

thinkproject

The Built Asset Lifecycle Platform

Pavement Management

A guide to AMDS changes

November 2024

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New Asset Tables

The existing roading asset tables have been replaced with **three new tables**. These hold both historical and current records and are now all viewable in Map.

Subgrade Layer (AMDS)

The Subgrade is the layer(s) of native material under the constructed Pavement and Surface Layers.

Pavement Layer (AMDS)

The Pavement is the layer(s) of compacted material (subbase and base course) that support the traffic load and distribute it to the roadbed.

Surface Layer (AMDS)

The Surface Layer is the top layer(s) in direct contact with traffic loads. Details include construction information, seal dates, material, chip size, binder types and more.

Records can be added in Map or Grid but can be **Approved** only in Pavement Management.

Key Asset Table Changes

There are some key changes to the new AMDS tables and the data that can be recorded.

Now a separate table

Subgrade Layer (AMDS)

Subgrade records used to be part of the Pavement Layer table. They now have their own table.

Multiple Subgrade Layers can be recorded.

Subgrade Layers are added and edited outside of Pavement Management.

No Approval needed

Recommend maintaining asset data in Pavement Management

Pavement Layer (AMDS)

Up to two Material types can now be recorded against a single Pavement.

Surface Layer (AMDS)

A third Chip Grade can now be recorded (for more complex mixes).

SHDOM standards are built-in, for example for chip grade size range or material depth.

Approve only in Pavement Management

While new Pavement and Surface Layer records and changes can be made in Map and Grid, they **cannot be seen** there **until** they have been **Approved** in Pavement Management.

New View Tables

The Structure tables summarise data from the Layer tables so current data can be viewed in Map and Grid. These view tables have new default RAMM layers, as seen below.

Pavement Structure (AMDS)

Pavement Structure (AMDS) Grid Settings
_ X

Refresh Load Edit Remove Share Save Save As Help

Use this to load and manage your saved settings and system settings provided by RAMM.

X

Detailed Pavement (AMDS)	R ★
Major Pavement (AMDS)	R ★
Pavement Structure (AMDS)	R ★

Surface Structure (AMDS)

Surface Structure (AMDS) Grid Settings
_ X

Refresh Load Edit Remove Share Save Save As Help

Use this to load and manage your saved settings and system settings provided by RAMM.

X

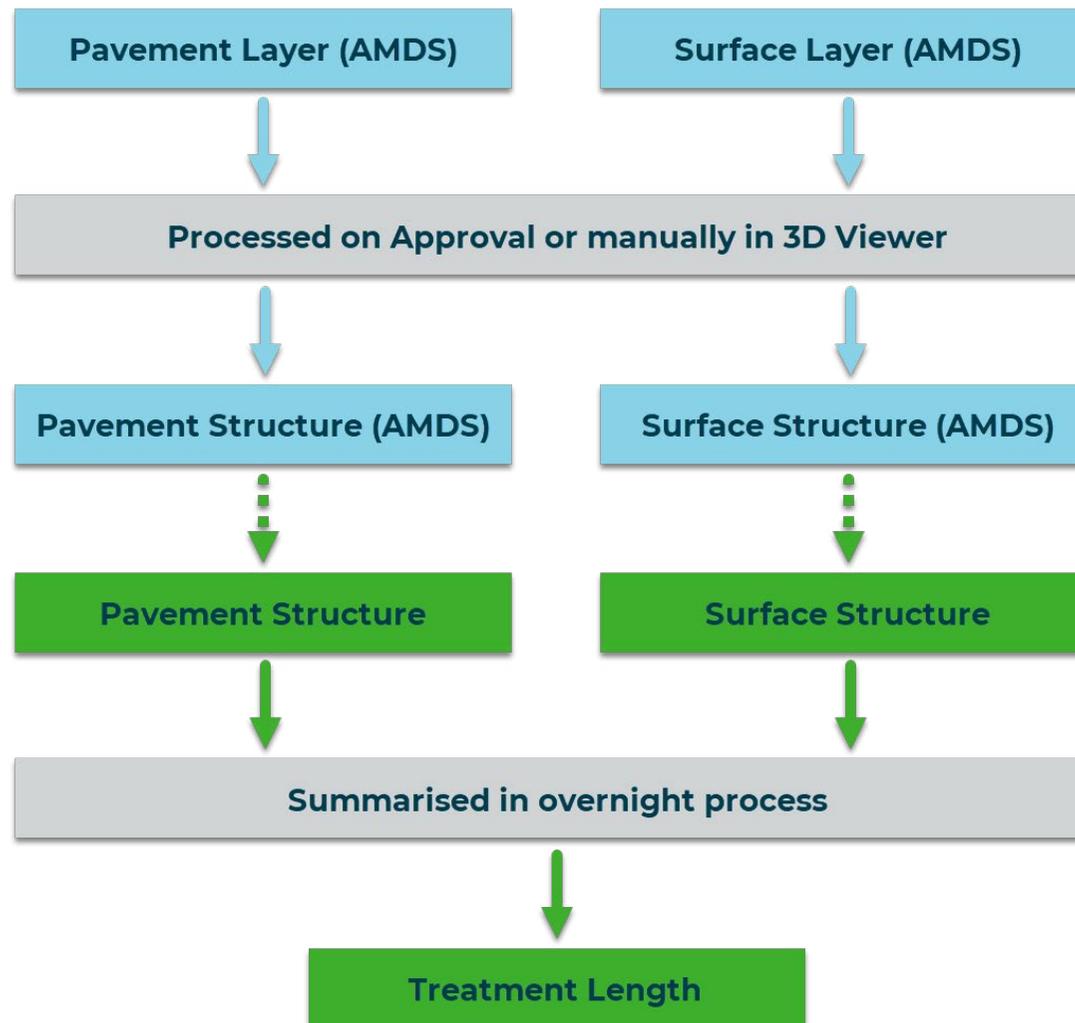
Detailed Surface (AMDS)	R ★
Surface Structure (AMDS)	R ★
Top Surface (AMDS)	R ★

The favourite (yellow starred) layer is always loaded initially.
The defaults highlighted above have no Filter applied to them.

The Structure records cannot be edited. They are updated whenever a Pavement or Surface Layer record is Approved, or when the Structure processing is run manually from the 3D Viewer in Pavement Management.

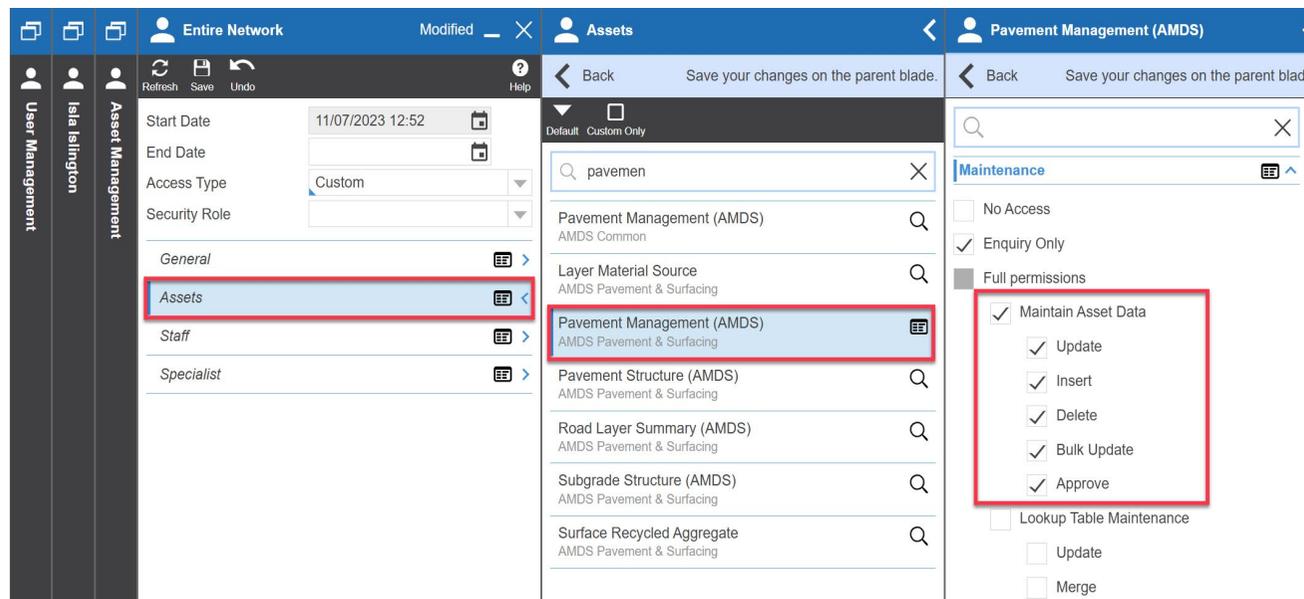
Data Processing Path

When AMDS Layer records are approved, or the structure process is run, the data is summarised into the new AMDS Structure tables, and also updated in the classic Structure tables. This allows the overnight process to summarise the data into the current Treatment Length table.



Permissions

Set Pavement Management (AMDS) permissions in User Management to enable users to **Update, Insert, Delete, Bulk Update, and Approve** Pavement and Surfacing records as applicable.



Pavement Management (AMDS) grants permissions for:

- Surface Layer (AMDS)
- Pavement Layer (AMDS)
- Additive Details (AMDS)
- Adhesion Agent Details (AMDS)
- Pavement Stabilising Agent.

Asset Area and Shape

The Area for both Pavement and Surface Layers can now be altered by using **Adjustment** and **Extra Area** in the **Dimensions** child blade.

The screenshot displays the software interface for editing a Surface Layer (AMDS) #13. The interface is split into two panes. The left pane shows the 'Dimensions' section with a red box around its header. The right pane shows the 'Dimensions' section with a red box around the 'Adjustment', 'Reason', and 'Extra Area' fields. The 'Adjustment' field is currently empty, and the 'Reason' field is a dropdown menu. The 'Extra Area' field is also empty. The 'Total Area' is displayed as 261 m2.

Field	Value	Unit
Layer Lane Coverage	2	
Measured Thickness	25	mm
Calculated Thickness		mm
Length	29	m
Area	261	m2
Adjustment		m
Reason		
Extra Area		m2
Total Area	261	m2

Note: Drawing irregular Pavement and Surface Layer shapes in Map is not recommended. The Area is calculated as Length x Width so the shape may default to these measurements.

Pavement Stabilising Agent

Add Pavement Stabilising Agent as a linked child in the Pavement Layer **Asset Hierarchy**.

The image displays three sequential screenshots of a software interface for managing asset hierarchies.

- Left Screenshot:** Shows the 'Asset Hierarchy' window with a search bar containing 'Pavement Layer (AMDS) #2497 - All Passing 65mm'. The 'Add' button in the top toolbar is highlighted with a red box.
- Middle Screenshot:** Shows the 'Add item' dialog box. The search bar contains 'Search'. The list of item types includes 'Pavement Layer (AMDS)' and 'Pavement Stabilising Agent', with the latter highlighted by a red box.
- Right Screenshot:** Shows the 'Add item' dialog box with the search bar containing 'Search'. The list of item types includes 'Not Linked', 'Component', 'Attachment', 'Binder Component', 'Rehabilitation Type', and 'Lighting Component', with 'Rehabilitation Type' highlighted by a red box.

Use the **Rehabilitation Type** link.

Pavement Stabilising Agent is **not** currently **in Pavement Management**. All editing is done through the Asset Hierarchy and there is **no Approval** process.

thinkproject Surface Additive and Adhesion Agent

Add Surface Additive and Adhesion Agent Details in the Surface Layer **Asset Hierarchy**.

The image displays three sequential screenshots of a software interface for managing asset hierarchies.

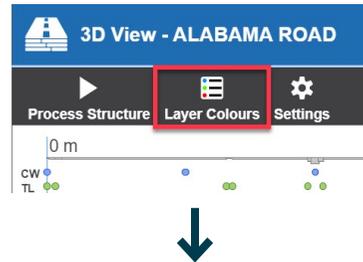
- Left Screenshot:** Shows the 'Asset Hierarchy' window with a search bar and a list of items. The selected item is 'Surface Layer (AMDS) #3 - Single Coat Seal'.
- Middle Screenshot:** Shows the 'Add item' dialog box. The search bar contains the text 'Search'. The list of items to add includes 'Additive Details (AMDS)', 'Adhesion Agent Details (AMDS)', and 'Surface Layer (AMDS)'. The 'Adhesion Agent Details (AMDS)' item is highlighted with a red box.
- Right Screenshot:** Shows the 'Add item' dialog box with the search bar containing the text 'Search'. The list of items to link includes 'Not Linked', 'Component', 'Attachment', 'Binder Component', 'Rehabilitation Type', and 'Lighting Component'. The 'Binder Component' item is highlighted with a red box.

Use the **Binder Component** link.

Surface Additive and Adhesion Agent Details are **not** currently **in Pavement Management**. All editing is done through the Asset Hierarchy and there is **no Approval** process.

3D Viewer Layer Colours

The Material Type layers in the 3D Viewer all default to black. Select your own colours for each Material Type using **Layer Colours** on the 3D Viewer toolbar.



Materials Colours

Refresh

This allows you to colour your layer based on attributes of your data so that you can highlight important features.

Surface Material Type >

Pavement Material Type >

Select Surface Material Colour

Clear

Select each value to assign a highlight colour.

Search

- Bitumen Bound Macadam
- Bolidt Polyurethane Mix Default
- Cape Seal Default
- Combination Seal
- Concrete Surface
- Dense Graded Asphalt AC (M/10) Default
- Dense Graded Asphalt DG (M/10) Default
- Enrichment Seal Over Asphalt Default

Layer Colour

Refresh Apply Default Help

Colour Border

#0073DD 60%

Apply

Use **Settings** to save your changes so they're not lost and you can share them with other users. Select the Setting to be your favourite so they load every time.

thinkproject Approving Pavement and Surface Layers

Review all new and edited records in the **View Pending Changes** list. All records are now **Approved here** as they cannot be approved through the Pavement and Surface Layer tables.

The screenshot displays the 'Pavement Management' software interface, divided into three main sections: 'Pavement Management', 'Pending Changes', and 'Rehabilitation'.

- Pavement Management:** Contains a sidebar with navigation options: '3D Viewer', 'View Structure Map and Grids', 'View Layer Grids', 'Add a Simple Surface', 'Record an Initial Construction', 'Record a Rehabilitation or Reconstruction', 'View Pending Changes' (highlighted with a green box), 'View Change History', and 'Reports'.
- Pending Changes:** Features a search bar and a list of records. The 'Ready for Approval' button is highlighted with an orange box. The list includes:
 - AGINCOURT STREET (0 - 150m) - Initial Construction, Created by Maree Brown on 12/06/2023
 - ADAMS LANE (10 - 20m) - Initial Construction, Created by Stacey Verner on 12/06/2023
 - ROSINA CORLETT LANE (240 - 300m) - Edit Surface, Created by Maree Brown on 12/06/2023
 - ADAMS LANE (1 - 100m) - Rehabilitation, Created by Maree Brown on 13/06/2023 (highlighted)
 - ADMIRALTY PLACE (1 - 100m) - Add Pavement, Created by Maree Brown on 11/07/2023
 - BEACON ROAD (0 - 10m) - Rehabilitation, Created by Melissa Kearney on 17/07/2023
- Rehabilitation:** Provides a detailed view for 'ADAMS LANE'. It includes a 'Location' section with fields for Road (ADAMS LANE), Start (1 m), End (100 m), Offset (LHS) (0 m), and Width (10 m). The 'Modifications' section shows 'Remove, Recycle and Stabilise' (Nothing removed), 'Add Pavements' (No pavement added), and 'Add Surface' (No surface added). The 'Audit' section shows 'Created On' (13/06/2023) and 'Created By' (Maree Brown). At the bottom, the 'Approve' button is highlighted with a green box, and the 'Ready for Approval' button is highlighted with an orange box.

Users with the correct permissions can **Approve** directly, others will be able to check details and mark records as **Ready for Approval**. When Approved, the Structure process is run to update the **view tables** and **3D Viewer**. This will take a few minutes before being displayed.

Rehabilitation or Reconstruction

When adding the Width of a Rehabilitation or Reconstruction, the **Carriageway Section Width** and **Use** display as a guide.

The image shows two side-by-side software windows. The left window is titled 'Rehabilitation' and contains a 'Reject' button and a description: 'Use this when you are removing, stabilising, or recycling existing surfaces and/or pavements before adding new surfaces and / or pavements.' Below this is a 'Location' section with fields for Road (BEACON ROAD), Start (0 m), End (10 m), Offset (LHS) (0 m), Width (empty), and Full Width (empty). A dropdown menu is open for the Width field, showing options: 'Seal Widening', 'Road 4m wide, ADT ...', and 'Road 4m wide, ADT < 100'. The right window is titled 'Carriageway Section #1024' and has a toolbar with icons for Refresh, Save, Undo, Delete, Replace, Add Inspection, Schematics, and Action. It features two sections: 'Pavement' with 'Type' (Unsealed) and 'Use' (ADT < 100) dropdowns, and 'Dimensions' with 'Length' (1461 m), 'Width' (4 m), 'Area' (5844 m2), 'Width Indicator' (Regular), and 'Reserve Width' (14.7 m). Red boxes highlight the 'Use' field in the Pavement section and the 'Width' field in the Dimensions section. Red arrows point from these boxes to the 'Road 4m wide, ADT ...' option in the Rehabilitation window's dropdown menu.

Field	Value
Rehabilitation - Location - Road	BEACON ROAD
Rehabilitation - Location - Start	0 m
Rehabilitation - Location - End	10 m
Rehabilitation - Location - Offset (LHS)	0 m
Rehabilitation - Location - Width	
Rehabilitation - Location - Full Width	
Rehabilitation - Location - Width Dropdown	Seal Widening, Road 4m wide, ADT ..., Road 4m wide, ADT < 100
Carriageway Section #1024 - Pavement - Type	Unsealed
Carriageway Section #1024 - Pavement - Use	ADT < 100
Carriageway Section #1024 - Dimensions - Length	1461 m
Carriageway Section #1024 - Dimensions - Width	4 m
Carriageway Section #1024 - Dimensions - Area	5844 m ²
Carriageway Section #1024 - Dimensions - Width Indicator	Regular
Carriageway Section #1024 - Dimensions - Reserve Width	14.7 m

The Carriageway Section data is not updated from Pavement Management, so will need to be edited separately if there are any changes.

Remove, Recycle and Stabilise

When rehabilitating existing surfaces, if new material is being added and/or the existing pavement stabilised, new Pavement Layer records are created in the working table.

Rehabilitation Reject

Use this when you are removing, stabilising, or recycling existing surfaces and/or pavements before adding new surfaces and / or pavements.

Location

Road: ALANA PLACE

Start: 2 m MILFORD END OF PLA

End: 8 m ROAD NARROWING B...

Offset (LHS): 1 m [Seal Widening](#)

Width: 12 m Road 12m wide, ADT 1...

Full Width:

[View existing pavements and surfaces](#)

Modifications

Remove, Recycle and Stabilise
Nothing removed

Add Pavements
No pavement added

Add Surface
No surface added

Audit

Created On: 18/07/2023

Created By:

[View new pavements and surfaces](#) **Approve**

[Ready for Approval](#)

Remove, Recycle and Stabilise Save

Use this when you are removing, stabilising, or recycling existing surfaces and/or pavements before adding new surfaces and/or pavements. [View examples](#)

1. Depth Removed

0 mm

Specify the depth of existing surfaces and pavements that were entirely removed, excluding the depth of material that was recycled or stabilised. Leave this as 0 mm if you did not remove any material.

2. Thickness of Added Material

0 mm **Specify Pavement Details**

Specify the depth of new material that was added prior to stabilisation. Leave this as 0 mm if you did not add any material. Add a new pavements for any material after stabilisation.

3. Depth Stabilised

0 mm **Specify Pavement Details**

Specify the depth of material that was stabilised including the depth added material specified above (if any).

Date

Enter the date of the Rehabilitation.

Save

View examples of the different scenarios to learn more about Rehabilitation and Reconstruction. Add Agent and Additive Details in the Asset Hierarchy, once the Rehabilitation is **Approved**.

Current Restrictions

Some features in Pavement Management are not working as well as they could with the new AMDS roading tables.

Carriageway Width Validation Report

The Carriageway Width Validation report still works on the classic Pavement data. There is currently no release date for when this will work on the new AMDS data.

The screenshot displays the Pavement Management software interface. The main window is titled "Pavement Management" and contains a sidebar with various navigation options: "3D Viewer", "Add a Simple Surface", "View Change History", and "Reports". The "Reports" option is highlighted with a red box. The main content area shows a "Reports" panel with a "Refresh" button and a list of reports. The "Carriageway Width Validation" report is highlighted with a red box and includes a description: "Lists Carriageways where the width is different from the total width of overlapping Surfaces." A green wavy line is drawn across the bottom of the interface.

**Contact us if you
need more help
understanding the
changes to Pavement
and Surfacing under
AMDS.**

[Submit a Support ticket](#)

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