



# Carbon in Homes User Manual

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## 1. Opening Carbon in Homes

1. Use the 'Survey & Data' button on the homepage of Homelife to access the Lifespan Homelife data repository.

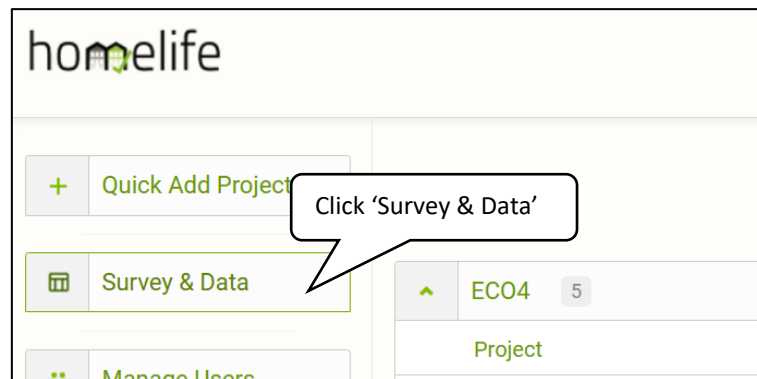


Figure 1: survey & data

2. If you have a specific property list you want to use, filter your selection first. From the menu bar go to RdSAP and click on 'Open CHA'.

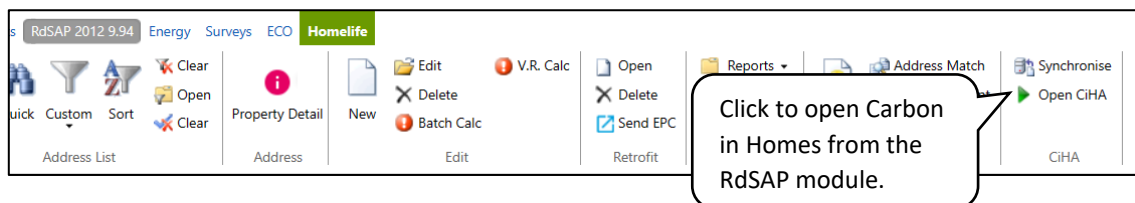


Figure 2: open CiHA button

Any filters applied will transfer over to CiHA if selected. Add a Filter Name so you can apply it once in the assessment. If you want to send across all of the properties in the database, untick the box next to 'Send Current Property Filter to CiHA'.

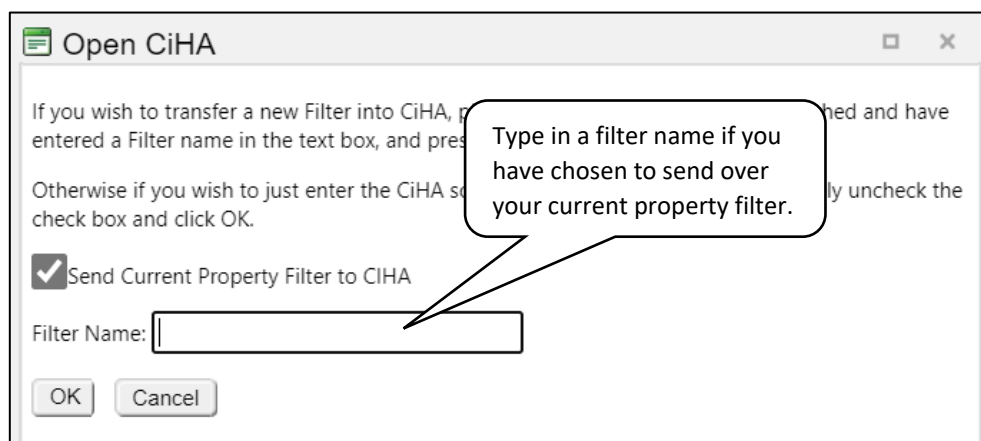
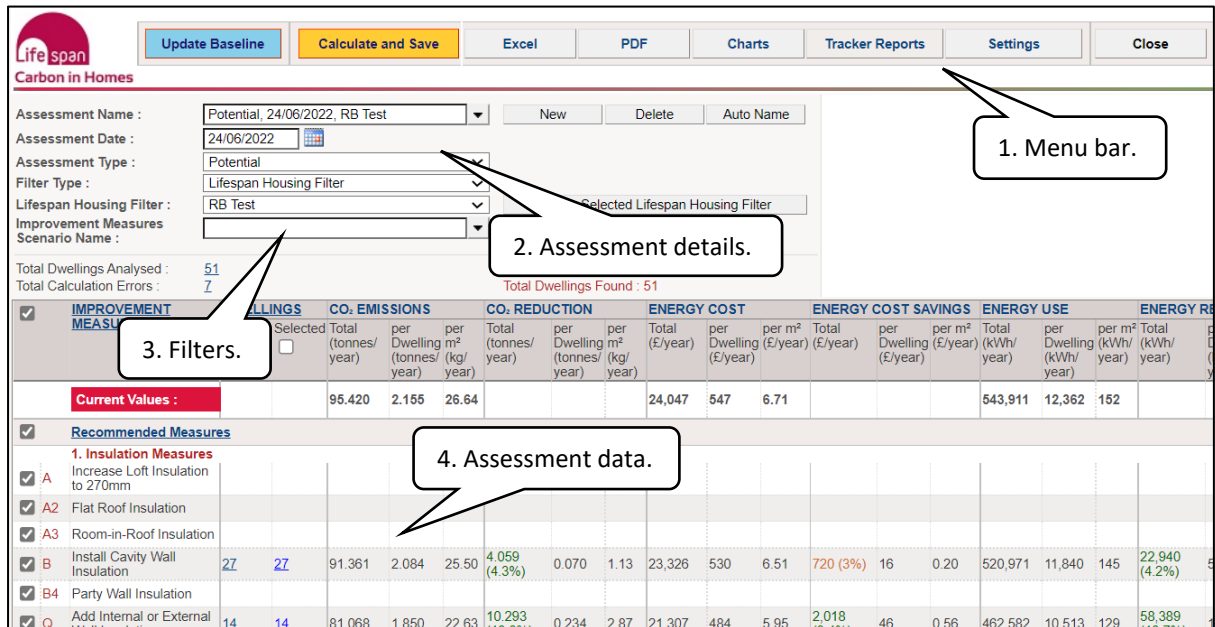


Figure 3: open CiHA

## 2. Navigation



The screenshot shows the Carbon in Homes software interface. At the top is a menu bar with buttons for 'Update Baseline', 'Calculate and Save', 'Excel', 'PDF', 'Charts', 'Tracker Reports', 'Settings', and 'Close'. Below the menu bar is a form for 'Assessment Name', 'Assessment Date', 'Assessment Type', 'Filter Type', 'Lifespan Housing Filter', 'Improvement Measures', and 'Scenario Name'. A table below the form displays 'Current Values' and 'Recommended Measures' with columns for CO2 emissions, CO2 reduction, energy cost, and energy use. Callouts point to the menu bar, assessment details, filters, and assessment data.

Figure 4: carbon in homes

### 2.1 Menu Bar



Figure 5: menu bar

The menu bar comprises a selection of buttons which carry out the following functions.

- Update Baseline – update the baseline energy data (used for calculation of actual assessments)
- Calculate and Save – calculate and save the potential, reference or actual dataset
- CiHA Report – view the CiHA stage 2 report in word format
- Excel – view the CiHA summary report in excel format
- PDF – view the CiHA summary report in adobe acrobat format
- Charts – view CiHA chart portfolio
- Tracker Reports – view reports to track the ongoing updates of re-calculated data.
  - Carbon Reduction Tracker
  - Cost Saving Tracker
  - Energy Saving Tracker
  - SAP Change Tracker
  - EI Change Tracker

## 2.2 Assessment Details

Assessment Name :	Potential, 24/06/2022, RB Test	New	Delete	Auto Name
Assessment Date :	24/06/2022			
Assessment Type :	Potential			
Filter Type :	Lifespan Housing Filter			
Lifespan Housing Filter :	RB Test	Delete Selected Lifespan Housing Filter		
Improvement Measures Scenario Name :				
Total Dwellings Analysed :	51			
Total Calculation Errors :	7	Total Dwellings Found : 51		

Figure 6: assessment details

You can either open a saved assessment or create a new one.

1. Select an existing assessment by choosing it from the drop-down next to 'Assessment Name'.

Assessment Name :	Potential, 24/06/2022, RB Test	New	Delete	Auto Name
Assessment Date :	Potential, 04/05/2022, All Properties			
Assessment Type :	Potential, 04/05/2022, Test2			
Filter Type :	Potential, 13/01/2021, All Properties			
Lifespan Housing Filter :	Potential, 13/01/2021, All Properties			
Improvement Measures Scenario Name :	Potential, 17/02/2021, All Properties			
Total Dwellings Analysed :	Potential, 18/01/2022, Training 18.01.22			
Total Calculation Errors :	Potential, 18/11/2020, Butterworth			
	Potential, 22/10/2021, All Properties			
	Potential, 22/10/2021, Training22.10.21			
	Potential, 24/06/2022, RB Test	Total Dwellings Found : 51		
	Potential, 27/05/2021, RBTest 9.94			

Figure 7: choose an existing assessment

2. Clicking 'New' will clear anything in the 'Assessment Name' field. To create a new assessment, enter the title of the assessment into the field or click on 'Auto Name' which will generate one for you.

Assessment Name :		New	Delete	Auto Name
Assessment Date :	24/06/2022			
Assessment Type :	Potential			

Figure 8: creating a new assessment name

The assessment date will automatically be today's date. To choose a specific date, click on the calendar icon (📅) to select one.

As assessment type, you can choose either potential or actual. Go to the drop-down next to the field and select the one you require.

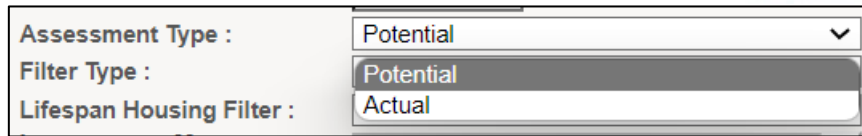


Figure 9: assessment type

### 2.3 Filters

When you first enter CiHA, the filter type will be set to 'All Properties', so every property listed in the company database will appear in the assessment.

Filters are an easy way of limiting your dataset to specific properties and this facility is available through Lifespan Housing. Any filters applied in housing, prior to opening CiHA through RdSAP, which were given a filter name will appear in the drop-down list next to 'Lifespan Housing Filter' with the same name.

Select 'Lifespan Housing Filter' as the filter type and then go to the drop-down underneath to select the filter required.

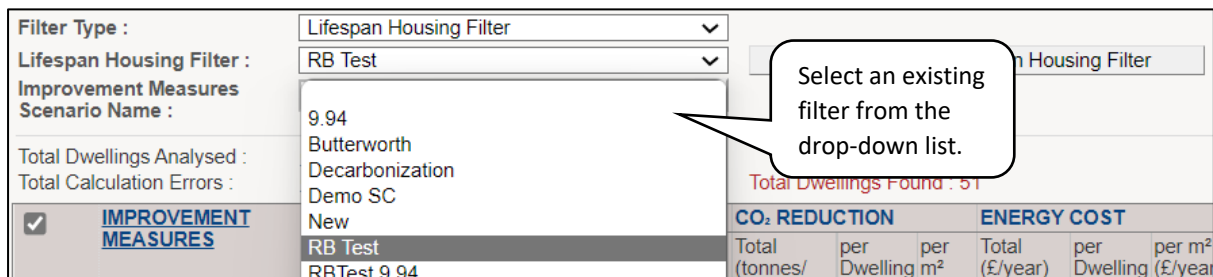


Figure 10: filters

'Total Dwellings Found' gives you a total of properties with the applied filter.



Figure 11: total dwellings found

If you want to remove a filter, click the button 'Delete Selected Lifespan Housing Filter'.

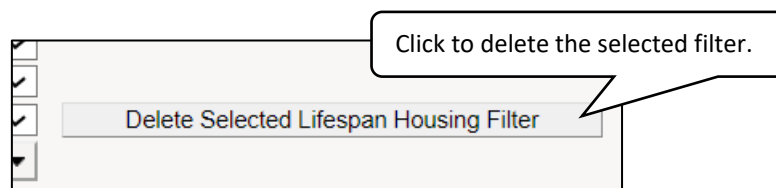


Figure 12: delete filter

**NOTE** This will not just remove the filter from the current assessment, it will be deleted from the drop-down list and would have to be re-created through Lifespan Housing if needed again

## 2.4 Assessment Data

The assessment data section of the screen is largely the data output which gives an overview of all data collected. On the left are all possible measures and along the top are the columns for CO<sup>2</sup>, Energy Cost/Savings, SAP, Improvements and Eco Savings.

1. Press 'Calculate and Save' from the menu bar.

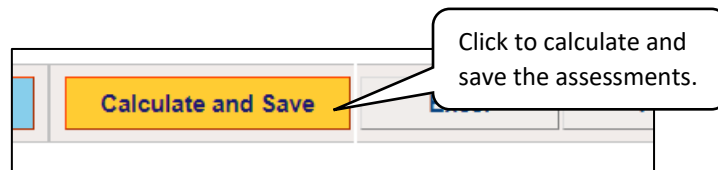


Figure 13: calculate and save

Once calculated, the collated RdSAP data is present on the main assessment data screen, separated by column to show the figures and percentages for the selected properties.

For any calculation errors, the total shows next to 'Total Calculation Errors'. Click on the underlined number to generate an excel export of the relating properties – you can use these details to investigate any problems with the assessments in Lifespan.

Total Dwellings Analysed :		<u>51</u>																					
Total Calculation Errors :		<u>7</u>																				Total Dwellings Found : 51	
<input checked="" type="checkbox"/>	<b>IMPROVEMENT MEASURES</b>	<b>DWELLINGS</b>	<b>CO<sub>2</sub> EMISSIONS</b>		<b>CO<sub>2</sub> REDUCTION</b>		<b>ENERGY COST</b>		<b>EN</b>														
	Affect																						
	<b>Current Values :</b>		95.420	2.155	26.64							24,047	547	6.71									
<input checked="" type="checkbox"/>	<b>Recommended Measures</b>																						
	<b>1. Insulation Measures</b>																						
<input checked="" type="checkbox"/>	A Increase Loft Insulation to 270mm																						
<input checked="" type="checkbox"/>	A2 Flat Roof Insulation																						
<input checked="" type="checkbox"/>	A3 Room-in-Roof Insulation																						

Figure 14: calculated assessment

## 3. Improvement Measures

Within the assessment, you can apply improvement measures to one or multiple properties to see how this will affect the overall data.

1. From the assessment details section in the selected column, click on the underlined figure for the row you want to apply the improvement measure to. This figure relates to the number of properties this measure applies to, so you will have the option to update all or a selection of the properties listed.





associated with it, it may be beneficial to use the filters to narrow down your search if only some of the properties need to be updated.

Click on the arrow next to 'Filter Type' and select from the drop-down list whether you want to filter by UPRN or Property Address.

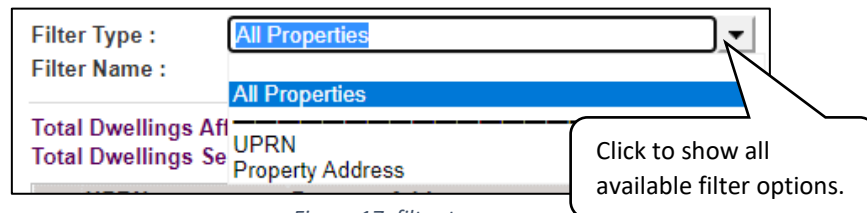


Figure 17: filter type

Under 'Filter Name' type in a UPRN or partial address and click on 'Find'. Any properties matching the filter name used will be listed on screen.



Figure 18: filter name

All possible improvement measures are listed on the right, not just the one selected. This gives you an overview for all the properties in the filter, shows you which measures a specific property has against it and the option to update more than one measure for a property at the same time.

As shown below, all the properties in this filter have the same improvement measures against them. Q was originally selected so by default is ticked and the column shows in red. The columns in grey show that the properties have this measure against them, to apply the measure to all applicable properties select the relevant tick box.

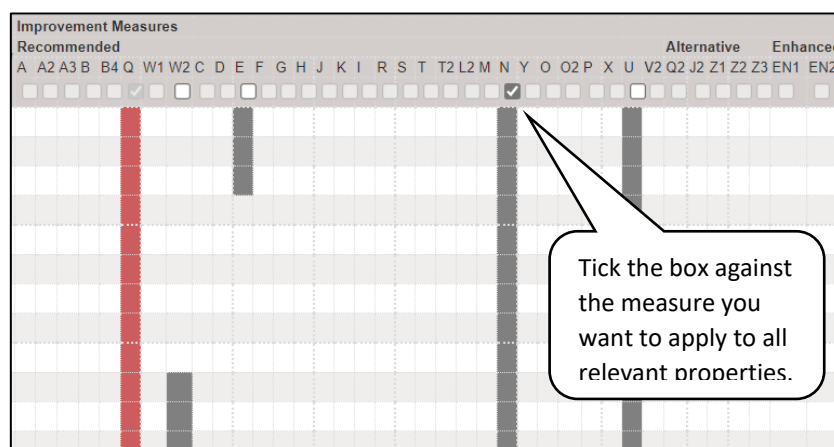


Figure 19: select measures to apply to multiple properties

- You can select whether all properties in the filter or just specific ones have the improvement measure applied to them. Click in the tick box next to the property you want to update, or in the tick box in the column heading to select all.

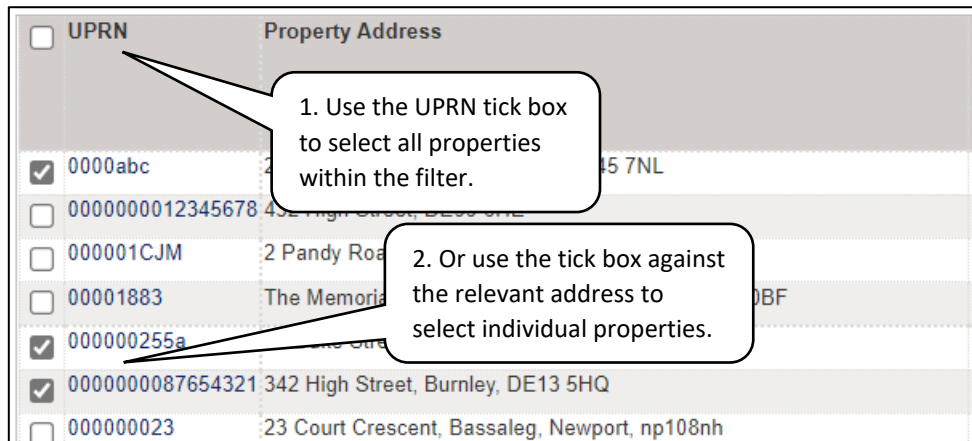


Figure 20: select properties to apply improvement measures

- Once you have selected the measures and properties, click on ‘Apply this Improvement Measure to All Selected Dwellings’ from the top right of the screen.

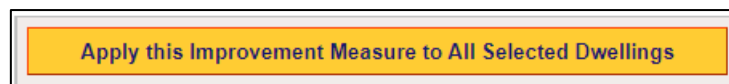


Figure 21: apply this improvement measure to all selected dwellings button

You can also use the ‘Excel’ and ‘PDF’ buttons to download the selected data within this section. Just click on the relevant button to download in the format you want.

- To view the RdSAP assessment for any of the properties listed, just click on the UPRN of the address you want, and you will be directed to the energy assessment editing page where you can review all the data collected for the specific property.

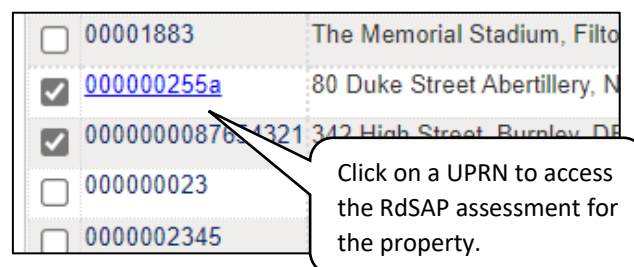


Figure 22: link to RdSAP assessment through address UPRN

## 4. Reports

You can create a variety of reports within the software, using a selection of formats. All of these are accessed through the menu bar at the top of the screen.

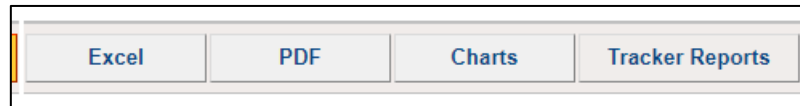


Figure 23: reports in menu bar

### 4.1 Summary Reports

1. Click 'Excel' to download a summary report in excel format. This will give you a summary of the calculated data, as shown on the assessment data pane on the main screen.



Figure 24: excel report button

2. Click 'PDF' to download a summary report in pdf format. Again, this will give you the same summary as shown in the assessment data on screen, you are given an overview of all calculated data.



Figure 25: pdf report button

### 4.2 Tracker Reports

As soon as any improvement measures are applied to the properties and the data is re-calculated, the tracker reports button can be used. If you are constantly reviewing and amending the data, this is a useful function to enable you to track ongoing updates of data in between each improvement.

1. Go to 'Tracker Reports' from the menu bar.

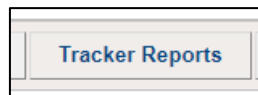


Figure 26: tracker reports button

2. Click on the arrow to the right of 'Tracker Reports' to bring up the drop-down list of options. There is a different report for each datatype, simply click on whichever report you want to download to view the change in data after each calculated improvement.

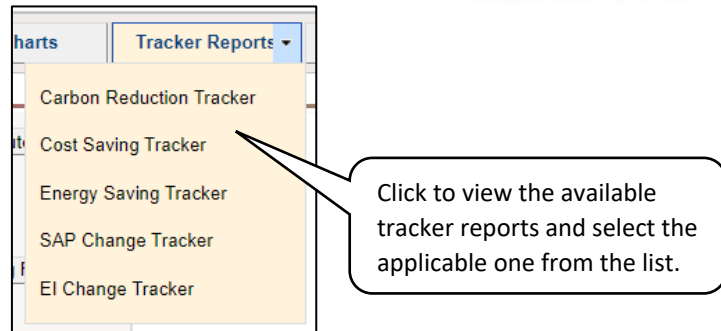


Figure 27: tracker report drop-down list

## 5. Charts

1. From the menu bar, select 'Charts'. This will open the chart portfolio.



Figure 28: charts button

2. There are five different charts to choose from.
  - CO<sup>2</sup> Emissions
  - Energy Cost
  - Energy Use
  - SAP Increase
  - El Increase

To produce one of these, just select the relevant option from the left of the screen and the chart will appear on the right.

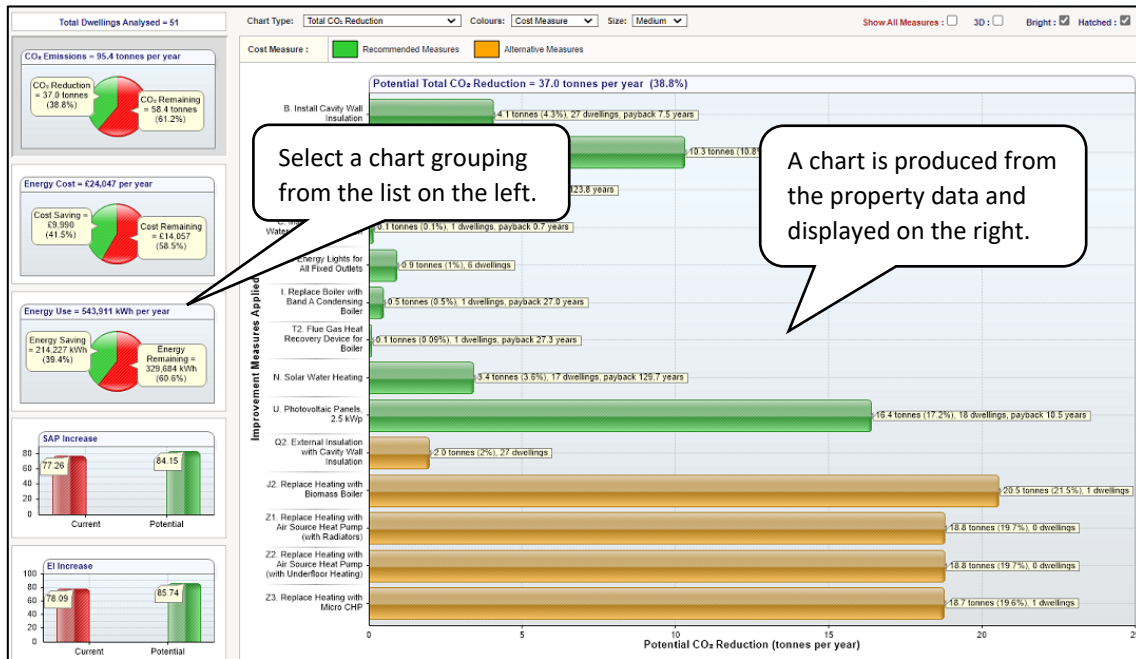


Figure 29: producing a chart

3. Within each chart grouping, there are various types to choose from depending on what data you want to show. To select a chart type, click on the arrow next to 'Chart Type' above the chart and select from the drop-down list. In the example below, within the 'CO<sub>2</sub> Emissions' chart grouping you can select to view either the reduction, emissions or breakdown – showing either the total figures, per dwelling or per m<sup>2</sup>. Clicking on any of these options would prompt the software to create a different chart displaying the information requested.

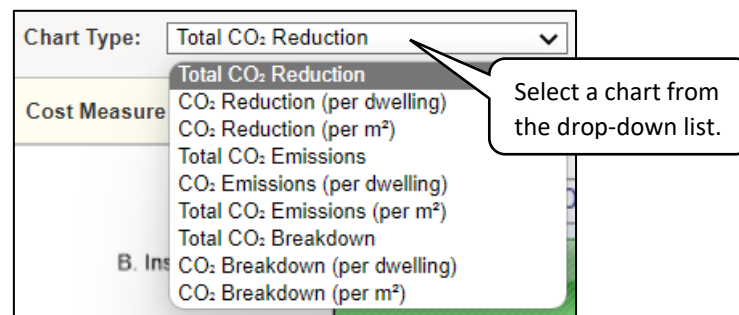


Figure 30: selecting a chart type

4. By default, the chart will only show the necessary measures for the type and properties selected. To show all possible measures, tick the box next to 'Show All Measures' above the chart in the top right of the screen.



Figure 31: show all measures tick box

5. To the right of this, there are also some options to enable customisation. Just click in the tick box next to the choice to apply it to the chart.
  - 3D – this will change the display to 3D
  - Bright – this will change the colours to a more vibrant palette
  - Hatched – this adds some texture to the coloured sections of the chart

## 6. Settings

Click on the arrow to the right of 'Settings' to bring up the drop down list of options. You can make changes to the table and report outputs using the following.

- Table Settings
- Report Settings
- Improvement Costs
- Improvement Measures Scenarios

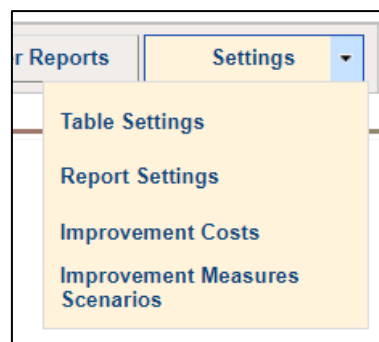


Figure 32: settings

### 6.1 Table Settings

This option will enable you to change the table settings where you can customise the size of the assessment details table. By default, the table will be set to maximum height and 100% width. To update this, tick the box next to 'Use Custom Dimensions' and use the drop down lists to select the required size.

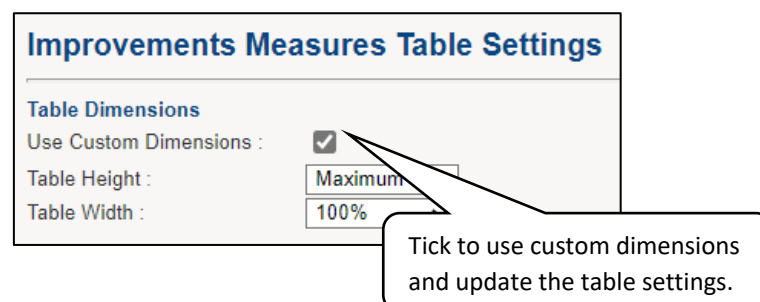


Figure 33: improvement measures table settings

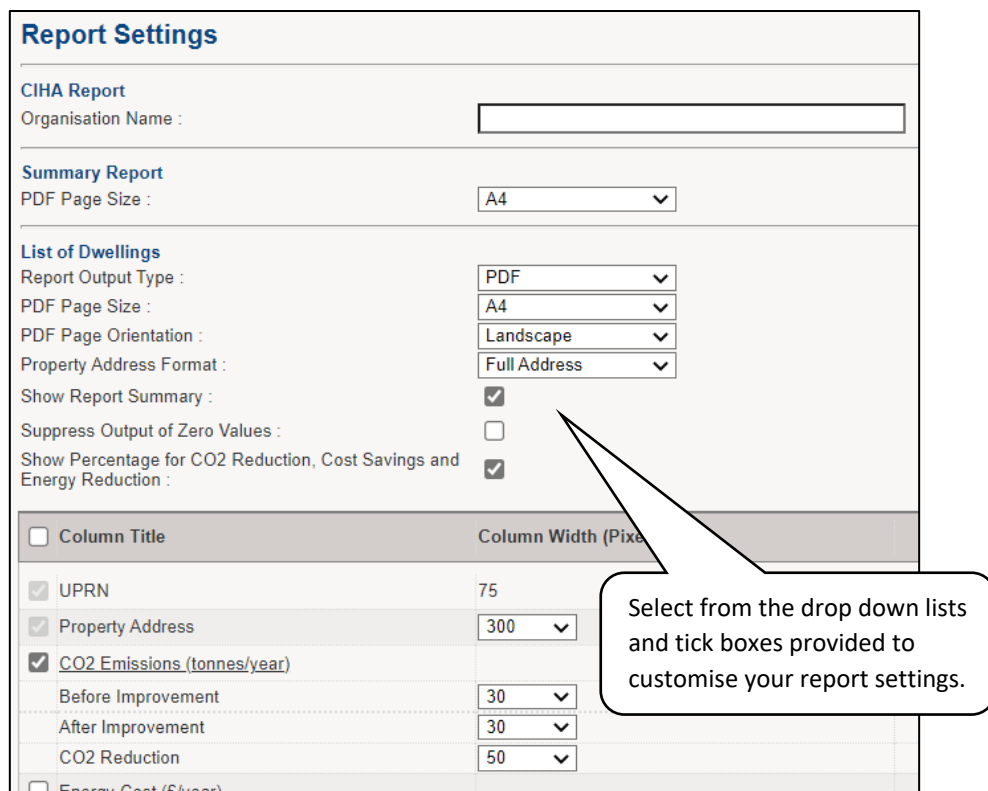
**NOTE** There is a shortcut to the table settings by clicking on the underlined column heading 'Improvement Measures' in the analysis table.

### 6.2 Report Settings

This option will bring up the report settings. From here you can change some of the elements within the report and amend the settings.

There are limited modifications available for an excel output, however the PDF report can be customised to include/exclude specific column heading and widths. Use the drop-down lists and tick boxes provided to make changes as necessary before saving.

**NOTE** There is a shortcut to the report settings by clicking on the underlined column heading 'Dwellings' in the analysis table.



Column Title	Column Width (Pixels)
<input checked="" type="checkbox"/> UPRN	75
<input checked="" type="checkbox"/> Property Address	300
<input checked="" type="checkbox"/> CO2 Emissions (tonnes/year)	30
Before Improvement	30
After Improvement	30
CO2 Reduction	50
<input type="checkbox"/> Energy Cost (£/year)	

Figure 34: report settings

### 6.3 Improvement Costs

This option will bring up the screen below where you can amend the cost and unit of measure for each of the items listed. Type in the costs required and choose the relevant unit of measure from the drop down list for each improvement measure.

Costs for Implementing the Improvement Measures				
Improvement Measure	RdSAP Indicative Cost (per dwelling)	Actual Cost (£)	Unit of Measure	
<b>Recommended Measures</b>				
A	Increase Loft Insulation to 270mm		100	per dwelling
A2	Flat Roof Insulation		500	per dwelling
A3	Room-in-Roof Insulation		1000	per dwelling
B	Install Cavity Wall Insulation	£500 - £1,500	200	per dwelling
B4	Party Wall Insulation	£300 - £600	300	per dwelling
Q	Add Internal or External Wall Insulation	£4,000 - £14,000	3000	per dwelling
W1	Floor Insulation (for Suspended Floor)	£800 - £1,200	800	per dwelling
W2	Floor Insulation (for Solid Ground Floor)	£4,000 - £6,000	4000	per dwelling
C	Install/Increase Hot Water Cylinder Insulation	£15 - £30	15	per dwelling
D	Draughtproof Single Glazed Windows	£80 - £120	80	per dwelling
E	Low Energy Lights for All Fixed Outlets	£5 (per item)	5	per item
F	Install Hot Water Cylinder Thermostat	£200 - £400	200	per dwelling

Enter a cost and select the applicable unit of measure for each item.

Figure 35: costs for implementing the improvement measures

### 6.4 Improvement Measures Scenarios

This option will bring up the improvement measures scenarios page where you can model improvement measures utilising user defined U-Values. Please see section 8. Beyond RdSAP Modelling for further guidance and information on using this element of the software.

## 7. Beyond RdSAP Modelling

The Energy market is constantly changing and with new more aggressive targets for Energy saving in housing being set it is at times important to be able to look beyond the recommended measure that are set in RdSAP.

Our Beyond RdSAP Modelling tools allows customers to create scenarios that both search for URPN's that fit specific Criteria and implement improvement measures that fit specific design parameters. Allowing customers to target investments and design improvements in a more fluid way.

Improvements can be analysed as individual improvement measures or as part of a selection of measure to be implemented over time, predicting expected Cost, CO2 and SAP improvements.

### 7.1 Beyond RdSAP Scenarios

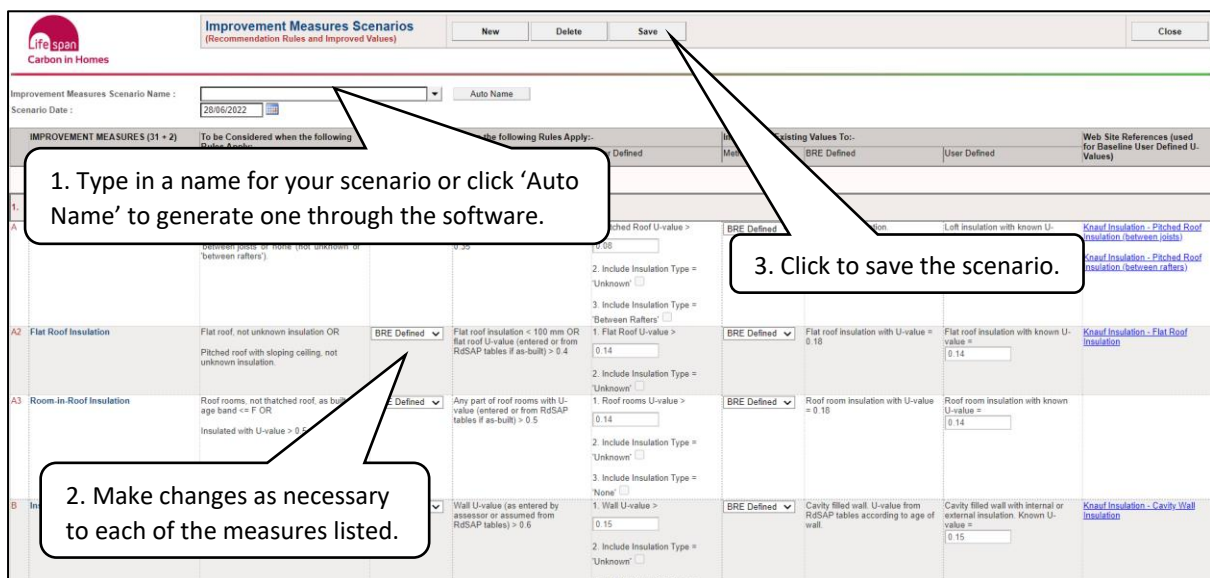
You must first start by creating an assessment. Once the assessment is created then you can start to review possible scenarios. To open the scenario panel, click on the 'Recommend Measures' text on the main analysis display.



IMPROVEMENT MEASURES		DWELLINGS	CO <sub>2</sub> EMISSIONS			CO <sub>2</sub> RED	
		Affected	Selected	Total (tonnes/year)	per Dwelling (tonnes/year)	per m <sup>2</sup> (kg/year)	Total (tonnes/year)
<b>Current Values :</b>			<input type="checkbox"/>	95.420	2.155	26.64	
<b>Recommended Measures</b>							
<input checked="" type="checkbox"/>	<b>1. Insulation Measures</b>						
<input checked="" type="checkbox"/>	A Increase Loft Insulation to 270mm						
<input checked="" type="checkbox"/>	A2 Flat Roof Insulation						
<input checked="" type="checkbox"/>	A3 Room-in-Roof Insulation						
<input checked="" type="checkbox"/>	B Install Cavity Wall Insulation	27	27	91.361	2.084	25.50	4.059 (4.1)
<input checked="" type="checkbox"/>	B4 Cavity Wall Insulation						

Figure 36: Recommended measures scenario panel

This will open the Improvement Measures Scenarios screen.



The screenshot shows the 'Improvement Measures Scenarios' interface. At the top, there are buttons for 'New', 'Delete', 'Save', and 'Close'. Below this, there is a form for 'Improvement Measures Scenario Name' and 'Scenario Date'. The main area is a table with columns for 'To be Considered when the following Rules Apply:', 'Methodology', 'U-value', 'BRE Defined', 'User Defined', and 'Web Site References'. Three callouts are present: 1. 'Type in a name for your scenario or click 'Auto Name' to generate one through the software.' pointing to the 'Auto Name' button. 2. 'Make changes as necessary to each of the measures listed.' pointing to the 'U-value' column. 3. 'Click to save the scenario.' pointing to the 'Save' button.

Figure 379: Improvements measures scenarios screen

Create a scenario by giving it a 'Name' and then building your own improvement measures. For each improvement measure you can tailor the threshold at which the URPN's are identified for the measure and also tailor the U-value that will be achieved by the measure.

Under the column 'Methodology', select 'User Defined' from the drop-down list to enable this column to be edited and the values modified.

The function buttons at the top of the screen can be used to start a new scenario, delete a scenario or save the current scenario.

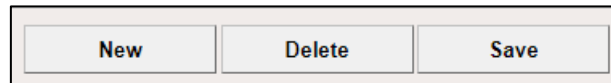


Figure 38: create, delete or save a scenario

Each measure can be adjusted in isolation or multiple adjustments made at the same time. To view results of the scenario, click 'Close' to return to the main analysis display. All saved scenarios will appear in the 'Improvement Measures Scenario Name' drop-down, select the relevant scenario from the list and recalculate to apply the results the data below.

Filter Type :	Lifespan Housing Filter
Lifespan Housing Filter :	RB Test
Improvement Measures Scenario Name :	User Defined - All Measures
Total Dwellings Analysed :	User Defined - All Measures
Total Calculation Errors :	7

Select your saved scenario from the list and re-calculate to view the results.

Figure 40: Scenario selection