/22	376239
ONLY	Person responsible for preparing task delivery plan(s):	Louise Potter	09/08/22	

METHOD 3*	Planning for a schedule of Reduced Test Before Touch actions	Name	Date	Sentinel Number	
ONLY	Nominated Person (2):	Mark Evans	09/08/22	874637	

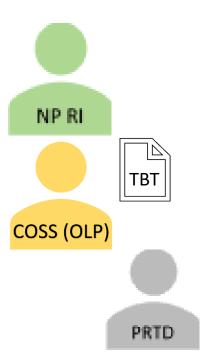
\*NOTE: Method 3 shall only be endorsed if the risk assessment justifies this approach. If this is not the case then the work will need to be re-planned and a different method shall be selected)

METHOD 4	COSS (OLP)	I confirm that I accept the responsibility to request a Test Before Touch action prior to every occasion where it is planned to touch	Name:	Date:	
ONLY	declaration	a conductor	Signed:	Time:	





### **Nominated Person actions**



The Nominated Person responsible for issuing the OLP must check that the tests detailed on the Test Before Touch actions form remain appropriate

If the Nominated Person determines that the Test Before Touch actions are **not** appropriate they must:

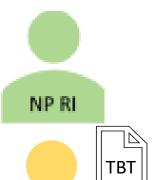
- amend the schedule to include the additional tests that will make it appropriate; or
- amend the schedule to include Test Before Touch actions in line with method 4; or
- invoke the work safe procedure

If the Nominated Person determines that the Test Before Touch actions <u>are</u> appropriate they must brief the COSS (OLP) and any Authorised Person that will be undertaking the Test Before Touch actions





## Nominated Person's briefing



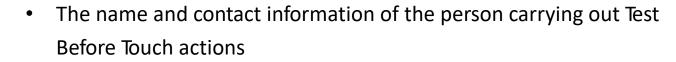
COSS (OLP)

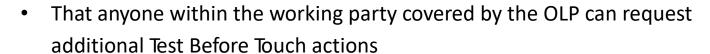
**AP** 

The Nominated Person briefs the COSS (OLP) and Authorised Person (if applicable) on the content of the schedule of Test Before Touch actions. The NP must confirm the COSS (OLP)s understanding.

The briefing will include:

- The location and position of Test Before Touch actions making use of the visual aid(s) produced
- Access and egress points for all working party members and any OTP
- The requirements to carry out a re-test



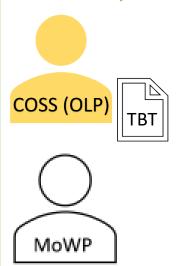


The process following a Live indication





## COSS (OLP)'s actions



Prior to work starting, the COSS (OLP) must brief all members of the working party on the details of the Test Before Touch arrangements

The Authorised Person will complete the required Test Before Touch actions inline with the brief from the Nominated Person and discussion with the COSS (OLP)

The COSS (OLP) must witness every Test Before Touch action that is completed

The COSS (OLP) will then update Stage B of the Test Before Touch actions form and record the required information as detailed <u>earlier</u>





NR/L3/ELP/27720/TBT Actions Form Issue 1 3rd September 2022

#### NETWORK RAIL TEST BEFORE TOUCH ACTIONS FORM

NOTE: COSS (OLP) to	remind the working party	that anyone can reques	t a Test Before Touc	h action at any time v	while the OLP is in place

Stage A - Test L	ocations - applicable to	all methods
Location / Structure No	Line(s)	Comment(s)
00/155	Line H	At OLP SWL
00/155	Line G	At OLP SWL
00/155	Line F	At OLP SWL
00/155	Line D	At OLP SWL
00/155	Line C	At OLP SWL
00/155	Line B	At OLP SWL
00/155	Line A	At OLP SWL

Stage B - Implementation - applicable to all methods						
Test co	Test completed by			Test witnessed by		
Name of AP/NP	Date	Time	Initial	Sign		
F Green	12/08/2022	22:30	MLS	M Smythe		
u n	u n	22:31	MLS	M Smythe		
u n	u n	22:34	MLS	M Smythe		
u n	u n	22:36	MLS	M Smythe		
u n	u n	22:38	MLS	M Smythe		
u n	u n	22:40	MLS	M Smythe		
u n	u n	22:41	MLS	M Smythe		

COSS (OLP) Details

Name (Print):

Number:

M Smythe

123456



In the event of an unexpected Live indication during a Test Before Touch action the COSS (OLP) in receipt of the OLP shall immediately stop all work defined by the OLP and verify that all personnel in the working party are greater than 2.75 m from the relevant conductor.

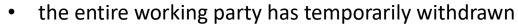




#### Requirements to undertake a retest



Any retests or additional Test Before Touch actions that were completed during the work must also be recorded. Reasons for a re-test include:

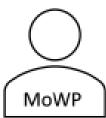


- there is a change in COSS (OLP)
- there is a change in shift of the working party
- a different access point was used to that stated on the OLP



AP

If there is a requirement to move back onto a line or location where a conductor has already has a Test Before Touch action completed, the COSS (OLP) must check the Test Before Touch action form to confirm a test is required



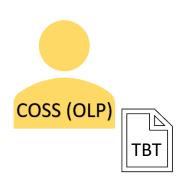
If any member of the working party has any doubts whether a conductor is de-energised, then a retest must be carried out.



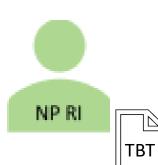




### Real time changes to a reduced set of Test Before Touch actions



An endorsed schedule of a reduced set of Test Before Touch actions <u>must not</u> be reduced further



Additional tests are allowed and must be recorded by the COSS (OLP) and the Nominated Person responsible for the isolation and the OLP

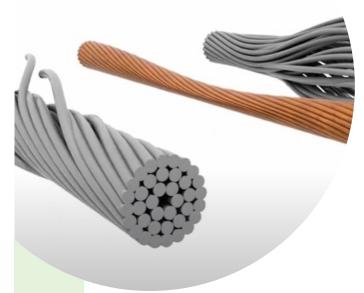


Methods 2 & 3: Real time changes to the planned Test Before Touch actions due to work arising









#### Managing 'work arising' under methods 2 & 3

Urgent or 'safety critical' defects that are outside of the planned work, the associated OLP and planned Test Before Touch actions must be completed in a controlled way

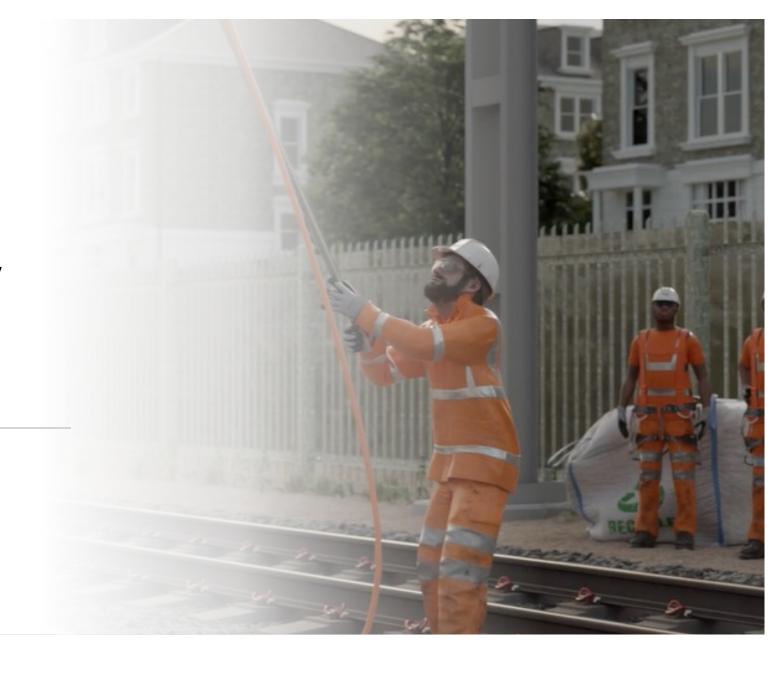
It is vital that any changes to the extent of the OLP or isolation are managed by the Nominated Person in accordance with NR/L3/ELP/29987

Any changes to the Safe Work Pack must be managed in accordance with NR/L2/OHS/019

The Nominated Person responsible for the isolation must make sure that all additional Test Before Touch actions are implemented in accordance with method 4



Method 4: A Test Before Touch action prior to every occasion where it is planned to touch a conductor









#### Method 4 'rule set'

Method 4 is simple, yet more intensive

There is no need to pre-plan or pre-document the locations where Test Before Touch actions are to take place

The COSS (OLP) must request a Test Before Touch action prior to every occasion where it is planned to touch a conductor

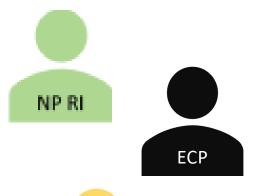
Additional Test Before Touch actions are to be undertaken before the working party moves along a conductor, plans to touch a different conductor or moves to an adjacent line. This applies even if you have previously tested the conductor



# Scenario – An ECP become permanently unavailable

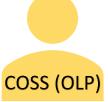
The work requiring an OLP is for a canopy repair and maintenance at a station's platforms

This work has been planned to be completed under method 1. However, due to high winds the OLE maintenance team are having to respond to an object on the OLE elsewhere on the route. This means that the Equipment Competent Person (ECP) is no longer available within the working party



As the work was planned to utilise method 1, but circumstances have prevented it being implemented.

The only way to prevent the work from being cancelled is to complete the works using method 4 – subject to the Nominated Person and COSS (OLP) agreeing to this change of approach



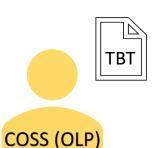


# Nominated Person briefing





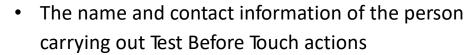
The Nominated Person responsible for issuing the OLP will brief the COSS (OLP) and Authorised Person (if applicable). They will state that a Test Before Touch action is required prior to **every** occasion where it is planned to touch a conductor

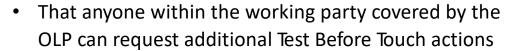


The Nominated Person will also brief the COSS (OLP) and confirm their understanding of:

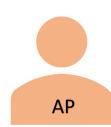
OFFICIAL







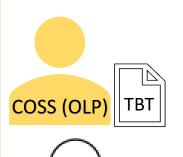






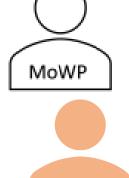


## COSS (OLP)'s actions



Prior to work starting, the COSS (OLP) must brief all members of the working party on the details of the Test Before Touch arrangements

The Authorised Person will complete the required Test Before Touch actions inline with the brief from the Nominated Person and at the request of the COSS (OLP)



AP

The COSS (OLP) must witness every Test Before Touch action that is completed

The COSS (OLP) must sign the Test Before Touch actions form to accept the responsibility for requesting Test Before Touch actions in accordance with the briefing from the Nominated Person



The COSS (OLP) must record the details of each Test Before Touch action using Stage A and Stage B of the Test Before Touch actions Form #TestBeforeTouch





### Requirements to undertake a retest



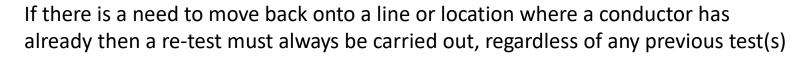
Any retests of Test Before Touch actions that were completed during the work must also be recorded

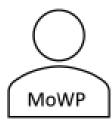


Reasons for a re-test include:



- the entire working party has temporarily withdrawn from site
- there is a change in COSS (OLP)
- there is a change of shift of the working party





If any member of the working party has any doubts whether a conductor is de-energised, then a test or a re-test must be carried out



OLP (Form C)

reference

Wk22/02

23/8/22

22:00

Date:

Time:

NetworkRail

NR/L3/ELP/27720/TBT Actions Form Issue 1 3rd September 2022

METHOD 4 COSS (OLP)

declaration

ONLY

#### NETWORK RAIL TEST BEFORE TOUCH ACTIONS FORM

METHOD S	METHOD SELECTION:					
Tick which r	nethod will be used to identify and record the Test Before Touch acti	ons in accordance with	NR/L3/ELP/27720 <u>(T</u>	ick one only)		
	1: Dynamic decision making st Before Touch actions  Method 2: Pre-planned and pre-documented Test Before Touch actions	documented	re-planned and pre- reduced Test Before ich actions	action p	od 4: A Test Before Touch rior to every occasion where inned to touch a conductor	
Fill out the	necessary information below based of the method selected above.					
Have suppo	orting visual aids been produced? Yes / No (These are mandated for r	method 2 & 3) No	0			
METHOD 1 ONLY	Sign:					
METHOD	Stage A prepared by:		Name		Date	
2 & 3*	Representative of organisation requiring Test Before	re Touch actions:				
ONLY	Will an AP/NP be required to be with the working party for the duration of the OLP to implement Test Before Touch actions? (Yes / No)					
METHOD	Stage A endorsed by:	Name		ate	Sentinel Number	
2 & 3*	Nominated Person (1):					
ONLY	ONLY Person responsible for preparing task delivery plan(s):					
METHOD 3*	Planning for a schedule of Reduced Test Before Touch actions	Name		ate	Sentinel Number	
ONLY	Nominated Person (2):					

\*NOTE: Method 3 shall only be endorsed if the risk assessment justifies this approach. If this is not the case then the work will need to be re-planned and a different method shall be selected)

I confirm that I accept the responsibility to request a Test Before

Touch action prior to every occasion where it is planned to touch

a conductor



Name:

Signed:

**Paul Smith** 

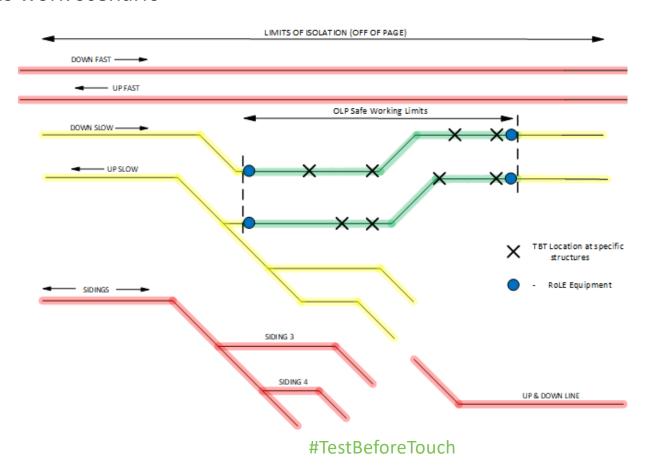
P.Smith



# NetworkRail

## Method 4 - Test Before Touch actions implemented

The diagram below shows the Test Before Touch actions that were implemented under method 4 for this work scenario





NetworkRail

NR/L3/ELP/27720/TBT Actions Form Issue 1 3rd September 2022

#### NETWORK RAIL TEST BEFORE TOUCH ACTIONS FORM

COSS (OLP) Details			
Name (Print): Paul Smith			
Number:	738962		

NOTE: COSS (OLP) to remind the working party that anyone can request a Test Before Touch action at any time while the OLP is in place.

cation / Structure No	cations - applicable to Line(s)	Comment(s)
52/02	Down Slow	At SWL
52/02	Up Slow	At SWL
52/03	Down Slow	
52/04	Up Slow	
52/05	Up Slow	
52/05	Down Slow	
52/06	Up Slow	
52/07	Down Slow	

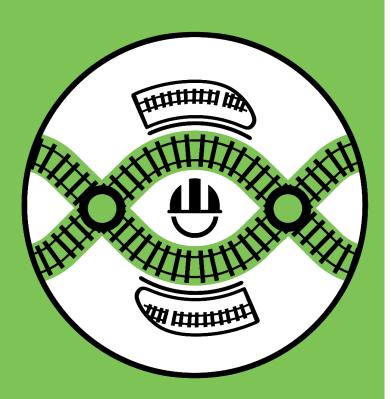
Stage B - Implementation - applicable to all methods						
Test co	Test completed by			Test witnessed by		
Name of AP/NP	Date	Time	Initial	Sign		
Michael Hall	23/8/22	00:30	PS	P Smith		
Michael Hall	23/8/22	00:45	PS	P Smith		
Michael Hall	23/8/22	00:56	PS	P Smith		
Michael Hall	23/8/22	02:30	PS	P Smith		
Michael Hall	23/8/22	03:39	PS	P Smith		
Michael Hall	23/8/22	03:41	PS	P Smith		
Michael Hall	23/8/22	03:48	PS	P Smith		
Michael Hall	23/8/22	04:55	PS	P Smith		

In the event of an unexpected Live indication during a Test Before Touch action the COSS (OLP) in receipt of the OLP shall immediately stop all work defined by the OLP and verify that all personnel in the working party are greater than 2.75 m from the relevant conductor.





# Next steps



Providing technical leadership

# NetworkRail

#### Next steps

Name

#### Mr Jonathon Butterfield

Sentinel Number

#### 100001

**Primary Sponsor** 

**Network Rail** 

Status

#### Operational



On completion of this briefing your attendance will be logged and shared with the Competence Delivery
Specialist / Sentinel CoOrdinator to upload the Event to your Sentinel profile

Events	
Date Achieved	Event Name
04/09/2022	Test Before Touch for Overhead Line Equipment Detailed Briefing
23/06/2022	Annual Capability Converstation
01/10/2021	COSS Workbook
3233333333333	
25/08/2021	Briefing: Live Dropper Inst and Removal Kit
20/06/2022	Annual Capability Converstation







# Improving electrical safety – the next steps





Never assume equipment is isolated – always test before touch.







### Feedback - Have Your Say in

As part of the deployment of this new standard we welcome your feedback - whether positive or negative. This can be on the standard itself, the four Test Before Touch methods, the briefing material or the delivery method

Simply scan the QR code and follow the onscreen instructions to provide feedback.





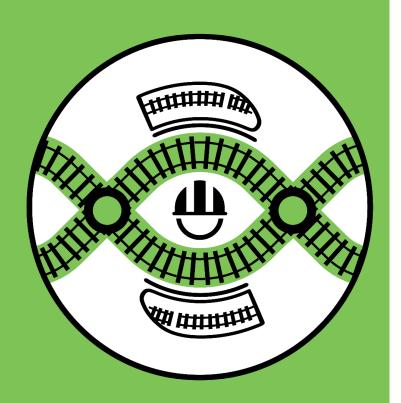






# **Supporting information**

This content is not part of the formal briefing materials



Providing technical leadership



### Items excluded from the scope of the standard

Section 2 of NR/L3/ELP/27720 sets out the scope exclusions as follows:

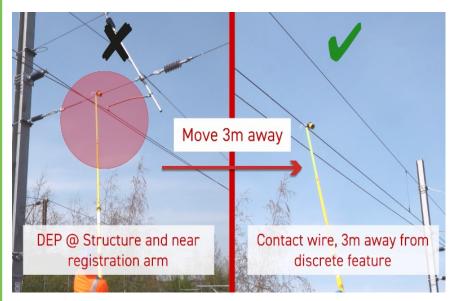
- work covered by an Overhead Line Permit to Work where it is not planned to touch a conductor (as defined in clause 3);
- Test Before Earth;
- when an isolation is being set up such that it can be shortened back later, the
  initial tests required to prove that the shorter section is de-energised before the
  initial wider isolation is implemented;
- insulated conductors e.g. high voltage cables;
- aerial earth wires;
- return conductors;
- local (depot) isolations; and
- OLE that is under construction (i.e. not capable of being energised).

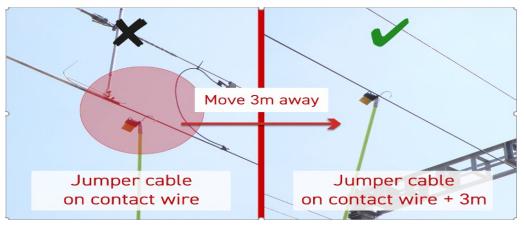


Click here to return to the main presentation:

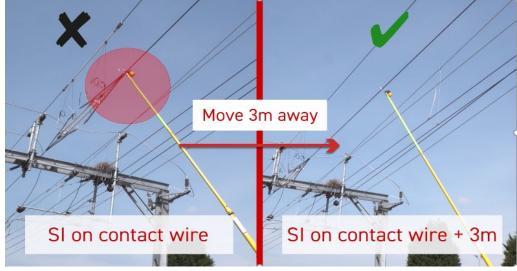


### Examples of correct position of a Test Before Touch action





NetworkRail

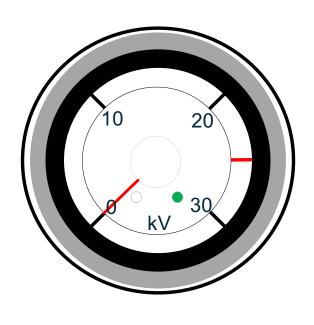




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## Irregularities – an unexpected Live indication



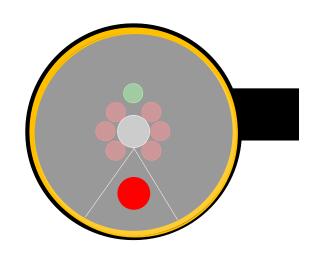




Click here to return to the main presentation:



**Arthur Flury** 



Pfisterer





## **Examples of discrete in-line OLE features**



**BICC Neutral Section** 



**Arthur Flury Section insulator** 



Click here to return to the main presentation:

## Implementing a Test Before Touch action



If a replacement or additional LLI device is needed, below are the approved units for AC OLE

Manufacturer	Device for 25kV OLE	Catalogue No.	Туре	Image
Pfisterer	KP-Test 5HL Capacitive Live Line Tester	040/090158	Capacitive	
Arthur Flury	AG 25kV Capacitive Live Line Indicator	091/012715	Capacitive	
Cotec C31	CTEC Type 31 25kV Live Line Tester	091/012337	Resistive	



Return to presentation

## Implementing a Test Before Touch action



If a replacement or additional LLI device is needed, below are the approved units for DC OLE

Manufacturer	Device for DC OLE	Catalogue No.	Image
High Voltage Instrument Ltd	LLI – 1500DC (Sunderland)	0092/000925	
	LLI-750DC (Sheffield)	0094/001498	

