TTM Worker learning plan

NZ Transport Agency

28 October 2019

Version 2.0

# TTM Worker Learning Plan

## Outcome for this learning

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| At the end of this session the TTM Worker will know:   * The TTM Worker role and responsibilities * The correct PPE to be worn at a worksite, * The no go zones at a worksite * The framework for a TTM worksite * About the traffic management plan (TMP) | They will also have the skills needed to perform the TTM Worker role, including:   * Manual handling/lifting of TTM equipment * Setting out TTM equipment * Using a Stop/Go paddle * Using radio communications * Acting as a ‘spotter’ * Interacting with people (good/bad practises and dealing with conflict) |

## Resources

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| **Resource** | **Explanations** |
| TTM Worker learning plan | To be used by TTM Mentor during training of the TTM Workers |
| TTM Worker Handbook | To be used by TTM Mentor during training of the TTM Workers |
| TTM Worker PowerPoint presentation | To be used by TTM Mentor for training a small group of TTM Workers. PowerPoint can be used each time the learning plan refers to the TTM Worker Handbook |
| TTM Worker video clips | Optional for use by TTM Mentor during training of the TTM Worker |
| TTM Worker knowledge test | Must be completed before person begins tasks on the live network |
| TTM Worker assessment document | To be completed by the TTM Mentor as the learner completes each TTM Worker task included in the training |

## About this learning

This learning is designed to be delivered by the TTM Mentor using resources including the TTM Worker learning plan, TTM Worker Handbook, TTM Worker video clips and TTM Worker assessment document.

A PowerPoint presentation is also provided to help the TTM Mentor explain information from the TTM Worker Handbook. This can also be used when training small groups of TTM Workers.

The TTM Worker learning plan can be split into several separate sessions spread over multiple days depending on the learning needs of the TTM Worker.

The learning plan allows the TTM Worker to:

* Learn key information about common tasks a TTM Worker completes
* Demonstrate they have the required TTM Worker knowledge by passing the TTM Worker knowledge test
* Practice the common tasks (e.g. set up sign, set out taper on foot) in a safe environment
* Demonstrate competence as a TTM Worker at a worksite on a live network

## TTM Mentor actions

* Identify the outcomes for the mentoring session
* Make an initial assessment of the TTM worker’s learning style
* Adapt the mentoring to suit the learner. Consider the following:
* Small group or individual learning session
* Predominately kinaesthetic/visual or kinaesthetic/visual
* Comprehension level
* Select the resources that will work best for the learner(s)
* If needed. adjust your mentoring approach during the session

## Estimated learning time

Up to 4.5 hours

## Estimated practice time

Up to 6 hours

## PART A: TTM Worker learning plan

This part of the learning is to be completed in a safe environment away from a live network.

This could include starting the learning in an office area or training room, then moving to a yard for practice of key tasks.

| **Topic** | **What to cover** | **Time** | **Resource options** |
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| **Complete safety briefing for the learning** | TTM Mentor to complete a safety briefing for the hazards and mitigation appropriate for the environment you are mentoring in and the activities that you will be practising  **Note:** Briefings may need to be completed at different stages of the learning | 5 mins |  |
| **Introduction to the TTM Worker role** | State what you will be covering during this learning  Refer to the TTM Worker PowerPoint (or Handbook) and explain what a TTM Worker does  Refer to the TTM Worker PowerPoint (or Handbook) and explain the TTM Worker responsibilities | 5 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| **About TTM** | Refer to the TTM Worker PowerPoint (or Handbook) and:   * Explain the common terms used in TTM * Explain the framework for TTM at a worksite * Show who is in charge at a worksite. Point out that they will be working under the direction of the STMS or delegated TC * Explain that there will be a TMP for every site. The TMP has 2 parts, the text and the diagram. The STMS will be setting the site up as per the TMP | 15 min | TTM Worker PowerPoint  TTM Worker Handbook |
| **Managing risk when working with TTM equipment** | Explain that we work in a hazardous environment and it is important that we take steps to keep ourselves and others safe. In this part of the session we will look at some of the common risks with roadworks sites and how we manage those risks  Refer to the TTM Worker PowerPoint (or Handbook) and explain the:   * Safety briefings * What to report and who to report hazards to * PPE required * Guidelines for lifting and moving TTM equipment * TTM no go zones   Explain the other risks involved when working with TTM equipment (especially loading and unloading)  As you explain each risk, get TTM Worker to suggest ways to reduce the risk | 25 min | TTM Worker PowerPoint  TTM Worker Handbook |
| **Vehicle movements at the worksite** | Refer to the TTM Worker PowerPoint (or Handbook) and explain:   * Vehicle movements at worksites * How to reduce your risk * Acting as a spotter for vehicle movements * Your role as the spotter | 10 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| **Assisting with site set up** | Refer to the TTM Worker PowerPoint (or Handbook) and explain:   * The order of setup of TTM * How to work FROM a TTM equipment vehicle * How to work ON a TTM equipment vehicle * Where to install TTM equipment in relation to the equipment vehicle | 10 mins | TTM Worker PowerPoint  TTM Worker Handbook |

| **Topic** | **What to cover** | **Time** | **Resource options** |
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| **Being a spotter for an inspection activity** | Refer to TTM Worker PowerPoint (or Handbook) to explain:   * What an inspection is and the requirements for inspections on the shoulder or on the lane * The role of the spotter and how to perform the task | 15 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| Get the TTM Worker to practice being a spotter and provide feedback  Discuss trouble shooting options  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 15 mins practice | TTM Worker assessment document |
| **Dealing with people** | Explain that dealing with people is an important part of the role of a TTM worker  Refer to TTM Worker PowerPoint (or Handbook) to explain:   * The people they will communicate with * The overall outcome and approach to communication * Tips for good communication * How to deal with conflict (eg use the HELP model) | 15 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| Get the TTM Worker to practice dealing with people and provide feedback  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 10 mins practice | TTM Worker assessment document |

| **Topic** | **What to cover** | **Time** | **Resource options** |
| --- | --- | --- | --- |
| **Knowledge test** | Get the TTM Worker to complete the knowledge test (contained  Conditions for test:   * Individual work * Open book (TTM Worker Handbook) * Pass rate is %100   TTM Mentor to progressively mark the test and circle any answers that are incorrect.  Allow TTM Worker to complete further research and amend the answer. Maximum of 3 amendments can be marked correct after they have been circled.  Arrange resit if required, use a different version of the test | 30 mins | TTM Worker PowerPoint  TTM Worker Handbook  TTM Worker Knowledge test in assessment document |

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|  | **The following TTM Worker tasks can be completed in any order** |  |  |

| **Topic** | **What to cover** | **Time** | **Resource options** |
| --- | --- | --- | --- |
| **Setting up a sign** | Introduce task of setting up a sign  Explain you may work as a team to install signs  Refer to TTM Worker PowerPoint (or Handbook) to explain key points about sign setup; visibility, stability, positioning, location and correct signage for the situation  Show the video of setting up a sign (or demonstrate setting up a sign referring to TTM Worker PowerPoint (or Handbook) to explain key points) | 40 mins | TTM Worker PowerPoint  TTM Worker Handbook  Video clip – Setting up a sign |
| **Type A (small) signs**  Get the TTM Worker to practice setting up a Type A sign and provide feedback.  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 10 mins practice | TTM Worker assessment document |
| **Type B (large) signs** *Complete if the network the person will be working on requires Type B signs*  Explain the differences between setting up a Type A and a Type B sign  Get the TTM Worker to practice setting up a Type B sign and provide feedback  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 10 mins practice | TTM Worker assessment document |
| **Removing a sign** | Introduce task of removing a sign  Refer to TTM Worker PowerPoint (or Handbook) to explain key points about sign removal  Demonstrate removing a sign referring to TTM Worker PowerPoint (or Handbook) to explain key points | 10 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| Get the TTM Worker to practice removing a sign and provide feedback  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 5 mins practice | TTM Worker assessment document |
| **Installing taper on foot** | Introduce task of installing a taper on foot  Refer to TTM Worker PowerPoint (or Handbook) to explain key points about installing a taper on foot (safety, protection, alignment and accurate distances)  Show the video of installing a taper on foot (or demonstrate installing a taper on foot referring to TTM Worker PowerPoint (or Handbook) to explain key points) | 20 mins | TTM Worker PowerPoint  TTM Worker Handbook  Video clip – Installing taper on foot |
| Get the TTM Worker to practice installing a taper on foot and provide feedback  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 10 mins practice | TTM Worker assessment document |
| **Installing cones alongside working space on foot** | Introduce task of installing cones alongside working space on foot  Refer to TTM Worker PowerPoint (or Handbook) to explain key points about installing cones alongside working space on foot (correct spacing, straight, correct location, operating from a safe position)  Demonstrate installing cones alongside working space on foot referring to TTM Worker PowerPoint (or Handbook) to explain key points | 20 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| Get the TTM Worker to practice installing cones alongside working space on foot and provide feedback  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 10 mins practice | TTM Worker assessment document |
| **Installing cone threshold on foot** | Introduce task of installing a cone threshold on foot  Refer to TTM Worker PowerPoint (or Handbook) to explain key points about installing a cone threshold on foot | 10 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| Get the TTM Worker to practice installing a cone threshold on foot and provide feedback.  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 5 mins practice | TTM Worker assessment document |
| **Alternating flow controller** | Introduce task of a controller of alternating flow situations (eg: Stop/Go, eStop, Portaboom)  Refer to TTM Worker PowerPoint (or Handbook) (or the Civil Contractors MTC handbook) to explain key points about alternating flow situations   * Ensuring your safety during alternating flow operations (eg make sure you can hear, stay off the live lane, face traffic on your approach, dominate your position and make positive eye contact, place a cone in the lane once the vehicle has stopped) * Location of operator for Stop/Go (and the differences for the other methods) * Summary of alternating flow essentials * Night work * Operation of Stop/Go paddle (discuss other control options) * Using radio communication | 30 mins | TTM Worker PowerPoint  TTM Worker Handbook  Civil Contractors MTC handbook |
| Get the TTM Worker to practice the Stop/Go method of controlling alternating flow and provide feedback  Discuss trouble shooting options  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document  *Complete practice on other control methods if required* | 15 mins practice | TTM Worker assessment document |
| **Removing cones alongside working space on foot** | Introduce task of removing cones alongside working space on foot  Refer to TTM Worker PowerPoint (or Handbook) to explain key points about removing cones alongside working space on foot  Demonstrate removing cones alongside working space on foot referring to TTM Worker PowerPoint (or Handbook) to explain key points | 10 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| Get the TTM Worker to practice removing cones alongside working space on foot and provide feedback  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 5 mins | TTM Worker assessment document |
| **Removing taper on foot** | Introduce task of removing a taper on foot  Refer to TTM Worker PowerPoint (or Handbook) to explain key points about removing a taper on foot  Demonstrate removing a taper on foot referring to TTM Worker PowerPoint (or Handbook) to explain key points | 10 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| Get the TTM Worker to practice removing a taper on foot and provide feedback  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 5 mins | TTM Worker assessment document |
| **Removing cone threshold on foot** | Introduce task of removing a cone threshold on foot  Refer to TTM Worker PowerPoint (or Handbook) to explain key points about removing a threshold on foot  Demonstrate removing a threshold on foot referring to TTM Worker PowerPoint (or Handbook) to explain key points | 10 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| Get the TTM Worker to practice removing a threshold on foot and provide feedback  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 5 mins | TTM Worker assessment document |
| **OPTIONAL**  **Installing cones from a vehicle** | Complete your company’s harness training with the trainee(s) | Depends on company’s training programme |  |
| Introduce the task of installing cones from a vehicle  Refer to TTM Worker PowerPoint (or Handbook) to explain key points about installing cones from a vehicle:  Demonstrate installing cones from a vehicle referring to TTM Worker PowerPoint (or Handbook) to explain key points  There are 2 roles. These are often called the feeder and placer  Some points to consider when feeding cones:   * Put cones in the same place for the cone placer to grab * Ensure the cone placer does not have to wait for a cone * Communicate issues to the cone placer   Some points to consider when placing cones:   * Ensure cones are placed at correct spaces, rhythm and reference points * Follow the vehicle lead instead of the road markings (ie reach out the same distance and place cones alongside the vehicle, the driver sets the line for the cones) * Communicate issues to the driver | 20 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| **Practice feeding cones**  Get the TTM Worker to practice feeding cones to the placer and provide feedback  Discuss trouble shooting options (eg if cones don’t separate)  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 10 mins practice | TTM Worker assessment document |
| **Practice placing cones**  Get the TTM Worker to practice placing cones and provide feedback  Discuss trouble shooting options (eg if there is a delay in feeding cones)  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 10 mins practice | TTM Worker assessment document |
| **OPTIONAL**  **Removing cones from a vehicle** | **OPTIONAL**  Introduce the task of removing cones from a vehicle  Refer to TTM Worker PowerPoint (or Handbook) to explain key points about removing cones from a vehicle:  Demonstrate removing cones from a vehicle referring to TTM Worker PowerPoint (or Handbook) to explain key points   * There are 2 roles. These are often called the picker and stacker   *Some points to consider when picking cones*   * Keep up * Be consistent and communicate where you will be passing your cones * Communicate issues to the driver and stacker   *Some points to consider when stacking cones*   * Establish plan for stacking your vehicle * Ensure cones are stacked neatly * Do not fall behind * Communicate issues to the picker | 20 mins | TTM Worker PowerPoint  TTM Worker Handbook |
| **Practice picking cones**  Get the TTM Worker to practice picking cones and provide feedback  Discuss trouble shooting options  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 10 mins practice | TTM Worker assessment document |
| **Practice stacking cones**  Get the TTM Worker to practice stacking cones and provide feedback  Discuss trouble shooting options  Repeat task if further practice is required  Record successful completion of the task on the TTM Worker assessment document | 10 mins practice | TTM Worker assessment document |

## PART B: TTM Worker learning plan

This part of the learning is to be completed on a live network.

This could include a live worksite or a mock worksite in a live environment that is being set up for the practice and assessment.

| **Topic** | **Training** | **Time** | **Resource options** |
| --- | --- | --- | --- |
| **Work as a TTM Worker to set up an alternating flow worksite and then act as an alternating flow controller** | Ensure the TTM Worker attends the safety briefing for the activity  Brief the TTM Worker on the additional risks with being a learner in this environment and how risks will be mitigated  TTM Worker is to complete the tasks to be verified in the TTM Worker Assessment document  **Note to TTM Mentor:**   * Let the TTM Worker complete each task and provide feedback once the task is completed * Provide feedback immediately if there is a safety risk * Direct rework as required * Progressively record successful completion of each task on the TTM Worker assessment document | 2 hours | TTM Worker Assessment document |
| **Work as a TTM Worker to remove TTM from a worksite** | Ensure the TTM Worker attends the safety briefing for the activity  Brief the TTM Worker on the additional risks with being a learner in this environment and how risks will be mitigated  TTM Worker is to complete the tasks to be verified in the TTM Worker Assessment document  **Note to TTM Mentor:**   * Let the TTM Worker complete each task and provide feedback once the task is completed * Provide feedback immediately if there is a safety risk * Direct rework as required * Progressively record successful completion of each task on the TTM Worker assessment document | 1 hour | TTM Worker Assessment document |
| **Wrap up** | Congratulate the person on being assessed as working to standard as a TTM Worker  Explain the remainder of the assessment process which could be either:   * TTM Mentor sends assessment document to CoPTTM Assessor who determines competence and awards the TTM Worker unit standard *(required if the learner will be completing the TC workshop in the future)* * TTM Mentor completes company training records to confirm that the learner has competently performed the key tasks of a TTM Worker   Explain that they will continue to learn more about TTM as they get more experience  Point out the next steps of their development | 5 mins |  |
| **Recording results** | Update the TTM Worker’s training record that they have completed the TTM Worker training  If the TTM Worker is completing the unit standard, send the completed and the completed knowledge test (and any other required information) to CoPTTM Assessor for awarding of the unit standard |  |  |