# TAMS And Referential Integrity

TAMS and other database systems use a technique called "Referential Integrity". This means that some tables are "related" to each other, and the database management system (DBMS) automatically ensures that the relationships are correctly maintained.

The following diagram illustrates the referential integrity links in the main asset register tables.

Referential Integrity Of Asset Database

Sys				Sys.db
SubSys				SubSys.db
Facility	Facility ID			Facility.db
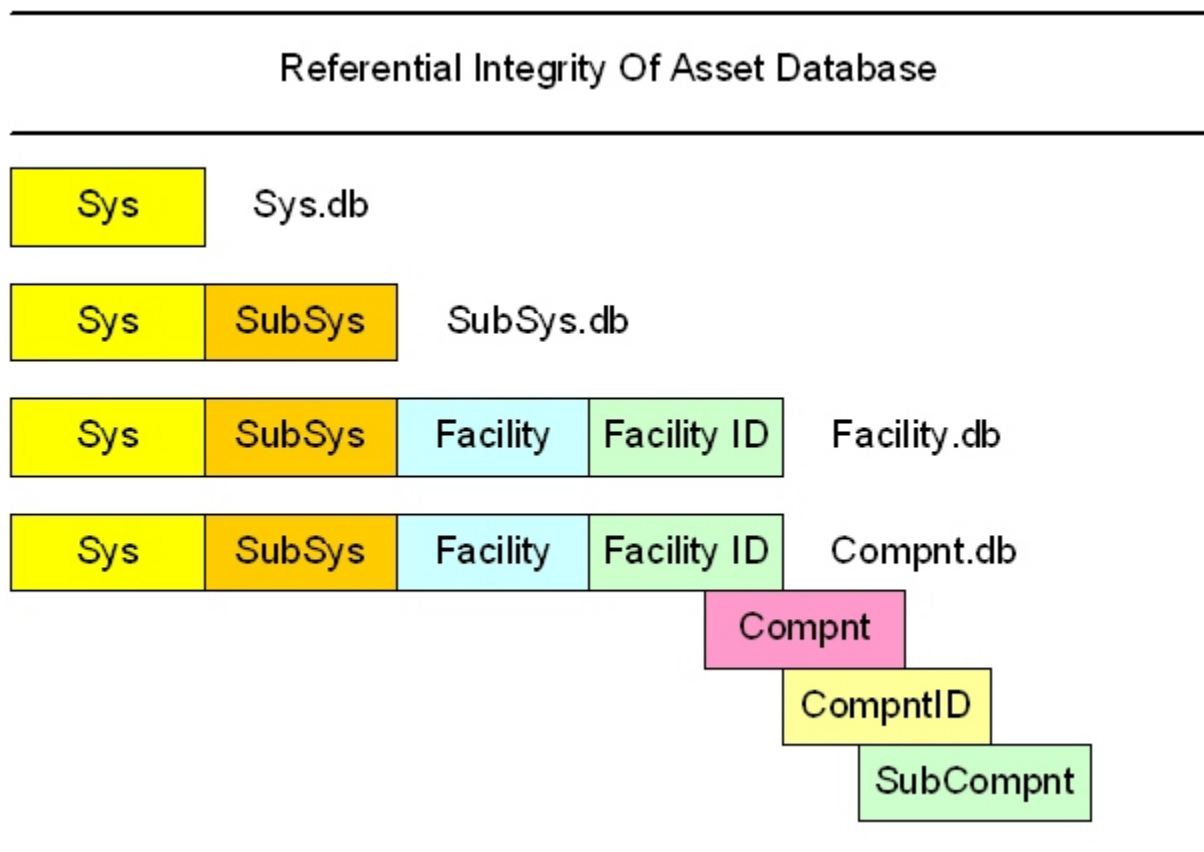
Working from top to bottom:

- the Sys.db table holds information about the highest level assets - for example a water system, or a road;

- the SubSys.db table holds information about the next level, for example a catchment area, or a road segment;

- the Facility.db table holds information about the next level, for example a sewerage treatment works, or kerbs and guttering;

- the Compnt.db table holds information about the lowest level asset, for example a pump within a sewerage treatment works. In the case of the Roads module, these lowest levels are not normally used as there is no need for any

further breakdown.

When adding data, the tables must be filled in order from top to bottom. For example, a "System" must be created before a "SubSystem", and so on.

When removing data, the tables must be emptied in order from bottom to top. For example, a "Component" must be removed before a "Facility" and so on.

When changing data, a change made at the top is automatically flowed down to the bottom. For example changing a "System" code will flow through "SubSystem" and "Facility" to "Component". However, a change made at the bottom does not flow to the top. For example changing the Sys code in the Compnt table will not be permitted unless the code is already correctly set up in the upper tables.