An overview of the Asset Hierarchy feature

21/09/2023 3:02 pm +10

The RAMM Asset Hierarchy feature allows for relationships to be defined between different items in the database. Relationships are created by adding links between related records.



When linking items together, one record becomes the parent record and the other becomes the child record. Links can be added between records in the same table or between records across different tables. For example, an asset in the Berm (AMDS) table could be linked to an asset in the Footpath (AMDS) table.

Records can also be unlinked if the relationship is no longer relevant/applicable.

Dependent Records

Some types of RAMM records must be linked to a parent record, where they are dependent on that parent record for important information such as location or classification details.

For example, records in the **Pavement Stabilising Agent** table have no location information on their own, so they must be joined to a parent **Pavement Layer** or **Subgrade Layer** record.



Complex Linking

Multiple levels of links can be defined to model complex relationships between records.

A single record may have no links, a single link to another record, or it can be linked to many other records. A single record can hold a mix of parent and child roles when linked to multiple other records.

Refer to the diagram below which shows fourteen tables configured in the Bridge linking hierarchy.



Link Types

The link types available in the Asset Hierarchy screen, and their intended uses, are as follows:

- Component: For use when the child record forms part of the parent item.
- Attachment: For use when the child record is related to, or associated with the parent record in some manner, but does not form part of the parent item.
- Lighting Component: For use when joining the components of Luminaire, Outreach and Pole Structure.
- **Rehabilitation**: For use when joining Pavement Stabilising Agent details to Pavement Layers or Subgrade Layers.

Foreign Key Relationships

Relationships can also exist in the database in the form of **Foreign Key** relationships. These are relationships defined directly within a record, as part of the overall table design.

An example of this can be seen in the pathway table. When a pathway asset is located on a bridge, the bridge is defined directly within the pathway asset record.

Pathway (AMDS)	_ × _
Apply Undo Edit	
Footpath on Bridge?	No
Bridge	
If a Pathway asset is located on a Bridge, this is included as part of the definition of the asset record.	

As Foreign Keys have a different implementation to the link types previously outlined above, *Foreign Key* is not a selectable link type option when adding links in the Asset Hierarchy screen.

Common Link Examples

Assets in the following groups are often linked to other assets/items in the database. The table names commonly linked to or from have been listed for each group.

- Barriers
 - Barrier (AMDS)
 - Barrier Terminal (AMDS)
 - Crash Cushion (AMDS)
 - Other related objects these assets are connected to or mounted on.
- Bridges
 - Bridge (AMDS)
 - Other related assets that are installed on, connected to, or mounted on the bridge.
- Drainage: where Headwall records are linked to parent Culvert records.
 - Culvert (PNG)
 - Headwall (AMDS)
- Intelligent Transport Systems
 - Camera (AMDS)
 - Controller (AMDS)
 - Electronic Sign (AMDS)
 - Other related objects these assets are inside of / located within.
- **Pavements**; where *Pavement Stabilising Agent* records are linked to parent *Pavement Layer* or *Surface Layer* records.
 - Pavement Layer (AMDS)
 - Pavement Stabilising Agent (AMDS)
 - Subgrade Layer (AMDS)

• Street Lights

- Controller (AMDS)
- Luminaire (AMDS)
- Outreach (AMDS)
- Pole Structure (AMDS)
- Other related objects these assets are connected to, mounted on or located within.
- Surfaces; where Additive Details and Adhesion Agent Details records are linked to parent Surface Layer records.
 - Surface Layer (AMDS)
 - Additive Details (AMDS)
 - Adhesion Agent Details (AMDS)
- Traffic Signals
 - Aspect (AMDS)
 - Controller (AMDS)
 - Pole Structure (AMDS)
 - Target Board(AMDS)
 - Traffic Signal (AMDS)
 - Other related objects these assets are connected to, mounted on or located within.

Support Structure assets (Pole Structure, Outreach, Gantry, and Mast) will usually be linked to other assets, but have not been explicitly included as a standalone asset group in the list above.