

A quick tour of iSAP

cSAP - Consultation SAP

Developed by BRE on behalf of DECC.



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Click here to view your projects...

Welcome back to cSAP cSAP Software

First time using cSAP?

Have a look at the [quick tour guide](#) before you get started.

This consultation seeks views on proposed changes to the Standard Assessment Procedure, the government's tool for assessing the energy and environmental performance of dwellings.

SAP is used to underpin the delivery of a
including:

- the Building Regulations for England and Wales

This guide includes:

- Navigating the interface
- Creating a project
- Adding and deleting objects
- Entering data
- Help and validation features
- Running the calculation
- Results format

My Projects

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To open a project, simply click on it's name to view the details

Want another project?
Create new projects
on this page

Your projects on iSAP cSAP software

Your current projects are listed below. Choose (by clicking on the name) any project you wish to open.

To create a new project, follow the link from the menu on the left.

To change the version of SAP that you are using please use the following selector:

Active version: [Change Version](#)

Number of projects: 4

Name of project

[Typical detached house](#)
Address: Test Street, , ,

[Project 1 test](#)
Address: , , ,

[Project 2 test](#)
Address: , , ,

This shows you
the version of SAP
you are using

Delete?

[Delete](#)

[Delete](#)

[Delete](#)

Careful! This
button will
permanently
delete a
project

New Project

The screenshot shows the 'cSAP - Consultation SAP' web interface. The header includes the title and the SAP logo. A left sidebar contains navigation links: Home, My Projects, New Project, Downloads, and FAQs. The main content area is titled 'Create a Project cSAP software' and is divided into two sections: 'New project' and 'Duplicate an existing project'. The 'New project' section has a text input field for 'Enter project name:' and a 'Create' button. The 'Duplicate an existing project' section has a dropdown menu for 'Select project:' (currently showing 'Typical detached house'), a text input field for 'Enter project name:', and a 'Duplicate' button. A footer note states: 'You are currently working with projects for sap2016 calculations. To change version use the My Projects tab.' Annotations in yellow boxes with arrows point to the 'Create' button, the 'Duplicate' button, the 'Enter project name:' field in the 'New project' section, and the footer note.

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Create a Project
cSAP software

New project

Enter project name: **Create**

Duplicate an existing project

Select project: **Duplicate**

Enter project name:

ⓘ You are currently working with projects for **sap2016** calculations. To change version use the My Projects tab.

Click here to create a project from scratch...

...or here to copy a project you already have

Don't forget to give your project a name!

Note: this footer will remind you which calculation version you are using (to switch just go back to the My Projects tab)

Current Project

Good to know: iSAP is dynamic! It will save all your inputs as you define them (no need to click save!)

The screenshot displays the iSAP software interface. On the left is a 'Current Project' sidebar with a tree view of building components. The main area has a top navigation bar with tabs: 'General', 'Geometry', 'Heating Systems', 'Ventilation & AC', 'Renewables', and 'Results'. The 'General' tab is active, showing 'Project details' and 'Dwelling Location' sections. The 'Project details' section includes input fields for 'Project name', 'Address Line 1', 'Address Line 2', 'Address Line 3', 'Post Town', 'Post Code', 'Country', 'Weather Region', and 'Is dwelling in smoke control area?'. The 'Dwelling Configuration' section includes dropdown menus for 'Type of analysis', 'Built form', 'Detachment', and 'Stage of analysis'. A bottom navigation bar contains 'Home' and 'My Projects' buttons.

Current Project

- Typical detached house
 - Door
 - Window
 - Building Part
 - Thermal Bridge1
 - Roof / Ceiling
 - Wall
 - Wall Opening
 - Wall Opening2
 - Floor
 - Main Heating
 - Water Heating
 - Ventilation
 - Lighting

Project details

General

Dwelling Location

Project name ⓘ Typical detached house

Address Line 1 Test Street

Address Line 2

Address Line 3

Post Town

Post Code

Country England

Weather Region South East England

Is dwelling in smoke control area? no

Dwelling Configuration

Type of analysis new dwelling

Built form House

Detachment ⓘ Detached

Stage of analysis As designed

This box shows you everything currently in your project...

...click on any object to view the details

Related inputs are grouped into sections

A project always opens with the general information first

You enter all the project details in the boxes

Adding objects

Remember! Use this box to navigate to objects already in your project

Use these tabs if you want to add new objects

Current Project

- Typical detached house
 - Door
 - Window
- Building Part
 - Thermal Bridge1
 - Roof / Ceiling
 - Wall
 - Wall Opening
 - Wall Opening2
 - Floor
- Main Heating
- Water Heating
 - Solar Thermal
- Ventilation
- Lighting

General **Geometry** **Heating Systems** **Ventilation & AC** **Renewables** **Results**

Project details
Renewables

Add new:

- Solar Thermal Maximum reached.
- Photovoltaic
- Wind Turbine
- Special Feature

sap2016 calculations. To change version use the My

Use the buttons to add objects to your project (you will be prompted to give each object a name)

If an object cannot be added, then the Add button will be disabled

Note: some essential objects will always be added when you first create a project

Add and delete objects

The screenshot shows a software interface with a project tree on the left and a details panel on the right. The project tree is titled 'Current Project' and contains a hierarchy: 'Typical detached house' -> 'Door' -> 'Window' -> 'Building Part' -> 'Thermal Bridge1' -> 'Roof / Ceiling' -> 'Wall' (highlighted) -> 'Wall Opening' and 'Wall Opening2'. The details panel has tabs for 'General', 'Geometry', 'Heat', 'Renewables', and 'Results'. The 'Geometry' tab is active, showing 'Project details Geometry' and a 'Wall' object selected. Below the object name is a 'Select instance:' dropdown menu with 'Wall' selected. To the right of the dropdown are 'Add' and 'Delete' buttons. Below the dropdown is a list of 'Wall' objects with an 'Add' button at the bottom. The 'Area' property is 180 m², 'Thermal transmittance (U-value)' is 0.13 W/m²K, and 'Effective thermal capacity (kappa-m)' is 100 kJ/m²K.

Current Project

- Typical detached house
 - Door
 - Window
 - Building Part
 - Thermal Bridge1
 - Roof / Ceiling
 - Wall
 - Wall Opening
 - Wall Opening2
 - Ventilation
 - Lighting

Project details Geometry

Wall

Select instance: Wall

Add Delete

Wall

Area ⓘ 180 m²

Thermal transmittance (U-value) 0.13 W/m²K

Effective thermal capacity (kappa-m) ⓘ 100 kJ/m²K

Wall Opening Add

You can add similar objects to the one you are viewing...

You can select another object instance to view from this list

...Or delete the current object

This shows you all the grouping and levels of current objects

Note: your project tree will instantly update as you add and delete objects

Child objects can also be added from the parent page

Enter data

For each question, enter data or select an option from the list, as you do the rest of the page will update to what is applicable

- Wall
 - Wall Opening
 - Wall Opening2
- Floor
- Main Heating
- Water Heating**
- Ventilation
- Lighting

PCDB Index Numbers Help

[Product Characteristics Database \(PCDB\)](#)

Tip: It is recommended that questions are answered in the order they appear on each page

General | **Geometry** | **Heating Systems** | **Ventilation & AC** | **Renewables** | **Results**

Project details

Heating Systems

Water Heating

General

Name	Water Heating
Category	Electric immersion
System Type	Electric immersion
Fuel Type	Electricity
Efficiency data source	from manufacturer declaration
Heating efficiency	110 % Value fails range check.
Immersion type	single immersion
Tick if heat pump assisted by immersion	<input type="checkbox"/>
Number of baths in property	1

Thermal Store and CPSU ⓘ

Water store ⓘ

Tick if hot water storage cylinder	<input type="checkbox"/>
Store size	180 litres

Inputs with only one option are displayed in grey

Inputs that are invalid will flag an error message (these values will not be saved)

Questions which are not applicable will be hidden (sometimes for a whole group)

Help with inputs

The screenshot shows a web-based configuration tool for heating systems. The interface is divided into several sections:

- Current Project:** A tree view on the left showing a hierarchy of building parts: Typical detached house, Door, Window, Building Part, Thermal Bridge1, Roof / Ceiling, Wall, Floor, Main Heating, Water Heating, Ventilation, and Lighting. The 'Main Heating' item is highlighted.
- Navigation:** A horizontal menu at the top with tabs for General, Geometry, Heating Systems (selected), Ventilation & AC, Renewables, and Results.
- Project details Heating Systems:** A section for configuring the main heating system. It includes a dropdown for 'Select instance:' set to 'Main Heating', and buttons for 'Add' and 'Delete'.
- General:** A form with various input fields:
 - Name: Main Heating
 - boiler with radiators or underfloor heating (dropdown)
 - Gas boilers (dropdown)
 - Gas (including LPG) boiler 1998 or later (dropdown)
 - Regular condensing with automatic ignition (dropdown)
 - Fraction of heated space served by this system: 1 (input field)
 - Data Source: from database (dropdown)
 - PCDB index number: [] (input field)
- System description:** A section with a dropdown for 'Heat emitter', a checked checkbox for 'Tick if condensing boiler', a dropdown for 'Heat distribution for condensing boiler' (flow temperature 55C or higher), and a dropdown for 'Central heating pump' (2013 or later).

Callouts provide additional information:

- A yellow box points to the 'i' icon next to the 'PCDB index number' field, stating: "For more information on a question hover over the **i** symbol to read the help text box".
- A yellow box points to the 'PCDB index number' field, stating: "Input fields with a blue border mean they are required for you to run the calculation".
- A grey box points to the 'System description' section, stating: "Product index number from PCDB is always six digits (with leading zeroes if necessary). Use link in menu on the left to access PCDB, search for product, and copy over its index number.".
- A yellow box points to the 'PCDB Index Numbers Help' link in the left sidebar, stating: "Additional help also appears in these links".

Checking inputs

When you finish defining your project, click on the results tab

The screenshot shows a software interface with a navigation bar at the top containing tabs for 'General', 'Geometry', 'Heating Systems', 'Ventilation & AC', 'Renewables', and 'Results'. The 'Results' tab is selected and highlighted in yellow. On the left, a tree view under 'Current Project' shows a hierarchy: 'Typical detached house' -> 'Door', 'Window', 'Building Part' -> 'Thermal Bridge1', 'Roof / Ceiling', 'Wall' -> 'Wall Opening', 'Wall Opening2', and 'Lighting'. The main content area is titled 'Project details Results' and contains a blue error message box. The message states: 'Some required fields have not been entered, or data entered is invalid. Please check inputs for the following: - Boiler-Index-Number is required (Main Heating) Heating-Eff is required (Water Heating)'. Below the message is a 'Calculate' button. At the bottom, a note reads: 'You are currently working with projects Projects tab. use the My'. A yellow circle highlights the 'Results' tab, and another yellow circle highlights the error message. Arrows point from external text boxes to these elements.

If there are any errors you will not be able to run the calculation until they are corrected

The part in brackets tells you which pages to go back and check to fix the problem

use the My

Calculation

The screenshot displays a software interface with a navigation menu on the left and a main content area on the right. The navigation menu, titled 'Current Project', lists a tree structure: 'Typical detached house' (with sub-items 'Door' and 'Window'), 'Building Part' (with sub-items 'Thermal Bridge1', 'Roof / Ceiling', and 'Wall'), and 'Wall' (with sub-items 'Wall Opening' and 'Wall Opening2'). The main content area has a top navigation bar with tabs: 'General', 'Geometry', 'Heating Systems', 'Ventilation & AC', 'Renewables', and 'Results'. The 'Results' tab is active, showing 'Project details Results'. A blue message box contains the text: 'You have successfully completed the data entry for this project. You can now proceed to run the **sap2016** analysis:'. Below this message is a yellow 'Calculate' button. A yellow callout box with an arrow pointing to the 'Calculate' button contains the text: 'When a project has been defined without errors, you can run the calculation to see the results'. At the bottom of the interface, there is a note: 'You are currently working with projects for **sap2016** calculations. To change version use the My projects tab.'

Current Project

- Typical detached house
 - Door
 - Window
- Building Part
 - Thermal Bridge1
 - Roof / Ceiling
 - Wall
 - Wall Opening
 - Wall Opening2

General **Geometry** **Heating Systems** **Ventilation & AC** **Renewables** **Results**

Project details Results

Results

You have successfully completed the data entry for this project.

You can now proceed to run the **sap2016** analysis:

Calculate

When a project has been defined without errors, you can run the calculation to see the results

You are currently working with projects for **sap2016** calculations. To change version use the My projects tab.

Results

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Click here to go back and make changes to your project

Project Results cSAP software

[Back to Project details](#)

Summary

Dwelling Emission Rate, kgCO ₂ /m ² .annum:	20.44 (DER)	Pass
Target Emission Rate, kgCO ₂ /m ² .annum:	22.06 (TER)	
Dwelling Fabric Energy Efficiency, kWh/m ² .annum:	55.2 (DFEE)	Pass
Target Fabric Energy Efficiency, kWh/m ² .annum:	75.05 (TFEE)	
SAP Rating:	80	
SAP Band:	C	
Likelihood of overheating:		
June	High	
July	High	
August	High	

This part gives a summary of the main results

Calculation details

	Energy consumed (kWh/year)		CO ₂ emissions (kg/year)	
	Actual	Notional	Actual	Notional
Space heating	4471	4989	930	1038
Water heating	2783	2752	579	573
Electric showers	0	0	0	0
Cooling	0	0	0	0
Pumps and fans	75	75	30	30
Lighting	244	314	97	125
Special features	0	0	0	0
Total	7572	8130	1635	1765

View a break down of the results here