



# New Features Guide

## Sage 200 v2011

---

## Copyright statement

© Sage (UK) Limited, 2011. All rights reserved.

If this documentation includes advice or information relating to any matter other than using Sage software, such advice or information is provided for information purposes only. While Sage takes responsible steps to ensure the accuracy and completeness of such information, it can only be general in nature. You should therefore take appropriate steps to ensure it is correct and relevant to your circumstances. You should also consider taking professional advice when appropriate, for example to ensure that the results obtained from using the software comply with statutory requirements.

No part of this documentation may be copied, photocopied, reproduced, translated, microfilmed, or otherwise duplicated on any medium without prior written consent of Sage (UK) Limited, publisher of this work.

Use of the software described in this documentation is subject to Sage (UK) Limited's Licence Agreement enclosed with, or displayed by, that software.

Sage, the Sage logo, and other Sage logos and brands are either registered trademarks or trademarks of Sage (UK) Limited, or its holding company, The Sage Group PLC. All other marks are trademarks or registered trademarks of their respective owners.

---

Sage (UK) Limited

North Park

Newcastle upon Tyne

NE13 9AA

Issue Date: 08/06/2011

Pbn No: 14252

<b>Introduction</b> .....	<b>5</b>
<b>Web timesheets and expenses (WTE)</b> .....	<b>9</b>
<b>Triangulation on the EC Sales List</b> .....	<b>19</b>
<b>Archive projects</b> .....	<b>21</b>
<b>Change the status on multiple projects</b> .....	<b>25</b>
<b>Sage 200 security settings</b> .....	<b>27</b>
<b>Sage 200 Mobile for the iPhone®</b> .....	<b>29</b>
<b>In-product survey</b> .....	<b>31</b>
<b>Business Intelligence</b> .....	<b>32</b>
BI for Project Accounting.....	33
Aged Debt and Aged Credit cubes in BI.....	36
<b>Manufacturing</b> .....	<b>39</b>
Bills of Material workspace.....	40
Posting BOM rounding discrepancies to the Nominal Ledger.....	41
Reversing builds.....	42
Updating resources.....	44
Updating operation details.....	45
Updating operation rates.....	46
Cost analysis.....	49
Adding components.....	50
Placing BOMs on hold.....	51
Applying replenishment horizon in planning.....	52
Graphical Planner.....	53



## Introduction

This guide gives you a summary of the new features in version 2011 of the Sage 200 Suite.

Each new feature is summarised, and basic information is provided on how to use each new feature.

**Note:** For more detailed information on these features, see the Sage 200 help. The features are described in the [What's new in this version](#) section.

Sage 200 v2011 has the following new features:

What's new	Description
<b>In Sage 200 Accounts</b>	
<a href="#">Self Service Timesheets and Expenses</a>	<p>There is a new <i>Self Service</i> web application that you can use to enter timesheets and expense claims for Project Accounting. Users can enter timesheets and expense claims in a web browser, without requiring the Sage 200 client.</p> <p><b>Note:</b> This replaces the previous Sage 200 <i>Web Timesheets and Expenses (WTE)</i> application.</p>
<a href="#">Triangulation in the EC Sales List</a>	<p>You can specify when a foreign currency invoice or credit note is part of a triangulated transaction.</p> <p>This places an indicator on the EC Sales list.</p>
<a href="#">Archive Projects</a>	<p>Once you have finished a project, you can choose to archive it.</p> <p>An archived project remains stored in Sage 200, but is not visible and cannot be selected when processing new transactions or running reports or enquiries.</p>

What's new	Description
Change the status on multiple projects	You can change the status on multiple projects at the same time.
Sage 200 Mobile	Sage 200 Mobile is now available for the iPhone®. You can download the Sage 200 Mobile application from App Store <sup>SM</sup> .
<b>In Manufacturing</b>	
Using a Bill of Materials Workspace	Use the Bills of Material workspace to work with your BOMs.
Reversing Bill of Materials builds	You can reverse a Bill of Materials build if you accidentally built a BOM you did not intend to build.  <b>Note:</b> You cannot reverse builds that were built using Sage 200 v2010.
Updating resources	You can update machine, labour and tool resource details with the details currently held on the machine, labour or tool resource group.
Updating operation cost rates	You can update cost rates on resources, operations and BOM operations, based on the current cost rates defined on resource groups, resources or operation records.
Updating operation details	You can update BOM operation details with operation details from the Operations Register.
Bill of Materials cost analysis	Use cost analysis to view cost history analysis for your BOMs and make comparisons between planned and actual costs.
Adding Bill of Materials components	You can add components, sub-assembly or phantom BOMs to a BOM or BOMs.

What's new	Description
Converting CSV files to XML files for import into Sage 200	<p>Data is exported to and imported from an XML file.</p> <p>Sage can provide a conversion utility to convert a CSV file into the required XML format. The conversion does not support the full range of values you can import in XML, but allows you to process key pieces of data.</p> <p>Ask your Business Partner for more information.</p>
<a href="#">Graphical Planner</a>	<p>Graphical Planner v11.01 is released with Sage 200 v2011.</p> <p>This replaces Graphical Planner v9.4.</p>
<h3>In Business Intelligence</h3>	
<a href="#">BI for Project Accounting</a>	<p>You can use BI to analyse your Project Accounting data.</p>
<a href="#">Aged Debt and Aged Credit cubes</a>	<p>The Aged Debt and Aged Credit cubes in BI now report all transaction types; Invoices, Credit Notes, Payments and Receipts.</p>



## Web timesheets and expenses (WTE)

You can now enter and authorise timesheets and expense claims remotely using the new *Self Service* web application. These timesheets and expense claims are recorded against your projects in the Sage 200 Project Accounting module.

---

**Note:** Timesheets and expense claims in the *Self Service* web application replaces the previous Sage 200 *Web Timesheets and Expenses (WTE)* application.

---

You can do the following using the Self Service web application:

- Enter timesheets.
- Enter expense claims.
- Authorise timesheets.
- Authorise expense claims.

By using the Self Service web application, you do not need to have the Sage 200 client installed to enter timesheets and expense claims.

### Set up timesheets and expenses for Self Service

The Self Service web application uses the same settings, resources, hierarchies, and projects that you set up in Project Accounting. As long as a Sage 200 user can enter timesheets and expense claims in Sage 200 Project Accounting, they will also be able to do so using Self Service.

There are a few additional tasks that are specific to setting up the Self Service web application.

#### Install Self Service

- When you run the Sage 200 installation, choose to install *Self Service*. This will install the Self Service web service.

## Set up Sage 200 System Administration

- Enter the Self Service website address.

If a Self Service user chooses to reset their password, they will be sent an email containing a link, which uses the address that you set here.

 **Open:** Sage 200 System Administration > Messaging > Self Service.

- Click Edit.
- Enter the *Self Service Web Address* for the Self Service website. This should include the port number of the website.

This is in the format: `https://<server_name>:10445/Sage200SelfService.`

- To save your settings, click OK.

- Assign timesheets and expense claim features to the relevant roles.

Users must be able to enter timesheets and expense claims in Sage 200 Project Accounting.

 **Open:** Sage 200 System Administration.

- Select *Roles*, right-click a role and select *Features*.
- Assign the relevant features to the role:

Feature	Task
Add Timesheets	Enter timesheets
Authorise Timesheets	Authorise timesheets
Add Expenses	Enter expense claims
Authorise Expenses	Authorise expense claims

- Create Sage 200 user accounts.

Users must have Sage 200 user accounts to be able to enter timesheets and expense claims using Self Service.

 **Open:** Sage 200 System Administration > Users.

- Create the user accounts.
- Ensure that each user has a valid email address on the *User Details* tab.  
This is required if the user forgets their password, so that they can be sent a password reset email.

- Set your password policy.

 **Open:** Security Settings > Password Policy.

- a. Enter the following settings:

**Reset Password By Administrator Only** Enable this option if you don't want Self Service users to be able to reset their own passwords. If this is selected, only Administrators can set passwords. If this setting is not enabled, Self Service users will be able to reset their password.

**Maximum Time to Reset Password** If a Self Service user chooses to reset their password, they will be sent an email containing a link to reset their password. The **Reset Password Timeout Value** is the length of time they will have to use this link to enter their new password.

- b. Click OK to save changes.

- Set audit flags to monitor password reset requests.

You can set audit flags to record when users request a new password, and if password changes have failed or succeeded.

 **Open:** Security Settings > Audit Flags.

## Set up Sage 200

- Create *resource* records for the users in Sage 200 Project Accounting.

All users who enter timesheets and expense claims using Self Service must have a Sage 200 user account which is assigned to a *resource* in Sage 200 Project Accounting.

 **Open:** Sage 200 > Project Accounting > Project Maintenance > Resources.

- a. Select the relevant **Resource** and click **Edit**.
- b. On the resource **Details** tab, link the resource to the user account by setting the **Sage 200 user name**.
- c. On the resource **Permissions** tab, specify whether the resource can amend their cost charge and pay rates.

- Add the resource to the hierarchy.

To be able to enter timesheets and expense claims, all resources records must be members of the resource hierarchy.

 **Open:** Project Accounting > Project Maintenance > Hierarchy.

- Set authorisation permissions for the resource.

Sage 200 users can also authorise timesheet and expense claims via the Self Service website. To do this, you must set up authorisation permissions for each resource.



**Open:** Project Accounting > Project Maintenance > Manage resource Authorisation.

- Set your own terminology for projects, timesheets and expenses.

You can set up Sage 200 Project Accounting to use the same terminology that you use in your business. For example, if you refer to your projects as Jobs, you can replace the term **Project** with **Job**.

You can also change the terminology that you use for timesheets and expense claims. For example, you may want to use **Employee** rather than the default setting (**Resource**), for a timesheet user.

Any terminology changes you make here are reflected in the Self Service web application.

We recommend that you make sure the that the labels that you decide to use are familiar to your timesheet and expense claim users.

- Set timesheet and expense claim entry settings.

You can also set up how timesheet and expense claims are entered in the Sage 200 Project Accounting. These settings are also reflected in the Self Service web application.

For example, you can choose the time format that you use; **hh:min** or **decimal**. Your users will have to use your chosen format when entering time in the Self Service web application.

## Enter timesheets and expense claims

1. Enter the Self Service web address in your browser.

This will be in the following format and must contain the port number of the website. By default, the port number is 10445.

For example:

`https://<Server_name>:10445/Sage200SelfService.`

2. Log on using your Sage 200 user name and password.

---

**Note:** The password is used for both the Self Service web application and the Sage 200 desktop application.

---

3. To view your expense claims, click Expense Claims on the left (1).

**Sage 200** Expense Claims

[Expense Claims](#) **1**

[Authorise Expense Claims](#)

[Timesheets](#)

[Authorise Timesheets](#)

**Summary**

[Add new expense claim](#)

Status	Value
Recently Added <b>2</b>	£ 232.45
Saved	£ 21.60
Submitted	£ 72.00
Rejected	£ 16.20
Being Processed	£ 30.15
Processed	£ 83.50

**Recently Added** These expense claims have been recorded since 24/03/2010

Selected: [Submit](#) | [Print](#) | [Delete](#)

<input type="checkbox"/>	Date	Status	Expense Claim Number	Reference
<input type="checkbox"/>	<a href="#">Edit</a> 22/03/2011	Submitted	000000027	Removal at Future...
<input type="checkbox"/>	<a href="#">Edit</a> 11/03/2011	Saved	000000023	Better kitchens visit
<input type="checkbox"/>	<a href="#">Edit</a> 08/03/2011	Submitted	000000022	Abbey kitchens visit
<input checked="" type="checkbox"/>	<a href="#">Edit</a> 02/03/2011	Authorised	000000014 <b>3</b>	Abbey customer visit
<input type="checkbox"/>	<a href="#">Edit</a> 02/03/2011	Posted	000000020	Festival visit
<input type="checkbox"/>	<a href="#">Edit</a> 22/02/2011	Rejected	000000013	George Grey visit

**Items for Expense Claim 000000014 - Reference Abbey customer visit**

[Add item to this expense claim](#)

<a href="#">Edit</a>	Date	Project	Project Title	Project Item	Category	Item	Units
<a href="#">Edit</a>	27/01/2011	000000017	Abbey Kitcha...	Site Visit	Mileage	Business	100.0000
<a href="#">Edit</a>	27/01/2011	000000017	Abbey Kitcha...	Site Visit	Meals <b>4</b>	Subsistence	1.0000
<a href="#">Edit</a>	27/01/2011	000000017	Abbey Kitcha...	Site Visit	Misc	Incidentals	1.0000

- Select a Summary category (2) to list the expense claims in that group below (3).
  - Select an expense claim from the list (3) to display the details of that claim (4).
- You can Edit, Submit, Print and Delete expense claims from here.
- To enter a new expense claim, select Add new expense claim.

4. To view your timesheets, click Timesheets on the left (1).

**Sage 200 Timesheets**

[Expense Claims](#)  
[Authorise Expense Claims](#)  
[Timesheets](#) **1**  
[Authorise Timesheets](#)

**Summary**

Status	Hours
This Week (Expected 35:00) <b>2</b>	22:00
Recently Added	111:30
Saved	8:00
Submitted	33:30
Rejected	12:00
Being Processed	15:00
Processed	100:00

Timesheets for week beginning 14/03/2011 [This Week](#)

[Add New Timesheet](#) | [Submit All](#) | [Print All](#)

Project	Project Title	Project Item
<a href="#">Edit</a> 000000019	Abbey Kitchen 36 Marchbank	Site Visit
<a href="#">Edit</a> 000000019	Abbey Kitchen 36 Marchbank	Measurements
<a href="#">Edit</a> 000000019	Abbey Kitchen 36 Marchbank	Drawings <b>3</b>
<a href="#">Edit</a> 000000019	Abbey Kitchen 36 Marchbank	Proposal
Totals:		

- Select a Status category (2). The timesheets in that category are displayed in the List (3).

You can Edit, Submit, Print and Delete expense claims from here.

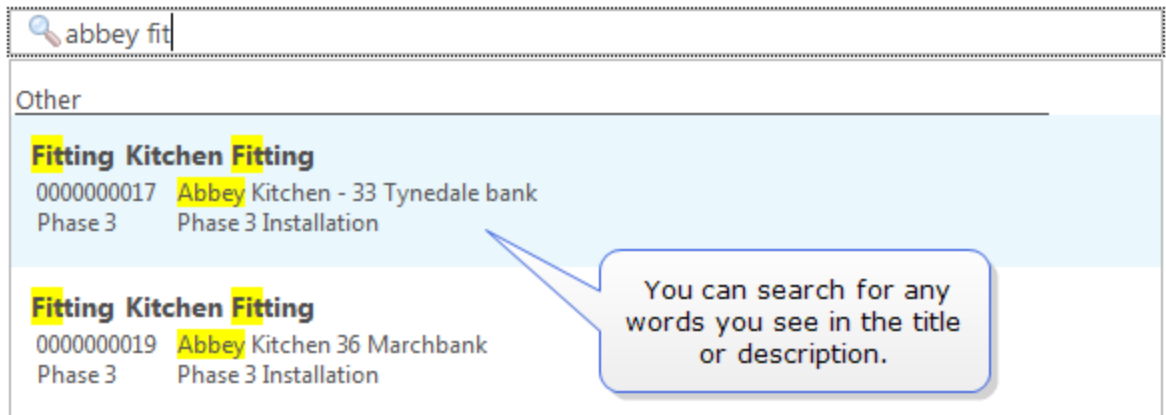
- To enter a timesheet:
  - i. Select This Week from the Status category.
  - ii. Select the week beginning date using the calendar, or to go to the current week select This Week.
  - iii. Select Add New Timesheet.

4. All timesheet and expense claims must be assigned to a Project and a Project Item before they can be submitted.

Use the Which Project / Project Item box to search for an activity.

You can enter any words or numbers that are contained in the project or project items names, e.g:

- A project code (for example, enter *17* to find project 0000017).
- Words in the project name.
- Words in the project item title or description (for example, enter *fit* to find fitting, or *exh* to find exhibition).



## Authorise timesheets and expense claims

1. Enter the Self Service web address in your browser.
2. Enter the Self Service web address in your browser.
3. Log on using your Sage 200 user name and password.

**Note:** The password is used for both the Self Service web application and the Sage 200 desktop application.

4. To authorise your expense claims, click Authorise Expense Claims on the left (1).

**Sage 200 Authorise Expense Claims**

Expense Claims  
 Authorise Expense Claims (1)  
 Timesheets  
 Authorise  
 Timesheets

**Summary by Resource** [View by Project](#)

Resource	Works Number	Expense Claims To Authorise	Expense Claims Not Posted
David Lee	9818	£138.25	£0.00
Sarah Miller	8544	£66.40	£0.00
<b>Totals:</b>		<b>£204.65</b>	£0.00

**David Lee - Expense Claims to Authorise**

Selected: [Authorise](#) | [Reject](#) | [Print](#)

Date	Claim Number	Reference
<input checked="" type="checkbox"/>	02/03/2011 000000014	Abbey customer visit
<input type="checkbox"/>	02/03/2011 000000020	Festival visit
<input type="checkbox"/>	08/03/2011 000000022	

**Items for Expense Claim 000000014 - Reference Abbey customer visit**

Date	Project	Project T	Project Item	Category	Item	Description	Amount
27/01/2011	000000...	Abbey...	Site Visit	Mileage	Business	Travel to consult...	100.00
27/01/2011	000000...	Abbey...	Site Visit	Meals	Subst...		10.00
27/01/2011	000000...	Abbey...	Site Visit	Misc	Incid...		24.65

- You can view the expense claims by a resource (person) or a project.
  - The Summary by Resource displays a summary of expense claims for each person.
  - To view the expense claims for a project, click View by Project.
- To see the expense claims requiring authorisation, click on a total from the Expense Claims to Authorise column (2).
- The expense claims are displayed in the Expense Claims to Authorise list (3).
  - Expense Claims to Authorise: Shows expense claims that have been submitted but have not yet been authorised.
  - Expense Claims Not Posted: Shows expense claims that have been authorised, but have not yet been posted in Sage 200.
  - Expense Claims Rejected: Shows expense claims that have been rejected, and have not been resubmitted.
  - Last 12 Months: Shows all expense claims entered in the last year.
- In the Expense Claims to Authorise list (3), select the expense claims to Authorise or Reject.

The details for the selected expense claim are displayed at the bottom of the page (4).

- Authorising an expense claim will mark the status as authorised, and it can then be processed (posted in Sage 200).

- Rejecting an expense claims will set its status to *rejected*. The expense claim is not removed from the system, and it can be edited and re-submitted.

5. To authorise your timesheets, click **Authorise Timesheets** on the left (1).

**Sage 200 Authorise Timesheets**

[Expense Claims](#)  
[Authorise Expense Claims](#)  
[Timesheets](#)  
[Authorise Timesheets](#) **1**

**Summary by Resource** [View by Project](#)

Resource	Works Number	Hours To Authorise	Hours Not Posted
David Lee	9858	28:00	13:00
Sarah Miller	8544	33:00 <b>2</b>	0:00
Dawn Redmond	1877	0:00	0:00
Jake Basker	4477	25:00	0:00
Christine Barker	4871	0:00	0:00
<b>Totals:</b>		<b>82:00</b>	<b>13:00</b>

**David Lee - Timesheets to Authorise**

Selected: [Authorise](#) | [Reject](#) | [Print](#)

Date	Project	Project Title	Project Item	Narrative
07/03/2011	0000000017	Abbey Kit...	Site Visit	Initial meeting...
08/03/2011	0000000017	Abbey Kit...	Measurements	Measurements for...
09/03/2011	0000000017	Abbey Kit...	Drawings	Drawings for 2...
10/03/2011	0000000017	Abbey Kit...	Drawings	Drawings for 2...
10/03/2011	0000000017	Abbey Kit...	CAD	

- You can view the timesheets entered by a resource (person) or a project.
  - The **Summary by Resource** displays a summary of timesheets for each person.
  - To view the timesheets for a project, click **View by Project**.
- To see the timesheets requiring authorisation, click on a total from the **Hours to Authorise** list (2).
- The timesheets are displayed in the **Timesheets to Authorise** list (3).
  - **Hours to Authorise**: Shows timesheets that have been submitted but have not yet been authorised.
  - **Hours Not Posted**: Shows timesheets that have been authorised, but have not yet been posted in Sage 200.
  - **Hours Rejected**: Shows timesheets that have been rejected, and have not been resubmitted.
  - **Last 12 Months**: Shows all timesheets entered in the last year.
- In the **Timesheets to Authorise** list (3), select the timesheets to **Authorise** or **Reject**.
  - Authorising a timesheet will mark the status as *authorised*, and it can then be processed (posted) in Sage 200.
  - Rejecting a timesheet will set its status to *rejected*. The timesheet is not removed from the system, and it can be edited and re-submitted.



## Triangulation on the EC Sales List

Triangulation is the term used to describe the supply of goods between EC countries that involves three parties.

For example, a UK company receives an order from a customer in Germany. To fulfil the order the UK company purchases the goods from their supplier, based in France. The goods are delivered directly from the French supplier to the German customer.

The invoice for the goods is sent to the German customer from the UK company.



As the goods do not enter the UK, an indicator must be placed on the EC Sales list to show that the sale represents a triangulation transaction. For more information on the EC Sales List requirements, refer to the HM Revenue & Customs website ([hmrc.gov.uk](http://hmrc.gov.uk)).

To mark sales as triangulated on the EC Sales list in Sage 200, you must select the **Triangulated** checkbox when entering the following types of transaction:

Module	Type of transaction
Sales Ledger	Invoice
	Free Text Invoice
	Credit Note

Module	Type of transaction
	Batch Invoice Batch Credit Note
Sales Order Processing	Sales Order - Full   Delivery and Invoicing Sales Order - Trade   Delivery and Invoicing Repeat Order Template   Delivery and Invoicing Sales Return   Return and Credit Quotation   Delivery and Invoicing Pro forma   Delivery and Invoicing <hr/> <p><b>Note:</b> If you have created the sales order using Sage 200 CRM, you must amend the order in Sage 200 and select the Triangulated checkbox from the Delivery and Invoicing tab.</p> <hr/>

## Archive projects

You can now mark a project as archived, once you have finished with it.

An archived project remains stored in Sage 200, but is not visible and cannot be selected when processing new transactions or running reports or enquiries.

You can use the archived reports to view details of your archived projects. If necessary, you can resurrect an archived project. For example, you may need to post transactions to it at a later date, or the project may have been archived in error.

### When a project can be archived

If you are not using statuses with your projects, you can archive a project at any time.

If you are using statuses with your projects, you can only archive a project when the project and all the groups, items and sub-projects in its structure have one of the following:

- A status that allows archive/delete.
- A **Not Applicable** status.
- No status. This occurs when you are not tracking the status for a particular group or item.



You cannot archive a sub-project on its own. To archive a sub-project, you must remove it from the parent project first. To prevent costs and/or revenue transactions being posted to a sub-project, you must apply a status with **Allow Archive / Delete** selected to the sub-project. You can continue to enter cost and/or revenue transactions to the parent project.

## How existing transactions are processed for an archived project

You can archive a project when it has outstanding transactions assigned to it. Once archived, some existing transactions that are assigned to an archived project cannot continue to be processed. This can depend on whether you are tracking statuses for the archived project.

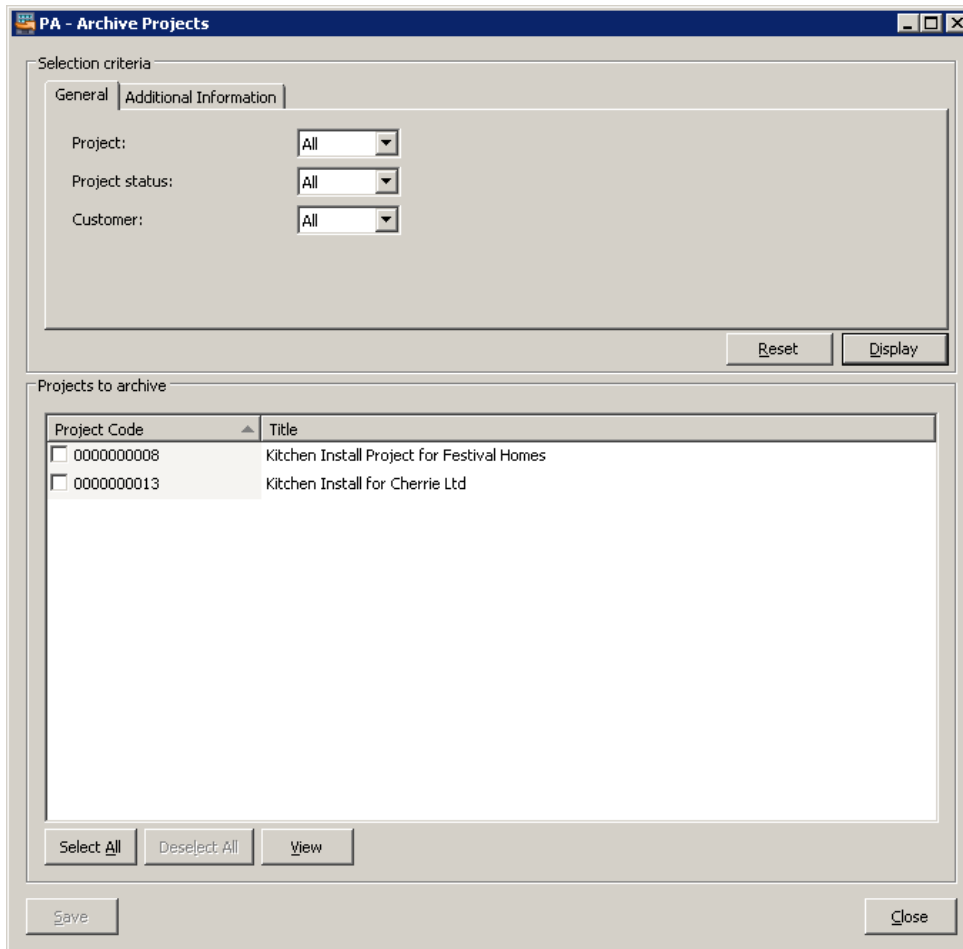
Existing transactions that are assigned to an archived project	Tracking statuses	Not tracking statuses
Timesheets and expenses	Yes	Yes
Sales Ledger and Purchase Ledger batch transactions	No The batch cannot be committed.	Yes
Sales orders and returns	Yes	Yes
Quotations - free text items	The converted sales order is not assigned to the project.	The converted sales order is not assigned to the project.
Purchase orders and returns - standard items	The order can be received and invoiced. Stock cannot be allocated to the project.	The order can be received and invoiced. Stock cannot be allocated to the project.
Purchase orders - free text items	The order can be received. The invoice cannot be posted to the project.	Yes

## How to archive a project

1. If you are using project statuses:
  - a. Create a status with *Allow Archive / Delete* selected.
    -  **Open:** Project Accounting > Project Maintenance > Project Statuses.
  - b. Apply the status to the project and all sub-projects, groups and items in the project's structure.
    -  **Open:** Project Accounting > Projects > Amend Project Status.

2. Select the projects that you want to archive.

 **Open:** Project Accounting > Utilities > Archiving > Archive Projects.



**PA - Archive Projects**

Selection criteria

General | Additional Information

Project: All

Project status: All

Customer: All

Reset Display

Projects to archive

Project Code	Title
<input type="checkbox"/> 000000008	Kitchen Install Project for Festival Homes
<input type="checkbox"/> 000000013	Kitchen Install for Cherrie Ltd

Select All Deselect All View

Save Close

### Outcomes of archiving a project

- The project is not available to select on project reports and enquiries.
- No new transactions can be entered against it.
- Any transactions assigned to the archived project cannot be reversed.
- The project is only included on the **Project (Archived )** workspace.
- The project does not appear on the desktop lists.

### How to resurrect an archived project

1. Select the projects that you want to resurrect from the **Resurrect Project** window.

 **Open:** Project Accounting > Utilities > Archiving > Resurrect Projects.

2. If you are using project statuses, and want to enter cost and revenue transactions for the project, apply a status to the project that allows costs or revenues.



## Change the status on multiple projects

You can now change the status on multiple projects at the same time. A list of top level projects is displayed. You select the projects that you want to apply the status to. The selected status is automatically applied to all sub-projects, groups and items in the project's structure. Any sub-projects, groups or items in the selected project's structure, that do not track statuses, are automatically set to **Not Applicable**.

### To change the status on multiple projects

 **Open:** Projects > Amend Project Status - Batch.

1. Select the projects to display.
  - Select the **General** tab to filter your projects by **Project**, **Project status** or **Customer**.
  - Select the **Additional Information** tab to filter your projects using the **Additional Information** drop-down lists.

2. Click **Display**.

A list of projects is displayed.

3. Select the status you want to apply to the selected projects, from the **Change project status** to drop-down list.
4. Select the projects that you want to apply the status to.

---

**Note:** To see the details of a project, click **View**. This displays the details of the first project selected.

---

5. To change the status of the selected projects, click **Save**.



## Sage 200 security settings

In Sage 200 v2011, the default security settings have changed. The security settings are entered in the Sage 200 System Administration tool:

 **Open:** Sage 200 System Administration > Security Settings > Password Policy

If you installing Sage 200 for the first time, or if you create a new configuration database, the minimum security settings are as follows:

Minimum password length	8 characters
Password complexity	Level 2 The password must contain 2 character types such upper and lower case letters, or letters and numbers.
Account Lockout Threshold	5 attempts Your account is locked after 5 incorrect attempts to enter your password.

When you first try to logon to the Sage 200 System Administration tool, you must create password for the **Manager** account that conforms to these security settings.

### Upgrading from Sage 200 v2010

If you are upgrading to v2011 from an earlier version of Sage 200, and you do **not** create a new configuration database, your existing security settings are retained.

We recommend that you set your security settings to the default settings (as a minimum), if you are using **Remote Authorisation** or **Self Service** (for timesheets and expenses).





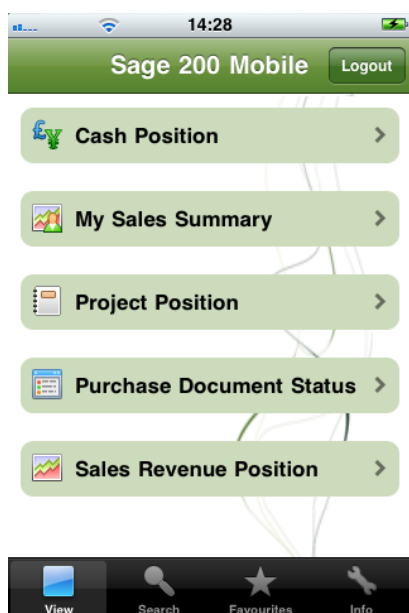
## Sage 200 Mobile for the iPhone®

You can now access your Sage 200 data from your iPhone®.

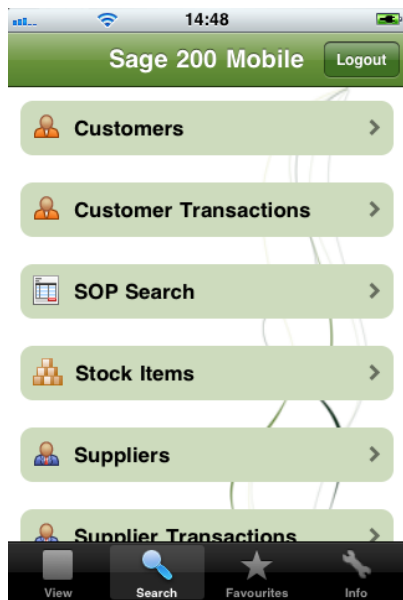
To use Sage 200 mobile on your iPhone® you must:

- Download the Sage 200 Mobile application from the *App Store*<sup>SM</sup>.
- Open the application and log in using the email address and password for your Sage Passport.

You can use **Views** to browse information from Sage 200.



You can use **Search** to find specific information.

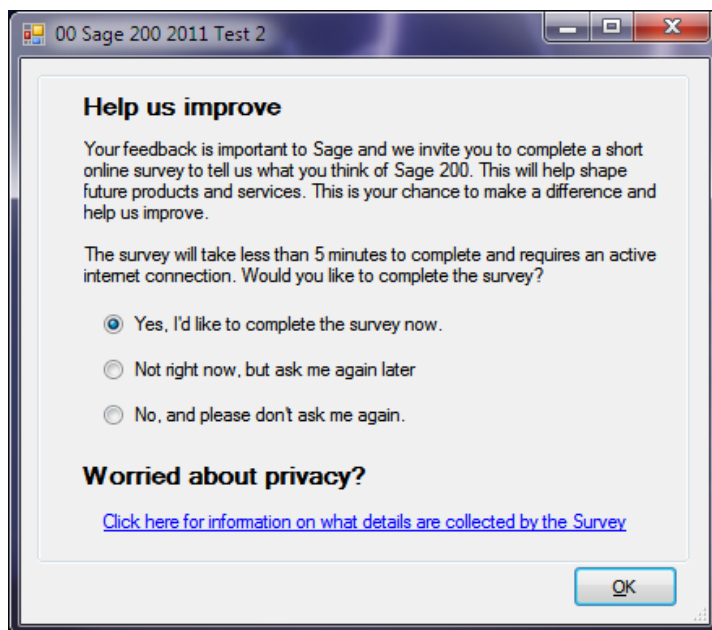


## In-product survey

Sage 200 v2011 has an in-product survey. This is to give you an opportunity to provide feedback on Sage 200 directly to the product team here at Sage.

The survey consists of six questions about your role and how you use Sage 200.

Once enabled, the in-product survey appears automatically 60 days after Sage 200 is first licensed, or after a user has logged on to Sage 200 60 times.



For more information about the survey settings, see the Sage 200 System Administration help.

## Business Intelligence

Sage 200 v2011 Business Intelligence contains the following new features:

- Three new Project Accounting cubes.
- Updated Aged Debt and Aged Credit cubes.

## BI for Project Accounting

You can now use Business Intelligence to analyse your Sage 200 Project Accounting data.

Three new BI cubes are included in Sage 200 v2011. They are:

- **Project Costs.**  
This allows you to analyse the costs and revenue transactions posted to your projects, and the profit/loss made.
- **Project Resources.**  
This allows you to analyse timesheets entered in Project Accounting, by your different resources. You can analyse these against your projects, project groups and project items.
- **Project Budgets.**  
This allows you to analyse your budget figures against your actual posted project transactions. You can do this for both current and previous budgets.

In addition, you can now analyse project accounting data in the following existing BI cubes:

- Sales.
- Purchases.
- Sales order book.
- Stock Movements.

### Setting up BI for Project Accounting

If you want to use BI with the new project accounting cubes, you must:

- Add the **Additional Information** fields to the **Report Settings**.
- Amend the standard BI project reports to use any configurable terms.

#### Report Settings

The **Report Settings** in the BI Admin tool have a new **Project** tab. Use this tab to set up the **Additional Information** fields for your project accounting cubes.

You must select the additional information fields that you want to use on the project accounting cubes, according to the **Type** specified for each one in Sage 200. These include **Text**, **Date**, **Numeric**, **Time**, **Yes/No**, **Supplier List**, **Customer List**, **Product List** and **Resource List**. This makes sure that the list of values for each field are displayed in a sensible order; text in alphabetical order, numbers in numeric order, dates in date order and so on.

## Report Settings

Company Demodata ▼

General Nominal Customers Suppliers Stock Project

### Project Additional Information

<p><b>Date Types</b></p> <p>Field 1: <span style="border: 1px solid gray; padding: 2px;">Expected Comple</span> ▼</p> <p>Field 2: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 3: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 4: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 5: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 6: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 7: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 8: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 9: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 10: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p>	<p><b>Text Types</b></p> <p>Field 1: <span style="border: 1px solid gray; padding: 2px;">Manager</span> ▼</p> <p>Field 2: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 3: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 4: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 5: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 6: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 7: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 8: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 9: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 10: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p>	<p><b>Numeric Types</b></p> <p>Field 1: <span style="border: 1px solid gray; padding: 2px;">Days Taken</span> ▼</p> <p>Field 2: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 3: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 4: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 5: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p>	<p><b>Boolean Types</b></p> <p>Field 1: <span style="border: 1px solid gray; padding: 2px;">Commercial Proje</span> ▼</p> <p>Field 2: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 3: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 4: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 5: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p>
<p><b>Time Types</b></p> <p>Field 1: <span style="border: 1px solid gray; padding: 2px;">Completion Time</span> ▼</p> <p>Field 2: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 3: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 4: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 5: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p>		<p><b>ID Types</b></p> <p>Field 1: <span style="border: 1px solid gray; padding: 2px;">Designer</span> ▼</p> <p>Field 2: <span style="border: 1px solid gray; padding: 2px;">Plumber</span> ▼</p> <p>Field 3: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 4: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p> <p>Field 5: <span style="border: 1px solid gray; padding: 2px;"></span> ▼</p>	

### To enter the report settings

1. Open the BI Admin tool (Start > Programs > Sage Tools > Sage 200 > Sage 200 Business Intelligence Administration).
2. Open the Report settings.
3. Select the Project tab.
4. Select the additional information fields you require from the drop-down lists for the following types:
  - Date.
  - Text.
  - Numeric.
  - Time.
  - Boolean (Yes/No types in Sage 200).
  - ID (Customer List, Supplier List, Product List, and Resource List types in Sage 200).
5. Click Save.

### Configurable terms

In Sage 200, you can set up project accounting to use terminology that is familiar to your business, such as Job rather than Project.

Business Intelligence automatically uses these configurable terms when you create or update the Project Accounting cubes. This is to make sure your reports match the terms that have been set up in Sage 200.

However, the standard project reports in BI have been created using the default terminology from Sage 200. Before using the standard project reports in BI, you must amend them to match the terminology you set up in Sage 200.

### To change the configurable terms

For each project report:

1. Open the report.
2. Select each item that has used a configurable term.
3. Re-select the item using the new term.

For example, if you have used **Job** as the label for your **Projects**, you must re-select **Job** for each place where **Project** is currently specified on the report.

## Aged Debt and Aged Credit cubes in BI

In Sage 200 v2010, the Aged Debt and Aged Credit cubes only contained information about invoices.

In Sage 200 v2011, these cubes have been updated to include all transactions.

Aged Debt by Transaction Date in the Last 3 Periods			
Demo Data			
Values	<a href="#">Outstanding Value</a>		
Customer Number	<a href="#">All Customers</a>		
		Period 10 2010	Period 11 2010
Future	↓ All Transaction Types		
	↓ All Credit Notes		
	Invoices		
	Payments		
	Receipts		
Current	↓ All Transaction Types	676,408.72	
	↓ All Credit Notes		
	Invoices	676,408.72	
	Payments		
	Receipts		

### Upgrading from Sage 200 v2010 to Sage 200 v2011

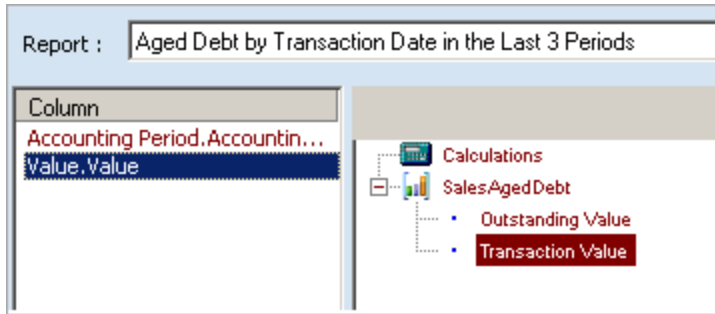
In Sage 200 v2010, when you added the Value on your aged debt and aged credit BI reports, you could only choose to use the Outstanding Value or Invoice Value.

In Sage 200 v2011, where you have added the Value to your aged debt and aged credit reports, the Invoice Value has been changed to Transaction Value. This is because this now includes the value of credit notes, receipts and payments as well as invoices.

If you have existing BI reports that use the Invoice Value in Sage 200 v2010, you must amend these reports after you have installed Sage 200 v2011.

#### To amend the aged debt and aged creditor reports

For each report that uses Invoice Value, you must re-select Transaction Value.



1. Open the BI report.
2. If Invoice Value is used as criteria on the report, re-select Transaction Value.
3. If Invoice Value has been used on the rows or columns, open the Report Layout.
4. Select Value on the Columns or Rows, where applicable.
5. Select Transaction Value.
6. Click Apply.



## Manufacturing

Manufacturing is undergoing redevelopment. The new Bill of Materials module was released with Sage 200 v2010, along with supporting modules; Machine Register, Labour Register, Tool Register, Operations Register and Drawing Register.

New features have been added to the Bill of Materials module for the Sage 200 v2011 release, including a new setting to the BOM Settings **Build** tab. In addition, a new setting has been added within Planning.

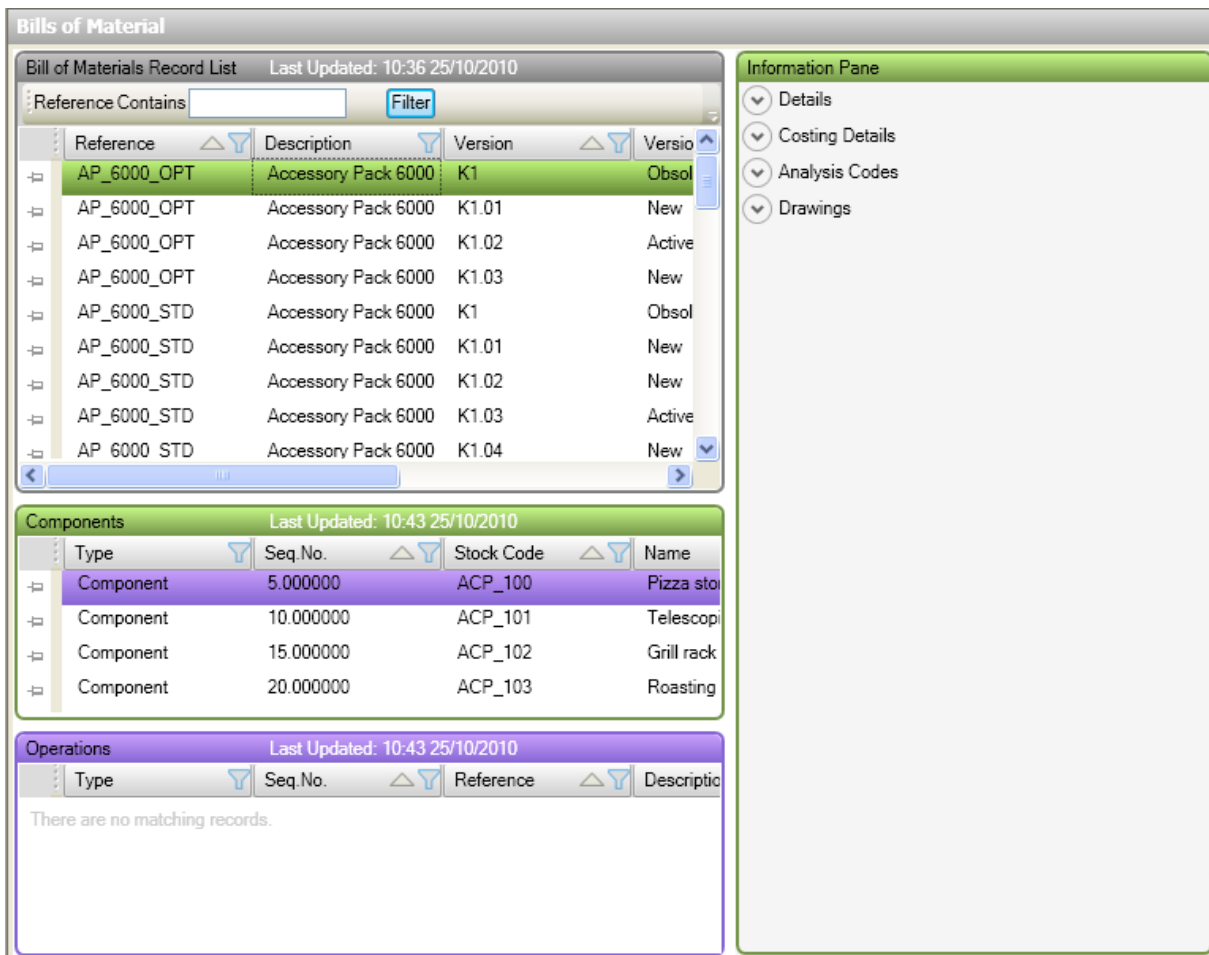
A change has been made to the processing allowed on BOMs that are placed *on hold*. When Sage 200 v2010 was initially released, you could create allocations and build BOMs even if sub-assembly BOMs in the built item BOMs were placed *on hold*. In Sage 200 v2011 any type of BOM that is *on hold* is not available for use in a new allocation or a build.

Sage 200 v2011 also uses an updated version of Sage Graphical Planner. Sage Graphical Planner - Preactor v9.4 has been replaced with Sage Graphical Planner - Preactor v11.01.

## Bills of Material workspace

 **Open:** Workspaces > Bills of Material.

This shows an overview of your BOM records with associated components and operations.



**Bill of Materials Record List** Last Updated: 10:36 25/10/2010

Reference	Description	Version	Status
AP_6000_OPT	Accessory Pack 6000	K1	Obsol
AP_6000_OPT	Accessory Pack 6000	K1.01	New
AP_6000_OPT	Accessory Pack 6000	K1.02	Active
AP_6000_OPT	Accessory Pack 6000	K1.03	New
AP_6000_STD	Accessory Pack 6000	K1	Obsol
AP_6000_STD	Accessory Pack 6000	K1.01	New
AP_6000_STD	Accessory Pack 6000	K1.02	New
AP_6000_STD	Accessory Pack 6000	K1.03	Active
AP 6000 STD	Accessory Pack 6000	K1.04	New

**Components** Last Updated: 10:43 25/10/2010

Type	Seq. No.	Stock Code	Name
Component	5.000000	ACP_100	Pizza stor
Component	10.000000	ACP_101	Telescopi
Component	15.000000	ACP_102	Grill rack
Component	20.000000	ACP_103	Roasting

**Operations** Last Updated: 10:43 25/10/2010

Type	Seq. No.	Reference	Description
There are no matching records.			

**Information Pane**

- Details
- Costing Details
- Analysis Codes
- Drawings

There are four panels:

- A list of BOM records.
- A list of components.
- A list of operations.
- An information panel which displays details for the selected BOM, component or operation record.

---

## Posting BOM rounding discrepancies to the Nominal Ledger

There is a new *Build Process* setting on the BOM Settings *Build* tab.

*Rounding Adjustments nominal code*

Select the nominal code to post rounding adjustments to.

---

**Note:** This will be blank, by default, when you install Sage 200 v2011, unless you are upgrading from Sage 200 v2010. If you are upgrading, the *Suspense account* will be selected, by default. You must select an account before you can build a BOM.

---

## Reversing builds

You can now reverse a build, if you mistakenly built something you did not intend to build.

### When can you reverse builds?

Builds have one of these statuses to help you identify which builds can be reversed.

Built	You can reverse the build, subject to certain conditions.
Can't reverse	The build was done using Sage 200 v2010 and cannot be reversed in Sage 200 v2011.
Reversed	The build has been reversed and cannot be reversed again.

You can only reverse one build at a time, and the entire build must be reversed. You cannot reverse part of a build. However, if you built from an allocation in more than one stage, you can reverse each stage separately.

You can reverse a build if:

- The build status is **Built**.
- You built from an existing allocation, using **Confirm Build**.
- You built from free stock, using **Record Built Items**.

---

**Note:** You may be prevented from reversing builds. A message will appear giving the reason. Typically, this occurs when stock has been recorded as allocated or issued.

---

### How to reverse a build

 **Open:** Bill of Materials > Processing > Reverse Build.

Press *F1* for help about how to reverse a build.

#### Outcomes of reversing a build

- Assembly stock is reduced by the build quantity.
- Component stock is increased by the build quantity in the locations used for the build.

---

**Note:** Stock is added to the bottom of the stock pile, not the top. It is not put back using FIFO rules.

---

- Traceable numbers, created in the original build, are updated to indicate that they have been reversed and may not be issued. Component traceable numbers become stock, free to be allocated or issued elsewhere.

- If Stock Control was set to produce nominal transactions, reverse nominal transactions are made to offset the nominal postings made during the build. These will use the same transaction date and URN.

## Updating resources

You can update labour, machine and tool resource details with the details currently held on the resource group.

### How to update resources

 **Open:** Manufacturing System Manager > Labour Register > Utilities > Maintenance > Update Labour Resource Details.

 **Open:** Manufacturing System Manager > Machine Register > Utilities > Maintenance > Update Machine Resource Details.

 **Open:** Manufacturing System Manager > Tool Register > Utilities > Maintenance > Update Tool Resource Details.

Press *F1* for help about how to update resources.

---

**Note:** After updating resources, you may also want to update operations with resource changes. You can do this by updating operation details and operation rates.

---

## Updating operation details

Use this option to update BOM operation details automatically, with operation details from the Operations Register.

### How to update operation details

 **Open:** Bill of Materials > Utilities > Maintenance > Update Operation Details.

 **Open:** Manufacturing System Manager > Operations Register > Utilities > Maintenance > Update Operation Details.

Press *F1* for help about how to update operation details.

#### Outcomes of updating operation details

If version control is in use, a *new* BOM will be created.

---

**Note:** If you have selected Allow Active BOMs to be amended in BOM Settings, and details are being updated in *active* BOMs, a new BOM is not created. The details in the active BOM will be updated.

---

## Updating operation rates

You can update cost rates on resources, operations and BOM operations, based on the current cost rates defined on resource groups, resources or operation records. If you choose to update BOM operations, you are prompted to select the relevant BOM records to update.

You can choose the source and target record types for the update. Target record cost rates are only updated when there is a direct association with the source record type.

For example, if you are updating operations or BOM operations from a *resource group*, updates are only made on operations and BOM operations, if the operation Resource Type is the same resource group.

This can be illustrated as follows.

Source	Selection	Target	What is updated
Select Resource Group as the Source Record Type.	Select Labour Register as the Record Type.	Select Resources as the Target Record Type.	All labour resources in the labour resource group are updated with the cost rates in the labour resource group.
Select Resource Group as the Source Record Type.	Select Labour Register as the Record Type.	Select Operations Register as the Target Record Type.	Operations are only updated if the operation Resource Type is <i>Labour Resource Group</i> .  <b>Note:</b> Although labour resources have been updated with the rates from the resource group, any labour resources on the operation are not updated at this stage.


Source	Selection	Target	What is updated
Select Resource Group as the Source Record Type.	Select Labour Register as the Record Type.	Select Bill of Materials Operations as the Target Record Type.	<p>BOM operations are only updated if the BOM operation Resource Type is <i>Labour Resource Group</i>.</p> <hr/> <p><b>Note:</b> Although labour resources have been updated with the rates from the resource group, any labour resources on the operation are not updated at this stage.</p>

If you want to update resources on the operations and BOM operations, you must update the operation values directly from the resource values as follows:

Source	Selection	Target	What is updated
Select Resource as the Source Record Type.	Select Labour Register as the Record Type.	Select Operations Register as the Target Record Type.	All operations in the operations register where the operation Resource Type is <i>Labour Resource</i> .
Select Resource as the Source Record Type.	Select Labour Register as the Record Type.	Select Bill of Materials Operations as the Target Record Type.	All BOM operations where the BOM operation Resource Type is <i>Labour Resource</i> .

**Note:** If you are updating BOM operations, we recommend that you recost your BOMs.

### How to update operation rates

-  **Open:** Bill of Materials > Utilities > Maintenance > Update Operation Rates.
-  **Open:** Manufacturing System Manager > Operations Register > Utilities > Maintenance > Update Operation Rates.

Press *F1* for help about updating operation rates.

#### Outcomes of updating operation rates

If you are updating BOM operations, and version control is in use, a *new* BOM will be created.

---

**Note:** If you have selected Allow Active BOMs to be amended in BOM Settings, and rates are being updated in *active* BOMs, a new BOM is not created. The rates in the active BOM will be updated.

---

## Cost analysis

You can analyse cost history and make comparisons between planned and actual costs for the BOM record, if you have at least two costing sessions available for the BOM record. This is done by costing the BOM using the Costing tab on the BOM record.

### Analyse cost history

Two charts are presented when you view cost history analysis:

Values over time	This chart shows the change in values (for example, unit cost, profit, mark-up values) over time.
Distribution	This chart shows detailed costs at Cost Heading, or Cost Heading Type, level. These costs provide the breakdown of how the unit cost values were calculated.

### Planned and actuals comparison

If you only have the Bill of Materials module installed, BOM planned costs (from costing the BOM) and BOM actual costs (from building the BOM) are plotted. If Manufacturing is installed, Works Orders planned costs (from costing the works order) and Works Order actual costs (from completing the works order) are plotted too.

---

**Note:** Works order actual costs are cumulative. If you part-complete the works order, the parts completed are added to give one average value for the parts completed. The works order values will therefore be the same as those you can see on the batch works order in the **Actual** column on the **Latest Costs** tab or the one-off works order in the **Actual Cost** column on the **Estimate/Actual** tab.

---

The costs displayed, include overheads for all versions of the BOM record. The latest costing is shown for each day that is plotted, even if there is more than one order per day. This is because the works order BOM is independent of the BOM record. Works orders costed and completed on the same day could have a different set of components and operations.

### How to analyse costs



**Open:** Bill of Materials > Records > Amend | Costing.



**Open:** Bill of Materials > Enquiries > View Bill of Materials | Costing.

- Click **Analysis** to view the cost history.
- Click **Actuals Comparison** to compare planned and actual costs.

---

**Note:** Default values for these charts are entered in BOM Settings.

---

Press **F1** for help about analysing costs.

## Adding components

You can add components, sub-assembly or phantom BOMs to a Bill of Materials.

You can also add components to BOMs that are marked as *on hold*.

If you are using version control, you cannot add components to a BOM if:

- The BOM is checked out to another user.
- The BOM is obsolete.
- The BOM is retired.

You also cannot add:

- A component to a BOM if it is linked to the same stock record as the component.
- An inactive sub-assembly to an active BOM.

After adding components, you can choose to recost the BOMs.

---

**Note:** The BOMs only include the price of added components when they are recosted.

---

### How to add components



**Open:** Bill of Materials > Utilities > Maintenance > Add Component.

Press *F1* for help about adding components.

#### Outcomes of adding components

If you are updating BOM operations, and version control is in use, a *new* BOM will be created.

---

**Note:** If you have selected *Allow Active BOMs to be amended* in BOM Settings, and a component is being added to an *active* BOMs, a new BOM is not created. The rates in the active BOM will be updated.

---

## Placing BOMs on hold

A change has been made to the processing allowed on BOMs that are placed *on hold*.

When Sage 200 v2010 was initially released, you could create allocations and build BOMs even if sub-assembly BOMs in the built item BOMs were placed *on hold*.

In Sage 200 v2011 any type of BOM that is *on hold* is not available for use in a new allocation or a build.

## Applying replenishment horizon in planning

A new setting, *Apply Replenishment Horizon*, has been added to Planning in v2011. This lets you specify the date MRP will use when applying the replenishment horizon.

Until v2010, MRP looked ahead of the demand due date to check whether there was stock already on order that could satisfy demand.

From v2011, you can choose whether you want MRP to use the demand due date or the current date.

For more information, see the *MRP* tab in *Planning Settings* in the *Sage 200 Suite help*.

---

## Graphical Planner

Sage Graphical Planner - Preactor v11.01 is released with Sage 200 v2011. This replaces Sage Graphical Planner - Preactor v9.4.

### **Upgrading from Sage Graphical Planner - Preactor v9.4**

Uninstall the existing version of Graphical Planner before installing the new version.

Once you have installed v11.01, refer to *Preactor's help* topics on *Converting Existing Configurations to v11*.

There are substantial differences between this version 11.01 and v9.4 (for example, the way in which calendars are created and operate in the new Graphical Planner). If you created and used the calendars in Graphical Planner v9.4, then you must recreate these calendars in v11.

## What are the differences between v9.4 and v11.01?

Sequencer	<ul style="list-style-type: none"> <li>■ Tool bars have been simplified, but are still customisable.</li> <li>■ Views (of charts, plots, etc) can be viewed separately or as part of a group view.</li> <li>■ Trace chart can be customised to show any appropriate field in the schedule file as the vertical axis.</li> <li>■ Zoom tools in v9.4 are now on the <b>View</b> menu.</li> <li>■ There is a new menu bar. Some elements have been moved into other options, for example, saving workspace views. Calendar states are now set up through the <b>View</b> menu instead of through <b>Maintain Database</b>. The <b>Trace Chart</b> option is also now on the <b>View</b> menu.</li> </ul>
Calendars	<p>You can set up complex shift patterns in a template and assign the template to primary and secondary resources. Exceptions, such as overtime and breakdowns, can be added to multiple resources.</p> <p>The use of <b>Start Time</b> and <b>End Time</b> for calendar periods in v11.01, replaces the <b>Exceptions for Specific Day</b> option in v9.4.</p> <p>In v9.4, you could right click on an operation and add an overtime shift to run straight after the normal shift ended, based on the unit time and quantity.</p> <p>In v11.01, you can either:</p> <ul style="list-style-type: none"> <li>■ Modify the calendar template, selecting <b>View &gt; Edit Mode &gt; Calendar Edit Mode</b>. The cursor changes to a watch icon. Double-clicking on a shift pattern then lets you extend the shift.</li> <li>■ Add an overtime exception to the date required, using <b>View &gt; Calendars &gt; Primary Resource Calendars</b>.</li> </ul>
Resources	<p>In v9.4, you could track resource usage by entering the number of people in the team in the <b>Max Value</b> field for the secondary resource. In v11.01, the value is set against the shift pattern for the secondary resource. You must map the shift patterns for the secondary resources in order to see the usage.</p>
Database Store	<p>Both SQL 2008 Express and SQL 2008 Server can be used.</p>
Reports	<ul style="list-style-type: none"> <li>■ Legacy reports are still accessible and new SQL reports are available.</li> </ul>

	<ul style="list-style-type: none"><li>■ You will need to use Visual Studio to amend and create new reports.</li><li>■ Drill-down is supported within reports.</li><li>■ Report definition language (RDL) files can be placed on disk and will be rendered within Preactor.</li><li>■ Gantt charts can be printed over multiple pages, with greater control given to you in specifying how you want the chart to print.</li></ul>
Speed of operation	Backward sequencing takes no longer than forward sequencing.
Bar Tool	Inclusion of a bar tool means you can control the colour and pattern of sequencer bars.
Online training videos	Online training videos are provided. Please note that some of the information contained within these may not be relevant to the Sage version of Graphical Planner.

