

Need to do a Risk Assessment to support your TMD design choices?

Tips for making sure you protect yourself



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Following publication of the Austroads Guide to Temporary Traffic Management (AGTTM) in 2019, it was evident that the TTM industry was not clear as to how a risk assessment should be undertaken to protect the liability for a Traffic Management Designer (TMD). Together with TMAA, a Solutions in Transport ran a series of training events in 2020/21 to contextualise the Australian Standard AS31000 - Risk Management for the traffic management industry.

However, risk assessments continue to be documented in TMPs and with TGSs that quite frankly are highly likely to leave the designer in trouble should the risk event occur at the worksite. As someone who undertakes investigations for road authorities and WHS investigations, it is always wise to be considered,

"If my site is subject to an investigation - what would the investigator find?"

Particularly, consider if the investigator reviewed the risk assessment attached to the project documents, would they find a comprehensive assessment, or something that

- looks like it is just copied from one job to the next
- fails to consider risks specific to the site where the works are being undertaken
- lacks any real robust assessment of mitigation measures
- appears to simply support business as usual practice
- does not consider reasonably practicable options

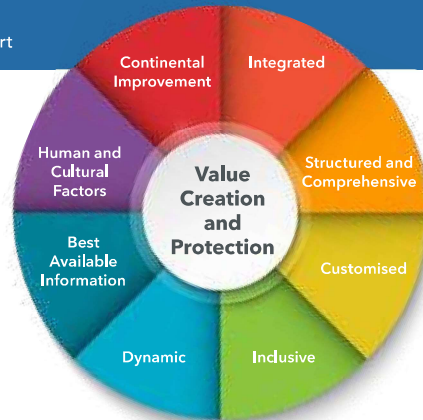
In a WHS investigation I undertook for an incident (not a TTM site) it was clear that the risk assessment was solely focussed on the risks to the personnel carrying out the work with absolutely no consideration of the risks created for the public. In this case, this fact alone supported the successful prosecution of the party involved.

In reviews I undertake for TTM projects, I am continually surprised in risk assessments, how often it is documented that a mitigation measure that means someone fills out a form addresses all risk. I therefore challenge all TMDs to review their risk assessment to ensure they meet the requirements of AS31000.

It is therefore worthwhile going back over the key elements of risk assessment as required to meet WHS requirements in our industry.

PRINCIPLES OF RISK ASSESSMENT

The principles for risk assessment as documented in AS31000 are outlined in the figure below and can be contextualised for our industry as follows:



Integrated - should be a part of normal processes in preparation of a TMP and the TGS - not an afterthought

Structured and Comprehensive - should follow a defined process which carefully works through all risks likely to occur

Customised - should be relevant to the task. Don't include risks that are completely irrelevant. For example, I see many risk assessments that list all the risks for TCs and PTCs when none are actually specified within the works at all.

Inclusive - should involve relevant stakeholders. Risk assessment is best undertaken in a group environment to workshop all foreseeable risks.

Dynamic - risks change over time and change from job to job. Therefore, the process and risks considered should change with each works and over time as new technology is introduced

Best available information - this is the point of the planning process. The best available information should be sought rather than simply assumed. E.g. don't assume that all on road cyclists are professional cyclists.

Human / cultural factors - recognise that humans are a part of the process and that there can be a tendency to cut corners. E.g. at end of night at the last site being visited there is a natural human tendency to want to finish quickly so that you can get home.

Continual improvement - should always be part of the process. After a period, stakeholders should undertake a re-evaluation of the process to ensure that any risks that have occurred that were not foreseen are included in the future. Controls that were ineffective should be revisited.

CONSIDERING RISKS FOR A PROJECT

		Likelihood				
		Almost certain	Likely	Possible	Unlikely	Rare
Consequence	Catastrophic	Very high	Very high	High	High	Medium
	Major	Very high	Very high	High	Medium	Low
	Moderate	High	High	Medium	Low	Low
	Minor	High	Medium	Low	Low	Low
	Insignificant	Medium	Low	Low	Low	Negligible

Table 2.5: Consequence/likelihood risk matrix

Determining the risk rating for each risk at a site is well understood applying AGTTM Part 10 Table 2.5.

However, in applying this template, it is critical that the TMD robustly assesses the risk. An example, I still see today can be summarised as follows:

Risk	Risk Rating	Mitigation / Control measure	Revised Risk Rating
TC being struck by vehicle	High	All TC to have appropriate qualifications	Low

So what is wrong with this?

- It is not clear why the TC is actually at risk of being hit by a vehicle. What are the particular features of this site that make this a concern compared to an optimal site?
- A single risk rating is provided without justifying how the "High" rating. As seen in the Table 2.5 there are a wide range of Likelihood / Consequence combinations that lead to a high risk rating
- The control measure assumes qualification (training and admin) is sole fix. Where is the evidence that a higher control measure was even considered to arrive at this outcome as the most reasonably practicable outcome. This also infers that the designer might be prepared to use unqualified TCs at the site
- This single administrative control apparently reduces the risk rating to Low. It is not clear considering the risk matrix how this would be achieved.

Best practice is that the person completing the risk assessment should identify four elements of the risk as follows:

1. What is the source of the risk? What are the particular elements of the site that give rise to a risk considered higher than acceptable practice
2. What is the risk event that we are concerned about - in this case a vehicle hitting a TC
3. What is the likelihood of the risk event - considering what makes this higher than the optimal arrangement
4. What is the consequence of the risk event - completed as per the tables in AGTTM.

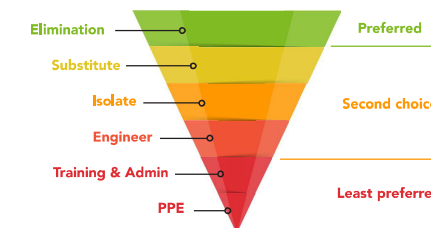


Figure 2.4: Hierarchy of controls

AGTTM Part 10 is clear that control measures for each risk should be considered in accordance with the hierarchy of control as shown in Figure 2.4.

Practically in the example from before, the TMD's approach therefore must be to start at the top of the hierarchy of control. In doing this the following questions should be considered and the responses documented to defend your decision:

Control Hierarchy	Possible measures
Elimination	Can I eliminate the need for a TC station by <ul style="list-style-type: none"> • Closing the road and detouring traffic around the site • Changing the way the work is done to eliminate the need for TC control
Substitute	Can I use something else such as a PTC so the TC cannot be hit
Isolate	Can I locate the TC behind protection such as a concrete barrier, so it is almost impossible to be hit by a vehicle
Engineer	Can I introduce additional design controls to reduce the likelihood of being hit by a vehicle such as speed reduction devices or a TMA
Training & Admin	Ensure TCs are up to date with current practice
PPE	TCs to wear appropriate PPE

It is not necessary to capture all of this in the published risk assessment, but should an investigation be undertaken, then all of this justification should be available to defend the selected control measure.

As a final word on your evaluation, please ensure that once you do this, that the selected control measures are actually applied in the TMP and the TGS. Too often again, examples exist where all these great measures are documented in the risk assessment but then ignored from then on.

MAKING RISK ASSESSMENT WORK FOR YOUR BUSINESS

It is then a requirement that adequate time and consideration is given to the risk assessment task to make this a comprehensive and defensible document. This then is:

- How you protect your business, your staff and yourself
- Document how you are meeting your risk obligations
- Demonstrate that you have evaluated all options to mitigate risks
- Record how you arrived at the TTM outcomes selected
- Use risk assessment at a continuous improvement tool



Providing Specialist advice and support to the Temporary Traffic Management Industry

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