Local Government Association of South Australia

Sustainable Asset Management in SA

Infrastructure Risk Management Plan Template

GUIDELINES

V5 DRAFT FOR PILOT COUNCIL REVIEW

Prepared by

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INTRODUCTION

These guidelines are provided to assist council staff and others in developing asset management plans for asset categories.


The template is a basic infrastructure risk management plan to primarily meet the needs of councils who have a large infrastructure asset stock to provide services to their communities.

It follows the recommended structure of the AS/NZS 4350 and uses MS Word ‘macrobuttons’ to indicate where data is required.

‘Macrobuttons’ are tools that show where data is required and what is required. An example is shown below.

"[Click here & type Council name]" indicates that the user should click on the macrobutton and type the council name.

The template includes:

- A infrastructure risk management plan template for risks associated with providing services from infrastructure;
- A MS Excel Workbook risk register producing tables for the risk management plan for:
  - risk identification
  - risk analysis
  - risk evaluation
  - risk treatment; and
  - treatment plan.

The template and guidelines contain examples and sample text to guide councils in completing the plan. The sample text is an example only and should not be used in the final document without consideration and review by the team compiling the infrastructure risk management plan to ensure that the text used in the plan is applicable to each individual council.
1. INTRODUCTION
Ref AS/NZS 4360:2004 Sect 2, pp 7 - 9

1.1 Aim
Ref AS/NZS 4360:2004 Sect 1.2 pp 1-2

1.2 Objectives
Review list of objectives to see if they are relevant to your council and make changes as necessary.

1.3 Scope
The template defines the scope of the infrastructure risk management plan to apply to risks to service delivery from infrastructure.

1.4 Risk Management Model
Ref AS/NZS 4360:2004 Sect 2 pp 7 – 9, 13

1.5 Risk Model Description
Ref AS/NZS 4360:2004 Sect 2.2 pp 7 – 8

1.5.1-8 Establish the context
Ref AS/NZS 4360:4360:2004 Sect 3.2 pp 12 - 16
This section describes the risk management processes to be followed in the preparation of the infrastructure risk management plan.

“Establishing the context is concerned with understanding the background of the organisation and its risks, scoping the risk management activities being undertaken and developing a structure for the risk management tasks to follow”. This step is to:

- Clarify the council’s objectives;
- Identify the environment in which the council operates;
- Specify the main scope and objectives for risk management, boundary conditions and outcomes required;
- Identify a set of criteria against which the risks will be measured; and
- Define a set of key elements for structuring the risk identification and assessment process.

This step aims to provide a “comprehensive appreciation of all the factors that may have an influence on the ability of an organisation to achieve its intended outcomes”.1

2. COMMUNICATION AND CONSULTATION
Ref AS/NZS 4360:2004, Sect 3.1 p 11

Communication and consultation is essential to ensure that credible risks are identified, a wide range of views is considered in analysing and assessing the level of risk, developing the process to manage the risk.

“Effective internal and external communication is important to ensure that those responsible for implementing risk management, and those with a vested interest, understand the basis on which decisions are made and why particular actions are required.”2

The template provides for recording members of the infrastructure risk management team responsible for preparing the infrastructure risk management plan.

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1 HB 436:2004, p 30
2 AS/NZS 4360:2004 p 11
It also proposes that copies of the infrastructure risk management plan be provided to team members and those stakeholders defined as having an interest in the infrastructure risk management plan.

Stakeholders are invited to advise the risk management team leader of any changes to existing circumstances that may affect risks or the level of risk identified in the plan.

3. ESTABLISHING THE CONTEXT

3.1 External Context
Ref AS/NZS 4360:2004, Sect 3.2.2, p 14

The template provides for the team to record the external context details. The factors with sample text examples are shown below.

<table>
<thead>
<tr>
<th>External Factor</th>
<th>Sample text</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>The area was established in 1840 as a port for the timber trade. It developed with grazing and cropping rural industries. Recent developments have seen the emergence of plantation timber and timber processing industries located in the south-east corner of the area.</td>
</tr>
<tr>
<td>Population and trends</td>
<td>Population has been relatively constant over the past 20 years. Projections indicate that this will continue, with a shift of population from the rural to urban localities.</td>
</tr>
<tr>
<td>Topography</td>
<td>The council area has two distinct topographic areas, flat plains in the south and mountainous in the north.</td>
</tr>
<tr>
<td>Climate</td>
<td>Rainfall varies over the council area from 500 mm average rainfall in the south to 300 mm in the north.</td>
</tr>
<tr>
<td>Transport links</td>
<td>Major transport links are the State highways running east to west and north east to west and local arterials serving the timber industries in the south east.</td>
</tr>
<tr>
<td>Industry base</td>
<td>The major industry is rural grazing, with an increase in irrigated cropping. Timber plantations are increasing in the south to support the timber processing plants in the south-east.</td>
</tr>
<tr>
<td>Service centre</td>
<td>The council centre (town) serves as the service centre for adjoining council areas. Available services include, regional retail centre, rural services, banking, legal, financial, hospital and medical, primary and secondary schooling, mechanical and steel fabrication.</td>
</tr>
<tr>
<td>Government services</td>
<td>The council has seen a reduction in government services with centralisation of Australian and State government offices to regional centres. Contracting of State road maintenance services has resulted in closure of the local works depot and loss of road maintenance equipment and expertise.</td>
</tr>
</tbody>
</table>

Click on the relevant ‘macrobutton’ and enter the context details for factors that contribute to the risks facing the council. Enter any other external context details that are not listed above.

Strengths, weaknesses, opportunities and treats are to be entered at the appropriate ‘macrobutton’. Examples are shown below.
<table>
<thead>
<tr>
<th>External Factor</th>
<th>Commentary sample text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengths</td>
<td>Council has a history of political stability with an experienced management structure, workforce and equipment resources. Regional cooperation of councils is increasing.</td>
</tr>
<tr>
<td>Weakness</td>
<td>Loss of State road maintenance capability as a backup to local resources in emergency circumstances.</td>
</tr>
<tr>
<td>Opportunities</td>
<td>Resource and expertise sharing between regional councils.</td>
</tr>
<tr>
<td>Threats</td>
<td>Possible loss of major industry and reduction in community capability and resources.</td>
</tr>
</tbody>
</table>

Stakeholders are to be listed in Table 2.1 together with their objective. Examples are shown below.

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Objective sample text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Councillors</td>
<td>Set policy and allocate resources for the delivery of services to maximise community benefit while meeting legislative requirements in the most effective and economical manner.</td>
</tr>
<tr>
<td>Council managers</td>
<td>Implement council policy and manage use of resources to deliver council’s objectives in the most efficient manner while avoiding financial shocks.</td>
</tr>
<tr>
<td>Community</td>
<td>Enjoy the best quality of life possible within available resources.</td>
</tr>
<tr>
<td>Industry</td>
<td>Ensure that the industry operates at a profitable level by providing employment and using local resources where possible.</td>
</tr>
</tbody>
</table>

The council’s key business drivers are to be inserted after Table 2.1. These will be driven by the council’s vision and mission statement.

Key business driver may include

- Provide the services that the community requires in the most effective and efficient manner.
- Maximise the quality of life for the community
- Provide services to facilitate the growth and prosperity of industry.
- Avoid financial shocks.
2.2 The Internal Context
Ref AS/NZS 4360:2004, Sect 3.2.3, p 14

The purpose of this section is to gain an understanding of the council organisation in its role of provider of services from infrastructure. Sample internal context factors are shown in the template as a 'macrobutton' for data entry. Sample commentary text is shown below.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Commentary sample text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>Enter vision statement from council’s Strategic Management Plan.</td>
</tr>
<tr>
<td>Culture</td>
<td>This could include culture of concern for community growth and development, providing the best services possible to the community, quality work practices, etc.</td>
</tr>
<tr>
<td>Internal stakeholders</td>
<td>List the internal stakeholders and their role in service delivery and risk management</td>
</tr>
<tr>
<td>Service structure</td>
<td>This may be illustrated by an organisation chart.</td>
</tr>
<tr>
<td>Capabilities, resources</td>
<td>Comment on capability of council and resources available with regard to providing services and responding to a risk event</td>
</tr>
<tr>
<td>Goals/ objectives &amp; strategies</td>
<td>List goals/objectives and strategies and link to risk management</td>
</tr>
</tbody>
</table>

2.3 The Risk Management Context
Ref AS/NZS 4360:2004, Sect 3.2.4, p 15

This section details the management practices associated with providing services from infrastructure. Commentary is provided in the template to describe existing management activities and to add additional service delivery practices where applicable.

Click on the 'macrobutton' and enter the text as required.

Commentary is provided on assignment of responsibilities for managing risks associated with providing services from infrastructure.

Click on the 'macrobutton' and enter the name of the department and its service delivery responsibility as required.
3. **RISK EVALUATION CRITERIA**

Ref AS/NZS 4360:2004, Sect 3.2.5, p 15

This section documents the criteria against which risks is to be evaluated. Decisions on whether risk treatment is required may be based on operational, technical, financial, legal, social, environmental or other criteria.

The test to be used in Section 6 is to compare the level of risk assessed in the analysis process of Section 5, against the level of acceptable risk to be defined in this section and deciding whether the risk can be accepted or whether risk treatment is required.

The template contains examples of risk evaluation criteria, shown below, for review by each council. The evaluation criteria must be set by each council to suit their operating conditions and available resources.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Risk Evaluation Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational</td>
<td>Risks that have the potential to reduce services for more than 2 hours</td>
</tr>
<tr>
<td>Technical</td>
<td>Risks that cannot be treated by council’s normal technical resources.</td>
</tr>
<tr>
<td>Financial</td>
<td>Risks that cannot be treated within council’s normal maintenance budgets or by reallocation of an annual capital works program.</td>
</tr>
<tr>
<td>Legal</td>
<td>Risks that exist where council does not comply with its ‘duty of care’.</td>
</tr>
<tr>
<td>Social</td>
<td>Risks that have the potential to cause significant social disruption in the community</td>
</tr>
<tr>
<td>Environmental</td>
<td>Risks that have the potential to cause environmental harm.</td>
</tr>
</tbody>
</table>

Risks that do not meet the evaluation criteria above are deemed to be unacceptable and risk management treatments and plans are required to be developed and documented in this Risk Management Plan.

4. **RISK IDENTIFICATION**

4.1 General

Ref AS/NZS 4360:2004, Sect 3.3, p 16

This step is to identify the risks to be managed. Identification should include those risks to providing service from infrastructure whether or not they are under the control of the council.

The aim is to generate a comprehensive list of assets at risk, sources of risk and events that might have an impact on service delivery. These risks may prevent, degrade or delay service delivery.

Provision is made to record the date(s) of meeting(s) held to identify risks.

The template includes a Risk Register spreadsheet with five worksheets:

- Risk Identification
- Risk Analysis
- Risk Evaluation
- Risk Treatment
- Treatment Plan
Open the ‘Risk Register’ spreadsheet and save it under a new name such as ‘Council name Risk Register ver 1’. Complete the ‘Risk Identification’ worksheet for the following datasets

- Risk No.
- Asset at Risk
  - identify assets at risk by location, eg Brown Ck bridge
- What can happen?
  - identify risk event, eg bridge collapse
- When can it happen?
  - select possible time when the event can occur from the responses in the drop down box.
- Possible cause
  - identify possible cause of the risk event occurring
- Existing controls
  - document existing controls on the asset such as load limits, speed controls, signage, etc
- Is risk credible?
  - this is an assessment by the team as to whether the risk is a credible risk and worthwhile taking to the risk analysis stage. It is to eliminate extremely rare or incredible events such as an aeroplane falling from the sky and hitting a CWMS pump station. Select from the preset responses (Yes/Maybe/No) in the drop down box.
- Is Risk Analysis required?
  - this is an assessment by the team as to whether the risk is to be taken to the risk analysis stage. Select from the preset responses (Yes/No) in the drop down box.

The spreadsheet template contains example data in the first four rows. Enter your data over the sample data. Save the worksheet.

When the ‘Risk Identification’ worksheet is complete copy rows down to and including completed rows and paste into Table 4.1 in the template.

5. RISK ANALYSIS

5.1 General
Ref AS/NZS 4360:2004, Sect 3.4, pp 16 - 19

“Risk analysis is about developing an understanding of the risk. It provides an input into decisions as to whether risks need to be treated and the most appropriate and cost-effective risk treatment strategies.”

This step takes ‘credible’ risks from the ‘Risk Identification’ worksheet and conducts an analysis of the risk in worksheet ‘Risk Analysis’.

To transfer credible risks for risk analysis follow this process.

- Identify each risk event assessed as ‘credible’ and requiring ‘risk analysis’ in worksheet “Risk Identification”;
- Highlight the first six (6) columns (shaded yellow) of each row or continuous rows of risk requiring risk analysis identified above.
- Copy and paste into worksheet ‘Risk Analysis’ into successive rows overwriting sample data in the first four data rows. Note that the risk number may not be continuous as non-credible risks are not considered further. Take care not to save data over the green shaded columns ‘Likelihood’ and beyond as this will destroy the analysis methodology coded into these cells.

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3 AS/NZS 4360:2004, p 16
Risk analysis takes into account the ‘likelihood’ and the ‘consequences’ of the event. The objective of the analysis is to separate the minor acceptable risks from the major risks and to provide data to assist in the assessment and management of risks.

Use the descriptors of ‘likelihood’ and ‘consequences’ in the template in the worksheet ‘Risk Analysis’. Select the appropriate response from the drop down boxes in the green shaded columns ‘Likelihood and ‘Consequences’.

Likelihood ratings are shown below.

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Descriptor</th>
<th>Probability of occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rare</td>
<td>May occur only in exceptional circumstances</td>
<td>More than 20 years</td>
</tr>
<tr>
<td>Unlikely</td>
<td>Could occur at some time</td>
<td>Within 10-20 years</td>
</tr>
<tr>
<td>Possible</td>
<td>Might occur at some time</td>
<td>Within 3-5 years</td>
</tr>
<tr>
<td>Likely</td>
<td>Will probably occur in most circumstances</td>
<td>Within 2 years</td>
</tr>
<tr>
<td>Almost certain</td>
<td>Expected to occur in most circumstances</td>
<td>Within 1 year</td>
</tr>
</tbody>
</table>

Likelihood ratings are shown below.

<table>
<thead>
<tr>
<th>Consequences</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insignificant</td>
<td>No injuries, low financial loss (less than $10,000)</td>
</tr>
<tr>
<td>Minor</td>
<td>First aid treatment, on-site release immediately contained, medium financial loss ($10,000 - $50,000)</td>
</tr>
<tr>
<td>Moderate</td>
<td>Medical treatment required, on-site release contained with outside assistance, high financial loss ($50,000 - $200,000)</td>
</tr>
<tr>
<td>Major</td>
<td>Extensive injuries, loss of production capacity, off-site release with no detrimental effects, major financial loss ($200,000 - $1,000,000)</td>
</tr>
<tr>
<td>Catastrophic</td>
<td>Deaths, toxic release off-site with detrimental effect, huge financial loss (more than $1M)</td>
</tr>
</tbody>
</table>

Columns ‘Risk Rating’ and ‘Action required’ are automatically generated from the ‘Likelihood’ and ‘Consequences’ data fields using the relationships below.

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rare</td>
<td>L L L M H</td>
</tr>
<tr>
<td>Unlikely</td>
<td>L L M H VH</td>
</tr>
<tr>
<td>Possible</td>
<td>L M M H VH</td>
</tr>
<tr>
<td>Unlikely</td>
<td>M M H H VH</td>
</tr>
<tr>
<td>Almost Certain</td>
<td>M H H VH VH</td>
</tr>
<tr>
<td>Risk Rating</td>
<td>Action required</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>VH</td>
<td>Very High Risk</td>
</tr>
<tr>
<td></td>
<td>Immediate corrective action</td>
</tr>
<tr>
<td>H</td>
<td>High Risk</td>
</tr>
<tr>
<td></td>
<td>Prioritised action required</td>
</tr>
<tr>
<td>M</td>
<td>Moderate Risk</td>
</tr>
<tr>
<td></td>
<td>Planned action required</td>
</tr>
<tr>
<td>L</td>
<td>Low Risk</td>
</tr>
<tr>
<td></td>
<td>Manage by routine procedures</td>
</tr>
</tbody>
</table>

The completed worksheet should contain data from worksheet ‘Risk Identification’ copied into columns ‘Risk No.’ to ‘Existing controls’ (shaded yellow cells), assessments of ‘likelihood’ and ‘consequences’ by the team in the cells shaded light green and ‘risk rating’ and ‘action required’ automatically generated in the white shaded cells.

When the ‘Risk Analysis’ worksheet is complete copy rows down to and including completed rows and paste into Table 5.4.5 in the template.
6. **RISK EVALUATION**  
Ref AS/NZS 4360:2004, Sect 3.5, p 19

The purpose of risk evaluation is to make decisions, based on the outcomes of risk analysis, about which risks need treatment and treatment priorities. Risk evaluation involves comparing the level of risk found during the analysis process (Section 5) with risk evaluation criteria established when the context was considered (Section 3).

Risk evaluation is done in worksheet ‘Risk Evaluation’. This worksheet is linked to worksheet ‘Risk Analysis’ with key data copied to the ‘Risk Evaluation’ worksheet. These fields are:

- Risk No.;
- Asset at Risk;
- What can happen?
- Possible cause;
- Existing controls;
- Risk rating; and
- Action required.

The worksheet ‘Risk Evaluation’ poses the question “Is the risk acceptable for the evaluation criteria selected in Section 3 for the following risk evaluation criteria in the cells shaded light green.

The team should consider each risk against each of the evaluation criteria and reach a conclusion as to whether the risk is acceptable under each criterion. Responses are pre-set in drop down boxes for each criterion being:

- Yes
- Maybe
- No

The next set is to evaluate the overall risk weighting up the responses to each criterion to answer the overall question “Is the risk acceptable? Responses are pre-set in drop down boxes for each criteria being:

- Yes
- No

If the answer is Yes, the risk can be managed by normal operating procedures. If the answer is No, the risk requires a risk treatment plan.

When the ‘Risk Evaluation’ worksheet is complete copy rows down to and including completed rows and paste into Table 6.2 in the template.
7. RISK TREATMENT PLANS

7.1 General
Ref AS/NZS 4360: 2004, Sects 3.6.1, 3.6.3 p 20 - 21

"Risk treatment involves identifying the range of options for treating risks, assessing these options and the preparation and implementation of treatment plans". 4

Options for treating risks include:

- Avoiding the risk by deciding not to start or continue with the activity which gives rise to the risk;
- Changing the likelihood of the risk, to reduce the likelihood of the negative outcomes;
- Changing the consequences, to reduce the extent of the losses. This includes pre-event measures such as protection devices and post-event responses such as continuity plans;
- Sharing the risk by contracts, insurance and organisational structures such as partnerships and joint ventures to spread responsibility and liability;
- Retaining the risk. 5

Note that retaining the risk is the outcome where no risk treatment plan is implemented.

7.2 Risk Treatment Process
Ref AS/NZS:2004, Sect 3.6.4, p 21

The risk treatment process comprises 5 steps.

Step 1. Review causes and controls
The risk identification process documented in Section 4 included identifying possible causes and documenting existing controls.

Step 2. Develop treatment options
Treatment options include those that eliminate risk, reduce the likelihood or the risk event occurring, reducing the consequences should the risk event occur, sharing of the risk with others and accepting the risk.

Step 3. Assess risk treatment options against costs and residual risk
The method of assessment of risk treatment options can range from an assessment by a local group of stakeholders and practitioners experienced in operation and management of the assets/service to detailed risk cost and risk reduction cost/benefit analysis.

Step 4. Select optimum risk treatment

Step 5. Develop risk treatment plans

7.3 Risk Treatments

Risk treatments are identified in worksheet ‘Risk Treatment’. This worksheet is linked to worksheet ‘Risk Evaluation’ with key data copied to the ‘Risk Treatment’ worksheet. These fields are

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4 AS/NZS 4360:2004, p 20
5 AS/NZS 4360:2004, p 21
The team should complete the columns shaded light green for each risk where the response to the question ‘is risk acceptable’ is ‘No’. These fields to be completed for these risks are:

- Treatment option(s)
- Residual risk
- Risk treatment plan

Where the response to the question ‘is risk acceptable’ is ‘Yes’, enter ‘N/a’.

“Selecting the most appropriate option involved balancing the costs of implementing each option against the benefits derived from it. In general, the costs of managing risks need to commensurate with the benefits obtained. ... It is important to consider all direct and indirect costs and benefits whether tangible or intangible and measured in financial or other terms. A number of options may be considered and applied either individually or in combination.”

The template contains examples of treatment options, residual risk and risk treatment plans for three sample risks. Type over these sample answers.

The examples are:

<table>
<thead>
<tr>
<th>Asset at risk</th>
<th>What can happen</th>
<th>Possible cause</th>
<th>Existing controls</th>
<th>Risk rating</th>
<th>Action required</th>
<th>Is risk acceptable?</th>
<th>Treatment options</th>
<th>Residual risk</th>
<th>Risk treatment plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown creek bridge</td>
<td>Bridge collapse</td>
<td>Ageing of timber girders and loss of load carrying capacity</td>
<td>None</td>
<td>Moderate</td>
<td>Planned action required</td>
<td>No</td>
<td>Introduce load limit</td>
<td>Risk remains if load limit ignored</td>
<td>Assess load capacity &amp; introduce load limit if required. Inspect bridge 3 monthly</td>
</tr>
<tr>
<td>Brown creek bridge</td>
<td>Damage from heavy vehicle hitting bridge</td>
<td>Poor alignment on southern approach</td>
<td>65 km/h advisory speed curve warning sign</td>
<td>Moderate</td>
<td>Planned action required</td>
<td>No</td>
<td>- realign approaches - improve signage - install advance warning signs</td>
<td>- low - risk remains if signs are ignored</td>
<td>Replace existing signs with larger signs</td>
</tr>
<tr>
<td>Brown creek bridge</td>
<td>Damage from heavy vehicle hitting bridge</td>
<td>Speed of approaching vehicles</td>
<td>65 km/h advisory speed curve warning sign</td>
<td>Moderate</td>
<td>Planned action required</td>
<td>No</td>
<td>As above</td>
<td>As above</td>
<td>Replace sign with 35 km/h signs. Install advance warning signage</td>
</tr>
</tbody>
</table>

When the ‘Risk Treatment’ worksheet is complete copy rows down to and including completed rows and paste into Table 7.3 in the template.

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6 AS/NZS 4360:2004, p 21
7.4 Risk Treatment Plans
Ref AS/NZS 4360:2004, Sect 3.6.5, p 22

Treatment plans document how the selected treatment option is to be implemented. The treatment plans should include:

- Proposed actions,
- Responsibilities,
- Resource requirements (inc. budget),
- Timing,
- Performance measures, and
- Reporting and monitoring requirements

Risk treatment plans are prepared in worksheet ‘Treatment Plan’. This worksheet is linked to worksheet ‘Risk Treatment with key data copied to the ‘Treatment Plan’ worksheet. These fields are

- Risk No.;
- Asset at Risk;
- What can happen?
- Risk rating;
- Action required; and
- Risk treatment plan

The team should complete the columns shaded light green for each risk where a risk treatment plan is planned. These fields to be completed for these risks are:

- Actions
- Responsibility
- Resources required
- Budget
- Date due

Where the response to the question ‘Risk treatment plan’ is ‘N/a’, enter ‘N/a’ in these fields.

The template contains examples of actions, responsibility, resources required budget and date due. Type over these sample answers.

The examples are:
<table>
<thead>
<tr>
<th>Asset at risk</th>
<th>What can happen</th>
<th>Risk rating</th>
<th>Action required</th>
<th>Risk treatment plan</th>
<th>Actions</th>
<th>Responsibility</th>
<th>Resources required</th>
<th>Budget</th>
<th>Date due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown creek bridge</td>
<td>Bridge collapse</td>
<td>Moderate</td>
<td>Planned action required</td>
<td>Assess load capacity &amp; introduce load limit if required. Inspect bridge 3 monthly</td>
<td>- implement 3 monthly condition inspections - commission bridge testing report - report to council on recommendations - install load limits if required</td>
<td>Director Engineering Services</td>
<td>- council staff training - consultant - council staff</td>
<td>- $2,000 - $5,000</td>
<td>- Aug 06 - Dec 06</td>
</tr>
<tr>
<td>Brown creek bridge</td>
<td>Damage from heavy vehicle hitting bridge</td>
<td>Moderate</td>
<td>Planned action required</td>
<td>Replace existing signs with larger signs</td>
<td>- report to council - replace signage</td>
<td>Director Engineering Services</td>
<td>- council staff</td>
<td>- council staff</td>
<td>$300</td>
</tr>
<tr>
<td>Brown creek bridge</td>
<td>Damage from heavy vehicle hitting bridge</td>
<td>Moderate</td>
<td>Planned action required</td>
<td>Replace sign with 35 km/h signs. Install advance warning signage</td>
<td>- report to TSA - replace signs when approved by TSA</td>
<td>Director Engineering Services</td>
<td>- council staff</td>
<td></td>
<td>$200</td>
</tr>
</tbody>
</table>

When the ‘Treatment Plan’ worksheet is complete copy rows down to and including completed rows and paste into Table 7.4 in the template.

8. MONITORING AND REVIEW
Ref AS/NZS 4360:2004, Sect 3.7, p 22

The template suggests a process for monitoring and review of the risks, the risk management plan and the risk treatment plan. Where possible, the review process is incorporated into existing review methods.

The team and management should review these suggestions and make changes to suit individual council needs and processes.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Review Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of new risks and changes to existing risks</td>
<td>Annual review by team with stakeholders and report to council</td>
</tr>
<tr>
<td>Review of Risk Management Plan</td>
<td>3 yearly review and re-write by team and report to council</td>
</tr>
<tr>
<td>Performance review of Risk Treatment Plan</td>
<td>Action plan tasks incorporated in council staff performance criteria with 6 monthly performance reviews. Action plan tasks for other organisations reviewed at annual team review meeting</td>
</tr>
</tbody>
</table>
9. REFERENCES


Insert reference documents such as the council’s strategic management plan, population projection, planning strategic report, etc used in the preparation of the risk management plan.

REFERENCES
