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Benchmark Apps

PPM Planner User Guide

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Table of Contents

Benchmark Apps – PPM Planner Overview

Benchmark apps offer an intuitive, cloud-hosted application for the Planned Preventative Maintenance (PPM) Planner. Key Project information is transferred from Benchmark to the PPM Planner via Benchmark's industry-standard API to visualise a visit schedule. This application allows you to:

- Generate a PPM schedule for every maintained Asset in a Benchmark Project.
- Adjust the visit schedules.
- Export the PPM information and use it in external applications.

Key Terminology

Term	Description	Example
Asset	A Project Item with an associated visit schedule. Only the Project Items identified as Assets are transferred from Benchmark to the PPM Planner.	
Labour Element	Represents the labour resource carrying out the maintenance visit for an Asset.	• n: Normal Time • o: Out of Hours • sn: Subcontracted Normal Time • so: Subcontracted Out of Hours
Frequency	Represents a periodical visit required to maintain an Asset. Frequencies are configured as Activities in the Codes window in Benchmark. Asset frequencies suffixed with the relevant Labour Element are stored as Item Variables in Benchmark.	• 1M: Monthly • 3M: Quarterly • 6M: Half-yearly • 1Y: Yearly Suffixed with Labour Element: • 1M -sn: The Asset requires a maintenance visit once a month from a Subcontractor during Normal hours. • 1Y -o: The Asset requires an Out of Hours maintenance visit once a year.
Duration	The amount of time required to complete a maintenance visit. Durations associated with the Item Variable are stored in the *Qty* and *Unit* fields in Project Resources in Benchmark.	A Variable associated with an Asset has the following details in Project Resources: • *Resource Description*: 1M - sn • *Qty*: 0.25 • *Unit*: Hr This means the Asset requires a monthly maintenance visit of 15 minutes from a Subcontractor during Normal hours.
Special Frequency	A frequency not defined in the PPM Planner application but present in the schedule.	

Term	Description	Example
	Administrators can also nominate a normal frequency (defined in the application) as a Special Frequency.	

Prerequisites

- To use the PPM Planner application, you must have access to Microsoft Power Apps in your organisation.
- All the relevant frequencies must be set up in Administration > Codes > Activities.

Setting Up Custom Information in Benchmark

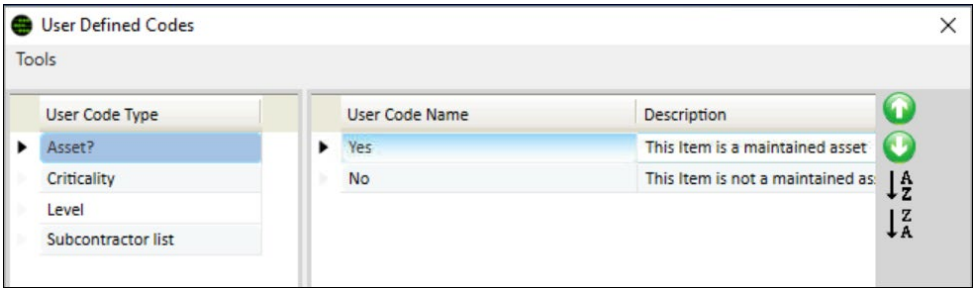
To create a PPM schedule, Project information is transferred from Benchmark to the PPM Planner application. The following Project Item information required by the PPM Planner must be set up as Custom Fields in Benchmark:

- *Asset*
- *Criticality*
- *Barcode*
- *Code 2*

Setting Up User Codes

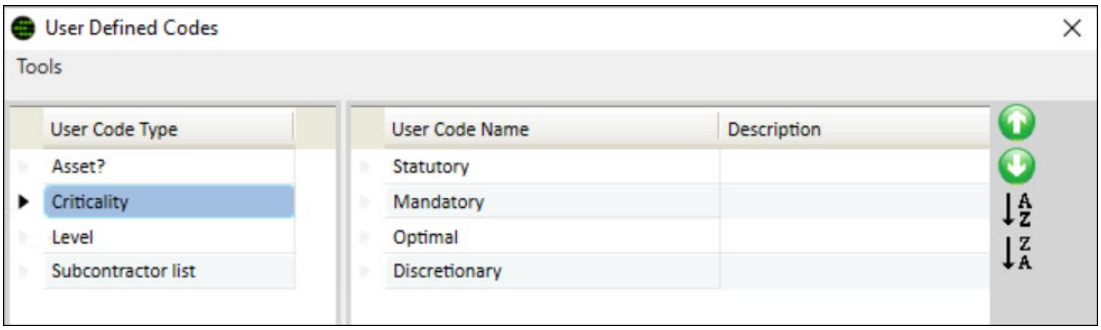
Benchmark Administrators must follow the steps below:

1. From the main menu, select Administration > User Codes.
2. Right click in the User Code Type column and select Add Code Type.
3. Enter *Asset?* and select OK.
4. Press CTRL + A and individually add the following *User Code Names*:
    a. *Yes*
    b. *No*



Only the Items where the Custom Field *Asset* is set to *Yes* in the Project Items window, are transferred from Benchmark to the PPM Planner application.

5. Right click in the User Code Type column and select Add Code Type.
6. Enter *Criticality* and select OK.
7. Press CTRL + A and individually add all the required levels of Criticality as User Code *Names*.
    a. *Statutory*
    b. *Mandatory*
    c. *Optimal*
    d. *Discretionary*



Setting Up Custom Fields

Benchmark Administrators must follow the steps below:

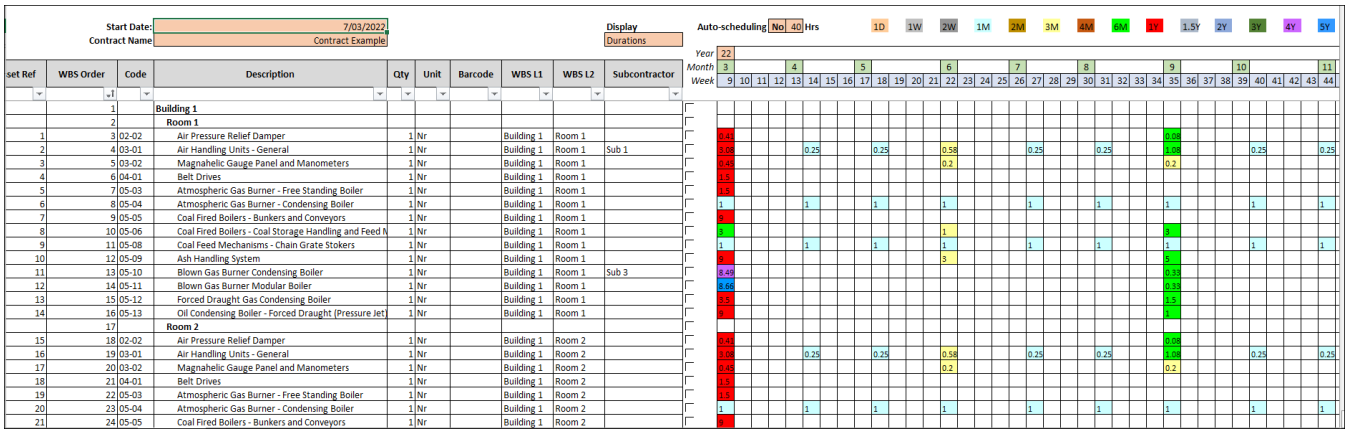
1. From the main menu, select Administration > Admin.
2. Select Custom Field > Project Items / Item Library.
3. Right click in the data grid and select Add Field.
4. Add the following Custom Fields:

Field Name	Type	Source
Asset	*Selection*	*Asset?*
Criticality	*Selection*	*Criticality*
Barcode	*TextInput*	
Code 2	*TextInput*	

Navigating the Application

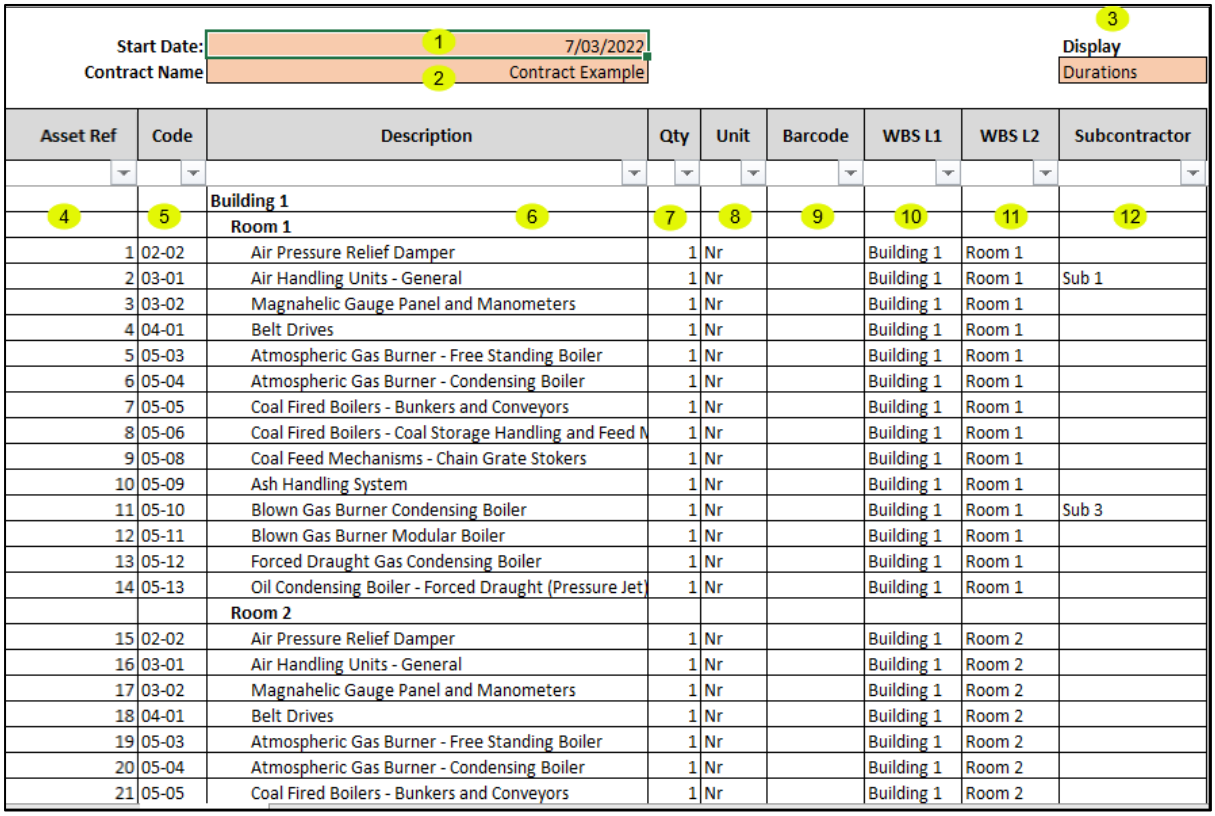
Some UI elements / functions may not be available to you. See Admin Access for more information.

- When you generate a visit schedule, the Assets in the Project and their relevant details display on the left panel.
- After you select a Contract *Start Date*, the visit schedule for these Assets displays on the right panel.



Left Panel

Project hierarchy in the PPM Planner follows the Benchmark Project Work Breakdown Structure (WBS).



Start Date: 1 7/03/2022
Contract Name 2 Contract Example
3 Display: Durations

Asset Ref	Code	Description	Qty	Unit	Barcode	WBS L1	WBS L2	Subcontractor
		Building 1						
4	5	**Room 1** 6	7	8	9	10	11	12
1	02-02	Air Pressure Relief Damper	1	Nr		Building 1	Room 1	
2	03-01	Air Handling Units - General	1	Nr		Building 1	Room 1	Sub 1
3	03-02	Magnahelic Gauge Panel and Manometers	1	Nr		Building 1	Room 1	
4	04-01	Belt Drives	1	Nr		Building 1	Room 1	
5	05-03	Atmospheric Gas Burner - Free Standing Boiler	1	Nr		Building 1	Room 1	
6	05-04	Atmospheric Gas Burner - Condensing Boiler	1	Nr		Building 1	Room 1	
7	05-05	Coal Fired Boilers - Bunkers and Conveyors	1	Nr		Building 1	Room 1	
8	05-06	Coal Fired Boilers - Coal Storage Handling and Feed N	1	Nr		Building 1	Room 1	
9	05-08	Coal Feed Mechanisms - Chain Grate Stokers	1	Nr		Building 1	Room 1	
10	05-09	Ash Handling System	1	Nr		Building 1	Room 1	
11	05-10	Blown Gas Burner Condensing Boiler	1	Nr		Building 1	Room 1	Sub 3
12	05-11	Blown Gas Burner Modular Boiler	1	Nr		Building 1	Room 1	
13	05-12	Forced Draught Gas Condensing Boiler	1	Nr		Building 1	Room 1	
14	05-13	Oil Condensing Boiler - Forced Draught (Pressure Jet)	1	Nr		Building 1	Room 1	
		Room 2						
15	02-02	Air Pressure Relief Damper	1	Nr		Building 1	Room 2	
16	03-01	Air Handling Units - General	1	Nr		Building 1	Room 2	
17	03-02	Magnahelic Gauge Panel and Manometers	1	Nr		Building 1	Room 2	
18	04-01	Belt Drives	1	Nr		Building 1	Room 2	
19	05-03	Atmospheric Gas Burner - Free Standing Boiler	1	Nr		Building 1	Room 2	
20	05-04	Atmospheric Gas Burner - Condensing Boiler	1	Nr		Building 1	Room 2	
21	05-05	Coal Fired Boilers - Bunkers and Conveyors	1	Nr		Building 1	Room 2	

- *Title* of the Project from Benchmark 1
- Start Date to define the starting week of the schedule 2
- Customises the schedule display: 3
    - *Duration*: Shows the duration and colour for each of the frequencies in the schedule.
    - *Blank*: Shows the frequency colours only.
    - *Labour Element*: Shows the frequency colour and the suffix for the Labour Element.
- Incremental numbers to reference each Asset in the Project 4
- Item *Code* 5
- Value of the Item Custom Field, *Code 2* if present in Project Items
- Item *Description* 6
- Item *Quantity* 7

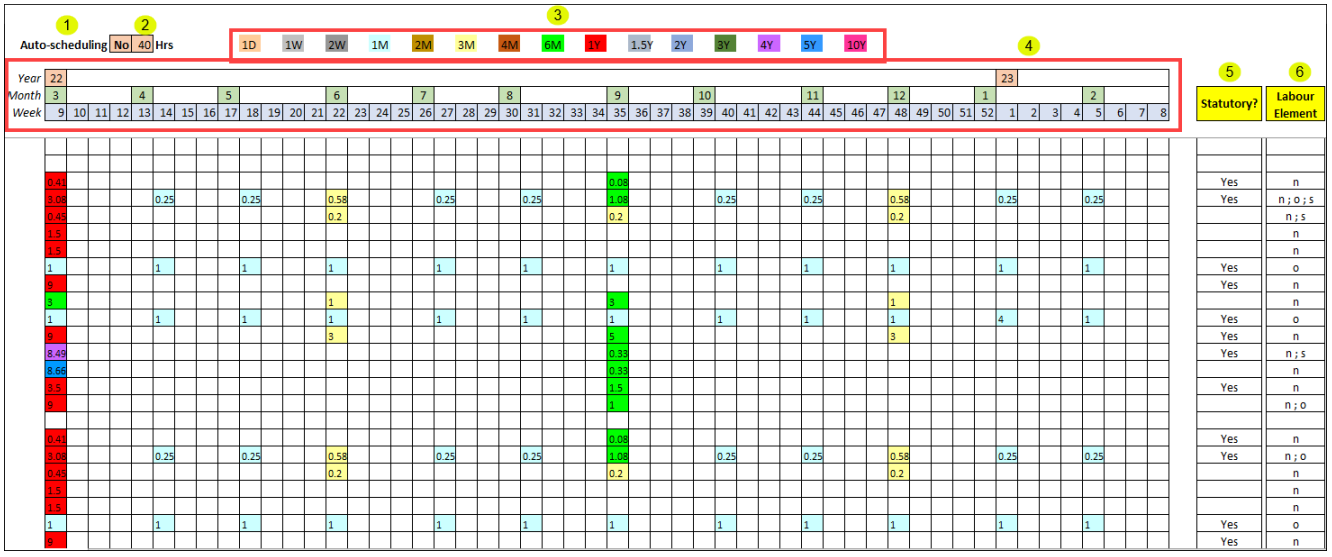
- Item *Unit* 8
- Value of the Item Custom Field, *Barcode* if present in Project Items 9
- Project Section *Description* 10
- Column WBS L2 11 shows the *Description* of the first level of Composites and will only be displayed if the Project contains Composite levels.

  There will be as many additional WBS L... columns as there are additional Composite levels in the Benchmark Project.
- The Subcontractor 12 associated with any Resource in the Item. This is the value of the *Subcontractor* column if present, in Project Resources

> If different Resources within an Item have different Subcontractors, then the first value in the *Subcontractor* column will be used.

- You can also generate various exports from the application. See Exporting Information for more details.

Right Panel

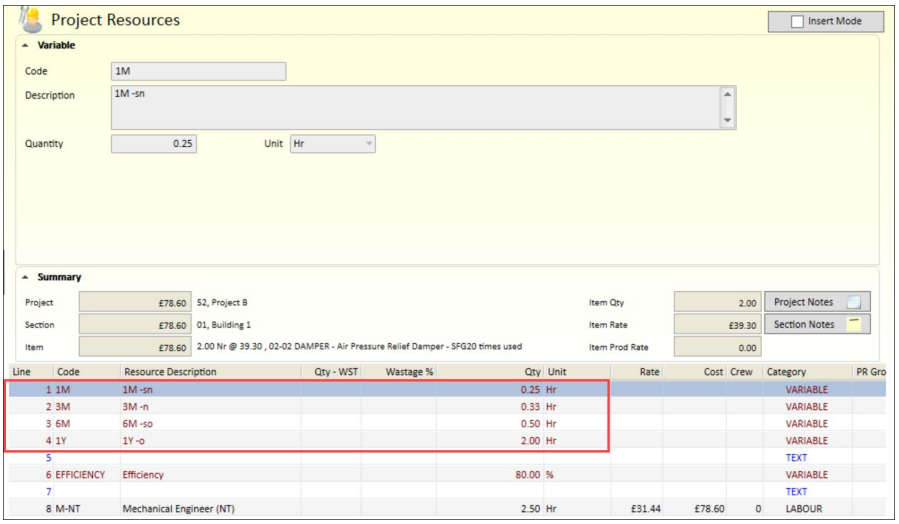


- Toggle to enable the Autoschedule function 1
  - Define the maximum number of weekly working hours to adjust the visit schedules when you use Autoschedule 2
- Frequencies used in the Estimate, represented by their colours 3
- The application shows a weekly visit schedule for one year (52 weeks) 4

- Each row displays the visit duration and frequency for an Asset (Project Item).
- For an Asset, if multiple visit frequencies are scheduled in the same week, then the colour of the frequency with the longest duration displays.
- *Statutory?* 5 shows *Yes* if the Custom Field *Criticality* is set to *Statutory* in Project Items
- *Labour Element* 6 shows the labour element suffixes from the frequency (Resource *Description*). Each suffix is displayed once even if present in multiple descriptions.

Example

- A Project Item (Asset) has the following frequencies set up in Benchmark:



Only the frequencies that precede the first TEXT line in Project Resources are identified as durations and sent to the PPM Planner.

- Frequencies have the following colours:

1M 3M 6M 1Y

- *Display* is set to *Duration*.
- *Start Date* is set to 02-March-2022. So, the calendar starts at week 9 of the year.
- The Asset will show the visit schedule for the year as follows:

Week	Month	Visits Scheduled	Duration Displayed
9	March	• Monthly (1M) • Quarterly (3M) • Half-yearly (6M)	0.25 + 0.33 + 0.50 + 2.00 = 3.08

Week	Month	Visits Scheduled	Duration Displayed
		• Yearly (1Y)	
14	April	Monthly (1M)	0.25
18	May	Monthly (1M)	0.25
22	June	• Monthly (1M) • Quarterly (3M)	0.25 + 0.33 = 0.58
27	July	Monthly (1M)	0.25
31	August	Monthly (1M)	0.25
35	September	• Monthly (1M) • Quarterly (3M) • Half-yearly (6M)	0.25 + 0.33 + 0.50 =1.08
40	October	Monthly (1M)	0.25

Configuring the PPM Planner

Managing User Access

Application Administrators can perform the following functions:

- Set up / modify / delete user access
- Set up normal and special frequencies
- Manage the colour palettes for frequencies

Admin Access

The application Administrator can grant admin access to a user. See the table below for information on this access:

Function	Admin Access	Non-Admin Access
Create	✓	✓
Edit		
Own Planner	✓	✓
Other Users' Planners	✓	✗
Duplicate		
Own Planner	✓	✓
Other Users' Planners	✓	✓
Delete		
Own Planner	✓	✓
Other Users' Planners	✓	✗
Archive		
Own Planner	✓	✓
Other Users' Planners	✓	✗

Setting Up New Access

1. Log in to the PPM Planner app.
2. Select Admin.
3. Select the Create New Access button.

4. Search the relevant user by their username

5. Select a default *Display* for the user from the following options:
   a. *Duration*: Shows the duration and colour for each of the frequencies in the schedule.
   b. *Blank*: Shows the frequency colours only.
   c. *Labour Element*: Shows the frequency colour and the suffix for the Labour Element.

   This will be the default *Display* for the user when they create a new Planner. The user can change this, if required.
6. Enter a *Login Code* for the user.
7. Select a default *Autoschedule* option:
   a. *Yes*: The user can define the number of weekly working hours to automatically adjust the schedule for all Assets.
   b. *No*: The user cannot automatically adjust the schedule.

   This will be the default selection for the user when they create a new Planner. The user can change this, if required.
8. Enter the default *Maximum Hours*.
   This will be the default *Maximum Weekly Hours* displayed to the user for the Autoschedule function, when they create a new Planner. The user can change this, if required.
9. Provide *Admin Access* to this user, if required.
10. Check one or more *Columns to be displayed* in the schedule.
11. Select Save.

Modifying User Access

1. Log in to the PPM Planner app.
2. Select Admin.
3. Search the relevant user.
4. You can:
    a. Check the *Admin* checkbox to grant admin access or uncheck to deny admin access.
    b. Select *Edit Access* to modify user access.
5. Select Save.

Locking User Access

Administrators can prevent users from accessing schedules in the PPM Planner by locking their access.

1. Log in to the PPM Planner app.
2. Select Admin.
3. Search the relevant user.
4. Select Lock.

You can grant back access any time by selecting the same user and then selecting Unlock.

You must unlock the user to modify or delete their access.

Deleting User Access

1. Log in to the PPM Planner app.
2. Select Admin.
3. Search the relevant user.
4. Select Delete.

Setting Up Frequencies

1. Log in to the PPM Planner app.
2. Select Admin.
3. Select the Colour Palette button.
4. Select Add Frequency.

The PPM Planner contains a pre-defined set of frequencies. Slide the Select toggle to the left if you do not wish to use any frequency.

5. Select Add Custom Frequency.
6. Enter the name for the new frequency, then select Save.

   The following confirmation message displays:

   "Are you sure you want to add the below frequency?"

Once saved, you cannot delete the frequency. However, you can the Hide Frequency toggle to prevent the frequency from being displayed in the schedule.

7. Select Yes.

   All the saved frequencies are displayed in the Colour Palette window.
8. Use the *Assign Colour* dropdown to select an RGB colour for the frequency.
9. Select Save.

   The following confirmation message displays:

   "Are you sure you want to save the colour?"

Once saved, you cannot edit the colour.

10. Select Yes.

Setting Up Special Frequencies

If a frequency does not have any colour defined in the Colour Palette or needs to be highlighted, you can set up a default / Special frequency colour.

1. In the Colour Palette window, slide the Special Frequency toggle.
2. In the *Label* field, enter a name for the special frequency.

If you do not define a name, the special frequency will be represented by S in the schedule.

3. Select a colour.
4. Select Save.

   The following confirmation message displays:

   "Are you sure you want to add the special frequency?"

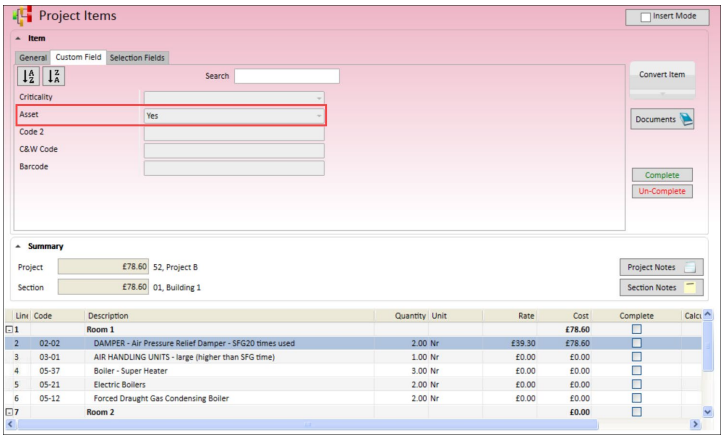
5. Select Yes.

To highlight a defined (normal) frequency, slide its Special Frequency toggle to the right.

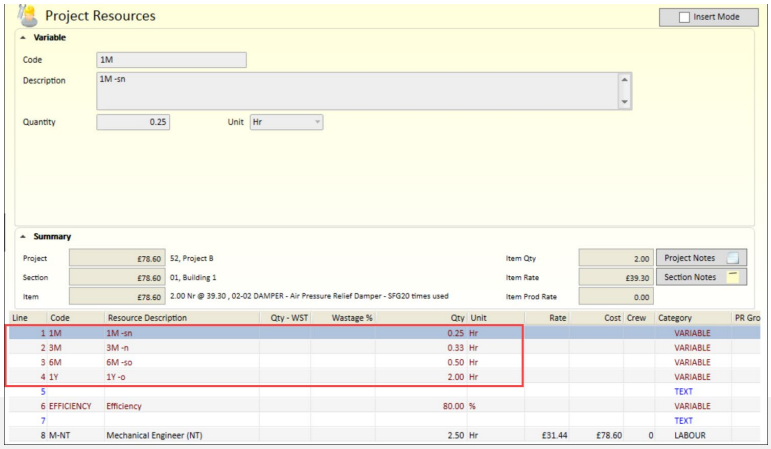
Creating a Planner

1. Log in to the PPM Planner app.
2. Select Planner.
3. Select Create New Planner.
4. Enter any of the following details to filter Projects:
   a. *Job No*
   b. *Quote No*
   c. *Project name*
   d. *Region*
5. Select the relevant Project.
6. Select Generate.
7. Select a *Start Date* to define the starting week of the schedule.

   This creates a visit schedule for all the Project Items where *Asset* is set to *Yes* in Project Items > Custom Field.



The schedule is based on the frequency durations of the Assets in the Project Resources window.



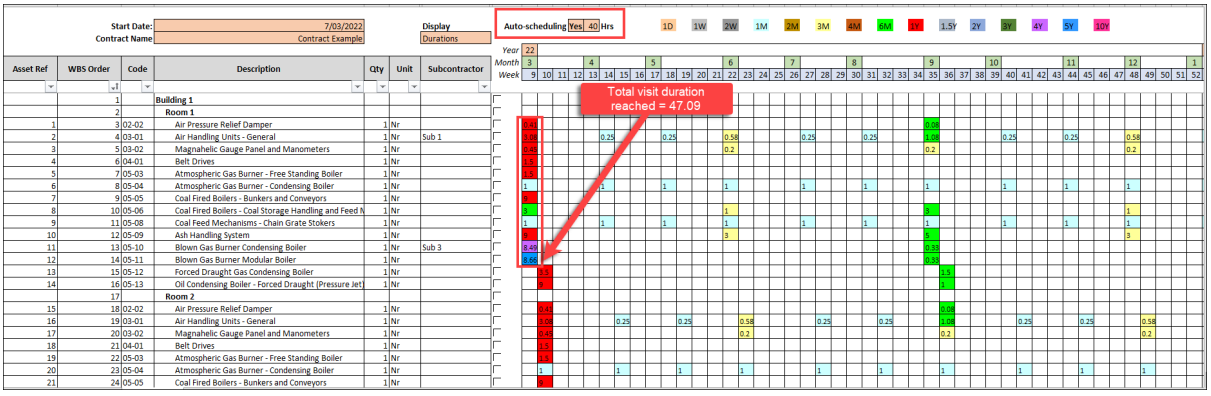
Adjusting the Schedule

Autoscheduling

1. On the application landing page, select Planner.
2. Search and select the relevant planner.
3. Select Edit.
4. Slide the Auto scheduling toggle to the right.
5. Enter the number of maximum weekly working hours.

   For example, *40*.

   When the total visit duration for any week (sum of durations for each row in a week) exceeds 40, then the visits scheduled for the remaining Assets (rows) is offset by a week until the limit of 40 is reached again.

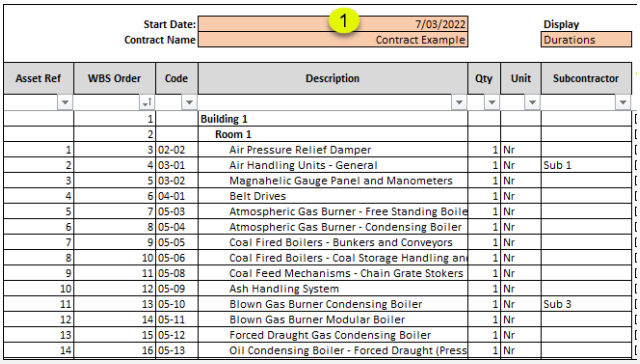


Entering a Last Checked Date to Offset Schedules

You can adjust the visit schedule for an Asset by entering the date it was last inspected.

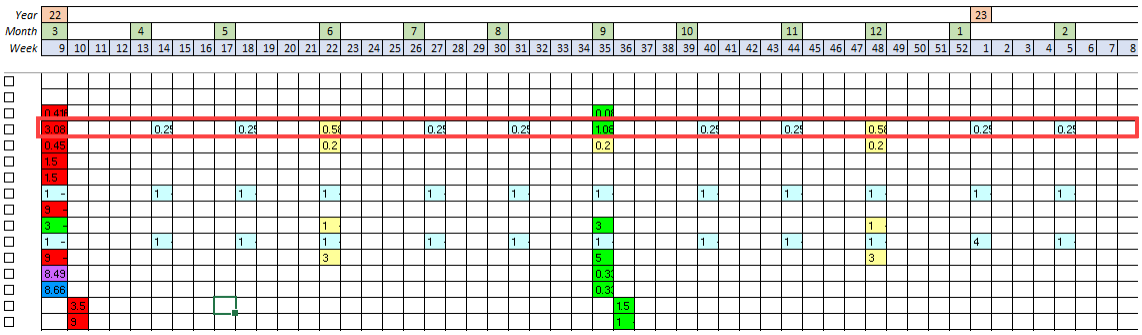
For example:

1. The contract start date is *07-March-2022* 1



Asset Ref	WBS Order	Code	Description	Qty	Unit	Subcontractor
	1		Building 1			
	2		Room 1			
1	3	02-02	Air Pressure Relief Damper	1	Nr	
2	4	03-01	Air Handling Units - General	1	Nr	Sub 1
3	5	03-02	Magnahelic Gauge Panel and Manometers	1	Nr	
4	6	04-01	Belt Drives	1	Nr	
5	7	05-03	Atmospheric Gas Burner - Free Standing Boile	1	Nr	
6	8	05-04	Atmospheric Gas Burner - Condensing Boiler	1	Nr	
7	9	05-05	Coal Fired Boilers - Bunkers and Conveyors	1	Nr	
8	10	05-06	Coal Fired Boilers - Coal Storage Handling an	1	Nr	
9	11	05-08	Coal Feed Mechanisms - Chain Grate Stokers	1	Nr	
10	12	05-09	Ash Handling System	1	Nr	
11	13	05-10	Blown Gas Burner Condensing Boiler	1	Nr	Sub 3
12	14	05-11	Blown Gas Burner Modular Boiler	1	Nr	
13	15	05-12	Forced Draught Gas Condensing Boiler	1	Nr	
14	16	05-13	Oil Condensing Boiler - Forced Draught (Press	1	Nr	

2. An Asset, Air Handling Units – General has the following schedule:

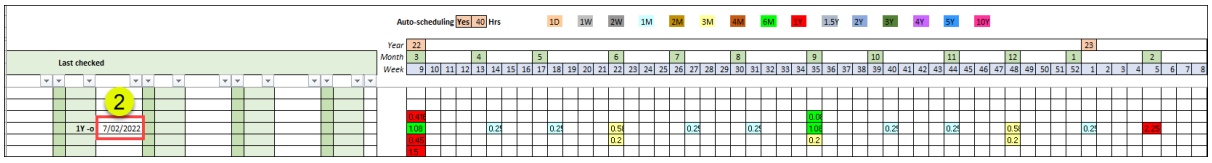


The first yearly visit is scheduled on the contract Start Date.

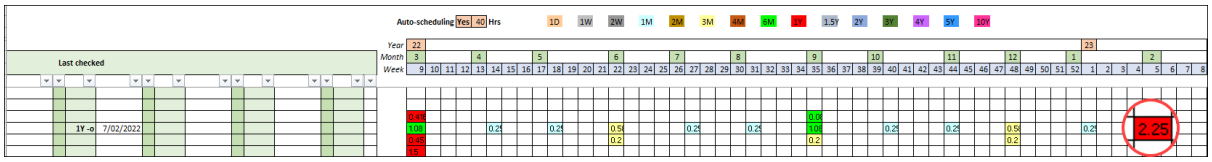
Week	Month / Year	Visits Scheduled	Duration
9	March 2022	• Monthly (1M) • Quarterly (3M) • Half-yearly (6M) • Yearly (1Y)	0.25 + 0.33 + 0.50 + 2.00 = 3.08

This Asset had its last yearly inspection on 07-Feb-2022 - a month before the contract start date.

3. Enter this *Last Checked Date* for the yearly frequency 2.



4. Since the last inspection was completed recently, the application will move the yearly visit to Feb-2023 i.e., a year after the *Last Checked Date*.

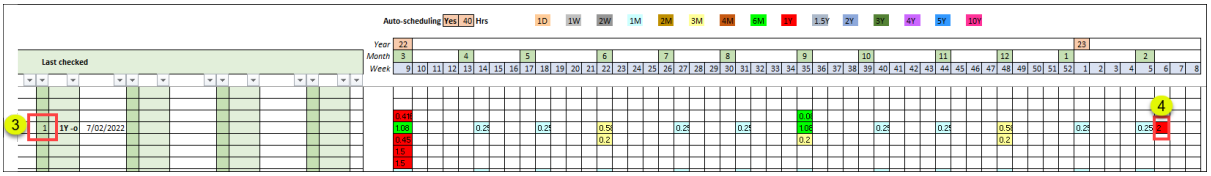


Week	Month / Year	Visits Scheduled	Duration
5	Feb 2023	• Monthly (1M) • Yearly (1Y) – adjusted visit	0.25 + 2.00 = 2.25

If the adjustment is not acceptable, you can offset the frequency.

5. Enter the number of weeks by which you want to offset the frequency 3.

The application moves the visit to the following week 4.



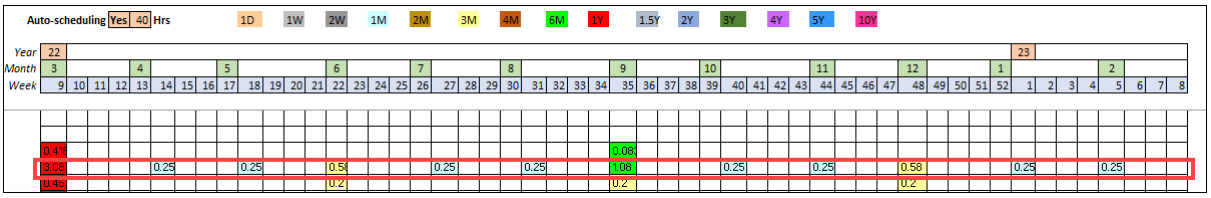
You can use negative offsets. For example, enter -3 to move the visit three weeks before the scheduled week.

Linking Frequencies

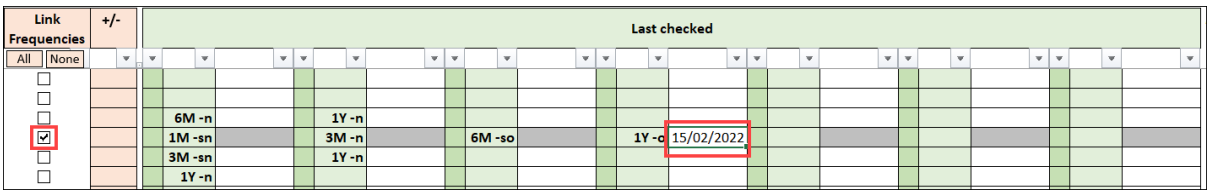
By linking frequencies, you can enter a single *Last Checked Date* across all the frequencies and/or enter the number of weeks by which you want to offset all the frequencies.

For example:

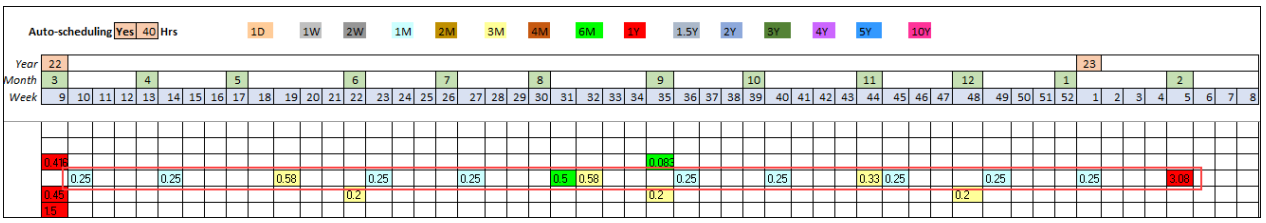
1. The planner from the previous example has a *Start Date* of 07-March-2022.
2. The Asset, Air Handling Units – General has the following schedule for the year:



3. The yearly frequency has a *Last Checked Date* of 15-Feb-2022.
4. Check the *Link Frequencies* checkbox to apply this *Last Checked Date* to all the frequencies.



This will adjust the schedule for all the frequencies accordingly.

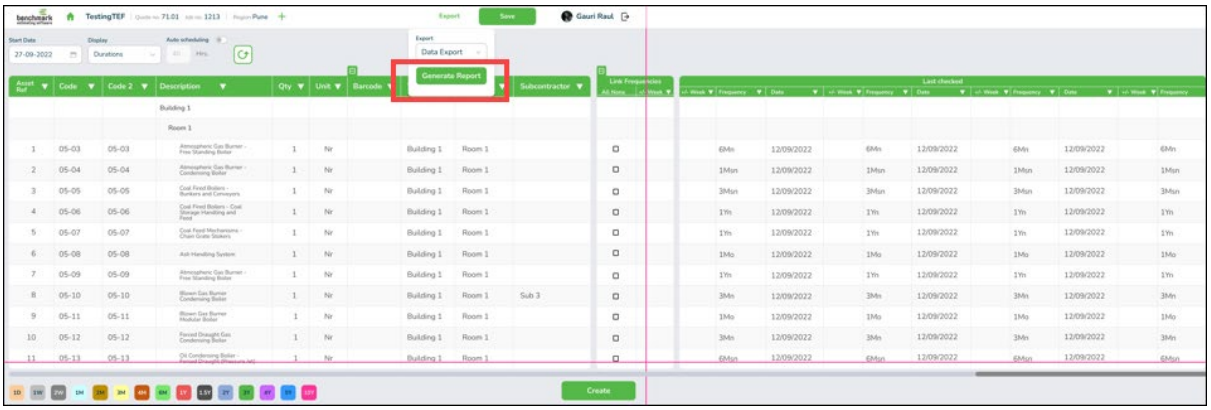


Exporting Information

Three options are available from the Export button in the PPM Planner:

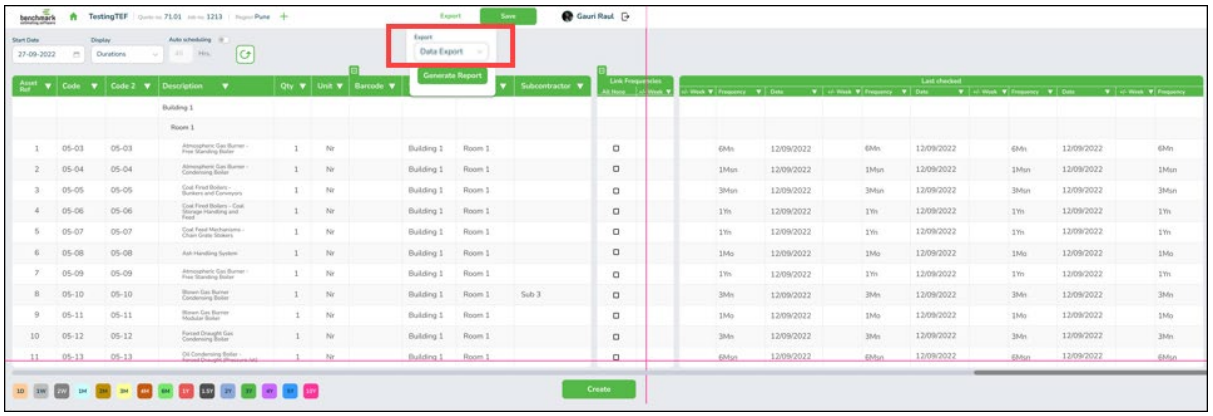
- Generate Report
- Data Export
- Maintenance Schedule

Generate Report

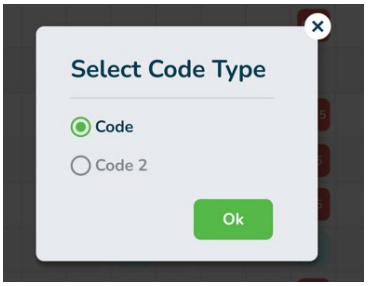


This report contains all the Asset and schedule information shown in the PPM Planner based on the selected *Display* option.

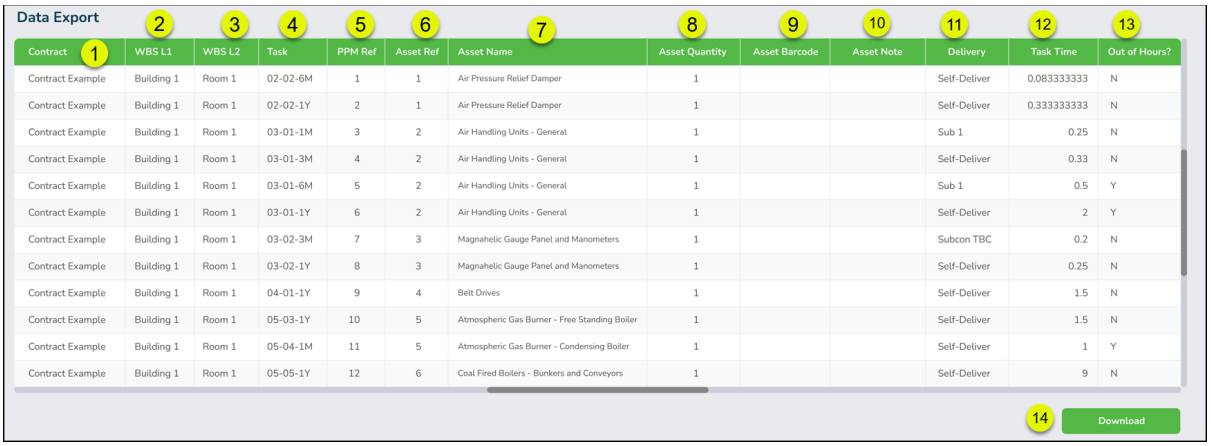
Data Export



1. In the relevant Planner, select Export > Data Export.
2. Select the Code type and then OK.



This lists all the frequencies for all the Assets.

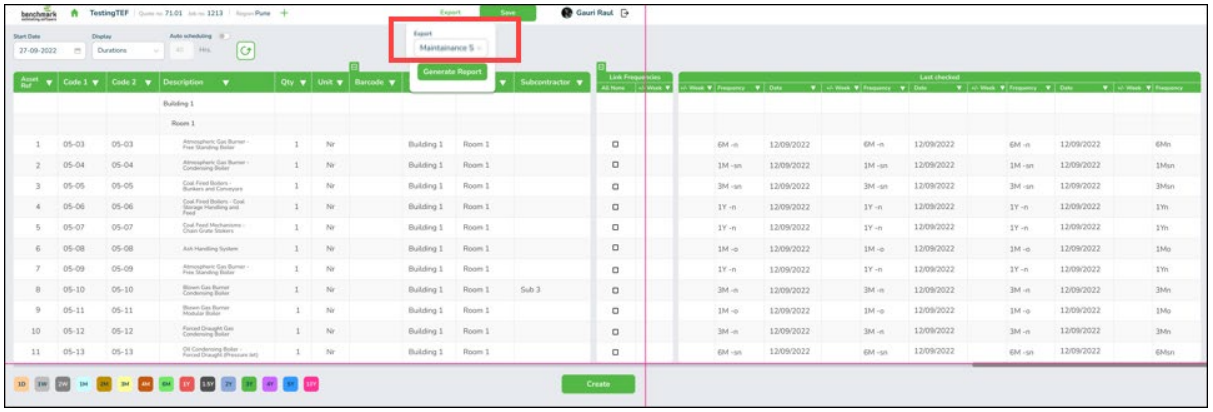


- *Title* of the Project from Benchmark 1
- Project Section *Description* 2
- Value of the *WBSL2* column from the Planner i.e., *Description* of the first level of Composites 3

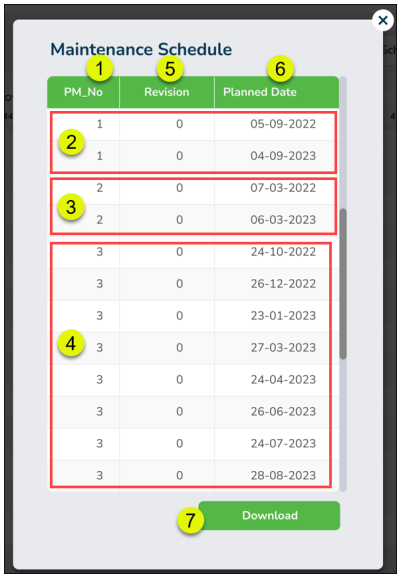
  If the Project does not have Composites, then this column is blank.
- A concatenation of either the corresponding Asset *Code* or *Code 2* (depending on the selection when generating the export), and the frequency without the suffix 4
- An incremental number sequence for each row in the export 5
- A numbering sequence to denote frequencies in an Asset. The same number is repeated for all the frequencies in one Asset 6
- Asset *Description* from the Planner 7
- Asset *Quantity* from the Planner 8
- Value of the Asset *Barcode* from the Planner 9
- Value of the *Text* field for this Asset in Project Items in Benchmark 10
- *Delivery* 11:

  - *Self-Deliver*: For all the frequencies ending with the suffix -n or -o. This means there is no Subcontractor associated with the Asset.
  - *Subcon TBC*: For frequencies ending with the suffix -sn or -so but no Subcontractor value for the corresponding Asset.
  - A Subcontractor name: Shows the *Subcontractor* column value from the Planner for all the frequencies ending with the suffix -sn or -so.
- *Duration* of the frequency 12
- *Out of Hours* 13:
  - *Y:* For all frequencies ending with the suffix -o or -so
  - *N:* For all the frequencies ending with the suffix -n or -sn
- Downloads the export to your system 14

Maintenance Schedule



This export lists every visit date for all the Frequencies for all the Assets in the Planner, over a period of two years.



- Numbering sequence to denote visits for a frequency in a period of two years (1)

  The number will repeat itself for visits of the same frequency.

  For example, see the schedule below:

  - Rows one and two (2) (*PM_No* value 1) represent half-yearly frequency visits.

    For an Asset, two years have four half-yearly visits. However, two of these visits occur on the same dates as the yearly visits.

  - Rows three and four (3) (*PM_No* value 2) represent yearly frequency visits.

  - Remainder of the rows (4) (*PM_No* value 3) represent monthly visit frequencies.

- Contains the value 0 for every *PM_No* (5)

- Date of the scheduled visit from the Planner 6
- Downloads the export to your system 7

Other Functions

See Admin Access for information on the functions available to Admin and non-Admin users.

Duplicating Planners

1. From the list of Planners, search the Planner you want to duplicate.
2. Select the **Duplicate** icon

   This creates a copy of the selected Planner.

Deleting Planners

If you no longer need a Planner:

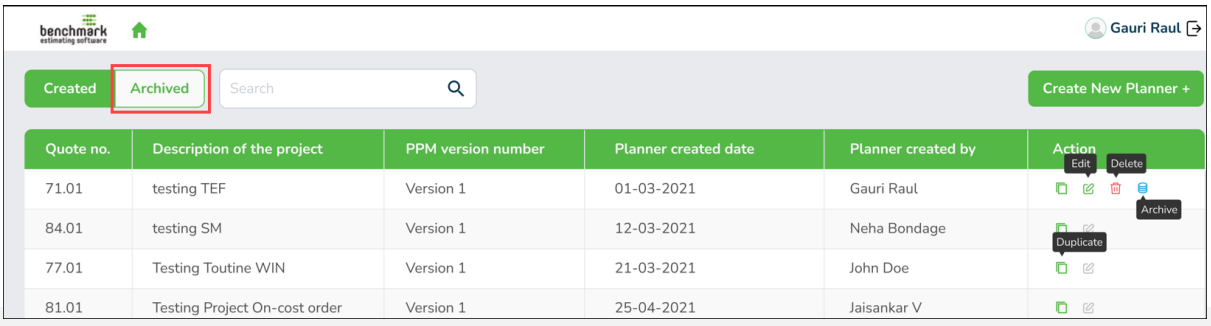
1. From the list of Planners, search the Planner you want to discard.
2. Select the **Delete** icon
3. Select **Yes** to the confirmation message.

Archiving Planners

If can archive Planners that you do not need actively but may need at a future stage.

1. From the list of Planners, search the Planner you want to archive.
2. Select the **Archive** icon
3. Select **Yes** to the confirmation message.

   This Planner will be moved to the **Archived** tab.



Logging Out

To log out of this application:

1. From any page within the application, select the Logout icon.

   The following confirmation prompt displays:

   “Are you sure you want to Logout?”

2. Select Yes.

Our mission is to help organisations improve their estimating, and the integration of estimating with related business processes; for private enterprise this helps improve your profit and market share; public authorities can deliver more accurate budgets and streamline project delivery.

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