RAMM Assessment

Document Release

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Guy Halpe	Second Edition	1st May, 2005
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> The first version of this guide was as a chapter in another RAMM guide. The third version was completed but not published.

Notes to the Fifth Edition

This version of RAMM Assessment has been updated to include the changes for WALGA and Pocket RAMM.

Contents

Introduction to Assessment

An Assessment is the record of an inspection of an Asset. You use Assessments for a number of reasons including to record the Condition of an Asset or its associated Likelihood and Consequences of Failure (Risks).

RAMM Assessment is a feature to used to manage and record Inspections of Roading Assets. You use **RAMM** Assessment to manage the overall Condition of your Network.

In This Chapter

Terms You Need to Understand

You need to be familiar with the meaning of the following terms to be able to work with **RAMM** Assessment.

Assessment Item

An Assessment Item is an individual aspect of an Asset which is to be Assessed. It is contained in an Assessment Group. An example of an Assessment Item could be Drainage within the Assessment Group Concrete for the Asset Type Surface Water Channels.

Assessment Group

An Assessment Group is an aggregation of Assessment Items for an Asset Type. For instance, Assessment Items related to Surface Water Channels made of concrete could be grouped under the Assessment Group Concrete for the Asset Type, Surface Water Channels.

Assessment Response

An Assessment Response is the description of the Condition of the Assessment Item which is the subject of the Assessment. For instance when assessing the Drainage of a Concrete Surface Water Channel, the Response could be Excellent. Assessment Responses are predefined for consistency.

Worksheet

A Worksheet is a document created in **RAMM** which is used by an Inspector to assess an Asset. It should contain a list of all the Assessment Items and Assessment Responses required to perform the Assessment. It is created from a Worksheet Template to ensure ease of creation and consistency of results.

Worksheet Template

A Worksheet Template is a **RAMM** item created so that Worksheets used by an Inspector to Assess an Asset can be created easily and consistently.   It should contain grouped lists of all the Assessment Items required to perform the Assessment of a particular Asset Type category.

RAMM Assessment Overview

You use **RAMM** Assessment to:

1 record the present Condition of Road Assets
2 forecast the Likelihood of Failure and the Consequence of Failure, from which an overall Risk can be estimated.

Record Asset Condition

First you record the Condition of your Road Assets. You do this for each Component of the Assets. So for each Assessment Asset Type you itemise the individual Components so that you can create a record for each Item that is relevant to Assessment. See Assessment Groups, Items and Responses (on page 58).

You set up these Assessment Items within logical Groups. Also, for each Item, you set up a list of standard Responses. You standardise the Responses so that meaningful calculations and comparisons can be made. See Assessment Responses (on page 65).

When you perform your Assessments you will want to use a standard Worksheet for the Assessment Asset Type. You use combinations of the Groups, Items and Responses to create Worksheet Templates for each Assessment Asset Type. These become the basis for the creation of Worksheets on which you record Condition or Risk values for Items. There will also be a Weighting for each Item within the Group. See Worksheet Templates (on page 74).

The Worksheets are used for Assessment Inspections, and the results entered into the **RAMM** Assessment system. **RAMM** Assessment generates Inspection Schedules to keep track of this work, giving you Advance Warning of Assessments that are due. See Schedule and Perform Assessments (on page 87).

Forecast Risk of Failure

Once the data is in the system, you can calculate Weighting for Condition. You use **RAMM** Assessment to assess the Risk Likelihood or the Risk Consequence for your **RAMM** Assets. See Assessment Results (on page 135).

For example, you may wish to know the Condition of a Bridge over a period of time. To do this you build a Worksheet Template, create a series of Worksheets and perform regular Assessments to record the series of Condition Assessments.

Alternatively you may wish to record which Bridges in your Road Network are more likely to fail and which will have a high economic consequence if they do fail. To do this you build a Worksheet Template for Risk Likelihood and/or Consequence and perform the Assessments accordingly. See Worksheet Templates (on page 74).

The detailed picture of your Road Network that emerges helps you plan for the future with greater accuracy and certainty.

> The calculations conform to the NAMS Standard Condition Categories (for Condition) or the Standards NZ document Guidelines for Managing Risk HB 143:1999 (for Risk Likelihood and Risk Consequence).

Weighting for Condition and Risk

You use Assessment Weighting to indicate where you should commit resources for the most benefit.

When you set up a Worksheet Template, you must specify a Weighting for every Item. This may either be for a Condition-specific Assessment or a Risk-specific Assessment.

The final Weighting value of an Assessed Asset is calculated automatically by **RAMM**. See Determine Weighting, Condition and Risk (on page 115). It is a single number that summarises all elements of the Assessment. It is displayed on the Assessment tabs of the respective Asset Detail screens. See Assessment Results For a Single Asset (on page 142).

Calculate Weighting for a Condition

The following example is of a Bridge with two Assessment Items attached – Graffiti and Drainage. To arrive at a value for Condition you set up an Assessment Group with the Items below from the Condition category. Then you build a Worksheet Template in which you set the Condition Weighting.

Item Weighting chosen by user	Item	Response	Equivalent Condition (based on NAMS)	Response Weighting (set by RAMM)
10	Graffiti	<5	Excellent	1
		5-10	Excellent to Good	2
		10-20	Good	3
		20-40	Good to Average	4
		40-60	Average	5
		60-80	Poor	7
		>80	Very Poor	9
90	Drainage	Very Good	Excellent	1
		Good	Good	3
		Adequate	Average	5
		Poor	Poor	7
		Very Poor	Very Poor	9
100 Total enforced by **RAMM**				

Once you have created Worksheets from this Template and performed several Assessments using the Responses, you will want to update Weighting for Condition on your Assets.

This is how **RAMM** calculates the Condition:

1   First, a range is established for the best and worst possible responses. Using the example above, this would be:

Best: $(10 \times 1) + (90 \times 1) = 100$
Worst: $(10 \times 9) + (90 \times 9) = 900$

2   This range is then divided into 5 equal sections that correspond to the 5 NAMS conditions. In this case 100 - 260 = Excellent, 260 - 420 = Good, 420 - 580 = Average, 580 - 740 = Poor and 740 - 900 = Very Poor.

3   **RAMM** then calculates the value of the Responses you selected when entering Assessment Results in the same way. If you set Graffiti to be 5-10 Excellent to Good and Drainage to be Very Poor.

Graffiti (10 x 2) + Drainage (90 x 9) = 830

4   The number 830 is placed within the NAMS condition sections above. The Condition is then Very Poor.

Calculate Weighting for Risk

You calculate Weighting for Risk Likelihood, Risk Consequence and overall Risk as for Condition, with these exceptions:

- You set up the Assessment Item Categories as either Risk Likelihood, Risk Consequence or Risk, but not Condition.
- The Worksheet Templates are Risk-specific.
- For Risk Likelihood and Risk Consequence, the values resulting from the calculation are summarised to the 5 Risk Likelihood and 5 Risk Consequence categories in the Standards New Zealand document Guidelines for Managing Risk HB 143:1999.
- Overall Risk is calculated from the Risk Matrix, which determines the Risk by comparing the Likelihood with the Consequence calculated for the Assessment Results. See Risk Matrix (on page 7).

The standards that govern the Responses to the Risk Categories conform to the Standards New Zealand document Guidelines for Managing Risk HB 143:1999.

Assessment Asset Types List

You can use the following Asset Types with **RAMM** Assessment:

- Berm
- Bridge
- Carriageway
- Crossing
- Drainage
- Feature
- Intersection
- Island
- Marking
- Minor Structure
- Pavement Rating
- Railing
- Retaining Wall
- Shoulder

- Sign
- Surface Water Channel
- Traffic Facility
- Traffic Signal
- Tree.

> You can also use **RAMM** Assessment with User Defined Tables
> (UDTs) for which you have selected the Assessment option at the
> RAMM Modules section. See the UDT chapter of the *Working with
> RAMM* guide.

Risk Matrix

The **Risk Matrix** is a rectangular table of Risk values. It is used to calculate an Overall
Risk value for an Asset. It allows a user to set values for Risk Likelihood and Risk
Consequence. It is structured to conform to the Standards Australia/Standards
New Zealand document *Risk Management Guidelines HB 436:2004*.

You follow the menu path Projects > Assessment > Preparing > Risk Matrix to launch
the **Risk Matrix** screen. You can view the **Risk Matrix** values. You can edit the Risk
Matrix values. This is not recommended.

Introduction to RAMM

Road Assessment and Maintenance Management (**RAMM**) is software developed and supported by RAMM Software Limited. This software is used by Road Controlling Authorities (RCAs) to manage Road Inventory Assets and Condition for their Network.

RAMM is the complete package for Asset maintenance, valuation, assessment, Forward Work Planning as well as inventory-based Asset management. It also includes a range of report and analysis applications which complement the management functions.

In This Chapter

What is RAMM?

The **RAMM** (Road Assessment and Maintenance Management) software from RAMM Software Limited is a comprehensive suite of applications to maintain and manage Road Inventory and Condition data.

> The name **RAMM** is used not only for a suite of Road Assessment and Maintenance Management applications but also for the central software application itself.

The RAMM Suite

The full **RAMM** suite includes **RAMM** (sometimes referred to as **RAMM** for Windows), **RAMM Contractor**, **Pocket RAMM**, **RAMM Manager**, **Hosting Administration**, **CAR Manager**, **RAMM Network Manager** and **RAMM SQL**.

When **RAMM** was introduced to the industry in the 1980s, it was a green screen application. Later a GUI (graphical user interface) was introduced. This is when it was sometimes called **RAMM** for Windows. As users came to expect more from **RAMM** other applications were added. **RAMM Manager**, **RAMM Network Manager** and **RAMM SQL** were added to facilitate Lookup, Staff Permissions, process, report and Network maintenance, database manipulation and data extraction. When Network Owners and Contractors needed a better system for contract management, **RAMM Contractor** and **Pocket RAMM** were introduced.

Recently the **CAR Manager** has been added to enable NZ Corridor Managers to manage access to their Network. **Hosting Administration** has been added to give users greater control over the users who access their Network data.

So that is why sometimes **RAMM** refers to the one application and other times to the entire application suite.

Your RAMM Applications

The full **RAMM** suite includes the following applications including **RAMM** (for Windows). You can access each individual application only if you have the correct Staff Permissions.

RAMM (for Windows)

RAMM (for Windows) is the central application of the **RAMM** suite. You access your Inventory, Asset and Condition data for your Network from **RAMM**.

RAMM Manager

RAMM Manager is the module in the **RAMM** suite of products which you use to set up Lookups, to maintain Staff Permissions, to run processes such as Status Check, and to run reports.

RAMM Contractor

RAMM Contractor is the module of the **RAMM** suite of products which enables Contractors, Network Owners and Consultants to manage Road Asset Maintenance Contracts. In particular, it has been optimised to facilitate the Programming of Network maintenance and the Estimation and Claims process which is integral to Programmed Maintenance Contracts. It also includes the special features for the managing of Contracts for Signs, Street Lights and Traffic Signals maintenance.

Pocket RAMM

Pocket RAMM is the module of the **RAMM** suite of products which enables a user to run **RAMM** on a netbook, laptop, tablet or PDA, and to perform Contract, Inventory and Claim management while mobile, in the field. Virtually all of the everyday maintenance ability of **RAMM Contractor** is present in **Pocket RAMM**. Please note that the **Pocket RAMM** application has become so comprehensive that the use of PDAs with **Pocket RAMM** is no longer recommended. PDAs are no longer powerful enough to deliver a positive user experience.

RAMM Network Manager

RAMM Network Manager is the module in the **RAMM** suite of products which you use to manage the details of your Network and in particular, the Road centre lines. **RAMM Network Manager** is a powerful, flexible and comprehensive Road Network maintenance tool that helps you automate tasks and perform complex Network management actions. For example, you can reverse a Road with a single press of your mouse. When you apply this change **RAMM Network Manager** will update all relevant tables within the database. It also has a graphical display which displays current and historical views of the changes you are making.

RAMM SQL

RAMM SQL is the module of the **RAMM** suite of products which enables a power user to manipulate **RAMM** data using SQL (Structured Query Language). It is a very powerful tool and should be used only by advanced users who have a detailed knowledge of the **RAMM** database.

Hosting Administration

The **Hosting Administration** is an online application which enables users to manage access to their Network. It enables Network Administrators to create logins for individual users and allows those individuals to maintain their own passwords.

CAR Manager

CAR Manager is the online application used by corridor managers to manage requests by utility operators, or their contractors, to access the Road corridor. Access to the corridor is required to make changes to electricity, gas, telecommunications, water, wastewater and postal infrastructure. At the time of writing, **CAR Manager** is available only to New Zealand RCAs who are clients of RAMM Software Limited.

> Your ability to view and access the complete suite of **RAMM** products will depend on your Staff Permissions. Best practice is to grant you permission to view and access only those applications which you need for your normal duties.

Your RAMM Database

All your Road Inventory and Condition information in **RAMM** is stored in a central database. Everything you do in **RAMM** is linked to it. All the actions you perform affect it.

How the Database Is Arranged

The information in the **RAMM** database is stored in tables. There are many of these, one for each aspect of the Road Network. Examples of **RAMM** tables are Surface Structure and Roughness. **RAMM** often combines information from different tables when you are working with it.

Each table holds its data in a combination of rows and columns. Each row in a table can also be called a record. It contains all the details for the particular aspect of the Road section – for example, the Start Displacement, Material, Construction Date and so on of a particular Road section. Each individual item of data is held in its own column.

These columns are related to the fields on **RAMM** screens. Information in a field on a **RAMM** screen resides in a table column. The column contains information about all the Roads, but pertaining only to one aspect of the Road – for example, just the Displacements for the various Roads and Road sections you are looking at.

Road Asset:	Column (Field):			
Surface Structure Table	**Road Name**	**Start Displacement**	**Pavement Type**	**Construction Date**
Row (Record):	Smith Street	000m	Thin Surfaced Flexible	17/03/2003
	Jones Road	100m	Concrete	12/02/2000

You will see messages and warnings from time to time, some accompanied by detailed, database related information. It is always useful to either print or record this information somewhere and have it at hand when you call RAMM Software Limited for assistance. See Contact RAMM Software Limited (on page 29).

Your Other Software and RAMM

When you are working with **RAMM**, you will use other software. The following list is not exhaustive. Also, you might not use some of the software listed.

Internet Browser

Your web or internet browser is the software application you use for accessing, presenting, and navigating information on the World Wide Web. You use it to access **RAMM** through the **RAMM** Hosting Service. Common browsers are Internet Explorer, Firefox, Safari and Chrome. Best results for accessing **RAMM** through the **RAMM** Hosting Service have been achieved using Internet Explorer.

Citrix Client

The Citrix client is a third party, remote access application. It allows users to access **RAMM** remotely. It enables secure passing of data between a remote server and your local, or client pc or other device. Once the Citrix connection is established, you work with **RAMM** as if it were running on your local device.

Microsoft Excel and Others

You can export **RAMM** data in a format usable in Microsoft Excel, Access and other data manipulation and reporting software.

Windows Explorer

You use Windows Explorer (sometimes referred to as My Computer) to access files on your computer which you attach to records in **RAMM** on the Multimedia tab of the **RAMM** Detail screens. Similarly you can use the software to download and save **RAMM** multimedia files to your own hard drive.
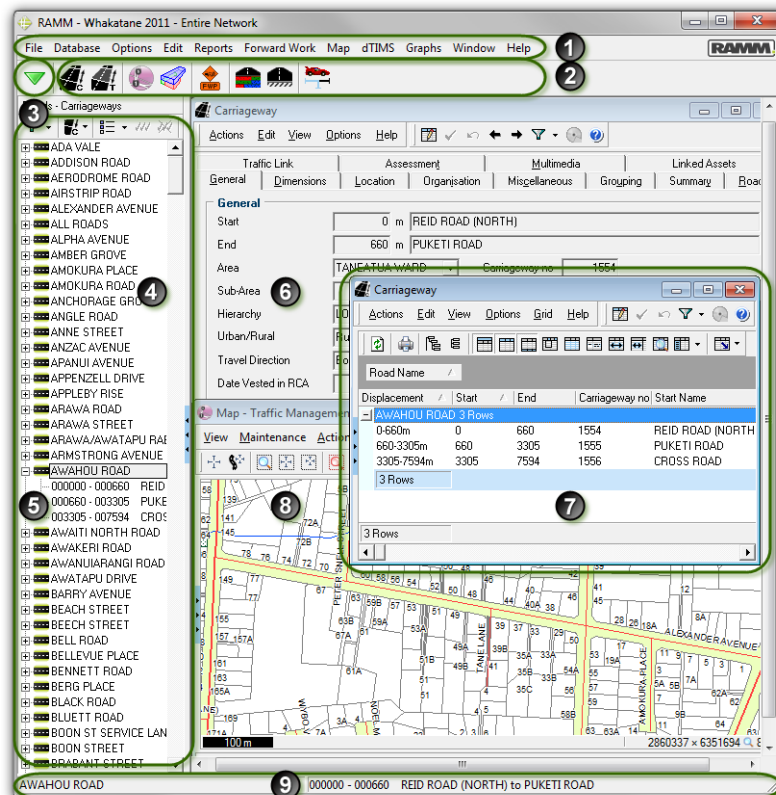
dTIMS

Deighton Total Infrastructure Management System (dTIMS) is a software tool used to model Pavement Deterioration. **RAMM** provides a method of extracting Treatment Length, Maintenance Cost and related data from the Road Network in a format that can be imported into dTIMS.   You export information from **RAMM** for use in dTIMS, and then import the results of your analysis back into **RAMM**.

RAMM Web Service

A web service is software application supporting one software product to talk to another. You use the **RAMM** Web service to enable your CSRs (Customer Service Representatives) to use their customer service software to add a Job into **RAMM Contractor** for, say, a Street Light out, and to monitor the Job progress. Configuring access to the **RAMM Contractor** Web Service is the responsibility of the Network Owner.

The RAMM Main Screen

The **RAMM** main screen is your portal to your **RAMM** database. You should familiarise yourself with its main items.

No	Item	Comments
1	Menu Bar	This contains the standard drop-down lists with which all Windows users will be familiar.
2	Tool bar	This is a repository for shortcuts to the screens you use most often.
3	**Show toolbar menu** (screen selection drop-down list)	You press this button for the drop-down list to access all the **RAMM** Inventory, Condition and other data screens.
4	**Roads** list panel	This panel lists all the Roads in your Network. You can Filter this list to include only the group of Roads you require.
5	Expanded tree	You press ⊞ to expand the tree and reveal the Carriageway Sections for a Road.
6	Detail screen	Detail screens display the details for one **RAMM** Inventory, Condition or other data record. You edit the item details at the Detail screen.
7	Grid screen	Grid screens display the details for one or more **RAMM** Inventory, Condition or other data records. You use Grid screens for reporting and other purposes.
8	**Map**	The **Map** in **RAMM** is a wonderful tool for visualising your Network and updating it.
9	Status bar	This is where you look to see useful information about what you are doing.

RAMM Terminology

In **RAMM**, as with any software application, there are terms which have a meaning specific to the software. When you are working in **RAMM** you will encounter these terms. You should have an understanding of them before you do. Some of these terms are also used in the wider Road industry. The definitions below are specific to **RAMM**.

The following list is a minimum of the terms you need to understand before you start to work with **RAMM**. You can also look at the Glossary at the end of this guide for a more comprehensive list.

RCA

A Road Controlling Authority (RCA) is the organisation responsible for a particular Road Network. An example of an RCA could be the New Zealand Transport Agency (NZTA) or a TLA (Territorial Local Authority).

Network

A Network is a collection of Roads managed by a particular Road Controlling Authority (RCA). Each **RAMM** database usually contains all the information for one Network.

Road

For Local Authorities, a Road denotes a single named Road that is part of their Network. For State Highways, a Road is a segment of the State Highway. Roads may include associated Assets such as Pavement, Top Surface, and Shoulders. Assets such as Signs and Surface Water Channels are associated with a Road.

Carriageway

Roads in **RAMM** are divided into logical sections named Carriageways. These start and end at easily identifiable Locations such as Intersections and Bridges. You can define your Carriageway Sections to suit your own purposes. For instance you may define them to start and end when the number of Lanes in the Road changes or if the Road changes between Sealed and Unsealed sections. A Carriageway Section starts at one Displacement along the Road and ends at another Displacement. Carriageways define the lengths of Road against which other Assets can be referenced.

Displacement

Displacement is the distance along a Road measured from the start of the first Carriageway Section of the Road. It is stated in metres.

Location

Location refers to the collection of details used to position an Asset or Inventory item within a database. The most basic Location information is a combination of Road and Displacement. Location information can also include helpful notes such as nearby landmarks. Point Assets such as Signs have a Location field whose value is the Displacement of the Sign from the start of the Road.

Asset

An Asset is an item in a Network which has a value. It could be a physical component of a Road, such as its Surface. It could be something real such as a Bridge, a Footpath or a Street Light. Where no table exists in **RAMM** for one of your Asset Types, you can set up a User Defined Table (UDT) to manage the Assets.

Nonasset

These are items which have no monetary value and for which screens exist in **RAMM**. They are generally not something physically present on the Road Network. Examples of   Nonassets are Roughness, Maintenance Cost and Crash. You can set up User Defined Tables (UDTs) to manage Nonassets which do not have their own screens in **RAMM**. Examples could be slips, hazards and certain Condition data.

Stock Asset

In **RAMM** the three Asset Types, Signs, Street Lights and Traffic Signals are referred to as Stock Asset Types. This is because, unlike the other Asset Types, when Signs, Street Lights and Traffic Signals Assets or components are replaced, a detailed record is kept of the replacements including the Replacement Reason. So you have an itemised list of the current and past Assets. You create Stock UDTs to manage those of your Assets (if any) which do not already exist in **RAMM** and for which you need to keep replacement records.

Network Inventory

Your Network Inventory is all of your **RAMM** database records including real items such as a Bridges, Footpaths and Street Lights as well as your Survey data such as Crashes and other data such as Bylaws. Your Condition data such as Roughness and your report data such as **RAMM** 3D do not form part of your Network Inventory.

Condition

The term Condition has two related meanings in **RAMM**. In **RAMM** Assessment the Condition of an Asset describes its fitness or readiness for use. Typical **RAMM** and NAMS Conditions are Excellent, Good, Average, Poor and Very Poor. Assessment Condition Weighting is used to determine Risk of Failure and the Consequences of Failure.

There are also Road Conditions which have their own **RAMM** screens. Roughness, High Speed Rutting and Skid Resistance are examples of **RAMM** items used to describe the Condition of your Roads.

You will be able to tell from the context in which it is used, which meaning of the term Condition is intended.

Assessment

An Assessment is the record of an inspection of an Asset. You use Assessments for a number of reasons including to record the Condition of an Asset or its associated Likelihood and Consequences of Failure (Risks). Rating and HSD are used to Assess Roads.

Rating

Rating is the process of recording the state of a Road by measuring the extent of the deterioration which has occurred. This includes factors such as the length of Cracking and Potholes. This is sometimes referred to as Condition Rating.

HSD

High Speed Data (HSD) is the collective name for particular properties and state of a Road as measured by specialised equipment mounted on a vehicle. The properties of the Road include its slope and curvature values. The state of the Road includes its Roughness and Skid Resistance values.

Treatment Length

A Treatment Length is a section of a Road with consistent performance and purpose. For example, it could have the same Top Surface material and Annual Average Daily Traffic (AADT) count along its length. A Treatment Length may have had similar Treatments applied along its length and is often different from its adjoining sections.

Treatment Lengths may coincide with Carriageway sections, but the same Carriageway section may have more than one Treatment Length. A Treatment Length may span more than one Carriageway section. Treatment Lengths will usually change over time, as conditions change.

Treatment Selection

A Treatment Selection is a recommended treatment for a Treatment Length to be carried out in the next twelve months. This recommendation can of course be No Treatment. Treatment Selections are generated in **RAMM** using the Treatment Selection Algorithm (TSA).

Log in to RAMM

You must log in to **RAMM** before you can use it.

You cannot log in to any of the **RAMM** applications unless you have a login name and a password. Once you have logged in you need appropriate Staff Permissions to carry out tasks related to your role.

Contact the Systems Administrator for the correct Staff Permissions to perform your normal tasks. See the Security chapter of the *Working with RAMM* guide.

You log in to **RAMM** using the **RAMM** Hosting Service.

RAMM Hosting Service

The **RAMM** Hosting Service is a service run by RAMM Software Limited. It enables you to run **RAMM** across the Internet. It hosts your database and the software on a server at a centralised location. You use your standard internet browser to access the software and work with your data, so you do not need any specialised software. It is very secure.

You use the **RAMM** Hosting Service from anywhere with an internet connection.

The graphic below shows the the options to access **RAMM** using the **RAMM** Hosting Service.

Logging in to the Hosting Service

Introduction

You log in to the **RAMM** Hosting Service to access the **RAMM** applications.

Before you do this you need to have:

* been granted access with a username and password by RAMM Software Limited. To contact RAMM Software Limited for assistance, see Contact RAMM Software Limited (on page 29).
* Downloaded the MetaFrame Presentation Server Client for 32-bit Windows. You do this by clicking the link on the RAMM Software Limited website **Log in** page and following the instructions.
* opened your web browser such as Internet Explorer or Mozilla Firefox.

Menu Path

Follow the menu path ramm.co.nz https://login.ramm.co.nz/ to open the **Log in** page.

► **To Log in to the Hosting Service**

To do this you follow these steps:

1 Type your username and password in the **User name**: and **Password**: fields.
2 Press **Log In**.
   The **Applications** panel will open. What you see in the **Applications** panel will depend on your Security Permissions.

The icons you see in the **Applications** panel will depend on your **Staff Permissions**

3   Do you want to use **Pocket RAMM**?

Yes	go to step 4.
No	go to step 6.

4   Press the Pocket Applications icon.
The **Pocket RAMM** applications will become available.

5   Go to step 7.

6   Press RAMM 2011.
The Applications panel will open. The software icons will be available.

Again, the icons you see in the **Applications** panel will depend on your **Staff Permissions**

7   Press the icon for the **RAMM** software you want to use.
The **RAMM** software application will open. If you have access to more than one database, a dialog will open so that you can choose the database which you require.

If you use an older version of Mozilla Firefox as your internet browser, a Warning telling you that you do not have the MetaFrame Presentation Server Client for 32-bit Windows will display as in the Log in page screen shot above. Once you have downloaded the software you can ignore this warning.

RAMM Help Options

The time will come when you will want to know more about **RAMM** so that you can be both more proficient and efficient. Use the following options to upskill:

- use the Help from within the software. See Context-sensitive Help (on page 23).
- use internet-based Help. See **RAMM** Help on the Internet (on page 25).
- read the **RAMM** documentation. See **RAMM** Guides and Manuals (on page 26).
- discover the **RAMM** tables and columns. See **RAMM** Database Details (on page 28).
- talk to other **RAMM** users. See Help from Other Users (on page 28).
- seek professional help. See Contact RAMM Software Limited (on page 29).

Context-sensitive Help

User assistance has been integrated into the **RAMM** applications.

Most screens in **RAMM** have a Help 🔘 menu option. You press F1 on your keyboard or press Help 🔘 at the top of the screen to open the context-sensitive Help.

As you can see in the graphic below, when you press Help 🔘 at the top of the screen, one page in a .chm file will open. In this example information to enable you to view Scheduled Traffic Counts on the **Map** on **RAMM** is being offered.

If the information on the page does not solve your issues, you can navigate through the .chm file. Use the Search and Index to speedily locate the information you require.

If you still need further information you can follow the menu path Help > Website > Read Latest Manuals. This will take you to a list of the latest RAMM manuals and guides where you can search for answers.

RAMM Help on the Internet

The **RAMM** user guides and manuals are available from the RAMM Software Limited web site (http://www.ramm.co.nz). They are generally available in both downloadable .pdf versions and in online Web Help versions.

Web Help

The Web Help versions of the user guides and manuals are the primary versions you will want to use. They are available from the web site and so are available to you, so long as you have access to the internet.

The Web Help versions open in your internet browser and are very attractive. They are fully searchable. They have both a table of contents and an index for quick access to the information you want.

Their only disadvantages are that you can print only one page at a time and they are not available to you when the internet is not available.

PDFs

The .pdf versions of the user guides and manuals are useful mainly if you want to print complete documents or large portions of them.

Also, the .pdfs may be useful if you want to keep your own copy of the manual on your desktop or mobile device.

Google Search

If you type a question into the Google search, this will sometimes return the information you are after. This can be hit or miss.

RAMM Guides and Manuals

RAMM Software Limited offers useful guides and manuals to enable you to maximise the benefits to you of using RAMM.

Release Notes

Users who want to know what is in the latest version of RAMM should read:

- **What's New in RAMM 2011 (Web Help)**
  This is a detailed description of the changes and improvements to the RAMM software suite in the 2011 release. In particular, it is the changes to Assets, Data, Finance, Patrols, Reports, Roads and Traffic Count Estimation, which are featured. The Web Help version of this document is fully detailed and fully searchable.
- **What's New in RAMM 2011 (Printed Manual)**
  This is an overview of the changes and improvements to the RAMM software suite in the 2011 release. In particular, it is the changes to Assets, Data, Finance, Patrols, Reports, Roads and Traffic Count Estimation, which are featured. For full details of the changes you should read the online Web Help version of the document.

Basic Help

Users who are new to RAMM need to understand the RAMM basics to maximise their experience with the software. They should read the following RAMM primer as it includes very helpful introductory information:

- **Using RAMM**
  This is a basic help guide introduction to RAMM. It covers the essentials, common tasks, procedures as well as Mapping and Decision Cube functions. There is a comprehensive explanation of the RAMM tool bar controls.

Advanced RAMM Functions

Users familiar with RAMM and ready for its more advanced functions should read:

- **Best Practice for Assessment in Pocket RAMM**
  This guide shows how you can set up Assessments for Pocket RAMM and record your Assessments in the field. This guide is available online only.
- **Managing RAMM**
  This advanced guide includes sections on Skid Resistance, Treatment Selection and Auditing Survey data. It has not been updated recently. This guide is available online only.
- **RAMM Assessment**
  This guide is for those who manage and record Assessment Inspections of Network Assets, enter the results into RAMM and generate analyses of Condition and Risk.

- **RAMM Asset Valuation**
  This advanced guide to the Asset Valuation process covers valuing a Road Network and calculating Replacement Costs.
- **RAMM Forward Work Programme**
  This guide is for those who use **RAMM** Forward Work Programme (FWP) - also known as NOMAD. It is an advanced tool for forecasting and analysis.
- **Traffic Count Estimation**
  This guide explains the set up and use of the **RAMM** Traffic Count Estimation System.
- **Working with RAMM**
  This is an advanced help guide for power users of **RAMM**. Use this guide only if you have a good working knowledge of **RAMM**, its Assets, the database structure and key components such as Treatment Lengths. This guide covers: User Defined Assets, Surfaces, **RAMM SQL**, Bridges, Maintenance Activity, Pavement Structure, Pavement Strength and **RAMM** Security.

RAMM Contractor Guides

Those users who need to know how to use **RAMM Contractor** should read the following manuals:

- **RAMM Best Practice**
  This guide gives step-by-step instructions on how to run a Programmed Maintenance Contract in **RAMM Contractor**. It is available as a .pdf or .xhtml file but not as a printed manual.
- **RAMM Contractor**
  This guide is for those Road Maintenance Contractors and Network Owners who use **RAMM Contractor** software. It covers setting up Contracts, managing Dispatches, generating Claims for work done and reporting on Contract activities.

Printed Manuals

RAMM Software Limited is happy to provide you with printed manuals to which you can refer at your convenience.

There is a small charge for additional copies of the manuals. Printed manuals do not require access to a computer or the Internet and are ideal for browsing, reference or learning about something in depth.

There are a number of guides which are available to **RAMM** users. The following list includes those most used and gives a brief overview of what they cover. For a full list of available guides, see the RAMM Software Limited web site Documentation page (http://www.cjntech.co.nz/index.php?section=55).

Help from Other Users

Other users can be a mine of information.

If there are other users in your organisation, you should approach them if they perform the same tasks as you do or if they have been using **RAMM** for longer than you.

They probably know shortcuts, tips and tricks which they can teach you. Don't reinvent the wheel. Talk to someone who knows more than you.

RAMM Database Details

When you begin to carry out more complex tasks, you will need to know where specific details are stored in the **RAMM** database. These details are available in the Database Structure report.

The Database Structure report is a listing of all tables and columns in the **RAMM** database. It is available from the **RAMM Manager** main menu. You follow the menu path Reports > Database Structure.

You then choose the tables you wish to view and then press Preview or Print to view or print the report.

Contact RAMM Software Limited

Internet

This is the link to open the **RAMM** web site (http://www.ramm.co.nz).

Email

This is the link to send an email to **RAMM** Support (mailto:support@ramm.co.nz).

This is the link to send an email to **RAMM** Documentation (mailto:documentation@ramm.co.nz).

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Comments and Suggestions

If you have any feedback about this document or about the software itself, please contact RAMM Software Limited at whichever address above is convenient to you. Your observations and suggestions are welcome. Your feedback is an important element in improving and updating the **RAMM** experience.

The Assessment Process in RAMM

You follow the process outlined in this chapter to set up and run **RAMM Assessment**.

In This Chapter

Assessment Process Diagram

The following diagram outlines the standard Assessment process in RAMM. The process starts with creating Master Lists and creating Worksheet Templates. You do this for each Asset Type for which you wish to perform Assessment Inspections. You then use the Master Worksheet Templates to print off Worksheets for your staff. You set up your Inspection schedules and your staff use these Worksheets to record the Assessment results which are then entered into RAMM. You then run the appropriate processes and reports so that you can analyse the Assessment results. You can simplify this process by using Pocket RAMM for aspects of your Assessments. See Introduction to Assessment in Pocket RAMM (on page 153).

Assessment Process

You take the following steps to set up and then operate **RAMM** Assessment.

Step	Action	Comments
❶	Activate your Asset Types for **RAMM** Assessment.	You select and Activate those Asset Types you wish to Assess using **RAMM** Assessment. There is a predefined list of Asset Types such as Bridges and Drainage available for Assessment in **RAMM**. These Asset Types will be **Active** by default. If you have set up User Defined Tables (UDTs) for which you have selected the **Assessment** option at the RAMM Modules section these will also be available for Assessment. You do this at the **Assessment Asset Types** screen. See Activating Asset Types for Assessment (on page 41).
❷	Select the Components you want to Assess.	Asset Types such as Bridges are comprised of a number of Components. Bridges, for instance, may have Decks, Braces, Beams, Railings and more. In **RAMM** Assessment you Assess the Components individually. All these Components for an Asset Type are **Included** for Assessment by default. If you do not wish to Assess a Component you make it unavailable. You can also choose whether to Assess the Component Asset, such as the Bridge, as a whole. You do this at the **Assessment Asset Types** screen. See Selecting Components for Assessment (on page 44).
❸	Set the period of Advanced Notice for each Asset Type.	**RAMM** advises you when Assessments are due. When you open the Grid screen for an Asset Type **RAMM** advises you if Assessments are due for Assets of the Asset Type. You configure the period of Advance Notice you require for each Asset Type. You do this at the **Assessment Asset Types** screen. See Setting the Advanced Notice Period (on page 47).
❹	Define Asset Location Information.	When Inspectors are performing Assessments they do this standing next to the Asset. It is very important that the Inspector is in the correct Location in order to positively identify the site of the Asset to be

		Assessed. You define Asset Location Information to make identification of the Asset more certain. You do this at the **Assessment Asset Types** screen. See Defining Asset Location Information (on page 50).
⑤	Define Asset Identification Information.	When Inspectors are performing Assessments it is very important that the Inspector positively identifies the Asset to be Assessed. You define Asset identification information to be printed on the Assessment Worksheets. This makes identification of the Asset more certain. You do this at the **Assessment Asset Types** screen. See Defining Asset Identification Information (on page 53).
	Add your Inspectors.	You add the Master lists of the Inspectors qualified to perform Assessments on each Asset Type. Then, when Assessments are manually entered into **RAMM** they can be associated with the Inspector who performed the Assessment. You do this at the **Inspectors (Asset Type)** screen. See Adding Inspectors (on page 56).
	Add your Assessment Groups.	An Assessment Group is an aggregation of Assessment Items for an Asset Type. For instance, Assessment Items related to Surface Water Channels made of concrete could be grouped under the Assessment Group **Concrete** for the Asset Type, Surface Water Channels. You do this at the **Assessment Group, Item and Responses (Asset Type)** screen. See Adding Groups (on page 60).
	Add your Assessment Group Items.	An Assessment Item is an individual aspect of an Asset which is to be Assessed. It is contained in an Assessment Group. An example of an Assessment Item could be **Drainage** within the Assessment Group **Concrete** for the Asset Type Surface Water Channels. You do this at the **Assessment Group, Item and Responses (Asset Type)** screen. See Adding Items to Groups (on page 63).
	Add your Assessment Item	An Assessment Response is the description of the

	Responses.	Condition of the Assessment Item which is the subject of the Assessment. For instance when assessing the Drainage of a Concrete Surface Water Channel, the Response could be **Excellent**. Assessment Responses are predefined for consistency. You do this at the **Assessment Group, Item and Responses (Asset Type)** screen. See Assessment Responses (on page 65).
	Build your Worksheet Templates.	You create Master Worksheet Templates for your standard Assessments. These are the basis of the Assessment Worksheets. You do this for each Asset Type. You may need several templates for an Asset Type such as Bridges to account for the different Assessment requirements for Timber Bridges, Concrete Bridges and Culverts. You do this at the **Master Worksheet Templates (Asset Type)** screen. See Worksheet Templates (on page 74).
	Schedule your Assessments.	You run a report to preview and print details of future Assessments. You do this at the **Assessment Schedule Report (Asset Type)** screen. See Schedule and Perform Assessments (on page 87).
⑥	Create and print the Worksheets for the Assessors.	You create the Worksheets the Inspectors will use for their Assessments. You then print them off. You do this at the **Creating Worksheet Dialog**. See Printing Assessment Worksheets (on page 96).
⑦	Add the Survey Header for the Assessments.	You add the Survey Header to group the results of the Assessments when they are added to **RAMM**. You do this at the **Enter Assessment Results** dialog. See Survey Headers (on page 102).
⑧	Enter the Assessments.	You enter the Assessments into **RAMM**. You do this at the **Entering Assessment Results (Security Zone)** screen. See Enter an Assessment Result (on page 103).
⑨	Run the Assessment Weighting, Condition and	You run the process to update the Assessment Weighting, Condition and Risk values for your

	Risk process.	Assets.
		You do this at the **Determine Weighting, Condition and Risk** dialog.
		See Determine Weighting, Condition and Risk (on page 115).
10	Check the results.	You view the results which will include any Automatic Reminder Notes for a particular Asset. You run reports for analysis.
		You do this at a variety of screens.
		See Assessment Results (on page 135).
11	Transfer Assessments between databases if required	You can export and import Assessment data to or from an external program.
		You do this at a variety of screens.
		See Importing Assessment Data (on page 149).

Assessment Navigator

You use the **Assessment Navigator** to take you through the Assessment process. If you follow its workflow you will perform the steps required in the correct sequence.

RAMM Assessment Workflow

When you are using **RAMM** Assessment, **RAMM** will provide you with a schedule of Assessments based on parameters you have set.

You can use paper forms or **Pocket RAMM** for the actual Assessments. Either way, you will want to produce a concise Worksheet for each Assessment of each Asset. So time you spend setting up Worksheet Templates will greatly enhance the efficiency of your Assessment programme.

Launch RAMM Assessment

You can launch Assessment from **RAMM Manager** > Projects > Assessment, and either use the Assessment Navigator or select an Assessment action directly from the menu path. See Assessment Navigator (on page 36).

You would go directly to the Assessment action if you were Assessing more than one Asset or were importing or exporting data.

If you were performing a specific Assessment task it may be preferable to launch Assessment from the relevant **RAMM** Asset Grid screen. You would first select or filter the Asset data in the Grid screen. Then you would follow the menu path Actions > Assessment > [Assessment Function].

You can view Assessment values for an Asset on the Assessment tab of the Asset Detail screen.

Assessment Set Up

You need to set up **RAMM** Assessment to match your Network requirements before you can use it in **RAMM**.

You select your Assessment Asset Types, create a Master List of Inspectors, add your Assessment Groups, Items and Responses and then build your Worksheet Templates.

In This Chapter

Select Asset Types to Assess

You select for Assessment only those Asset Types you wish to Assess.

For each available Asset Type you determine:

- whether an Asset Type will be **Active** or **Inactive** for Assessments
- the period of **Advance Notice** you require before an Assessment is due
- for Asset Types such as Bridges and Traffic Signals which have Components, whether any or all of the Components will be included for Assessments.

Default Active Asset Types

You can use **RAMM** Assessment only with the default Assessment Asset Type set. See Assessment Asset Types List (on page 6).

You can also use **RAMM** Assessment with User Defined Tables (UDTs) for which you have selected the **Assessment** option at the **RAMM Modules** section. See the UDT chapter of the *Working with RAMM* guide.

Active by Default

All the Assessment Asset Types in the set are Active by default. If you do not wish to include them in your use of **RAMM** Assessment you should make them Inactive. If you change your mind at a later date you can make the Asset Type Active again.

You highlight the **Asset Type** and select **Active** to toggle the availability of **Asset Types** for **Assessment**

Activating Asset Types for Assessment

Introduction

You select and Activate those Asset Types you wish to Assess using **RAMM** Assessment. There is a predefined list of Asset Types such as Bridges and Drainage available for Assessment in **RAMM**. These Asset Types will be Active by default. If you have set up User Defined Tables (UDTs) for which you have selected the Assessment option at the RAMM Modules section these will also be available for Assessment.

Before you do this you need to have:

- created Assessment UDTs if you intend Assessing them using **RAMM** Assessment. See the UDT chapter of the *Working with RAMM* guide.
- a list of the Asset Types you want to be available for **RAMM** Assessment
- logged in to **RAMM Manager**.

Menu Path

Follow the menu path Projects > Assessment > Navigator > (press Asset Types) to open the **Assessment Asset Types** screen.

Activating Asset Types for Assessment

To do this you follow these steps:

1   Select, in the (unnamed) **Asset Type** list panel, the Asset Type which you want to be available for **RAMM** Assessment.

2   Press **Actions**.
The **Active** and **Default** options will become available.

You highlight the **Asset Type** and select
Active to toggle the availability of **Asset**
Types for **Assessment**

3   All the Assessment Asset Types in the set are **Active** by default. Is the **Active** option selected?

Yes	go to step 5.
No	go to step 4.

4   Select the **Active** option.
This Asset Type becomes available for **RAMM** Assessment.

5   Do you want to set this Asset Type as the Default?

Yes	go to step 6.
No	go to step 7.

6   Select the **Default** option.
This Asset Type is now the Default Assessment Asset Type.

7   Close the Active and Default options.

8   Press ✔ .
Your changes are saved.

9   Is there another Asset Type you wish to make available for RAMM Assessment?

Yes	go to step 1.
No	go to step 10.

10   Close the screen in the normal manner.
Your selected Asset Types will be come available for RAMM Assessment.

Asset Type Components for Assessment

RAMM Asset Types such as Berms are a single unit. Other RAMM Asset Types such as Bridges and Traffic Signals are comprised of a number of Components.

Bridges, for instance may have Decks, Braces, Beams and Railings. Traffic Signals have a Controller, Poles, Lanterns, Logic Racks and more.

Include Components

All Components for an Asset Type are Included for Assessment by default. If you do not wish to Include certain Components in RAMM Assessment you set its Included field value to No.

Basic Asset

RAMM advises you which of the items listed in the Components panel is the Basic Asset and which items, if any, are Components. You are unable to edit this.

You use the Basic Asset for Assessment if, as well as Assessing the Asset Components, you want to perform an overall Assessment of the Asset itself.

Selecting Components for Assessment

Introduction

Asset Types such as Bridges are comprised of a number of Components. Bridges, for instance, may have Decks, Braces, Beams, Railings and more. In **RAMM** Assessment you Assess the Components individually. All these Components for an Asset Type are Included for Assessment by default. If you do not wish to Assess a Component you make it unavailable. You can also choose whether to Assess the Component Asset, such as the Bridge, as a whole.

Before you do this you need to have:

- performed steps 1-10 of Activating Asset Types for Assessment. See Activating Asset Types for Assessment (on page 41).
- a list of the Components you wish to be available for **RAMM** Assessment.

Menu Path

Follow the menu path Projects > Assessment > Navigator > (press Asset Types) to open the **Assessment Asset Types** screen.

Selecting Components for Assessment

To do this you follow these steps:

1   Select, in the (unnamed) **Asset Type** list panel, the Asset Type whose Components you want to be available for **RAMM** Assessment. This must be an Asset Type which is comprised of Components such as Bridge or Traffic Signal.
The Components will be listed in the **Components** list panel.

2   Do you want to make an overall Assessment of the Asset itself such as the Bridge or Traffic Signal?

Yes	go to step 3.
No	go to step 5.

3   Select **Yes** in the **Included** drop-down list adjacent to the Asset. This will be the Component with **Yes** in the **Basic Asset** field. In the graphic above this is the **Bridge** Component.

4   Go to step 6.

5   Select **No** in the **Included** drop-down list adjacent to the Component with **Yes** in the **Basic Asset** field. In the graphic above this is the **Traffic Signal** Component.

6   The Components are Included by default. So all the Included values for the Components should be Yes. For each of the Components which you do not wish to Assess, set the Included value to No.

7   Press ✔.
Your changes are saved.

8   Is there another Asset Type whose Components you wish to select for Assessment?

Yes	go to step 1.
No	go to step 9.

9   Close the screen in the normal manner.
Only the Components you have Included will now be available for Assessment.

Advance Notice for Assessments

You define at the Advance Notice field on the **Assessment Asset Types** screen, the number of days notice you require prior to an Assessment being due for an Asset Type.

You define, at the **Advance Notice** field, the number of days notice you require before an **Assessment** is due for the **Asset Type**

Of course **RAMM** Assessment will not know when to activate this Advance Notice period until you have configured the Assessment Cycle and Next Due date for the Asset Type. You do this when you are setting up Worksheet Templates. See Worksheet Templates (on page 74).

Open Grid or Detail Screen for Notification

Then when you open the Asset Type Detail or Grid screen in **RAMM**, if the next Assessment is due within the Advance Notice period, an **Assessment Automatic Notifications** dialog will open.

For instance, if Surface Water Channels were last Assessed on 10th October 2009, the Assessment Cycle for Surface Water Channels was 12 months, the Advance Notice value was 10 Days and you tried to open the **Surface Water Channel** Grid or Detail screen on 1st October 2010, a dialog, like the one below would open instead.

View and Print Report

Best practice is to view and print the report **RAMM** produces listing those Assessments which are due. You press [OK] at the **Assessment Automatic Notifications** dialog to open the **Assessment Schedule Report (Asset Type)**. You can then view and print the report.

You then know for which of your Assets you need to create Assessment Worksheets.

Setting the Advanced Notice Period

Introduction

RAMM advises you when Assessments are due. When you open the Grid screen for an Asset Type **RAMM** advises you if Assessments are due for Assets of the Asset Type. You configure the period of Advance Notice you require for each Asset Type.

Before you do this you need to have:

- performed steps 1-9 of Selecting Components for Assessment. See Selecting Components for Assessment (on page 44).
- decided the Advance Notice period for each Assessment Asset Type.

Menu Path

Follow the menu path Projects > Assessment > Navigator > (press Asset Types) to open the **Assessment Asset Types** screen.

Setting the Advanced Notice Period

To do this you follow these steps:

1   Select, in the (unnamed) **Asset Type** list panel, the Asset Type whose Advance Notice period you wish to set

2   Type in the **Advance Notice** field, the number of days in advance that you wish to be advised that Assessments are due for this Asset Type. You can also use the **Up** and **Down** arrows to increment or decrement the value in the field.

3   Press ✔.
    Your changes are saved.

4   Do you want to set the period of Advance Notice for another Asset Type?

Yes	go to step 1.
No	go to step 5.

5   Close the screen in the normal manner.
    You will now receive timely Advance Notice of Assessments which are due once you have configured the **Assessment Cycle** and the **Next Due Date.**

Asset Location
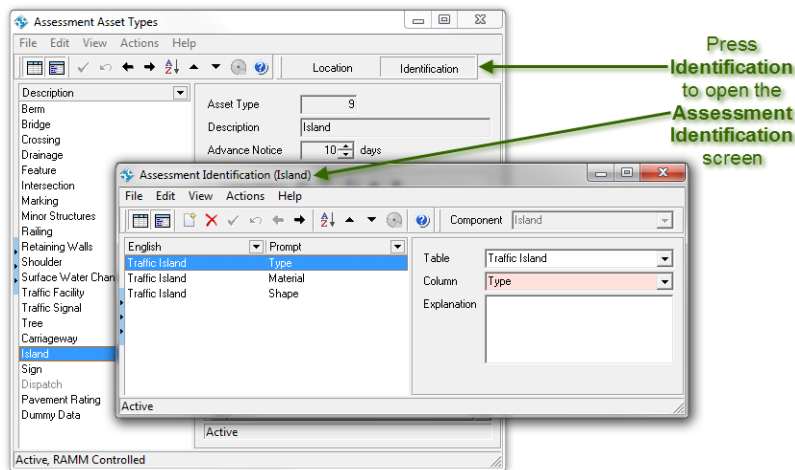
If you are using a manual system for your Assessments, you will want to define how **RAMM** Locates Assets for Assessment. This is so that when the Inspector needs to travel to the Asset, there is enough information so they know where to go. Also when the Inspector is standing next to the Asset to be Assessed, there will be details on the Worksheet which will enable the Inspector to positively Locate the site of the Asset.

Assessment Location (Asset Type) Screen

To add Location information you open the **Assessment Location (Asset Type)** screen. You do this by pressing the Location button on the **Assessments Asset Types** screen.

You then select those column values from the Asset Type table which will be assist the Inspector to determine the Location of the Asset.

In the example below which is for Signs, the Location, Road ID, Side and Offset columns have been selected. This information should be enough for the Inspector to know where to look for the Sign.

If you need to know which columns in **RAMM** tables you need to use then follow the **RAMM Manager** menu path Reports > Database Structure to open the Database Structure Report.

Pocket RAMM Users

You do not need to add Location information if your inspectors use **Pocket RAMM** for Assessments. When the Inspector stands next to the **RAMM** Asset, **Pocket RAMM** identifies the Asset Location automatically.

Defining Asset Location Information

Introduction

When Inspectors are performing Assessments they do this standing next to the Asset. It is very important that the Inspector is in the correct Location in order to positively identify the site of the Asset to be Assessed. You define Asset Location Information to make identification of the Asset more certain.

Before you do this you need to have:

- performed steps 1-5 of Setting the Advanced Notice Period. See Setting the Advanced Notice Period (on page 47).
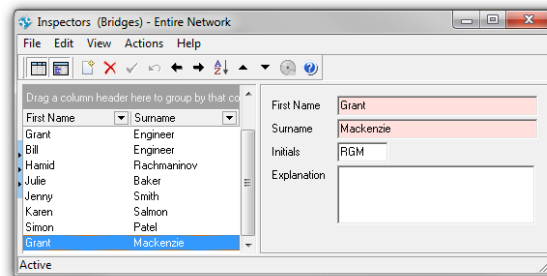- decided which **RAMM** columns you will use to enable the Inspectors to positively identify the Location of Assets for each Assessment Asset Type.

Menu Path

Follow the menu path Projects > Assessment > Navigator > (press Asset Types) to open the **Assessment Asset Types** screen.

Defining Asset Location Information

To do this you follow these steps:

1 Select, in the (unnamed) **Asset Type** list panel, the Asset Type whose Location information you wish to define.

2 Press [Location].

The **Assessment Location (Asset Type)** screen will open.

3 Press [ ].

A new line record will become available in the (unnamed) **Table Column** list panel.

4 Select, from the **Column** drop-down list the column from the Asset Type table which will give useful Location information to the Inspectors.

5 Press [✓].

Your changes are saved.

6 Do you want to select another column which will give useful Location information to the Inspectors?

Yes	go to step 3.
No	go to step 7.

7 Close the screen in the normal manner.

You will be returned to the **Assessment Asset Types** screen.

8 Do you want to define Asset Location information for another Asset Type?

Yes	go to step 1.
No	go to step 9.

9 Close the screen in the normal manner.

Helpful Asset Location information will now appear on printed Assessment Worksheets for the Asset Type(s).

> **Tip** If you need to know which columns in **RAMM** tables you need to use then follow the **RAMM Manager** menu path Reports > Database Structure to open the Database Structure Report.

Asset Identification

If you are using a manual system for your Assessments, you will want to define how **RAMM** identifies Assets for Assessment. This is so that when the Inspector is standing next to the Asset to be Assessed, there will be details on the Worksheet which will enable the Inspector to positively identify the Asset.

Assessment Identification (Asset Type) Screen

To add identification information you open the **Assessment Identification (Asset Type)** screen. You do this by pressing the Identification button on the **Assessments Asset Types** screen.

You then select those column values from the Asset Type table which will be assist the Inspector to determine the identity of the Asset.

In the example below which is for Traffic Islands, the Type, Material, and Shape columns have been selected. This information should be enough for the Inspector to positively identify the Traffic Island.

If you need to know which columns in **RAMM** tables you need to use then follow the **RAMM Manager** menu path Reports > Database Structure to open the Database Structure Report.

Pocket RAMM Users

You do not need to add Location information if your inspectors use **Pocket RAMM** for Assessments. When the Inspector stands next to the **RAMM** Asset, **Pocket RAMM** identifies the Asset Location automatically.

Defining Asset Identification Information

Introduction

When Inspectors are performing Assessments it is very important that the Inspector positively identifies the Asset to be Assessed. You define Asset identification information to be printed on the Assessment Worksheets. This makes identification of the Asset more certain.

Before you do this you need to have:

• performed steps 1-9 of Defining Asset Location Information. See Defining Asset Location Information (on page 50).
• decided, for each Assessment Asset Type, which **RAMM** columns you will use to enable the Inspectors to positively identify the Assets.

Menu Path

Follow the menu path Projects > Assessment > Navigator > (press Asset Types) to open the **Assessment Asset Types** screen.

Defining Asset Identification Information

To do this you follow these steps:

1   Select, in the (unnamed) **Asset Type** list panel, the Asset Type whose identification information you wish to define.

2   Press ⟨ Identification ⟩.
The **Assessment Identification (Asset Type)** screen will open.

3   Press ⟨□⟩.
A new line record will become available in the (unnamed) **Table Column** list panel.

4   Select, from the **Column** drop-down list the column from the Asset Type table which will give useful identification information to the Inspectors.

5   Press ⟨✓⟩.
Your changes are saved.

6   Do you want to select another column which will give useful identification information to the Inspectors?

Yes	go to step 3.
No	go to step 7.

7   Close the screen in the normal manner.
You will be returned to the **Assessment Asset Types** screen.

8   Do you want to define Asset identification information for another Asset Type?

Yes	go to step 1.
No	go to step 9.

9   Close the screen in the normal manner.
Helpful Asset identification information will now appear on printed Assessment Worksheets for the Asset Type(s).

If you need to know which columns in **RAMM** tables you need to use then follow the **RAMM Manager** menu path Reports > Database Structure to open the Database Structure Report.

Assessment Inspectors

Assessment Inspectors are the personnel who perform the Asset Assessments which are entered into **RAMM**. When you add Inspectors to **RAMM** this does not give them any Staff Permissions in **RAMM**. It makes their names available when you are entering the Assessments into **RAMM**. You associate the Inspector with the Assessment. You then have a record of the individual who performed the Assessment.

You define a list of **Inspectors** for each **Asset Type** with which you intend to use **RAMM Assessment**

When the Assessment is manually entered into **RAMM** the name of the Inspector is entered at the same time to identify the person who performed the Assessment.

Inspectors and Pocket RAMM

The list of Inspectors you create is for your own reporting purposes. Creating them at the **Inspectors (Asset Type)** screen does not give them any privileges in **RAMM** or in **Pocket RAMM**.

For an Inspector to perform Assessments in **Pocket RAMM** they need the correct Staff Permissions. See Staff Permissions for Assessment in Pocket RAMM (on page 183).

> You can delete an Inspector only if the Inspector has not already been recorded against any Assessments.

Adding Inspectors

Introduction

You add the Master lists of the Inspectors qualified to perform Assessments on each Asset Type. Then, when Assessments are manually entered into **RAMM** they can be associated with the Inspector who performed the Assessment.

Before you do this you need to have:

* performed steps 1-9 of Defining Asset Identification Information. See Defining Asset Identification Information (on page 53).
* a list, for each Assessment Asset Type, of the Inspectors qualified to Assess the Assets.

Menu Path

Follow the menu path Projects > Assessment > Navigator > (press Inspector) > (select Asset Type) to open the **Inspectors (Asset Type) - (Security Zone)** screen.

Adding Inspectors

To do this you follow these steps:

1 Press .

A new line record will become available in the (unnamed) Inspectors list panel.

2 Type, in the First Name field, the Christian name of the Inspector.

3 Type, in the Surname field, the family name of the Inspector.

4 Type, in the Initials field, the initials of the Inspector.

5 Type in the Explanation field, any notes of use to you. For instance, it may be helpful to record the name of the organisation for which the Inspector works and any relevant contact information.

6 Press .

Your changes are saved.

7 Do you want to add a record for another Inspector for this Asset Type?

Yes	go to step 1.
No	go to step 8.

8 Close the screen in the normal manner.

You will be returned to the **Assessment Navigator**.

9 Do you want to add Inspectors for another Asset Type?

Yes	go to step 10.
No	go to step 13.

10 Press Inspectors.

A drop-down list of Asset Types will become available.

11 Select the Asset Type for which you want to add Inspectors.

The **Inspector (Asset Type) - (Security Zone)** screen will open.

12 Go to step 1.

13 Close the screen in the normal manner.

Inspector records will now be available to associate with Assessments when they are entered into **RAMM**.

Assessment Groups, Items and Responses

You will want your Assessment data to be standardised, itemised and logically grouped. You set this up at the **Assessment Group, Item and Responses (Asset Type)** screen. You launch the screen by following the menu path Projects > Assessment > Preparing > Group, Item and Response > (Asset Type).

You define preset Groups, Items and Responses for each Asset Type for which you want to perform Assessments

This is where you set most of the parameters for the Assessment process. You create a collapsible tree structure that clearly shows the relationships between your Groups, Items and Responses for the Asset Type.

Assessment Groups

An Assessment Group is an aggregation of Assessment Items for an Asset Type. For instance, Assessment Items related to Surface Water Channels made of concrete could be grouped under the Assessment Group Concrete for the Asset Type, Surface Water Channels.

Add a Group

You add Groups by highlighting the Asset Type and then pressing the Add Item Group button. If you have a Group highlighted when you press Add you have the option of creating a Group or an Item. **RAMM Manager** automatically sets the Group at the correct hierarchical level.

Crib Sheet Notes

You can add detailed notes for any information that may be useful to the Inspector performing the Assessment on this Group of Items. These notes can be grouped and printed together.
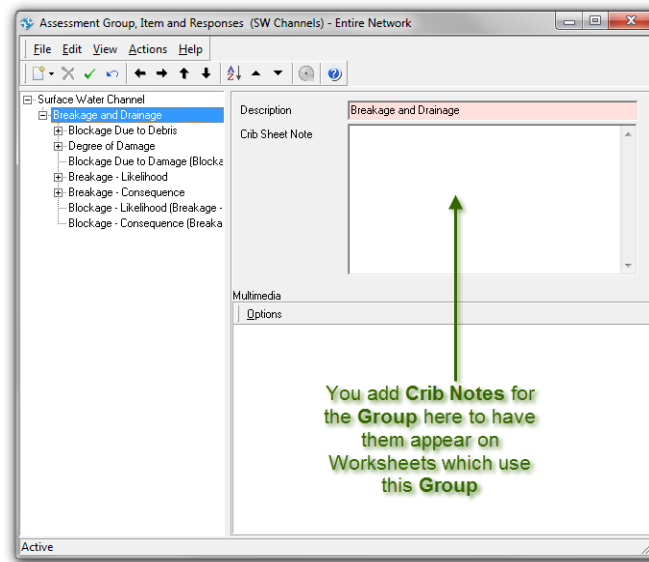
You can add multimedia such as photos to the Crib Sheet Notes so that an Inspector can have an example to which to refer.

Print Group

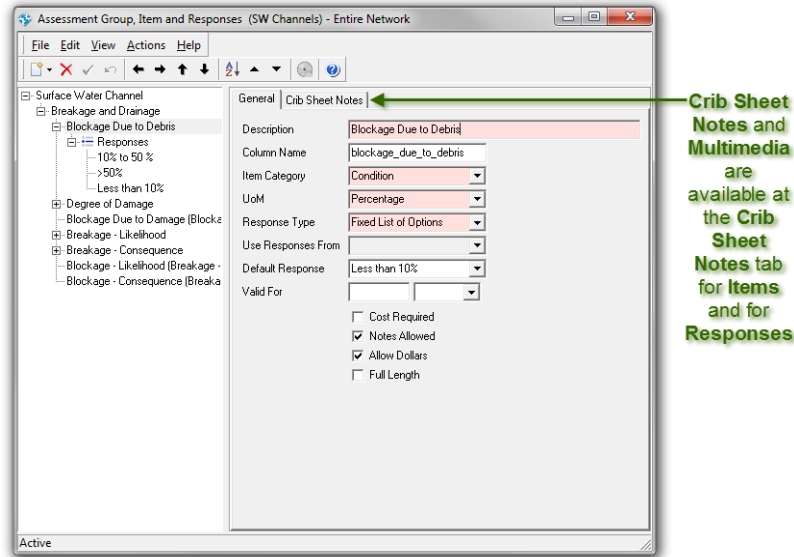You can print Groups using the File > Print menu path.

Adding Groups

Introduction

You create a tree structure of Assessment Groups, Items and Responses to be used for Assessments on each Asset Type. You do this so that your Assessment data can be standardised, itemised and logically grouped.

Before you do this you need to have:

- performed steps 1-13 of Adding Inspectors. See Adding Inspectors (on page 56).
- a logical and workable Assessment Grouping, Itemisation and Response plan which matches your Network Assessment requirements for each Assessment Asset Type.

Menu Path

Follow the menu path Projects > Assessment > Navigator > (press Group, Item and Response) > (select Asset Type) to open the **Assessment Group, Item and Responses (Asset Type)** screen for the Asset Type.

Adding Groups

To do this you follow these steps:

1   Use the mouse pointer to highlight the Asset Type for which you want to add an Assessment Group.

2   Press .

A drop-down panel will become available.

3   Press Item Group.

The (unnamed) Group panel on the right will become available.

4   Type, in the Description field, the name for the Group which makes clear the aspect of the Asset which is the subject of the Assessment.

5   Type, in the Crib Sheet Note field, any clarifying   information which will be of use to the Inspector who Assesses the Asset. The Crib Sheet Note you add will be printed on Worksheets which include this Group.

6   Do you want to add Multimedia files for this Group?

Yes	go to step 7.
No	go to step 8.

7   Add your Multimedia Files. See the Multimedia section of the Detail Screens chapter of the *Using RAMM* guide.

8   Press .

Your changes are saved.

9   Do you want to add another Assessment Group for this Asset Type?

Yes	go to step 1.
No	go to step 10.

10   Go to Adding Items to Groups (on page 63).

Assessment Items

An Assessment Item is an individual aspect of an Asset which is to be Assessed. It is contained in an Assessment Group. An example of an Assessment Item could be Drainage within the Assessment Group Concrete for the Asset Type Surface Water Channels.

Add an Item

You add Items by highlighting the Group which will contain the new Item, or an Item in the Group, and then pressing the Add Item button. If you have a Group highlighted when you press Add you have the option of creating a Group or an Item. **RAMM Manager** automatically sets the Item at the correct hierarchical level.

Crib Sheet Notes

You can add detailed notes for any information that may be useful to the Inspector performing the Assessment on this Item. These notes can be grouped and printed together.

You can add multimedia such as photos to the Crib Sheet Notes so that an Inspector can have an example to which to refer.

Print Items

You can print Items using the File > Print menu path.

Adding Items to Groups

Introduction

You create a tree structure of Assessment Groups, Items and Responses to be used for Assessments on each Asset Type. You do this so that your Assessment data can be standardised, itemised and logically grouped.

Before you do this you need to have:

- performed steps 1-10 of Adding Groups. See Adding Groups (on page 60).

Menu Path

Follow the menu path Projects > Assessment > Navigator > (press Group, Item and Response) > (select Asset Type) to open the **Assessment Group, Item and Responses (Asset Type)** screen for the Asset Type with the Groups created.

Adding Items to Groups

To do this you follow these steps:

1   Use the mouse pointer to highlight the Group for which you want to add Assessment Items.

2   Press ⬚.
A drop-down panel will become available.

3 Press **Item**.

The (unnamed) **Item** panel on the right will become available.

4 Type, in the **Description** field, the name for the Item which makes clear the individual aspect of the Asset which is the subject of the Assessment Item.

5 Select, from the Item Category drop-down list the kind of Assessment for this Item.

6 Type, in the **Crib Sheet Note** field, any clarifying   information which will be of use to the Inspector who Assesses the Asset. The Crib Sheet Note you add will be printed on Worksheets which include this Item.

7 Do you want to add Multimedia files for this Group?

Yes	go to step 7.
No	go to step 8.

8 Add your Multimedia Files. See the Multimedia section of the Detail Screens chapter of the *Using RAMM* guide.

9 Press ✔.

Your changes are saved.

10 Do you want to add another Assessment Group for this Asset Type?

Yes	go to step 1.
No	go to step 11.

11 End of procedure.

Assessment Responses

An Assessment Response is the description of the Condition of the Assessment Item which is the subject of the Assessment. For instance when assessing the Drainage of a Concrete Surface Water Channel, the Response could be Excellent. Assessment Responses are predefined for consistency.

Add a Response

You add a Response by highlighting the Item for which you are creating the Response and then pressing the Add Response button. **RAMM Manager** automatically sets the Response at the correct hierarchical level.

Crib Sheet Notes

You can add detailed notes for any information that may be useful to the Inspector performing the Assessment using these Responses. These notes can be grouped and printed together.

You can add multimedia such as photos to the Crib Sheet Notes so that an Inspector can have an example to which to refer.

Print Items

You can print Items using the File > Print menu path.

Crib Sheet Notes

You may want to add helpful hints to the Inspectors who Assess your Assets. You add these as Crib Sheet Notes. These display on the Worksheets which use this Group.

Item and Response Crib Sheet Notes

If you want to add helpful hints associated with Items or Responses you add these as Crib Sheet Notes. These are added at the Crib Sheet Notes tabs for the Item or Response. These display on the Worksheets which use the Items or Responses.

Multimedia

The standard Multimedia options are also available at Group, Item and Response level. See the Multimedia section of the Working with Detail Screens chapter of *Using RAMM* guide.

Assessment Summaries

An Assessment Summary is normally an averaging of Assessment values on a Pavement. Summary Types of Total, Largest Segment, Standard Deviation, Minimum and Maximum are also available. Assessment Summaries are viewed at the **Treatment Length** screen. You define Assessment Summaries only for length-based Asset Types such as Pavement Rating.

Add a Summary

You add a Summary by highlighting the Item for which you are creating the Summary and then pressing the Add Summary button. **RAMM Manager** automatically sets the Summary at the correct hierarchical level.

Add Another Summary

You can add more than one Summary if required for comparison purposes. If you do this both Summaries will display in their own fields on the Treatment Length screen.

Crib Sheet Notes

You can add detailed notes for any information that may be useful to the Inspector performing the Assessment using these Responses. These notes can be grouped and printed together.

You can add multimedia such as photos to the Crib Sheet Notes so that an Inspector can have an example to which to refer.

Print Items

You can print Items using the File > Print menu path.

Summary Types and Column Names

Assessment Summaries can be defined to summarise differing data sets and user requirements.

Summary Type

You select the Summary Type which best matches your Assessment data set. You select, at the Summary Type drop-down list from the following values:

- Minimum Value
- Maximum Value
- Total
- Largest Segment
- Average
- Standard Deviation.

Description

When you add a Summary to an Assessment Item **RAMM** defaults a suggested Description. **RAMM** first takes the name of the Assessment Item (Local Surface Defects in the example below) and appends the Summary Type value (Average in the example below). The concatenated expression then becomes the default Description (Local Surface Defects Average in the example below).

You can edit this to make it better suit your workflows if required.

Column Name

When you add a Summary to an Assessment Item **RAMM** defaults a suggested Column Name. This is the name of the column which will be appended to the Treatment Length table. **RAMM** first takes the name of the Assessment Item (Local Surface Defects in the example below) and the Summary Type value (Average in the example below), it converts all words to lower case and joins them using underscores. The Summary Type value appended is the abbreviation (Avg in the example below). The concatenated expression then becomes the name of the column (local_surface_defects_avg in the example below).

You can edit this to make it better suit your workflows if required.

Weighting and Coverage Percent

When you add a Summary to an Assessment Item, if the Item has a Fixed List of Responses, you may want to use Weighting in the Summary calculations. If so you select, from the Weighting Type drop-down list, the value which matches the Asset Type parameters. Available values are:

- Not Weighted
- Length
- Area
- Volume.

Set Response Weightings

If you wish to use Weighting in your Summaries you set Summary Weight values for each of the Fixed List of Responses.

Coverage Percent

If your Summaries are not calculated from an entire Treatment Length you might want to have a display field on the Treatment Length screen to show the percentage of the Treatment Length which has been used in the Summary Calculation. You select the Coverage Percent option to achieve this.

Length Weighting Summary Calculations

The following example is a simplified demonstration of the effect of applying a Weighting Type of Length in Summary Average Calculations.

The Effect of Length Weighting Type

If you set up an Assessment Summary with a Summary Type of Average and a Weighting Type of Length, the following example reveals the principles used in Summary Average Calculations.

Summary Type	Average	→	**Average** is the **Summary Type**
Description	Crack Extent Average		
Column Name	treatment_length_crack_exter		
Weighting Type	Length	→	**Length** is the **Weighting Type**
	☑ Coverage Percent		

If you perform an Assessment for Cracking on a Treatment Length, and the two sections Assessed have values of 15% cracked and 2 % cracked then without adjustment the Summary Average for the Treatment Length would be 8.5 [(15 + 2) / 2 = 8.5].

If the section which was 15% cracked were quite short, then this 8.5% figure would be misleading and incorrect.

This is the situation in which you would use the Weighting Type of Length. As you can see, from the example below, the different lengths of the sections with the 15% and the 2% Cracking have been taken into account to result in a more accurate Assessment value of 3.3%.

Length Weighting Summary Example

Treatment Length 1000 m

Two Cracking Assessments are recorded, one of 15%, one of 2%

15% — 100 m

2% — 900 m

$$\frac{(15 \times 100) + (2 \times 900)}{1000} = 3.3\%$$

The Assessment calculated result is 3.3%

Summary Average Calculations

If you have chosen to have an Average Summary figure for Treatment Lengths, this figure is displayed on the Treatment Length screen once the Assessments have been entered into **RAMM**.

The value displayed will be the Response value which most closely matches the Average Condition Rating for the Treatment Length.

Below is an example of a Pavement Rating Assessment Summary Average Calculation.

Response Settings

You can see in the graphic below that there is a fixed set of Responses for Crack Extent Assessments.

Treatment Length Assessment

The graphic below shows an example of an Assessment of a Treatment Length in four roughly equal parts. The four percentages are averaged with the result for the entire Treatment Length being 7.5%. This is in the range of the Response No 2 1 - 10%. So the Condition Rating which would display on the Treatment Length screen would be 2.

Pavement Rating Assessment Summary Average Calculation Example

A Treatment Length has 4 Condition Ratings of roughly equal length

0	1	2	4
0	1	19	10

Responses		Ratings
0	0	0
1	0 - <1%	1
2	1 - 10%	10
3	>10%	19

(0 + 1 + 19 + 10) / 4 = 30 / 4 = 7.5

The Average Condition for the Treatment Length is 7.5
This is in the 1-10% band

So the Treatment Length Condition Rating is 2

> The above calculation has been simplified. In the real world it is likely that Length Weighting Type would be specified.

Worksheet Templates

A Worksheet Template is a **RAMM** item created so that Worksheets used by an Inspector to Assess an Asset can be created easily and consistently. It should contain grouped lists of all the Assessment Items required to perform the Assessment of a particular Asset Type category.

Once you have created your lists of Groups, Items, Responses and Summaries, you are ready to create your Worksheet Templates.

Worksheet Template Initial Parameters

You build Worksheet Templates for each of your most common Assessments. You create them from your Master Lists of Groups, Items and Responses.

For instance you might create different Worksheet Templates for different Asset Type categories such as Timber Bridges, Concrete Bridges and Culverts. They would all have different Assessment Items and Responses. They may also have differing Assessment cycles.

Description

You define in the Description field, the heading you want to appear at the top of Worksheets created from this Template.

RAMM creates the Worksheet title from a concatenation of the Asset Type (Bridge in the example below), the word Assessment, hyphenated with the Description you defined (Wooden in the example below). So the heading is Bridge Assessment - Wooden.

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Printed: Tuesday, 21 September 2010 16:29   Page: 1

Bridge Assessment   Wooden
[Sample Only]

The **Worksheet** title is a concatenation of the **Asset Type** and the **Description** you defined

Location
[Start, End, and/or Road Name will go here]

Identification
Bridge:
Name:
Local Description:

Bridge Assessment identifies the **Asset Type**

Wooden is the **Description** you defined

Assessment Cycle

You define the length of the Assessment Cycle for the Asset Type category for which this Worksheet Template is being created. **RAMM** uses this figure in combination with the date of the most recent Assessment to calculate the Next Due date for an Assessment for the Asset Type category.

Next Due

When you initially create a Worksheet Template, you specify the date on which the next Assessment is due for the Asset Type. You select this date from the Next Due drop-down calendar.

The default Next Due value is twelve months from the current date.

> If you do not select a Next Due value, **RAMM** will not initially schedule Assessments for the Asset Type category.

When you have performed your initial Assessments, **RAMM** uses the combination of the most recent Assessment date and the Assessment Cycle value to schedule future Assessments. **RAMM** updates the Next Due date with the results of the calculations.

> When you are creating Worksheets from an existing Worksheet Template you can select a date from the Next Due drop-down calendar to override the existing Assessment schedule.

Worksheet Template Groups and Items

When you have defined the initial Worksheet Template parameters you then add the Assessment Groups and Items for the Asset Type category. An example of an Asset Type category could be Concrete Bridges.

You add the   Assessment Groups and Items in the Items panel of the **Master Worksheet Templates (Asset Type)** screen.

Asset Type Category Groups

In the example below there are two Pavement Rating categories being Flexible Pavement and Rigid Pavement. For Flexible Pavement there are two groupings of the Assessment Groups and Items being Condition and Other.

Grouping Names

The Assessment Groups and Items are grouped in the Items panel by the values selected at the Item Category field on the Item panel of the **Assessment Group, Item and Responses (Asset Type)** screen. Possible values are Condition, Risk Likelihood, Risk Consequence and Other.

Items Panel

You add each individual item to be Assessed at the Items panel of the **Assessment Groups, Items and Responses (Asset Type)** screen.

You can not add an Assessment Item unless you have first selected its associated Assessment Group at the Group drop-down list.

You add an Assessment Item for each Assessment required for the Asset Group. You can select from the Item drop-down list any of the Items you defined at the **Assessment Groups, Items and Responses (Asset Type)** screen. See Adding Items to Groups (on page 63).

Add All Items from a Group

The first time you add an Assessment Item **RAMM** will offer to add every other Assessment Item from the Assessment Group.

If you press Yes, **RAMM** will add and group the Assessment Items.

All the **Items** in the
Assessment Group
have been grouped by
their **Item Category**
value **Condition**

All the **Items** in the **Assessment Group**
have been added automatically by **RAMM**

Worksheet Template Responses

An Assessment Response is the description of the Condition of the Assessment
Item which is the subject of the Assessment. For instance when assessing the
Drainage of a Concrete Surface Water Channel, the Response could be Excellent.
Assessment Responses are predefined for consistency.

You can select from the Response drop-down list any of the Responses you defined
at the **Assessment Groups, Items and Responses (Asset Type)** screen. If you select a
Response at the Response drop-down list this will not influence the Inspector
performing the Assessment towards a particular Response. The Response does not
appear on the printed Worksheet. It is used as the default value when entering the
Assessment into **RAMM**.

If you select a **Response** from the **Response drop-down** list this becomes the default when entering an **Assessment** into **RAMM**

It does not appear on the printed **Worksheet**

For each **Worksheet Template** You define **Assessment Items**

The **Weighting** for each **Group** must add up to **100**

If there is more than one **Group, RAMM** displays the total for all the **Groups** combined, in this case there are two **Groups** so the total is 200

Default Response

The Response becomes the default when the Assessment is entered into **RAMM**.

Worksheet Template Weightings

Weighting is the degree of priority given to an Assessment. It is a value given to an Item. It is used to determine where resources should be committed as a priority.

The Assessment Calculations are simpler if the sum of the Weightings for an Assessment Group is always 100. So **RAMM** enforces this.

One is the Default Weighting

When you add an Item line record in the Items panel, RAMM sets the default Weighting value to 1. You can not save a Group record unless the Weightings sum to 100. RAMM will warn you of this if you forget.

Worksheet Template Maintenance

You can add, edit and delete Worksheet Templates. You can also print the Worksheet Template details.

Edit a Template

After you have edited a Worksheet Template, RAMM gives you the option of applying the changes you have made to all the Worksheets based on that Template which are currently unused.

Delete a Template

You may delete a Worksheet Template. You highlight the Template you wish to delete and press the standard RAMM Delete button.

If you attempt to delete a group of Assessment Items all at once you will not be able to do this. You need to delete one line record at a time.

You delete
Assessment Item
line records one at a
time

You can not simply
highlight the **Group**
name and press
Delete

Print Worksheets

You use the Worksheet Templates to create and print out Worksheets for each
Assessment.

Follow the menu path
File > Print to print a
Worksheet Template

Preview a Worksheet Template

You will want to preview your Worksheet Template before you create Worksheets
from it.

You follow the menu path File > Preview Worksheet.

Follow the menu path
File > Preview Worksheet
to see what the
Worksheet will look like

Preview the WorkSheet

The **Assessment Worksheet Report - (Asset Type)** will open displaying the empty Worksheet.

Preview Crib Sheet

If you want to view not only the Worksheet but also the Crib Sheet notes, you follow the menu path View > Show Crib Sheet when viewing worksheet. This toggles the Crib Notes view. So when you no longer wish to view the Crib Notes as well as the Worksheet, you follow the same menu path again to toggle off Crib Notes view.

Preview the WorkSheet and Crib Notes

You follow the menu path File > Preview Worksheet. The first few pages of the Assessment Worksheet Report will be the **Assessment Crib Sheets - (Asset Type)**. The **Assessment Worksheet Report - (Asset Type)** will follow the Crib Sheet notes.

Schedule and Perform Assessments

Once you have set up **RAMM** Assessment you can schedule and perform Assessment Inspections. Best practice is to set up **RAMM** to notify you in advance that your Assets are scheduled for Assessment. **RAMM** schedules Assessments for your Assets based on the parameters you have set.

You can override the schedule if required.

In This Chapter

Set Assessment Schedule Parameters

You set three parameters to schedule your Assessments. You define:

- The number of days in advance you wish **RAMM** to notify you that an Assessment is due.
- The number of months between Assessments
- The date for the initial Assessment.

You do this when you are setting up **RAMM** Assessment.

Advance Notice

When you are setting an Asset Type to be Active, you define the numbers of days Advance Notice for Assessments which are due. See Default Active Asset Types (on page 40).

You define, at the **Advance Notice** field, the number of days notice you require before an **Assessment** is due for the **Asset Type**

Initial Date

When you are defining your Assessment Worksheet Templates, you set the number of months between Assessments. You also set the date by which the next Assessments are due for the Assets for which this Worksheet Templates will be used. See Worksheet Template Initial Parameters (on page 75).

You set the date by which the next **Assessment** is due

You set the number of months between **Assessments**

Automatic Notification

When you have defined the Advance Notice, Assessment Cycle and Next Due date for an Asset Type, **RAMM** will notify you when Assessments are due.

Open Grid or Detail Screen for Notification

Then when you open the Asset Type Detail or Grid screen in **RAMM**, if the next Assessment is due within the Advance Notice period, an **Assessment Automatic Notifications** dialog will open.

For instance, if Surface Water Channels were last Assessed on 10th October 2009, the Assessment Cycle for Surface Water Channels was 12 months, the Advance Notice value was 10 Days and you tried to open the **Surface Water Channel** Grid or Detail screen on 1st October 2010, a dialog, like the one below would open instead.

View and Print Report

Best practice is to view and print the report **RAMM** produces listing those Assessments which are due. You press [OK] at the **Assessment Automatic Notifications** dialog to open the **Assessment Schedule Report (Asset Type)**. You can then view and print the report.

You then know for which of your Assets you need to create Assessment Worksheets.

Ignore Assessments

If you do not want to deal with the Assessments which are due you press [Cancel].
The **Assessment Automatic Notifications** dialog will close and the Grid or Detail screen
will open.

> If Assessments are due, the **Assessment Automatic Notifications** dialog
> will open every time you open a Grid or Detail screen for the
> Asset Type until you have created Worksheets for the Assets
> requiring an Assessment.
>
> If you want to prevent this message screen from appearing again
> you select Don't show this message again.
>
> If you do this, notifications are not automatically displayed
> whenever you open a Grid screen or Detail screen containing an
> Asset with an Assessment due. To turn the notifications back on
> again, you can Reset All Warning Dialogs in **RAMM** by following the
> menu path Options > Reset All Warning Dialogs.

Creating an Assessment Schedule

Introduction

Once you have set up **RAMM** Assessment you can schedule and perform
Assessment Inspections. Best practice is to set up **RAMM** to notify you in advance
that your Assets are scheduled for Assessment. **RAMM** schedules Assessments for
your Assets based on the parameters you have set. You create an Assessment
Schedule to ensure that Assessments are performed in a timely manner when they
are due.

Before you do this you need to have:

• set up **RAMM** Assessment. See Assessment Set Up (on page 39).
• logged in to **RAMM Manager**.

Menu Path

Follow the menu path   Projects > Assessment > Assessment Navigator to open the
Assessment Navigator.

▶ **Creating an Assessment Schedule**

To do this you follow these steps:

1   Press **Schedule**.
A list of Assessment Asset Types will become available.

2   Select the Asset Type for which to create an Assessment Schedule.
The **Assessment Schedule Report (Asset Type)** screen will open. It may take some time for your report to load depending on the decisions you have made and the size of your Network.

3   Use the Layout to ensure that only those columns that you want in the printed report are displayed. See the Filters chapter of *Using RAMM* guide.

4   Adjust the column widths to maximise the information display space usage.

5 Press 🖶.

A preview of the report will open.

6 Does the report display as you require.

Yes	go to step 8.
No	go to step 7.

7 Go to step 3.
8 Print the report.

Create Assessment Worksheets

If you use printed Assessment Worksheets, rather than **Pocket RAMM** to record your Asset Assessments, then you must first create and then print Assessment Worksheets for the Assessments.

You do this at the **Creating Worksheet** dialog. Your options may differ dependent on whether you launched the dialog from **RAMM** or from **RAMM Manager**. See Worksheet Creation Options (on page 93).

Worksheet Creation Options

You have slightly different options for creating Worksheets dependent on whether you opened the **Creating Worksheet Dialog - (Security Zone)** dialog from **RAMM Manager** or from the Grid or Detail screen for an Asset Type in **RAMM**.

At the **Asset Type** drop-down list, select a single **Asset Type**, to be offered **Master Worksheet Templates** only for that **Asset Type**

RAMM Manager Options

When you open the **Creating Worksheet Dialog - (Security Zone)** dialog from **RAMM Manager**, you can opt to list all available Asset Types or just a single Asset Type. In the graphic above, only one Asset Type, Surface Water Channel, has been selected at the Asset Type drop-down list on the Options section of the **Assessment Navigator**. So the options only for this Asset Type have been offered.   In the graphic below All has been selected at the Asset Type drop-down list on the Options section of the **Assessment Navigator**. So all Assessment Asset Types are listed. Only those Asset Types for which Assessment Items, Groups and Responses have been defined are available for selection.

When you run the Worksheet creation process from **RAMM Manager** Worksheets are created for all Assets. You do not have the option to filter the Assets so that Worksheets are created for a defined subset of the Assets. You can do this from **RAMM**.

If you open this dialog from **RAMM Manager** you can opt to list all **Asset Types** for selection

If you run this process from **RAMM Manager** then **Worksheets** will be created for all **Assets** of the selected **Asset Types**

RAMM Options

When you open the **Creating Worksheet Dialog - (Security Zone)** dialog from **RAMM** the only Asset Type available for the creation of Worksheets will be the one from whose Detail or Grid screen you have opened the dialog.

If you have filtered the Grid screen, then Worksheets will be created only for those Assets in the Grid.

If you have launched the **Creating Worksheet Dialog - (Security Zone)** dialog from a Detail screen then a Worksheet will be created only for the Asset in the Detail screen.

If you open this dialog from a **Grid** or **Detail** screen in **RAMM**, the available options are for the screen's **Asset Type** only

If you run this process from **RAMM** then **Worksheets** will be created only for the **Assets** listed in the **Grid** or for the single **Asset** in the **Detail** screen

Creation Options

There are three Worksheet creation options to determine the circumstances under which **RAMM** will create a Worksheet for an Asset.

- **Create Worksheets for all Assets**
  Select this option to create Worksheets for the selected Assets even if a current Worksheet already exists.
- **Create Worksheet for Assets where one does not already exist**
  This is the default option. Worksheets will be created for all the selected Assets unless a current Worksheet exists for the Asset.
- **Create Worksheet for all Assets replacing empty ones of the same type**
  Select this option if the existing Worksheets have been made redundant by changes to the Worksheet Template and you wish to replace them.

Printing Assessment Worksheets

Introduction

Once you have created Worksheets for the Assets which require Assessment, your Inspectors will perform the Assessments. If you do not use **Pocket RAMM**, you will want to print the Worksheets for the Inspectors to complete. You can do this from within **RAMM** or **RAMM Manager**. In this procedure the Worksheets are printed from **RAMM Manager**.

Before you do this you need to have:

- created your Assessment Schedule. See Creating an Assessment Schedule (on page 90).
- created the Worksheets you want to print. See Create Assessment Worksheets (on page 92).
- logged in to **RAMM Manager**.

Menu Path

Follow the menu path   Projects > Assessment > Assessment Navigator to open the **Assessment Navigator.**

► Printing Assessment Worksheets

To do this you follow these steps:

1 Press Printing Worksheets.
The **Assessment Printing Worksheet Dialog** will open.

You have a variety of options to select one or more **Worksheets** for printing, particularly by **Security Zone** or **Date Range**

2 Select the Asset Type from the Asset Type drop-down list.
3 In the Location Options section perform one of the following actions.

If	then
you want to limit the Assessment Worksheet print run by area	select the appropriate Security Zone from the Security Zone drop-down list.
you know the Road ID of the Road where the Assets are Situated	type the Road ID in the (unnamed) Road ID field.

If	then
You know the name of the Road where the Assets are situated	in the (unnamed) **Road Name** drop-down list, start typing the name of the Road. The autosearch function will default your Road Name when you have typed in enough characters for a unique match.

4   Do you want to limit your print run by date range?

Yes	go to step 5.
No	go to step 6.

5   In the Date Range section select the range of dates for the Worksheet print run.

6   Press ⌈ Prepare ⌉.
       The **Assessment Worksheet (Asset Type)** screen will open.

7   Does the report list the Worksheets you require for printing?

Yes	go to step 9.
No	go to step 8.

8   Go to step 3 and correct your settings.

9   Select or clear the **Layout** options so that only the values you require are displayed.

10 Select the check boxes for those Assets for which you want to print a Worksheet. Press to select all Assets. Press to clear all selections and start the Asset selection process from the start.

11   Press [printer icon].

A preview of the Worksheet will open.

12   Press [printer icon].

The Worksheets will be printed.

Unused Worksheet Deletion

Once you have created a Worksheet, you cannot change its details. If after creating a Worksheet you discover it is incorrect you can delete it and then create one which is correct,

You can do this from **RAMM** or from **RAMM Manager**.

If you are in **RAMM**, you open a Grid or Detail screen and follow the menu path Actions > Assessment > Performing Assessment > Delete Empty Worksheets.

If you are in **RAMM Manager** you follow the menu path Projects > Assessment > Performing Assessment > Delete Empty Worksheets.

You then make your selections. If you are performing the operation from **RAMM** you will be offered options only for the Asset Type of the Detail or Grid screen from which you opened the dialog. If you are performing the operation from **RAMM Manager** you will have to select only those Asset Types for which you want to delete Worksheets. In the graphic below the list of Asset Types indicates that the dialog was accessed from **RAMM Manager**.

You press [Delete] to begin the deletion process. A **Warning** dialog will open asking if you really want to delete all the empty Worksheets for the Assets.

You press [Yes]. The empty Worksheets are deleted.

If you have already used a Worksheet you cannot delete it.

Record the Results

Once you have performed your Assessments you enter the results into **RAMM**.

If you want to group your Assessments, you create a Survey Header with which to associate them. You then enter the Assessments into **RAMM**.

If you are entering a single Assessment, you would do this at the Detail screen for the particular Asset. If you are entering multiple Assessments you would use the **Assessment Navigator**.

If you want to view the resulting Weighting, Condition and Risk values you then run the process from within **RAMM Manager**.

> **Tip**
> You can enter Assessments for an Asset only if you have first created a Worksheet for the Asset.   This ensures that when you are entering the Assessment into **RAMM** the data fields match the Asset Type and the format of your Assessment.

In This Chapter

Survey Headers

You may want to group Assessments performed by the same Inspector or team of Inspectors under the same Contract. If so, you create a Survey Header with the information you require.

You add Assessment Survey Headers at the **Assessment Survey Header** screen. The **Assessment Survey Header** screen is a standard **RAMM** Header screen.

Menu Paths

You access the **Assessment Survey Header** screen either from **RAMM** or from **RAMM Manager**.

From **RAMM** you first launch the screen for the Asset or Asset Type for which you are entering Assessments. You then follow the menu path Actions > Assessment > Recording the Results > Survey Header.

From **RAMM Manager** you follow the menu path Projects > Assessment > Recording the Results > Survey Header.

You then associate Assessments with the Survey Header when you are entering the Assessment results into **RAMM**.

Associate Survey Header with Assessments

You associate the Survey Header with Assessments at the **Enter Assessment Results** dialog. This dialog opens when you press Entering Assessments on the **Assessment Navigator** and All is selected at the Asset Type drop-down list.

You select the Survey Header at the Survey drop-down list. If you select a Survey Header then all the results entered will be associated with the selected Survey Header.

> Assessment Survey Headers are not Asset-specific. So if an Inspector performs Assessments on a variety of Asset Types at the same time, they can all be recorded under the same Survey Header.

Enter an Assessment Result

You can enter an Assessment for a particular Asset from its Detail screen in **RAMM**.

You would do this only if you were entering a single Assessment for one Asset. If you are entering a number of Assessments you would normally do this using the **Assessment Navigator**.

Asset Detail Screen

You open the Detail screen for the particular Asset for which you want to enter an Assessment. From the Asset Detail screen, you follow the menu path Actions > Assessment > Recording the Results > Entering Assessments. If you prefer you can use the **Assessment Navigator**.

This opens the **Entering Assessment Results (Security Zone)** screen. This is where you enter the results of the inspection.

The Groups, Items and Responses will match those from the Worksheet used for the Assessment.

General and Item Notes

When you enter the Results of an Assessment into **RAMM** you can enter Notes at the same time. These Notes can be an explanatory part of the record for the Assessment.

They can also be configured to become reminders to the Inspector carrying out the next Assessment. See Print Note on Next Worksheet (on page 105).

The General Note for the Asset can be configured to appear on the next Assessment Reminder for the Asset. See Show Note with Next Reminder (on page 107).

Item Notes

You can associate Notes with an individual Assessment Item as below. You type the Note in the (unnamed) Note field beneath the Item Response.

Asset Note

You can associate a Note with the Assessment as a whole. This associates the Note with the Asset which is the subject of the Assessment.

You add these Notes at the Notes field in the lower (unnamed) General section.

Print Note on Next Worksheet

The Item Notes and the General Note can be configured independently to display on the next Worksheet for the Asset.

Item Response Notes

You can associate a Note with an individual Assessment Item Response as below. You type the Note in the (unnamed) Note field below the Item Response.

You select the (unnamed) Show on next Assessment option to have the note printed on the next Assessment Worksheet for the Asset.

You can see in the Surface Water Channel Assessment graphic below that the Note leaves from three oak trees in vicinity has been printed on the second page of the Worksheet.

General Asset Notes

You can associate a Note with the Asset being Assessed as below. You type the Note in the Note field in the lower (unnamed) General section.

You select the (unnamed) Show on next Assessment option to have the note printed on the next Assessment Worksheet for the Asset.

Worksheets

In the graphics below you can see the results of selecting the Show on next Assessment options for the Item Response and the Asset itself.

Page 1 of the Assessment Worksheet (below) is the crib sheet for the Inspector.

Page 2 of the Assessment Worksheet (below) is the section to be completed by the Inspector. The two Notes are plainly visible.
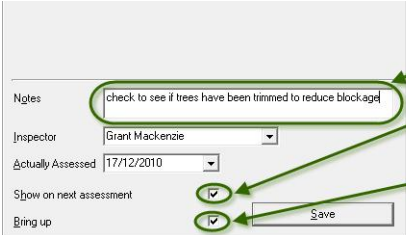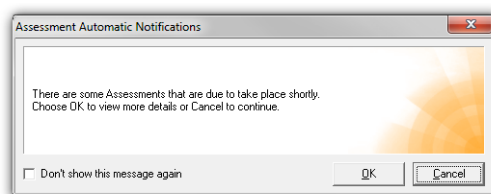

Show Note with Next Reminder

The General Note can be configured to be brought up automatically when due with the Bring up check box.

This Note is for the Asset

Select this option to have the **Note** printed on the next **Worksheet** for this Asset

Select this option to have the **Note** appear with the next reminder that an Assessment is due for this Asset

When Assessments are due the following Notification dialog opens when the Grid screen is opened for the Asset Type.

If you select **Don't show this message again** when the Notes are shown for one screen, then they will not be automatically displayed whenever you open any Grid screen or Detail screen containing an Asset with a Note attached to it.

To turn the warning back on again, you need to go into your global **RAMM** preferences and reset all warning dialogs.

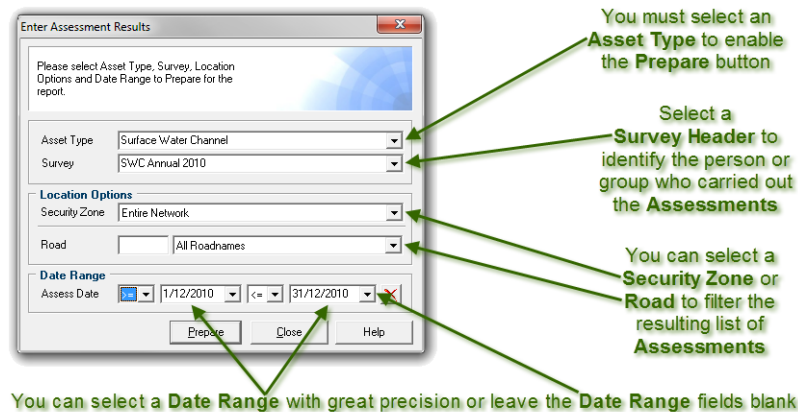# Enter Assessment Results in Bulk

Normal practice is to enter Assessments into **RAMM** for a large number of Assets in the same session.

You do this from **RAMM** or from **RAMM Manager**. Best practice is to use the **Assessment Navigator**. If you choose not to use the **Assessment Navigator** you can access the relevant screens directly from the menu paths in **RAMM** and **RAMM Manager**.

If you have created and printed only the set of Worksheets you want to enter, then when you will not need to filter the list of completed Assessments. Otherwise you will want to filter the list.

Filter the Assessment List

You press Entering Assessments on the **Assessment Navigator** to open the **Enter Assessment Results** dialog. You use this screen to filter the Assessment Worksheets you have created so that only the Assessments which you want to enter are listed.

Asset Type

If, prior to pressing Entering Assessments on the **Assessment Navigator** you have selected an Asset Type at the Asset Type drop-down list in the Options section of the **Assessment Navigator**, the **Enter Assessment Results** will not open. Instead all open Assessments for the Asset Type will be listed in the **Entering Assessment Results - (Security Zone)** screen.

Assessment Inspectors and Consultants

You might employ your own Inspectors to carry out your Assessment Inspections. Alternatively you might employ external consultants to carry out your Assessment Inspections. You may even use a combination of both.

You use **RAMM** to associate the individual Inspector who carried out the Assessment and the organisation to which he or she belongs with each individual Inspection record.
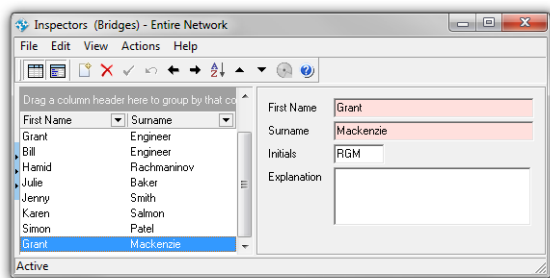
To do this you:

• add your Inspectors

- associate the organisation with the Survey Header and
- associate an Inspector with each Assessment record.
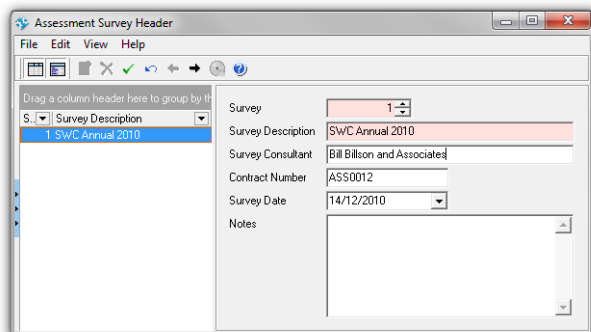
Add Your Inspectors

You define a list of Inspectors for each Asset Type. You do this at the **Inspectors (Asset Type)** screen. See Adding Inspectors (on page 56).

Then when you are entering an Assessment record into **RAMM** the name of the person who performed the Assessment becomes available at the Inspector drop-down list on the **Entering Assessment Results - (Security Zone)** screen. See below.

Associate the Organisation

You associate the organisation which performed the Assessment Inspections with a Survey Header at the **Assessment Survey Header** screen. These organisations are not predefined   in **RAMM**. You use the freeform Survey Consultant field.

Then when you select the Survey Header at the Survey field the   organisation which performed the Assessment Inspections is associated with all the Assessments associated with the Survey Header. See Associate Survey Header with Assessments (on page 102).

You select the
Survey Header from
the **Survey** drop-
down list

This identifies the
Survey date,
Contract and the
Consultant who
carried out the
Assessment

Associate the Inspector

When you are entering an Assessment into **RAMM** you select the name of the Inspector who performed the Inspection from the Inspector drop-down list.

You select the name of the
Inspector from the **Inspector**
drop-down list to show who
performed the **Assessment**

Entering Assessment Results

You enter Assessments into **RAMM** based on completed Worksheets. If you wish to enter an Assessment for a single Asset you would do that from the Detail screen in **RAMM**.   If you wish to enter Assessments for more than one Asset you do this from the Asset Type Grid screen in **RAMM** or from **RAMM Manager**. You can enter multiple Assessments by following the menu path directly to the **Entering Assessment Results (Security Zone)** screen or from the **Assessment Navigator**. This procedure is from the **Assessment Navigator**.

Before you do this you need to have:

- set up Assessment. You do this at a variety of screens. See Assessment Set Up (on page 39).

- scheduled Assessments for the Assets. See Schedule and Perform Assessments (on page 87).
- created the Assessment Worksheets. See Worksheet Templates (on page 74).
- created an Assessment Survey Header. See Survey Headers (on page 102).
- the completed worksheets from the Inspectors
- logged in to **RAMM Manager**.

Menu Path

Follow the menu path Projects > Assessment > Assessment Navigator > (press Entering Assessments) to open the Enter Assessment Results dialog.

Entering Assessment Results

To do this you follow these steps:

1   Select, from the Asset Type drop-down list, the Asset Type of the Assets Assessed. Prepare will become enabled.

2   Select the Survey Header for the Assessments from the Survey drop-down list.

3   If you wish to filter the list of Assets by Security Zone, Road or Date Range, make your selections.

4   Press Prepare .
The Enter Assessment Results dialog will close. **The Entering Assessment Results (Security Zone)** will open with the Asset Assessments listed.

5   The layout of the Assessment panel on the right of the **Entering Assessment Results (Security Zone)** screen will vary dependent on the Asset Type and the Worksheet Template used. The above graphic shows the panel laid out for the Surface Water Channel Asset Type. You select in the (unnamed) **Assessments List** panel, the Assessment to enter into **RAMM**.

6   Select the appropriate Responses from the drop-down lists in the panel to the upper right of the screen named for the Assessment ID.

7   Type, in the (unnamed) **Notes** fields, any Notes the Inspector has made.

8   If the Inspector has indicated that the Note should be printed on the next Assessment Worksheet for the Asset, select the (unnamed) **Show on next Assessment** option adjacent to the **Notes** field.

9   Add any Notes for the Asset in the **Notes** field in the (unnamed) **General** section.

10   Select, from the **Inspector** drop-down list, the name of the Inspector who performed the Assessment.

11   Select, from the **Actually Assessed** drop-down calendar, the date on which the Assessment was performed.

12   Should the Asset Note be printed on the next Assessment Worksheet for the Asset?

Yes	go to step 13.
No	go to step 14.

13   Select the **Show on the next assessment** option.

14   Should the Asset Note be brought up automatically in association with the automatic notification for the next Assessment?

Yes	go to step 15.
No	go to step 16.

15   Select the **Bring up** check box.

16 Is [Save and move to next] available?

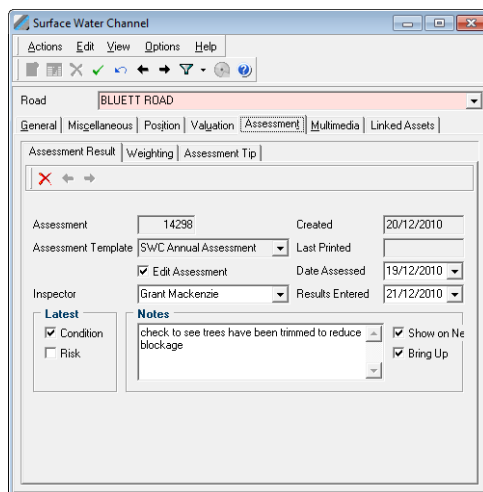| If	then
it is available	there are more Assessments to be entered. Go to step 17.
it is not available	there are no more Assessments to be entered. Go to step 19.

17 Press [Save and move to next].
The Assessment record will be saved. The **Assessment** panel will default to the next Assessment to be entered.

18 Go to step 6.

19 Close the screen in the normal manner.

View an Assessment

Once you have entered an Assessment into **RAMM** you can view it on the **Assessment** tab of the Detail screen for the Asset. You can perform basic editing tasks at the screen if required.

> The Assessments are viewed at the Assessment Result tab of the Asset Detail screen.
>
> If you wish to see the the results of the Assessment such as the Weighting values for Condition and Risk Management, you look on the Weighting tab. See Weighting (on page 116).

> If you want to view the resulting Condition, Asset Life and Risk Management values, you do this at the Miscellaneous tab.

Determine Weighting, Condition and Risk

When you have recorded your Assessments you then process the records to calculate the Weighting for Condition, Risk Likelihood and Risk Consequence for each Assessed Asset.

You can also update the Asset Condition, Risk Likelihood, Risk Consequence and Risk codes. See .

You do this at the **Determine Weighting, Condition and Risk** dialog. You open this dialog in **RAMM Manager** either by pressing Determine Weighting, Condition and Risk on the Assessment Navigator or by following the menu path Projects > Assessment > Recording the Results > Determine Weighting, Condition and Risk.

> Risk Management in **RAMM** Assessment conforms to the Standards Australia/Standards New Zealand document *Risk Management Guidelines HB 436:2004*. This is achieved using the **Risk Matrix**. See **Risk Matrix** (on page 7).

Weighting

Weighting is the degree of priority given to an Assessment. It is a value given to an Item. It is used to determine where resources should be committed as a priority.

Weighting is used in Condition, Likelihood and Consequence calculations.

Weighting Tab

There is a default list of Asset Types which can are available for **RAMM** Assessment. See Assessment Asset Types List (on page 6).

Whether or not you perform Assessments for all of these Asset Types, the Detail screens for each Asset of these Asset Types will have an Assessment tab. On that tab there will be a subsidiary tab Weighting. On that tab there will be two sections Condition and Risk Management.

It is in these sections that you can view the Weightings for Condition, Likelihood and Consequence. These values will be for viewing only and will be unable to be entered or edited.

Condition Weighting

In **RAMM** Assessment the Condition of an Asset describes its fitness or readiness for use. Typical **RAMM** and NAMS Conditions are Excellent, Good, Average, Poor and Very Poor. Assessment Condition Weighting is used to determine Risk of Failure and the Consequences of Failure.

When you set up Assessment in **RAMM** you define Assessment Items and Responses to record the Condition of an Asset. See Assessment Groups, Items and Responses (on page 58). When an Inspector has performed an Assessment of the Asset this is entered into **RAMM**. See Enter an Assessment Result (on page 103). You then use **RAMM** to calculate the Condition Weighting to assist you decide whether action is required for the Asset.

Condition Weighting values are calculated from the **Item Weighting(s)** as defined in the **Worksheet Template** and the **Weightings** for each individual **Item Response**

Weighting Factors – Item Responses

When you are creating Responses for Assessment Condition Items you assign a Summary Weight value. The greater the value, the worse the Condition of the Asset.

For **Items** which assess the **Condition** of an **Asset**

You assign a **Summary Weight** value

Weighting Factors – Worksheet Groups

When you are creating a Worksheet Template for an Asset Type, you assign a Weighting value to each individual Item in an Assessment Condition Group. The greater the value, the more likely that the Condition of the Asset will necessitate restorative action.

For instance, it is more likely that you would need to take restorative action if an Asset such as Surface Water Channel were blocked by damage than if the same Asset were covered in graffiti. So when you create a Worksheet for Surface Water Channel you would give the Blockage Due to Damage Item a higher Weighting value than the Graffiti Item.

The Calculation

The Response value for each Item in the group is multiplied by its Weighting percentage as defined in the Worksheet Template. These are then summed. This gives the figure displayed in the Calc Weight field above.

Assessment Item	Response Value		Weighting Percentage		Item Weighting
Blockage Due to Debris	10	X	.45	=	4.50
Blockage Due to Damage	10	X	.50	=	5.00
Graffiti	90	X	.05	=	4.50
			Condition Weighting Sum Total		**14.00**

Likelihood Weighting

The Likelihood of Failure is a measure used in **RAMM** Assessment. Inspectors use a standard set of Responses to indicate the probability (Likelihood) of Failure of an Asset. This value is combined with the value for the Consequences of that Failure for the Asset to give an overall Risk Assessment for the Asset.

When you set up Assessment in **RAMM** you define Assessment Items and Responses to record the Likelihood of Failure of an Asset. See Assessment Groups, Items and Responses (on page 58). When an Inspector has performed an Assessment of the Asset this is entered into **RAMM**. See Enter an Assessment Result (on page 103). You then use **RAMM** to calculate the Likelihood Weighting to assist you to understand the overall Risk associated with the Asset.

Likelihood Weighting values are calculated from the **Item Weighting(s)** as defined in the **Worksheet Template** and the **Weightings** for each individual **Item Response**

Weighting Factors – Item Responses

When you are creating Responses for Assessment Likelihood Items you assign a Summary Weight value. The greater the value, the greater the Likelihood of Failure of the Asset.

For **Items** which assess the **Likelihood of Failure** of an **Asset**

You assign a **Summary Weight** value

Weighting Factors – Worksheet Groups

When you are creating a Worksheet Template for an Asset Type, you assign a Weighting value to each individual Item in an Assessment Risk Likelihood Group. The greater the value, the more likely that the Asset will fail.

For instance, you might determine that it is more likely that an Asset such as Surface Water Channel will fail through blockage than if the same Asset were damaged. So when you create a Worksheet for Surface Water Channel you would give the Likelihood of Blockage Item a higher Weighting value than the Likelihood of Damage Item.

The Calculation

The Response value for each Item in the group is multiplied by its Weighting percentage as defined in the Worksheet Template. These are then summed.   This gives the figure displayed in the Calc Weight field above.

Assessment Item	Response Value		Weighting Percentage		Item Weighting
Breakage - Likelihood	25	x	.20	=	5.00
Blockage - Likelihood	10	x	.80	=	8.00
Risk Likelihood Weighting Sum Total					**13.00**

Consequence Weighting

Risk Consequence is used in RAMM Assessment. It is the measurement of the Consequence of Failure of an Asset. When an Inspector performs an Assessment of the Condition of an Asset they may record its Likelihood of Failure and the Consequences of that Failure. These values are weighted to give an overall estimation of Risk.

When you set up Assessment in RAMM you define Assessment Items and Responses to record the Consequences of Failure of an Asset. See Assessment Groups, Items and Responses (on page 58). When an Inspector has performed an Assessment of the Asset this is entered into RAMM. See Enter an Assessment Result (on page 103). You then use RAMM to calculate the Risk Consequence Weighting to assist you to understand the overall Risk associated with the Asset.

Consequence Weighting values are calculated from the **Item Weighting(s)** as defined in the **Worksheet Template** and the **Weightings** for each individual **Item Response**

Weighting Factors – Item Responses

When you are creating Responses for Assessment Consequence Items you assign a Summary Weight value. The greater the value, the greater the Consequence of Failure of the Asset.

For **Items** which assess the **Consequence of Failure** of an **Asset**

You assign a **Summary Weight**

Weighting Factors – Worksheet Groups

When you are creating a Worksheet Template for an Asset Type, you assign a Weighting value to each individual Item in an Assessment Risk Consequence Group. The greater the value, the greater the Consequence of Failure of the Asset.

For instance, you might determine that the Consequence of Failure, if an Asset such as Surface Water Channel failed, would be greater for breakage than for blockage. So when you created a Worksheet for Surface Water Channel you would give the Likelihood of Blockage Item a lower Weighting value than the Likelihood of Damage Item.

Each **Item** in the **Group** is given a **Weighting** value

Risk Consequence of Failure Items which would have worse **Consequences** are given a **Higher Weighting**

For instance if the **Consequence of Failure** of **Surface Water Channels** were worse for **Breakage** than for **Blockage** then **Breakage** would have a higher **Weighting**

The **Weightings** for each **Group** must sum to 100

There are three **Groups** so the sum total is 300

The Consequence Calculation

The Response value for each Item in the group is multiplied by its Weighting percentage as defined in the Worksheet Template. These are then summed. This gives the figure displayed in the Calc Weight field above.

Assessment Item	Response Value		Weighting Percentage		Item Weighting
Blockage - Consequence	10	x	.20	=	2.00
Breakage - Consequence	75	x	.80	=	60.00

Risk Consequence Weighting Sum Total   **62.00**

Condition and Risk Management

When you have entered your Assessments into **RAMM** you will want to process the results and update the Assessment records for your Network. You do this at the **Determine Weighting, Condition and Risk** dialog.

Update Codes

You select the options in the Calculate Weighting section to have **RAMM** process the Assessments and to calculate the Condition Weighting, Risk Likelihood Weighting and Risk Consequence Weighting. If you wish to be able to see at a glance the Condition and Risk Management codes for the Assessed Assets you select the four options in the Update Codes section.

Risk Management Codes

You view the codes to see at a glance the Condition and Risk profile of an Asset at the Miscellaneous tab of the Detail screen for the Asset. The screen below is the **Surface Water Channel** Detail screen.

RAMM updates the **Condition**, **Likelihood**, **Consequence** and **Risk** codes so that you can see at a glance the overall **Risk** posed by this **Asset**

Pavement Rating Assessment

The Pavement Rating Asset Type enables length-based Assessment of Pavement. Inspectors record the severity and extent of Road Conditions. These extent ratings vary from one (1) being the optimum to five (5) being sub optimal. These Rating data are collected using arbitrary lengths based on where the Condition of the Road changes. The data are then entered into **RAMM** and Summarised to Treatment Lengths. These Summaries are used in the dTIMS and **RAMM** Works Selection process.

Pavement Rating differs from other **RAMM** Asset Types. Its entry into **RAMM** also differs.

Survey: September 2010

Select a road to view its assessments

Road Name	Length (m)
BUNGALOW COURT	90
BUTLER WY	90

Assessments for: BUTLER WY

Start M	Local Surface Defects	Crack Type	Crack Severity	Crack Extent	Deformation Severity	Deformation Extent	Binder Condition	Binder Stone	Asphalt Condition	Patches Extent	Left Drain	Right Drain	Underground Drainage	Left Shoulder	Right Shoulder	Left Edge - Severity	Left Edge - Extent	Right Edge - Severity	Right Edge - Extent	Left Kerb - Condition	Left Kerb - Height
0	2	1	2	4	1	1			3		1		1								
20	2	1	2	3	1	2			3		1		1								

In This Chapter

Introduction to Pavement Rating

Pavement Rating is used for Assessment of the Condition of a Road.

Standard Assessment Model in RAMM

The standard Assessment method in RAMM is based on measuring the length or number of defects, such as cracking or rutting over a 10 to 100% inspection length. This is then extrapolated out to determine the Condition of the entire length.

Pavement Length Assessment Model

The Pavement Length model differs from the standard Assessment method in RAMM. It is based on the observations of an Inspector who travels from the start of a Road to its finish and records Condition severity and extent data. Changes to severity and extent are recorded as they occur down the Road. So the lengths at which data are entered into RAMM are arbitrary.

Data Summarisation

The Pavement Rating data are Summarised to Treatment Length, providing Summaries such as Minimum, Maximum, Total, Average and Standard Deviation.

These Summaries may not be user definable.

Summarisation Weighting

Summarisation for Items which are pick lists or extent indices is achieved by applying a Weighting to each Item. For instance where the extent value 2 represents 0-25% coverage, You would set the Weighting to 25.

Then when RAMM averages these it adds up the total Weighting and divides by the number of readings. It then selects the Item that has the nearest Weighting value to the calculated average Weighting.

You may also choose to store the calculated value as RAMM Works Selection. dTIMS may work with the calculated value rather than the 0-5 option.

These Weightings may not be user definable.

Treatment Length Display

You can display the percentage of the Treatment Length that the Assessment covers as well as the date of the source Condition data.

Assessment Surveys List

You view and enter Pavement Rating Survey data from **RAMM Manager**.

When you first launch Pavement Rating Survey entry (Projects > Assessment > Recording the Results > Pavement Rating) the **Assessment Surveys** list screen opens.

You can see a list of your previous Assessment Surveys. You can:

- view the list of Surveys
- open a Survey to view the details
- open a Survey to add further data
- Add a new Survey for data entry.

You double-click on a Survey to view or edit its details. This opens the **Assessments Roads** page.

Assessment Roads

The **Assessment Roads** page is where you view existing Pavement Rating data for a Road. You can also enter Pavement Rating Assessment data at this page.

First you find your Road. You can do this using the Search or the scroll bar. When you have selected your Road, the Assessments for the Road are displayed.

You can then add, edit or delete the Assessments.

Configure the Assessment Roads Page

You will want to set up your view of the **Assessments Roads** page to match your purpose in accessing the page.

If you have opened the page to enter data you will not want to see the full Item drop-down list values. Nor will you want to have the Item Descriptions horizontal and the data entry fields spaced far apart.

If however, you want to view the Condition Assessments you might want to see full explanations of the numerical Condition values.

If you are entering data, you might want to limit the Item display to only those from the Item Groups for which you have data to enter.

Limit Item Groups Display

You use the Show Item Groups to Display button to limit the Item display to the Item Groups you require.

Pressing opens the **Display Assessment Item Groups** dialog. You can see the effect of selecting and clearing the options for each Item Group as the Item list dynamically changes to match your selections.

Default Values

You press Show Descriptions to toggle the display of Item Descriptions.

Pavement Rating Data Entry

You enter Pavement Rating Condition data at the **Assessment Roads** page.

You select the Road whose Assessment you will enter. You can locate the Road with the Search or by using the scroll bar. In the example below, Forrest St has been selected and no Assessments have been entered. Only Items for the Other Assessment Group are being entered. So only the other items have been filtered out of view using the Show Item Groups to Display button .

Add a Length Assessment Data Line

You press Add New Assessment to add a line for the Assessment data. The default value for the start of the Assessment length is zero (0) metres. You can edit this.

Enter Assessment Data with Mouse Pointer

You can use the mouse pointer to reveal and select the preset Assessment values. This is not as quick as using the keyboard TAB key and the number pad.

Enter Assessment Data with TAB Key

The fastest way to enter data is to use the TAB key to move through the fields. As you TAB from one field to the next the available Item Assessment values display. You type the value to select it.

Add Another Assessment Data Row

When you add Pavement Rating Assessment data you do so at lengths which you determine yourself.

Each line of Assessment data at the **Assessment Roads** page represents the results of an Assessment starting at a unique displacement. So you are unable to add two lines with the same displacement for a Road. If you try to do so an error message displays as below.

Values Default from Previous Row

When you add a new data row beneath an existing row the values default to the new row. The values are greyed to show that they have defaulted from a previous row.

The values from the line above the new line have defaulted

Greyed Values Have Defaulted

You type the new values in the Assessment data row. These values are black. When you save the line record the new values remain black and the defaulted values remain greyed to show that they were defaulted from a previous row.

The new values you enter display in black to show they are new values

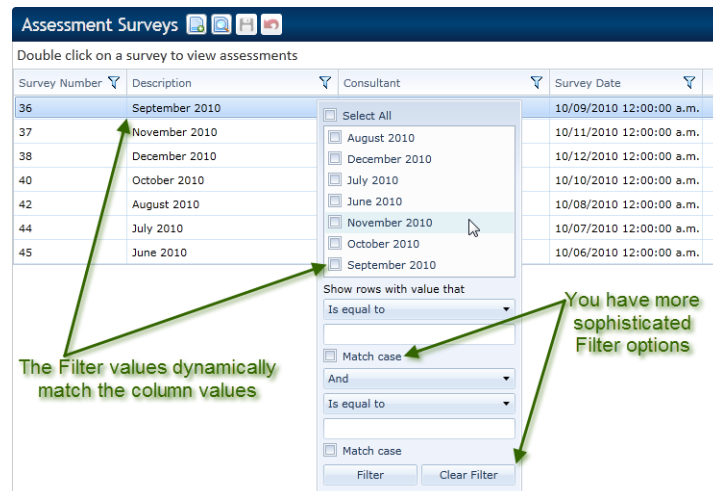Defaulted values remain greyed out to show they are defaulted

> When you add a new Assessment data row it will be added directly below the line you have highlighted. So if you want to add a row after the final row, you highlight that row. If you want to add a row in between two others, you highlight the row under which you wish the new row added.

Dynamic Column Filters

You use the dynamic Filters to adjust your view of the Assessment Surveys list page and the Assessments Roads page. You use the Filters to eliminate from view those records you do not need to see.

Filter Button

You press the Filter button to open the Filters. The contents of the Filters change dynamically. The filter options depend on the column you wish to filter.

Column Values

The Filter values dynamically match the column values. In the example below, the Description Filter button has been pressed. The initial Filter options include selecting from an alphabetically listed range of the Survey Descriptions you have added.

You can also select from a more sophisticated range of Filter options from the drop-down lists.

The alphbetically listed **Filter** values dynamically change to match the column

More sophisticated **Filter** options are available from the drop-down lists

Assessment Results

Once you have entered the Assessments, you process them and view the results. You can then prioritise the remedial actions to ensure that those Assets which most need attention are addressed first.

You review the Assessment results by running a report, comparing the results in a Grid screen or by viewing the results for an individual Asset:

- You use the **Assessment Results (Asset Type) - Security Zone** report when you want to quickly preview or print a formatted report of the Assessment details for one or more Assets of the same Asset Type.
- You use the Asset Type Grid screen to view and compare Assessments. You filter the records to reveal which Assets are most likely to require remedial action.
- You view Assessment results for individual Assets at the Detail screen for the Asset. This may include the Latest Assessment details, and Weightings for Condition, Likelihood of Failure and Consequence of Failure.

In This Chapter

Assessment Results Report

You use the **Assessment Results (Asset Type) - Security Zone** report when you want to quickly preview or print a formatted report of the Assessment details for one or more Assets of the same Asset Type.

Menu Path

As is normal in **RAMM** Assessment you can launch the report from a variety of menu paths. If you already have the **Assessment Navigator** open in either **RAMM** or **RAMM Manager** you press Looking at the Results.
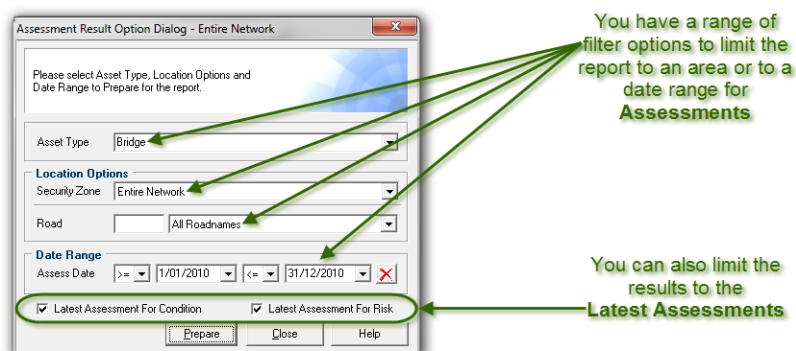
In **RAMM Manager** you can follow the menu path Projects > Assessment > Looking at the Results.

In **RAMM** you open either the Asset Type Grid or Detail screen and follow the menu path Actions > Assessment > Looking at the Results.

This launches the **Assessment Result Option Dialog**.
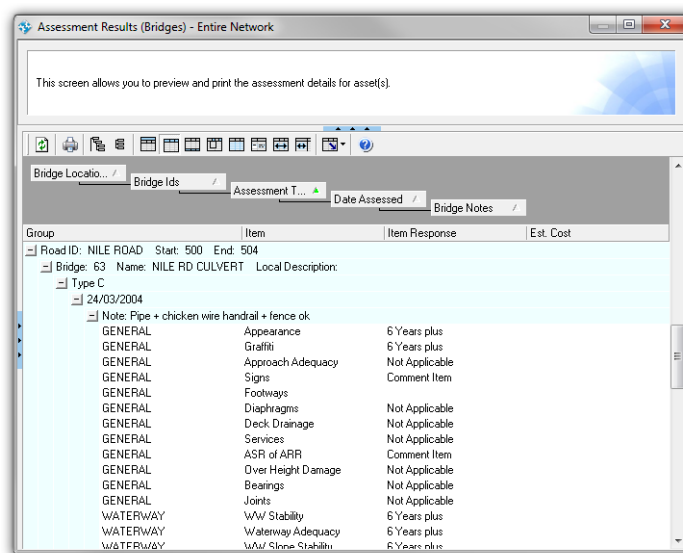
Filter Options

You set your initial filter options at the **Assessment Result Option Dialog**. The availability of the Asset Type and Location Options for selection will depend on from where you launch the report.

When you have made your selections you press Prepare to Launch the report itself.

Assessment Results (Asset Type) – (Security Zone)

What you see in the report depends on the criteria selected at the dialog above. It is a standard **RAMM** report. You use the Layout panel (not displayed in the graphic below) on the left of the screen to select the information you need for the report. You then generate a preview, print, or export the report to a file as required.

More Filter and Display Options

If you want to filter the Assessments for a large number of Assets and to manipulate the results, you may prefer to do this from within **RAMM** at the Grid screen for the Asset Type. See Filter the Grid Screen for Assessments (on page 139).
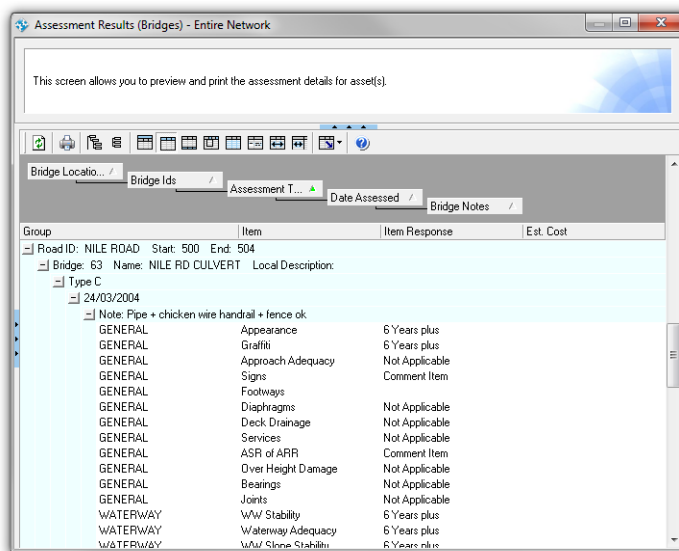
View Results for a Single Asset

If you want to see the Assessment details for a single Asset you may prefer to view these from the Asset Detail screen in **RAMM**. See Assessment Results For a Single Asset (on page 142).

> If you run the **Assessment Results (Asset Type) - Security Zone** report from a **RAMM** Grid or Detail screen then the resulting report will reflect the filtering decisions you have made in that screen.

General and Item Notes

The default display of the **Assessment Results (Asset Type) - Security Zone** report is list of all Notes available for the selected Asset(s).
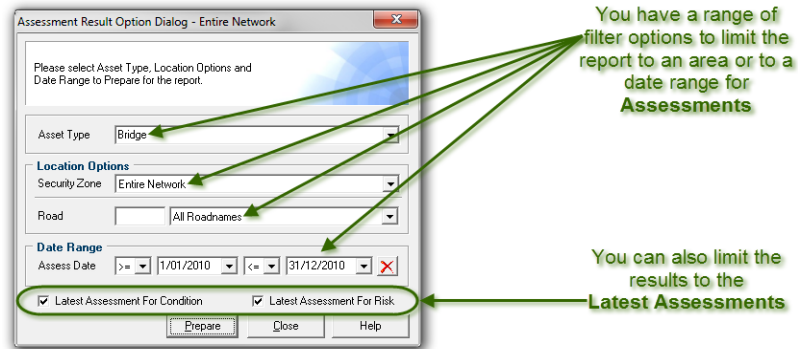

General Notes and Item Notes are the entered as part of the Assessment entry process. You view the notes in **RAMM**, from the Detail screen for the Asset. They are on the Assessment tab. Bridges and other component Asset Types display Assessments and their notes in a list view.

Latest Assessments

When you are viewing Assessments at the **Assessment Results (Asset Type) - Security Zone** report, you may wish to see only the results of the Latest Assessment. You configure this at the **Assessment Result Option Dialog**.

Latest Assessments for Condition and Risk

If you wish to see only the results of the Latest Assessments select the Latest Assessment for Condition and the Latest Assessment for Risk options.

You have a range of filter options to limit the report to an area or to a date range for **Assessments**

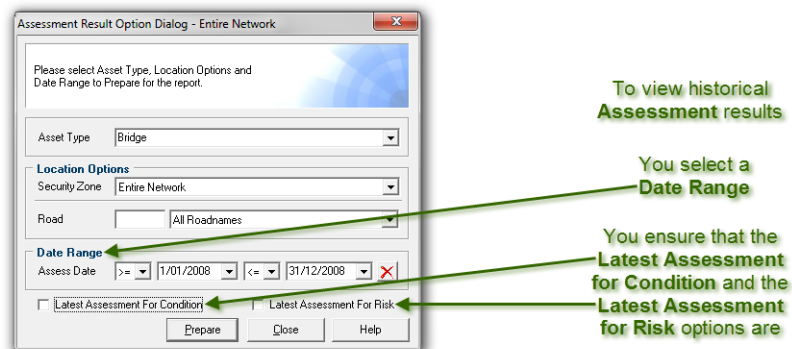You can also limit the results to the **Latest Assessments**

Historical Assessments

When you are viewing Assessments at the **Assessment Results (Asset Type) - Security Zone** report, you may wish to see only historical Assessment results. You configure this at the **Assessment Result Option Dialog**.

Historical Assessments for Condition and Risk

If you wish to see only historical Assessments you select a date range at the Date Range section and then clear both the Latest Assessment for Condition and the Latest Assessment for Risk options.

To view historical **Assessment** results

You select a **Date Range**

You ensure that the **Latest Assessment for Condition** and the **Latest Assessment for Risk** options are
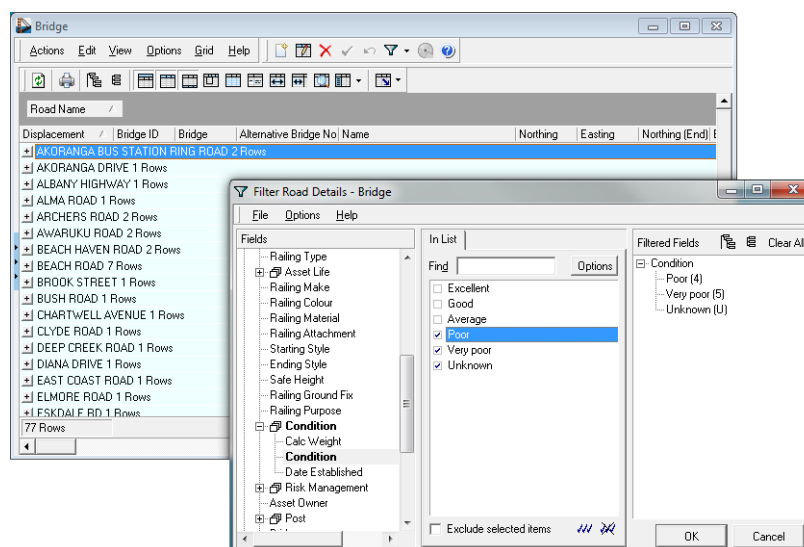
Filter the Grid Screen for Assessments

You use the Asset Type Grid screen to view and compare Assessments. You filter the records to reveal which Assets are most likely to require remedial action.

When you are checking the results of the Assessments using a **RAMM** Grid screen, you would initially filter the Grid so that only the set of Assets you wish to investigate is listed. You should read the Filters and Working with Grid Screens chapters of the *Using RAMM* guide to learn more about using Grid screens and Filters in **RAMM**.
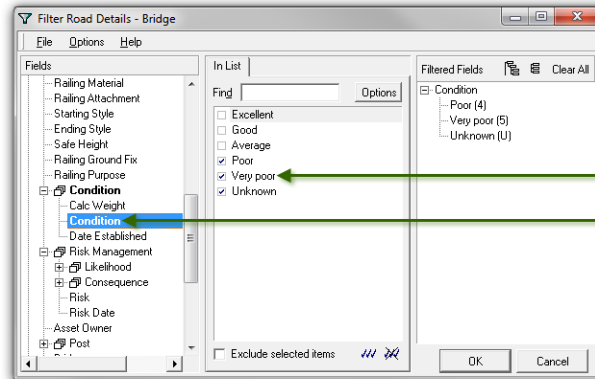
The three obvious further Filter options are:

- Condition (on page 140)
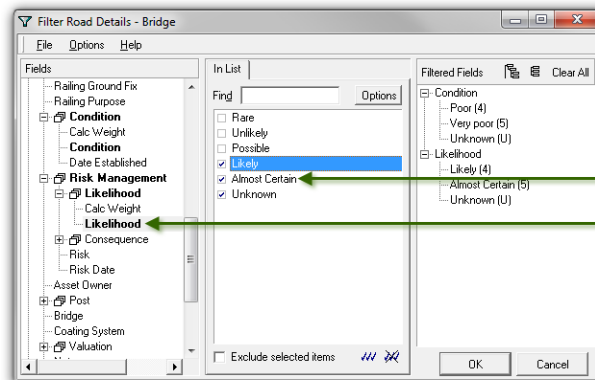- Likelihood of Failure (on page 141)
- Consequence of Failure (on page 142).

Condition

If the Condition of an Asset is Excellent, it is unlikely that the Asset will require remedial action in the near future. So if you are checking your Assets to determine which need attention as a priority, you will want to eliminate those which are in fine Condition. To do this you select the Condition **Filter** options which may show that the Asset requires remedial action as a priority.

You select only those **Filter** options for **Condition** which may show that the Asset requires remedial
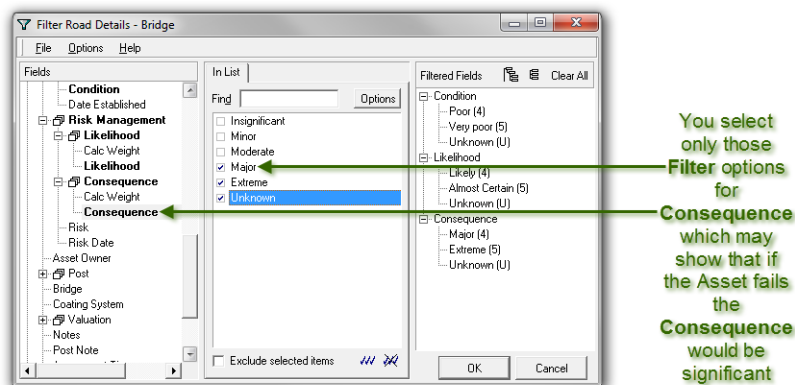
Likelihood of Failure

If the Likelihood of Failure of an Asset is Rare, then even if the Condition of the Asset is Very Poor, it is unlikely that the Asset will require remedial action in the near future. So if you are checking your Assets to determine which need attention as a priority, you will want to eliminate those whose Likelihood of Failure is small. To do this you select the Likelihood of Failure **Filter** options which show that there may be a strong chance of Failure of the Asset.

You select only those **Filter** options for **Likelihood** which show that there may be a strong chance of **Failure** of the Asset

Consequence of Failure

If the Consequence of Failure of an Asset is Insignificant, then even if the Asset fails, it is unlikely that the Asset will require prompt remedial action. So if you are checking your Assets to determine which need attention as a priority, you will want to eliminate those whose Consequence of Failure is small. To do this you select the Consequence of Failure **Filter** options which show that if the Asset fails, the Consequence would be significant.

Assessment Results for a Single Asset

You view Assessment results for individual Assets at the Detail screen for the Asset. This may include the Latest Assessment details, and Weightings for Condition, Likelihood of Failure and Consequence of Failure.

Standard **RAMM** Assessment Assets are a single unit. For instance a Surface Water Channel Asset or a Berm exists as a complete entity. Component Assessment Assets such as Bridges or Traffic Signals are a single Asset comprised of a number of components which need to be Assessed individually. However, the individual component Assessments are grouped under the Bridge or Traffic Signal Asset

So you view the Assessment Results quite differently. See:

Standard Asset Types

Standard **RAMM** Assessment Assets are a single unit. For instance a Surface Water Channel Asset or a Berm exists as a complete entity.

You view the most recent Assessment Results for the entire Asset at the Assessment tab of the Detail screen for the Asset.

Assessment Result

You view the Results of the Latest Assessment at the Assessment Result tab. You can edit some details.

The Results you see were entered from the Worksheet completed by the Inspector when the Assessment was performed.

Weighting

You view the Condition and Risk Management values for the Asset at the Weighting tab. The Condition and Risk Management sections display the results of the latest Condition, Risk Likelihood and Risk Consequence calculations for the Asset, if these are available.

You cannot edit these values.

Assessment Tip

You view the general Assessment Tip for the Asset at the Assessment Tip tab. You can edit the Tip.

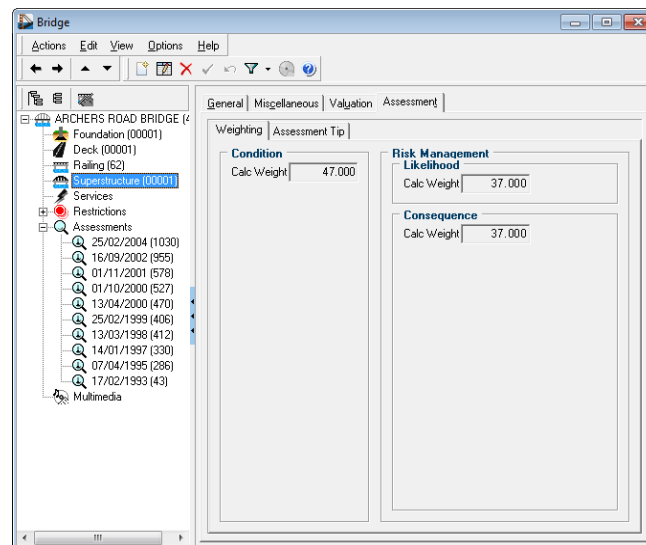This is the Tip for the Inspector performing the next Assessment for the Asset.

Component Asset Types

You view the Assessment Results for Component Asset Types at the Detail screen of the individual Asset.

Individual Weighting and Assessment Tip

The Asset, such as a Bridge or set of Traffic Signals will be comprised of a number of individual components. Each component is Assessed separately. So each component has its individual Weighting values and Assessment Tips. You view these by highlighting the component in the (unnamed) (Asset) Component Tree panel on the left of the screen.

In the graphic below, Superstructure has been highlighted. The Weighting values for the Bridge Superstructure are displayed.

Assessment Results List

You view the Results of the all Assessments for the Asset at the Results panel. You can edit some details such as the Item Responses and the Estimated Cost values.

The Results you see were entered from the Worksheets completed by the Inspector when the Assessment was performed.

Import and Export Assessment Data

If you have standalone instances of **RAMM** you may need to synchronise Assessment data throughout your databases. You achieve this by exporting the Assessment data from the database where you have done your Assessment set up and Assessments and importing the data into the other databases.

Another reason for the export and import of Assessment data, could be if the Assessment set up for an Asset Type in one database is ideal for the same Asset Type in another.

You export and import Assessment data in the Assessment Unload Archive (*.asu) format.
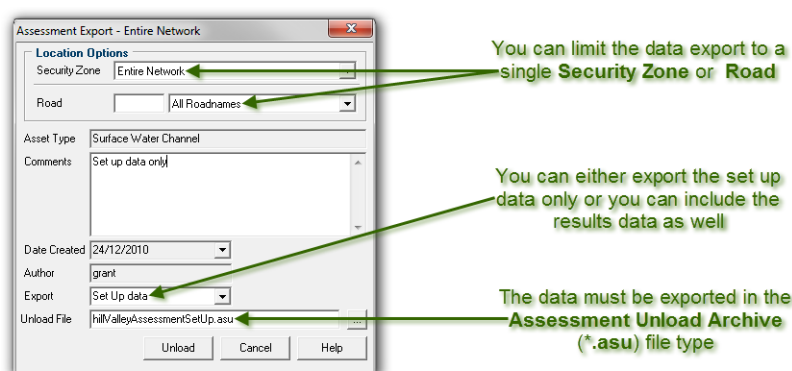
In This Chapter

Export Assessment Data

You can export Assessment data to another **RAMM** database. The default is to export either just the set up data being the Master Lists and Worksheet Templates. You can export the Assessment results as well if required.

Menu Path

You can export from **RAMM Manager** and from **RAMM**. You can use the **Assessment Navigator** or use the direct menu path. From **RAMM Manager** this is Projects > Assessment > Transferring Between Databases > Export > (select Asset Type). The **Assessment Export - (Security Zone)** screen for the selected Asset Type will appear.

Location Options

The default is to export data related to the Entire Network.

If you wish to limit the export to data related to a particular area you select that Security Zone from the Security Zone drop-down list. If you wish to restrict the export to data for a particular Road, you either type the Road ID in the (unnamed) Road ID field or select the Road name from the Road drop-down list.

Comments

You would typically add useful notes in the Comments field. These comments will assist the person receiving the exported files.
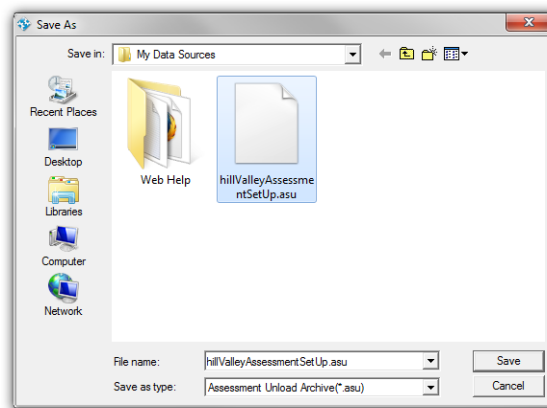
Export Data Type

You have the option of exporting the Assessment set up data only or exporting the set up and results data. You make your selection at the Export drop-down list.

Export Data File

When you have set the export parameters, you create the file into which the data will be exported.

You press the ellipsis ⊡ adjacent to the Unload File field and navigate to the location to which you want to save the exported data. You then type the name of the file for the data. This must have an .asu extension.

You then press Unload to export the data.

Importing Assessment Data

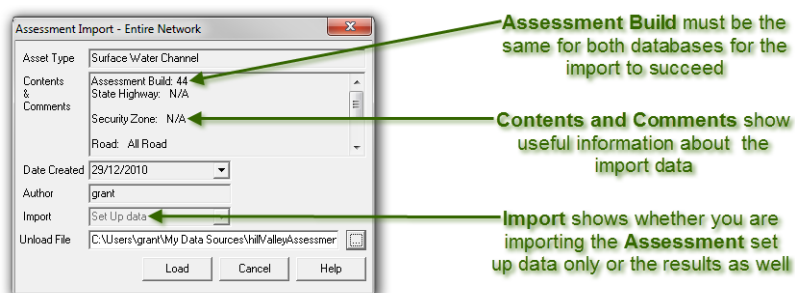You can import Assessment data from one **RAMM** database to another.

You can import either just the set up data, being the master lists and Worksheet Templates, or you can import the Assessment results as well. This of course depends on the contents of the exported file.

You would do this to save set up time if you had not set up Assessment for an Asset Type in your own database and an existing set up in another **RAMM** database suited your requirements.

You can import Assessment data only if someone has first exported the data you require. The data file must have an .asu extension. See Export Assessment Data (on page 148).

Menu Path

You can import from **RAMM Manager** and from **RAMM**. You can use the Assessment Navigator or use the direct menu path. From **RAMM Manager** this is Projects > Assessment > Transferring Between Databases > Import > (select Asset Type). The **Assessment Import - (Security Zone)** screen will appear. It will include data for only one Asset Type.
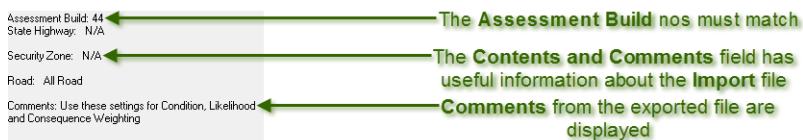

Assessment Build must be the same for both databases for the import to succeed

Contents and Comments show useful information about the import data

Import shows whether you are importing the **Assessment** set up data only or the results as well

Assessment Build

The Assessment table must have the same build in the export and the import databases. See Assessment Build (on page 151).

Contents and Comments

You can see useful information in the Contents and Comments field. This will comprise information about the Assessment Build, Security Zones, Roads and Comments from the person who exported the data.

The **Assessment Build** nos must match

The **Contents and Comments** field has useful information about the **Import** file

Comments from the exported file are displayed

Unload File

You press the ellipsis ⌐ adjacent to the Unload File field and navigate to the file you wish to import.
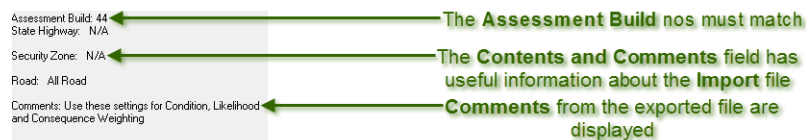
This file must have an .asu extension.

Assessment Build

The Assessment Build must be the same for both the export and the import databases.

What Is the Assessment Build?

Tables in the **RAMM** database are sorted into logical groups. One of these groupings is the Assessment group.
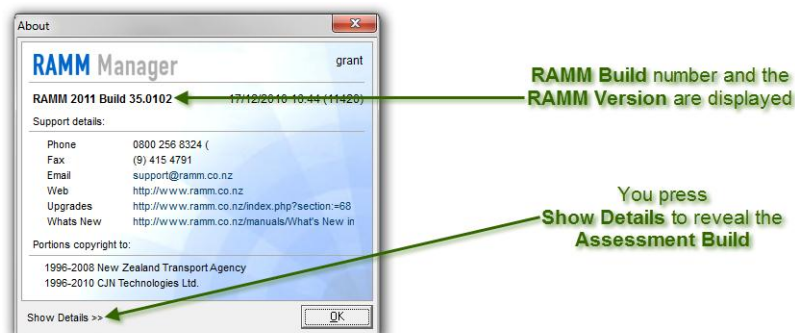
Tables in **RAMM** are changed from time to time. When a change is made to one or more of the tables in a group, the Build Number for the group is incremented by one. In the graphic below the Assessment Build number is 44. This is displayed in the Contents and Comments field of the **Assessment Import - (Security Zone)** screen.
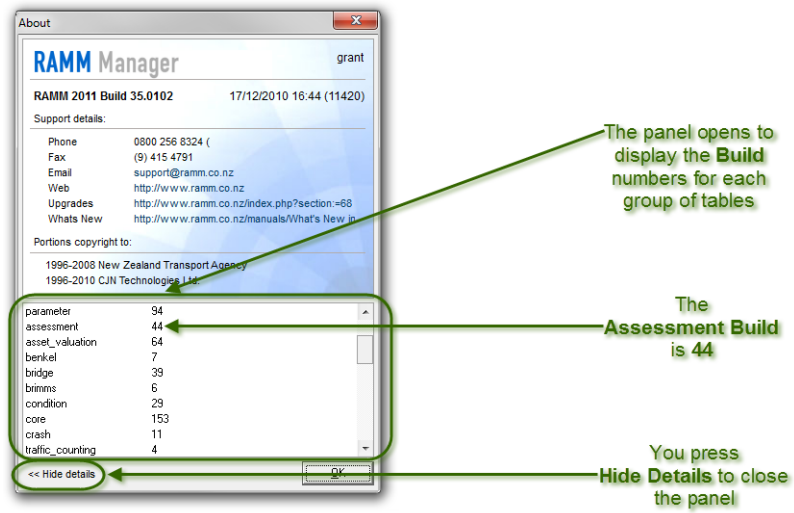

Assessment Build: 44 — The **Assessment Build** nos must match
State Highway: N/A
Security Zone: N/A — The **Contents and Comments** field has useful information about the **Import** file
Road: All Road
Comments: Use these settings for Condition, Likelihood and Consequence Weighting — **Comments** from the exported file are displayed

> The **RAMM** Build numbers of the export and import databases do not have to match, only the Assessment Build numbers.

Where Is the Assessment Build Number?

When you follow the menu path Help > About from any **RAMM** application, the **About** screen opens as below. This is the **RAMM Manager** version of the screen. It gives the **RAMM** version (2011 below) and the **RAMM** Build number (35.0102 below).

RAMM Manager   grant

RAMM 2011 Build 35.0102   17/12/2010 10:44 (11420) — **RAMM Build** number and the **RAMM Version** are displayed

Support details:

Phone   0800 256 8324 (
Fax   (9) 415 4791
Email   support@ramm.co.nz
Web   http://www.ramm.co.nz
Upgrades   http://www.ramm.co.nz/index.php?section=68
Whats New   http://www.ramm.co.nz/manuals/What's New in

Portions copyright to:

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1996-2010 CJN Technologies Ltd.

Show Details >> — You press **Show Details** to reveal the **Assessment Build**

OK

You press Show Details to display the Assessment Build number.

The panel opens to display the **Build** numbers for each group of tables

The **Assessment Build** is **44**

You press **Hide Details** to close the panel

Introduction to Assessment in Pocket RAMM

Welcome to Assessment in **Pocket RAMM**. You may find it more efficient to perform Assessments using **Pocket RAMM** rather than using paper-based methods.

You will want to learn how to:

- add a new Assessment in **Pocket RAMM**
- create your own set of Assessment Notes to speed **Pocket RAMM** data entry
- view existing Assessments to gain perspective of the Asset Assessment history
- edit or delete an existing Assessment.

In This Chapter

Terms You Should Know

You will better understand Assessments in **Pocket RAMM** if you take a few moments to read the following terms and their meanings:

- **Assessment Asset Type**
  An Asset is something real which exists in your Network such as a bridge, a culvert, or bus shelter. You group these Assets in **RAMM** by Asset Types such as Bridges, Drainage and Minor Structures. You can not enter Assessments against all Asset Types. Those Asset Types which can have Assessments against them in **RAMM** are Assessment Asset Types.

- **Assessment**
  An Assessment is the record of an inspection of an Asset. You use Assessments for a number of reasons including to record the Condition of an Asset or its associated Likelihood and Consequences of Failure (Risks).

- **Assessment Group**
  An Assessment Group is an aggregation of Assessment Items for an Asset Type. For instance, Assessment Items related to Surface Water Channels made of concrete could be grouped under the Assessment Group Concrete for the Asset Type, Surface Water Channels.

- **Assessment Item**
  An Assessment Item is an individual aspect of an Asset which is to be Assessed. It is contained in an Assessment Group. An example of an Assessment Item could be Drainage within the Assessment Group Concrete for the Asset Type Surface Water Channels.

- **Assessment Response**
  An Assessment Response is the description of the Condition of the Assessment Item which is the subject of the Assessment. For instance when assessing the Drainage of a Concrete Surface Water Channel, the Response could be Excellent. Assessment Responses are predefined for consistency.

- **Assessment Note**
  An Assessment Note is a note that can be added to qualify an Assessment Response. You can add both freeform notes and those which you have predefined. You can set up your predefined Favourite notes for each Asset Type.

- **Worksheet**
  A Worksheet is a document created in **RAMM** which is used by an Inspector to assess an Asset. It should contain a list of all the Assessment Items and Assessment Responses required to perform the Assessment. It is created from a Worksheet Template to ensure ease of creation and consistency of results.

- **Worksheet Template**
  A Worksheet Template is a **RAMM** item created so that Worksheets used by an Inspector to Assess an Asset can be created easily and consistently.   It should contain grouped lists of all the Assessment Items required to perform the Assessment of a particular Asset Type category.

Best Practice Overview

An Assessment is the record of an inspection of an Asset. You use Assessments for a number of reasons including to record the Condition of an Asset or its associated Likelihood and Consequences of Failure (Risks). It serves two main functions. You use it to:

- record the present Condition of Road Assets
- forecast the Likelihood of Failure and the Consequence of Failure, from which an overall Risk can be estimated.

Set Up Assessment in RAMM Manager

Assessment must be set up in **RAMM Manager** and **RAMM** before you can use it in **Pocket RAMM**.

A very quick overview of set up would be:

- To begin with, you set up Assessment Items within Assessment Groups.
- Items are linked in turn to expected Responses.
- The Groups, Items and Responses are used to create Worksheet Templates to record Condition or Risk values for Items, with a Weighting for each Item within the Group.

Assessments

From the Worksheet Templates, Worksheets are generated to perform the actual Assessments.

The Worksheets are used for Assessment Inspections, and the results entered into the **RAMM** Assessment system. **RAMM** Assessment generates Inspection Schedules to keep track of this work, giving you Advance Warning of Assessments that are due.

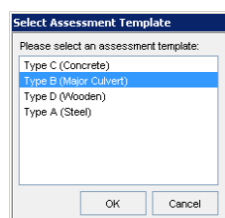Once the data is in the system, you can calculate Weighting for Condition, Risk Likelihood or Risk Consequence. The calculations conform to:

- the NAMS Standard Condition Categories for Condition or
- the Standards New Zealand document Guidelines for Managing Risk HB 143:1999 for Risk Likelihood and Risk Consequence.

Application

For example, you may simply wish to know the Condition of a Bridge over a period of time. You can build a Worksheet Template, create Worksheets and perform regular Assessments to do just that.

On the other hand, you may like to know which Bridges in your Network are more likely to fail or have a high economic consequence when they do fail. For this sort of Assessment you would build a Worksheet Template for Risk Likelihood and/or Consequence and perform the Assessment accordingly.

The detailed picture of your Network that emerges helps you plan for the future with greater accuracy and certainty.

You perform the Assessments in **Pocket RAMM** for greater efficiency and the use of fewer resources than paper-based systems.

> You need to set up Assessment in **RAMM Manager** before you can use it in **Pocket RAMM**.

Audience

The audience for this *Best Practice for Assessment in Pocket RAMM* guide is the users who will perform Assessments using **Pocket RAMM** rather than paper-based methods.

New Assessments

You add Assessments into **Pocket RAMM** at the same time as you are standing next to the Asset inspecting its Condition.

The owner of the Assets will have created Worksheets for you to use when entering the Assessments into **Pocket RAMM**. This ensures that your Assessment conforms to the standard required by the owner of the Assets. This gives your Assessments structure. The availability of predefined Responses enables you to enter data quickly.

You should also set up a your own Favourite notes so that you can add useful notes to an Assessment really quickly.

In This Chapter

Introduction to Assessment Creation

When you are standing next to your Asset, it appears in **Pocket RAMM**.

You tap the Asset to open the Detail screen for the Asset. The Asset in the graphic above is a Major Culvert. So when you tap it, the **Bridge** Detail screen opens.

To add an Assessment of the Asset you tap the Tool Box 🔽 and tap Assessments from the resulting drop-down list. This opens the **Assessment List** screen with a listing of all the previous Assessments for the Asset.

If you want to view previous Assessments to gain an understanding of the history of the Asset, you tap on the ones you want to view. See Viewing an Assessment (on page 174).

To add an Assessment record you tap Add Record ⊞. See Adding an Assessment (on page 166). When you tap ⊞ you may be asked to select a Worksheet Template.

Worksheet Template

A Worksheet Template is a **RAMM** item created so that Worksheets used by an Inspector to Assess an Asset can be created easily and consistently.   It should contain grouped lists of all the Assessment Items required to perform the Assessment of a particular Asset Type category.

When you are adding an Assessment in **Pocket RAMM** at the **Assessment Detail** screen, you must base it on a Worksheet. See Adding an Assessment (on page 166).

Worksheets are created from Worksheet Templates. So when you tap ⊞ at the **Assessment Detail** screen to add an Assessment, one of three things will occur:

- If no Worksheet Templates have been set up for the Asset Type, a message to this effect will appear and the process will be aborted. You will not be able to add an Assessment for Assets of that Asset Type.
- If only one Worksheet Template has been set up for the Asset Type, the **Assessment Detail** screen will open with the Worksheet loaded. You can then start your Assessment.
- If more than one Worksheet Template has been set up for the Asset Type, the **Select Assessment Template** dialog will open. You tap the Worksheet Template you want and then add your Assessment.

When the Worksheet Template has been selected, the **Assessment Detail** screen for the Asset Type will open so that you can define the Assessment Header.

Assessment Header

When you open the **Assessment Detail** screen to add an Assessment, most of the relevant details will have defaulted.

Inspector

The name of the current user will default into the Inspector field. Inspectors are added in **RAMM Manager**. If the current user has not been added as an Inspector, **Pocket RAMM** will do this automatically.

Notes – Show on Next Inspection

When you add an Assessment, you have the opportunity to add helpful notes.

If you think that the next person performing an Assessment on the Asset should see what you have written, you should select the Show on Next Inspection check box. Then, when they open the **Assessment Detail** screen to add a new Assessment, your note will default into the Notes field.

Tip

If there is some information which will be of general assistance to anyone who performs an Assessment on the Asset, rather than specifically for the person who performs the next Assessment, you should add it at the Tip field. Then it will default and be available every time an Assessment is performed on the Asset.

Save

Best practice when you have checked the default values and made any required changes, is to tap Save >> . This will save the Assessment Header record and open the Details tab so that you can add the Assessment Details.

Assessment Details

When you have added the Assessment Header, you then add the details of the Assessment.

You do this at the Details tab of the **Assessment Detail** screen.

You select the Assessment Response from the Assessment Item drop-down list. In the graphic above the two Assessment Items are Cracking and Knock Off Slab. The Assessment Responses are set up in **RAMM**.

You can also enter an estimate of the cost of repairs in the $ field.

Crib Sheet Notes

As well as the standard Help files available in **Pocket RAMM** which have been set up by RAMM Software Limited, there may be limited assistance available from the user defined Crib Sheet Notes. You access this by tapping ?.

In the situation displayed in the graphic above, there have been no helpful notes created for Knock Off Slab. So if you press ?, the following will display.

Some helpful remarks have been added for the Assessment Item Spalling. There is a note to define Spalling. There are remarks to qualify the Assessment Responses so that the user has a clear idea of the application of the Responses.

If the Assessment Responses need qualification or there is some matter which needs to be mentioned you add an Assessment Note.

Assessment Notes Made Easy

Sometimes when you are adding an Assessment, the standard Assessment Response will be enough information.

Other times, you will want to make a note to associate with the Assessment Item.

Quick Notes or Standard Notes

If a note is required which is unique to the situation, the quickest way to add the note is to type it in the (unnamed) Note field.

If the note you need to add is one which you may wish to use again, you should add a standard note using the Favourites option.

Add a Standard Note

If you are going to perform Assessments on many Assets of the same Asset Type you should add your own set of standard notes. In **Pocket RAMM** these are referred to as Favourites.

To access Favourites you tap the ellipsis button to open the **Notes** screen.

Then you tap Tool Box > Favourites > View Favourites to open the **Favourites for Notes** screen.

You tap ⊞ to makes the upper panel available. You then type in the note and save it in the normal manner. It then becomes available at all the (unnamed) Notes fields on any of the panels at the Details tab for the Asset Type.

If you select the Show this item for all fields option the note then becomes a Generic note.

This means that it is potentially available at all Note fields for all Asset Types. If you have a large number of Generic notes it can be difficult to locate the one you want if the list is too long. This can make locating Favourite Notes problematic.

Filtering the notes may help.

Filter the Notes

You can quickly apply a simple filter to your notes. You can filter by:

- Generic only
- This field only
- All Applicable.

You apply the filter at the **Notes** screen.

When you press the ellipsis button to open the **Notes** screen you tap ▾ and then Favourites to reveal the display options.

Generic Only

If when adding an Assessment Note you select the Show this item for all fields option, then the note becomes a Generic note. This means that the note will be available at all Note fields regardless of Asset Type. If you select the Generic only menu path, then the only notes which will appear in the lower section of the **Notes** screen will be the Generic ones. The notes associated with an Asset Type will not be available.

This Field Only

When you add a note at the **Favourites for Notes** screen, it is automatically associated with all Detail tab fields for the Asset Type. So when you select the This field only filter option, you will have available all notes which are associated with the Asset Type.

> ! **NOTE**
> Please note that this behaviour differs from the rest of **Pocket RAMM**. Normally, the This field only option is for a specific field, not for all fields associated with an Asset Type.

All Applicable

When you need all the notes for the Asset Type as well as the Generic notes available, you select the All Applicable option.

> ! **NOTE**
> Please note that these notes which you add are personal to you. They do not become available to other users.

Adding an Assessment

Introduction

You may need to add an Assessment of an Asset into **Pocket RAMM**.

Before you do this you need to have:

- logged in to **Pocket RAMM**.
- located the Asset to be Assessed.
- the correct Staff Permissions. See Staff Permissions for Assessment in **Pocket RAMM** (on page 183).

Menu Path

Follow the menu path (locate Asset on Map) > (tap Asset) > (tap ▼) > (tap Assessment) to open the **Assessment List** screen for the Asset.

▶ **Adding an Assessment**

All previous Assessments for the Asset are available for view

To do this you follow these steps:

1   Tap ⊞.
2   What happens now depends on your Assessment set up.

If	then
a message opens telling you that there are no Assessment Templates	you can not add an Assessment. See your **RAMM** administrator to have one added. End of procedure.
the **Assessment Detail** screen opens	go to step 5.
the **Select Assessment Template** screen opens	go to step 3.

3 Tap the Assessment Template which you want to use.

4 Press [OK].

The **Select Assessment Template** screen will close and the **Assessment Detail** screen will open with ID, Template, Inspector, Date, Notes and Tip details displayed.

5 The ID and **Template** fields will be unable to be entered or edited. If you need to edit any of the other fields, do this now.

6 Tap [Save >>].

Your changes will be saved and the Details tab will display.

7 At the first Assessment Item drop-down list tap [▼].

A list of the Assessment Responses will appear.

8 Tap the appropriate Response.

The value will default.

9 Do you want to add a note to this Assessment Item?

Yes	then go to step 10.
No	then go to step 11.

10 See Adding an Assessment Note (on page 168).
11 You now repeat steps 7, 8, 9 and 10 for all Assessment Items on the panel.
12 You then tap the numbers at the top of the screen in turn to view and select Responses for the Assessment Items.
13 When you have finished adding the details, tap ✔.
The screen will close and you will be returned to the **Assessment List** screen from which you can add another Assessment or exit **Pocket RAMM**.

Adding an Assessment Note

Introduction

When you are adding an Assessment of an Asset into **Pocket RAMM**, you may find that the Assessment Response for the Assessment Item needs qualification. In this case you need to add a note.

Before you do this you need to have:

• logged in to **Pocket RAMM**.
• completed the first ten steps of Adding an Assessment. See Adding an Assessment (on page 166).
• the correct Staff Permissions. See Staff Permissions for Assessment in **Pocket RAMM** (on page 183).

Menu Path

Perform the first ten steps of Adding an Assessment. The **Assessment Detail** screen will be open at the Details tab.

▶ **Adding an Assessment Note**

To do this you follow these steps:

1 Do you want to add a unique note to this Assessment Item?

Yes	then go to step 2.
No	then go to step 5.

2   Tap in the (unnamed) **Notes** field beneath the Assessment Item.

3   Type the note.

4   Go to step 8.

5   Tap the ellipsis button adjacent to the (unnamed) **Note** field.
      The **Notes** screen will open.

6   What do you want to do?

If you want to	then
add a new note which you can use again	see Assessment Notes Made Easy (on page 162).
find a note you have added which has not appeared in the lower panel	see Filter the Notes (on page 164).
add a note which you have predefined	go to step 7.

7   Tap ✔.
      The **Notes** screen will close and you will be returned to the **Assessment Detail** screen.
      The note will have defaulted into the (unnamed) **Note** field.

8   Return to step 11 of the Adding an Assessment procedure. See Adding an Assessment (on page 166).

Existing Assessment Records

Assessment records are kept for individual Assets.

Once an Asset Assessment has been made, the record is associated with the Asset and is available at the **Asset List** screen in **Pocket RAMM**. You use these records to compare the Condition of the Asset or the Risks associated with the Asset over a period of time.

All previous Assessments for the Asset are available for view

In This Chapter

View an Assessment

You can view historical Assessments which exist for an Asset.

To do this you navigate to the Detail screen for the Asset. A list of the Assessments is then available from the Tool Box menu.

You tap Assessments to open the **Assessment List** screen in **Pocket RAMM**. The Assessments are listed in descending date order.

You then tap on the record you want to view. The **Assessment Detail** screen will open at the General tab.

General Tab

The General tab displays the information by which the Assessment is identified such as its ID, the Template used, the name of the Inspector who performed the Assessment and the date when it occurred.

This is called the Assessment Header.

If the Inspector made any notes about the Assessment, these become available at the Notes field if you press the adjacent ellipsis button.

You see the identification and other details of the Assessment at the **General** tab.

To view Assessment Items and Assessment Responses you tap the **Details** tab

To read the contents of a field controlled by an ellipsis button, tap the ellipsis and the details will appear

The information will be unable to be entered or edited

> **NOTE**
>
> The record will be for your information only and will be unable to be entered or edited.

To view further information about the Assessment you press the Details tab.

Details Tab

You use the Details tab to view details of the Items Assessed and the Responses.

As the number of Items is much larger than can fit on one PDA screen, there are links to a number of sequential screens so that you can view all the details, although not all at once.

If the Inspector made any notes about the Assessment Item, these become available at the lower field if you press the adjacent ellipsis button.

You tap the numbered links sequentially to view the details for the Assessment Items in turn

You tap the **Help** button to view a screen with a limited explanation of the Item and Responses

If you tap the ⸢?⸥ Help button, a limited form of Help will open. The Assessment Group, Assessment Item and the Assessment Responses will be listed.

There will be useful comments only if the user who set up **RAMM** Assessment has entered them in the Crib Sheet Note fields at the **Assessment Group, Item and Responses** screen in **RAMM Manager**.

Viewing an Assessment

Introduction

When you are performing an Assessment using **Pocket RAMM** it may be helpful for you to be able to view previous Assessments so that you have some background as to the Condition or Risks associated with the Asset.

Before you do this you need to have:

- logged in to **Pocket RAMM**
- added the previous Assessments. See Adding an Assessment (on page 166).
- the correct Staff Permissions. See Staff Permissions for Assessment in **Pocket RAMM** (on page 183).

Menu Path

Follow the menu path (locate Asset on Map) > (tap Asset) to open the **Asset** screen. In the example below this is the **Bridge** screen.

▶ **Viewing an Assessment**

To do this you follow these steps:

1   Tap Tool Box ▾.
A drop-down list will appear.

2   Tap Assessments.
The **Assessments List** screen will open.

3   Tap the Assessment which you want to view.
The **Assessment Detail** screen will open with ID, Template, Inspector, Date and Note details displayed.

You see the identification and other details of the Assessment at the **General** tab.

To view Assessment Items and Assessment Responses you tap the **Details** tab

To read the contents of a field controlled by an ellipsis button, tap the ellipsis and the details will appear

The information will be unable to be entered or edited

4   View the details.

5   If you want to view the Note details, tap the ellipsis ⌹ adjacent to the **Notes** field. The **Notes** screen will open. Read the Note.

6   Tap ✔.
The **Note** screen will close and you will be returned to the **Assessment Detail** screen.

7   Tap the **Details** tab.
The **Details** tab will display.

You tap the numbered links sequentially to view the details for the Assessment Items in turn

You tap the **Help** button to view a screen with a limited explanation of the Item and Responses

8   You view the Assessment details on the screen. You tap the numbers in turn to view the different Assessment Items. The Assessment Item in the graphic above is **Spalling**.

9   Tap the ellipsis ⌹ adjacent to the (unnamed) **Notes** field to view full Note details.

10   Tap ⌸ to view limited **Assessment Help**.

11 When you have seen the details which you wanted to view, tap ✔.
The screen will close and you will be returned to the **Assessment List** screen from
which you can add an Assessment.

Edit an Assessment

If an Assessment has errors or is incomplete, you may want to edit it.

You can edit Assessments for an Asset if they are less than seven days old. After
this period, the Assessments become for information only and are unable to be
entered or edited.

You can only edit the Assessment if you added it yourself.

To edit an Assessment you navigate to the Detail screen for the Asset. You then tap
Assessments from the Tool Box drop-down list.

You tap Assessments to open the **Assessment List** screen in **Pocket RAMM**.

The Assessments are listed in descending date order. You then tap on the record
you want to edit. The **Assessment Detail** screen will open at the General tab.

You can edit all the fields on the Details tab.

Editing an Assessment

Introduction

You may need to edit an Assessment. You can do this only under limited circumstances.

Before you do this you need to have:

- logged in to **Pocket RAMM**.
- added the Assessment in the previous seven days. See Adding an Assessment (on page 166).
- the correct Staff Permissions. See Staff Permissions for Assessment in **Pocket RAMM** (on page 183).

Menu Path

Follow the menu path (locate Asset on Map) > (tap Asset) > (tap ▼) > (tap Assessment) to open the **Assessment List** screen for the Asset.

▶ **Editing an Assessment**

To do this you follow these steps:

1   Tap the Assessment which you want to edit.
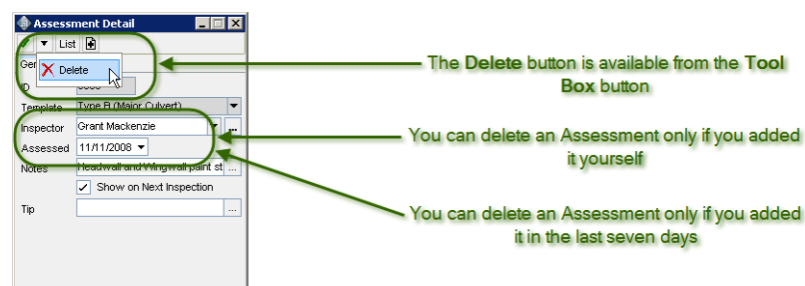The **Assessment Detail** screen will open with ID, Template, Inspector, Date, Note and Tip details displayed.

2   The ID and Template fields will be unable to be entered or edited. If you need to edit any of the other fields, do this now.

3   Tap the Details tab.
The Details tab will display.

4   Edit the Assessment details on the screen if required. You tap the numbers in turn to view and edit the different Assessment Items. The Assessment Items in the graphic above are Footways, Graffiti and Joints.

5   When you have finished editing the details, tap ✔.
The screen will close and you will be returned to the **Assessment List** screen from which you can add an Assessment or exit **Pocket RAMM**. See Adding an Assessment (on page 166).

Delete an Assessment

If an Assessment has been added in error, you may want to delete it.

You can delete Assessments for an Asset only if they are less than seven days old. After this period, the Assessments become for information only and are unable to be entered or edited.

You can only delete the Assessment if you added it yourself.

To delete an Assessment you navigate to the Detail screen for the Asset. You then tap Assessments from the Tool Box ▾ drop-down list.

The **Assessment List** screen then opens. The Assessments are listed in descending alphabetical order. You then tap on the record you want to delete. The **Assessment Detail** screen will open at the General tab.

You then tap the Tool Box ▾ drop-down list to make Delete available. You use this to delete the record. Both the Assessment header and details are deleted.

Deleting an Assessment

Introduction

You may need to delete an Assessment. You can do this only under limited circumstances.

Before you do this you need to have:

- logged in to **Pocket RAMM**.
- added the Assessment in the previous seven days. See Adding an Assessment (on page 166).
- the correct Staff Permissions. See Staff Permissions for Assessment in **Pocket RAMM** (on page 183).

Menu Path

Follow the menu path (locate Asset on Map) > (tap Asset) > (tap ▼) > (tap Assessment) to open the **Assessment List** screen for the Asset.

▶ **Deleting an Assessment**

All previous Assessments for the Asset are available for view

To do this you follow these steps:

1   Tap the Assessment which you want to delete.
The **Assessment Detail** screen will open with details of the Assessment you want to delete.

The **Delete** button is available from the **Tool Box** button

You can delete an Assessment only if you added it yourself

You can delete an Assessment only if you added it in the last seven days

2 Check that this really is the Assessment that you want to delete.

3 Tap Tool Box .

The Delete button will become available from the drop-down list.

4 Tap .

A **Confirm Delete** screen will open.

5 Tap .

The screen will close and your changes will be saved.

Staff Permissions for Assessment in Pocket RAMM

You need the correct Staff Permissions to view, add, edit or delete Assessments.
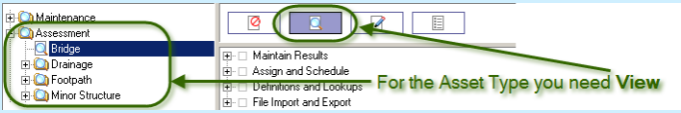

In This Chapter

Staff Permissions

View Assessments

Users will need the correct Staff Permissions to view an Assessment. They will need at least View for the Asset Type under Assessment.
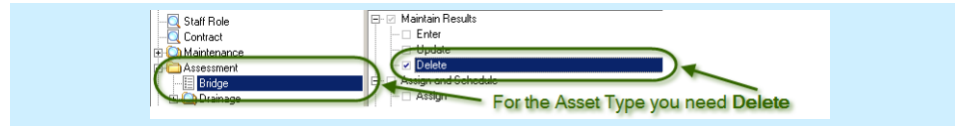

Add Assessments
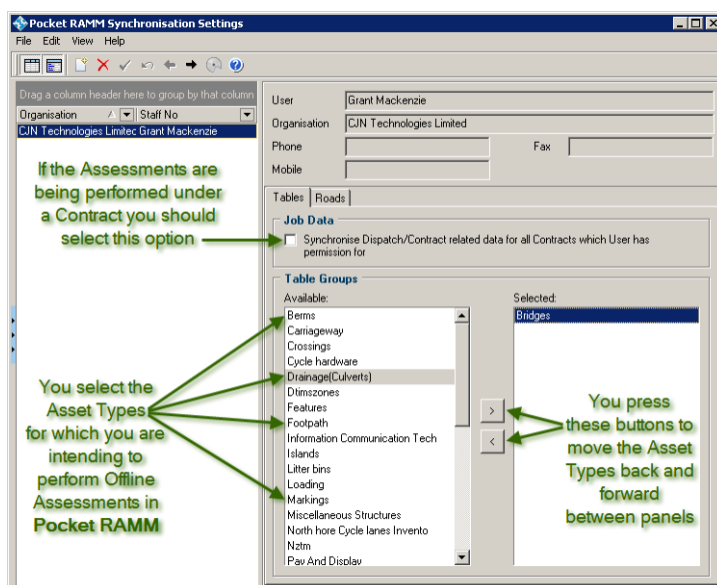
Users will need the correct Staff Permissions to add an Assessment. They will need at least Enter under Maintain Results for the Asset Type under Assessment.

Edit Assessments

Users will need the correct Staff Permissions to edit an Assessment. They will need at least Update under Maintain Results for the Asset Type under Assessment.

Delete Assessments

Users will need the correct Staff Permissions to delete an Assessment. They will need at least Delete under Maintain Results for the Asset Type under Assessment.

For the Asset Type you need **Delete**

Appendix 1 – Offline Synchronisation

Pocket RAMM can not be used for Assessments when working Offline unless this has been enabled for the user and the Asset Types at the **Pocket RAMM Synchronisation Settings** screen. This screen is available from **RAMM Manager** and from **RAMM Contractor**. Further information on using the screen is available in the General Contract Parameters chapter of the *RAMM Contractor* guide.

	If, when you try to use Assessments in **Pocket RAMM** Offline, you find it is not working, even though it had previously been working when you were Online, you should check with your **RAMM** administrator.
Tip	Check whether the Assessment Asset Type has been enabled for you personally for Offline Synchronisation.

Glossary

Assessment

An Assessment is the record of an inspection of an Asset. You use Assessments for a number of reasons including to record the Condition of an Asset or its associated Likelihood and Consequences of Failure (Risks).

Assessment Asset Type

An Asset is something real which exists in your Network such as a bridge, a culvert, or bus shelter. You group these Assets in **RAMM** by Asset Types such as Bridges, Drainage and Minor Structures. You can not enter Assessments against all Asset Types. Those Asset Types which can have Assessments against them in **RAMM** are Assessment Asset Types.

Assessment Group

An Assessment Group is an aggregation of Assessment Items for an Asset Type. For instance, Assessment Items related to Surface Water Channels made of concrete could be grouped under the Assessment Group Concrete for the Asset Type, Surface Water Channels.

Assessment Item

An Assessment Item is an individual aspect of an Asset which is to be Assessed. It is contained in an Assessment Group. An example of an Assessment Item could be Drainage within the Assessment Group Concrete for the Asset Type Surface Water Channels.

Assessment Note

An Assessment Note is a note that can be added to qualify an Assessment Response. You can add both freeform notes and those which you have predefined. You can set up your predefined Favourite notes for each Asset Type.

Assessment Response

An Assessment Response is the description of the Condition of the Assessment Item which is the subject of the Assessment. For instance when assessing the Drainage of a Concrete Surface Water Channel, the Response could be Excellent. Assessment Responses are predefined for consistency.

Assessment Summary

An Assessment Summary is normally an averaging of Assessment values on a Pavement. Summary Types of Total, Largest Segment, Standard Deviation, Minimum and Maximum are also available. Assessment Summaries are viewed at the **Treatment Length** screen. You define Assessment Summaries only for length-based Asset Types such as Pavement Rating.

Asset

An Asset is an item in a Network which has a value. It could be a physical component of a Road, such as its Surface. It could be something real such as a Bridge, a Footpath or a Street Light. Where no table exists in **RAMM** for one of your Asset Types, you can set up a User Defined Table (UDT) to manage the Assets.

Asset Type

An Asset is something real which exists in your Network such as a suspension bridge, an oak tree or a neon street light. You group these Assets by Asset Type such as Bridges, Footpaths and Street Lights. It is likely that all the Asset Types you require will exist by default in **RAMM**. If not, you define a UDT to accommodate the Asset Type.

Component

Components are specific elements which are physically or functionally independent and which make up an Asset. For instance a Traffic Signals set will include components such as a Controller, Detector Loops, Poles and Lanterns. Each component will have its own specific attributes, such as Total Useful Life. In **RAMM Contractor** components are sometimes referred to as Assets.

Condition

In **RAMM** Assessment the Condition of an Asset describes its fitness or readiness for use. Typical **RAMM** and NAMS Conditions are Excellent, Good, Average, Poor and Very Poor. Assessment Condition Weighting is used to determine Risk of Failure and the Consequences of Failure.

Database

This is a structured collection of data that is stored in a computer so that an application can consult it to answer queries. In **RAMM**, this is a particular Road Network. It is possible that you will use more than one **RAMM** database, especially if you work with more than one Road Controlling Authority.

Detail Screen

Detail screens in **RAMM** are used for working with Road Inventory, Condition and other items one at a time. You use them to view and maintain details for one item only at a time.

Export

When you have data in **RAMM** which you would like to use in another application, you export the data. To export data is to save the data from the **RAMM** database. This may involve converting the data into a particular file format. Once exported, the data can be used by an application that recognizes the exported format.

Filter (Database Filter, Grid Filter)

Filters are the screens which you use to sort the data in Detail or Grid screens according to selected criteria. You use these to streamline the

information you see in **RAMM** such as in the Roads list panel.

Grid Screen

The Grid screen in **RAMM** is a visual report writer. You use Grid screens to work with multiple Road Inventory, Condition and other items. You adjust the Grid Layout so that is looks right and it suits your purposes.   You can then view, export or print the displayed details.

Import

When you have data existing in a file which you would like to use in **RAMM**, you import the data. To import data is to enable the **RAMM** database to load it. Once successfully imported, the data can be used by **RAMM**.

Inspector

An Inspector is the user who performs the Assessment of the Asset and its items. They either enter the results directly into a **Pocket RAMM** Worksheet or use **RAMM** to print one off to fill out on site. The results are then manually entered into **RAMM**.

NAMS

National Asset Management Steering Group.

Network

A Network is a collection of Roads managed by a particular Road Controlling Authority (RCA). Each

RAMM database usually contains all the information for one Network.

NOMAD

The National Optimisation of Maintenance Allocation by Decade (NOMAD) is the software component providing Pavement maintenance and treatment information at a project level for up to 20 years on behalf of the NZTA. It is also known as **RAMM** Forward Work Programme and is interlinked with dTIMS, the decision tool for future works and the Annual Plan process.

Null

This means blank or having no value. Some **RAMM** fields must have a value. These fields are highlighted with a coloured background.

NZTA

The New Zealand Transport Agency (NZTA) is the Crown Entity responsible for State Highways. These are the strategic Roads and motorways that are about 12% (10,894 km) of all New Zealand Roads, but account for about half of the 36 billion vehicle kilometres travelled every year. It promotes land transport sustainability and safety and allocates government funding for land transport.

PDA

The Personal Digital Assistant (PDA) was the electronic handheld

device on which **Pocket RAMM** used to run before **Pocket RAMM** became too feature-rich for its limitations. Older versions of **Pocket RAMM** may still run on PDAs.

Pocket RAMM

Pocket RAMM is the module of the **RAMM** suite of products which enables a user to run **RAMM** on a netbook, laptop, tablet or PDA, and to perform Contract, Inventory and Claim management while mobile, in the field. Virtually all of the everyday maintenance ability of **RAMM Contractor** is present in **Pocket RAMM**. Please note that the **Pocket RAMM** application has become so comprehensive that the use of PDAs with **Pocket RAMM** is no longer recommended. PDAs are no longer powerful enough to deliver a positive user experience.

RAMM

Road Assessment and Maintenance Management (**RAMM**) is software developed and supported by RAMM Software Limited. This software is used by Road Controlling Authorities (RCAs) to manage Road Inventory Assets and Condition for their Network.

RAMM Assessment

RAMM Assessment is a feature to used to manage and record Inspections of Roading Assets. You use **RAMM** Assessment to manage

the overall Condition of your Network.

RAMM Contractor

RAMM Contractor is the module of the **RAMM** suite of products which enables Contractors, Network Owners and Consultants to manage Road Asset Maintenance Contracts. In particular, it has been optimised to facilitate the Programming of Network maintenance and the Estimation and Claims process which is integral to Programmed Maintenance Contracts. It also includes the special features for the managing of Contracts for Signs, Street Lights and Traffic Signals maintenance.

RAMM Hosting Service

The **RAMM** Hosting Service is a service run by RAMM Software Limited. It enables you to run **RAMM** across the Internet. It hosts your database and the software on a server at a centralised location. You use your standard internet browser to access the software and work with your data, so you do not need any specialised software. It is very secure.

RAMM Manager

RAMM Manager is the module in the **RAMM** suite of products which you use to set up Lookups, to maintain Staff Permissions, to run processes such as Status Check, and to run reports.

RAMM Software Ltd

This is the company which specialises in the development of software for the roading industry. Its core product, **RAMM** (Road Assessment and Maintenance Management) has been the benchmark in road asset management software in New Zealand for over 20 years. **RAMM** is now a suite of software products including **RAMM Contractor**, **Pocket RAMM**, **RAMM SQL**, **RAMM Manager**, **RAMM Network Manager** and the **RAMM** CAR Manager.

Rating Categories

User definable ratings that describe the condition of Street Lights. They can be categorised and activated individually.

RCA

A Road Controlling Authority (RCA) is the organisation responsible for a particular Road Network. An example of an RCA could be the New Zealand Transport Agency (NZTA) or a TLA (Territorial Local Authority).

Record

This is a collection of information about a single object. In **RAMM** it is a grouping of all the details about a particular item such as a Berm or Street Light. You maintain single record details in a Detail screen.

Replacement Cost

This is a form of Asset Valuation where the Asset value is determined by calculating the current cost of the most appropriate modern Asset with equivalent service potential.

Risk

Risk, sometimes referred to as Risk of Failure, is a measure used in **RAMM** Assessment.   It is calculated from a combination of values for the Likelihood of Failure and the Consequences of Failure for an Asset.

Risk Matrix

The **Risk Matrix** is a rectangular table of Risk values. It is used to calculate an Overall Risk value for an Asset. It allows a user to set values for Risk Likelihood and Risk Consequence. It is structured to conform to the Standards Australia/Standards New Zealand document *Risk Management Guidelines HB 436:2004*.

Road Asset

A Road Asset is a detail about a particular aspect of a Road. It could be the Pavement layers, Condition or other aspect.

RUL

The Remaining Useful Life (RUL) is the time remaining until the end of an Asset's Total Useful Life (see TUL below).

RV

The Residual Value (RV) is the remaining value, if any, of the Asset when it has reached the end of its useful life.

Staff Permissions

Staff Permissions are access rights granted to specific users and groups of users. They are authorisations for users to view or maintain specific aspects of **RAMM**. You set Staff Permissions for users, firstly, to manage their access to **RAMM** and, secondly, once they have accessed **RAMM**, to limit their actions to those which they need in order to perform their normal work activities.

Table

This is a container in the **RAMM** database that holds all the records about an aspect of all Roads in the database. This could be their Berm or Shoulder details for example. Each table holds all the information about only one aspect of all the Roads.

TUL

The Total Useful Life (TUL) is the period of time over which you would expect a normally performing Asset to be useful.

Useful Life

The Asset's current Useful Life is calculated by adding its Age and Remaining Useful Life. See RUL (on page 191). This may differ from the Asset's original estimated Total Useful Life. See TUL (on page 192).

Weighting

Weighting is the degree of priority given to an Assessment. It is a value given to an Item. It is used to determine where resources should be committed as a priority.

Worksheet

A Worksheet is a document created in **RAMM** which is used by an Inspector to assess an Asset. It should contain a list of all the Assessment Items and Assessment Responses required to perform the Assessment. It is created from a Worksheet Template to ensure ease of creation and consistency of results.

Worksheet Template

A Worksheet Template is a **RAMM** item created so that Worksheets used by an Inspector to Assess an Asset can be created easily and consistently. It should contain grouped lists of all the Assessment Items required to perform the Assessment of a particular Asset Type category.

Index

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