New Build (Office)

TRAINEE GUIDANCE AND TASKS

www.wrap.org.uk/nwtool
WRAP helps individuals, businesses and local authorities to reduce waste and recycle more, making better use of resources and helping to tackle climate change.

Written by: Scott Wilson

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This document will guide you through a worked example of amending an existing project in the WRAP Net Waste Tool (v1.1). The project is a design for a five storey office block with a concrete structural frame.

You will carry out a number of tasks which will provide you with the knowledge and confidence to use the Tool on your own projects. Screen images are shown below instructions, to help you identify where to enter data or what the results of your changes should look like.

The following key provides a guide to this example exercise:

**Information Box:** Description of the Tool screens and/or background information. You should read the information boxes before undertaking tasks.

**Navigation Task:** Requires you to navigate within or between Tool pages.

**Data Entry Task:** Follow the instructions to perform Tool functions, such as adding or altering data.

Text in **bold** indicates the name of a tab to click on; for example; **Register new users**.

Text with speech marks signifies a labelled area on screen, or screen name for example, “Project Details”.

Red arrows are used to highlight sections which require attention in the tasks.

**NB.** When inserting substantial quantities of data it is wise to **Save** regularly in case the Tool or the web browser you are using crashes.
<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
<td>A single material or product delivered to site, e.g. a brick. (This includes preassembled composite products such as windows.)</td>
</tr>
<tr>
<td>Element</td>
<td>A major part of a construction project, e.g. a wall.</td>
</tr>
<tr>
<td>Construction cost</td>
<td>The construction cost of the project, including labour but excluding demolition, design/consultant fees and preliminaries. Specialist fit out items (e.g. for healthcare or retail applications) should also be excluded.</td>
</tr>
<tr>
<td>Project</td>
<td>A construction type made up of a number of elements, e.g. a house.</td>
</tr>
<tr>
<td>Scheme</td>
<td>A collection of different projects.</td>
</tr>
<tr>
<td>Corporate reporting</td>
<td>Multiple schemes and projects for which data are aggregated for corporate reporting.</td>
</tr>
<tr>
<td>Recycled content</td>
<td>At product level, recycled content is the proportion, by mass, of recycled material in a product or packaging (as defined by ISO 14021). At project level, recycled content is calculated as a proportion of the total value of materials used, by summing the total cost of each material multiplied by its % recycled content by mass.</td>
</tr>
<tr>
<td>Reused content</td>
<td>The value of reused and reclaimed materials used in construction, quantified as 100% of the purchase cost of the equivalent newly manufactured product which is substituted.</td>
</tr>
<tr>
<td>RC</td>
<td>Abbreviation for reused and recycled content (i.e. all use of recovered material as an input to new construction).</td>
</tr>
<tr>
<td>Project Homepage</td>
<td>Each project has a ‘homepage’ screen from where all analysis and project administration functions can be accessed. After the user has created a new project and entered basic details, they will arrive at the project homepage.</td>
</tr>
<tr>
<td>Material value</td>
<td>The cost of a product to a purchaser at the point of purchase from a producer or supplier (generally defined as the price delivered to the site gate). Value added that occurs pre-purchase is included, but post-purchase value added (such as cost of assembly on site) is excluded.</td>
</tr>
<tr>
<td>Standard practice Recycled Content</td>
<td>The likely minimum level of recycled content in a given specification if no request is made for recycled content.</td>
</tr>
<tr>
<td>Good practice Recycled Content</td>
<td>A higher level of recycled content which is better than that for standard products but is still readily available in the marketplace at no extra cost.</td>
</tr>
<tr>
<td>Best practice Recycled Content</td>
<td>Defined as the highest recycled content currently available in products on the UK market.</td>
</tr>
<tr>
<td>Proforma</td>
<td>A proforma allows project data to be captured from a number of sources and written down prior to inputting data into the Tool.</td>
</tr>
<tr>
<td>Guest project</td>
<td>Project(s) that users have been invited to view (as ‘guests’) by the project ‘owner’.</td>
</tr>
<tr>
<td>Module names</td>
<td>Each named module for housing, residential, retail etc has distinct creation details and therefore the correct module needs to be selected when specifying projects for particular construction applications.</td>
</tr>
</tbody>
</table>
| **Unallocated material value** | The Tool subtracts the total construction value represented by the items specified in the Tool from the estimated total construction cost of the project (which is entered separately by the user). This difference, i.e. the unaccounted construction cost, is assumed to be approximately 50% labour cost and 50% material cost. The 50% material cost for the unaccounted components (i.e. the ‘unaccounted material value’) is then added to the total material value of the quantified components. The overall project result for RC is then calculated as the value of recycled content in quantified components, divided by the total materials value (quantified plus unaccounted).

This means that the Tool gives a more accurate yet conservative representation of the total recycled content by value of a construction project, even if all the components in the project have not been specified. |
| **Baseline wastage rate** | The percentage amount of a component (i.e. single material or product) that is likely to be wasted based on available data for current procurement and construction practice. |
| **Good practice wastage rate** | The percentage amount of a component (i.e. single material or product) that is likely to be wasted based on procurement and construction practice consistent with implementing “good practice” within a Site Waste Management Plan.

The Tool also calculates overall baseline and good practice performance on waste, where:
- baseline performance assumes baseline wastage rates and all waste being deposited in a mixed waste skip (from which materials are recovered at baseline recovery rates); and
- good performance assumes good practice wastage rates for all components with all waste disposal being managed using the optimum level of segregation and recovery via segregated skips. |
| **Net Waste** | The difference between the value of materials wasted and the value of recovered materials used in construction (see Appendix C). |
| **Material type** | The material making up a component. Some components are made entirely from one material while for others several materials are assigned to a component (on a percentage by mass basis). The materials that a component contains influence the waste stream to which the component will be allocated. Those components that contain several different materials which are not separable are assigned to the mixed waste stream irrespective of the materials that they contain. |
| **Waste stream** | A group of materials that can be segregated and managed in a consistent manner (for example inert wastes, or plasterboard wastes). The NW Tool contains seven defined waste streams together with ‘miscellaneous’ and ‘user defined’ streams. Each component is allocated to a default waste stream based on its constituent materials. It is possible to reallocate any component if required. |
| **Take back** | Where a product is returned to the manufacturer to be reused or reprocessed into new products. A common example is plasterboard off-cuts, although other products such as concrete blocks can also be returned to their manufacturers. Where appropriate a default cost is ascribed to sending a waste back to its manufacturer, this default can be amended or removed as appropriate. |
| **Recovery rate** | The percentage of a material that is ‘recovered’ in some form (i.e. is not sent to landfill). Recovery rates will vary with the waste destination (see below) and the practices of the specific waste management contractor involved. Default recovery rates are attached to individual material types, these are used to create a weighted average recovery rate for the Waste Streams in which they are present. It is possible to edit the default recovery rates for individual materials and then recalculate the average recovery rate for the waste stream. |
| **Retained on site** | Some genuine wastes do not get collected in waste containers because they are typically retained on site (e.g. waste in-situ concrete poured into foundations would typically remain in the foundation trench). Retained materials are still considered wastes (and therefore contribute to the value of wasted materials and mass of waste) but are not included in the mass / volume of materials to be sent for disposal (and are therefore excluded from waste to landfill calculations).

Wastes that are simply retained on site are serving no useful project purpose and should not be confused with materials those that are reused on site (i.e. where they serve a useful purpose replacing materials that would otherwise need to be brought onto site). Purposeful reuse (e.g. of half-bricks) can be modelled in the Tool as a lower wastage rate. |
| **MMC components** | Where a component could be included within an assembly that is manufactured offsite (using Modern Methods of Construction) then a check box is provided that enables the user to identify the component as being part of an MMC product. MMC components have much lower onsite wastage rates (reflecting increased amount of the construction process that takes place before reaching site). |
| **Waste containers** | Waste containers are the receptacles in which the materials forming different waste streams are held. Waste containers include a range of different sized skips together with bags and a 'user defined' container option. A default disposal cost is provided for each container type; these defaults can be overwritten with actual waste contractor information if this is available. |
| **Waste destinations** | Five waste destination options are available, including:
  
  o Takeback / reuse on site - where the waste stream will be sent back to the original product manufacturer for recycling, or will be reused (usefully) onsite
  
  o Recycling centre - where a specific waste stream will be sent to a recycling centre that is dedicated to managing a certain type of material (e.g. glass or plastic, etc). This destination is not the same as a Materials Recovery Facility (MRF) which is a facility for separating wastes into groupings of like materials
  
  o Landfill - licensed landfill where waste is subject to Landfill Tax
  
  o License exempt site - this is a waste destination that is able to receive certain materials (e.g. inerts) without the need for a waste management license.
  
  o Transfer station / MRF - where wastes are taken to a location where they are separated and redistributed to recycling/reprocessing facilities. The Tool includes default recovery rates for a standard practice transfer station but these can be overwritten if the specific waste contractor can demonstrate better performance. |
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Material change for a better environment
1.0 Welcome Page

Navigation Task

- Enter the following web address [www.wrap.org.uk/nwtool](http://www.wrap.org.uk/nwtool)

- You are now in the WRAP Construction site. Select **Click here to use the tool** as shown below.
You enter the NW Tool at the Welcome page, shown below. This provides links to information about the Tool as well an entry point to begin using the Tool. The various options are explained below:

<table>
<thead>
<tr>
<th>Toolkit entry point</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Start using the NW Tool”</td>
<td>Takes the user to the login or register page.</td>
</tr>
<tr>
<td>“What is WRAP’s NW Tool?”</td>
<td>This links directly to a pop-up window which gives a brief summary of “What is WRAP’s NW Tool?”</td>
</tr>
<tr>
<td>“NW Tool Quick Start Guide”</td>
<td>This links to a pop-up window of a 4-page document which aims to provide a start-up guide for using the Tool.</td>
</tr>
<tr>
<td>“Explore resource efficiency”</td>
<td>This links to a pop-up window which displays an animated diagram. The diagram illustrates materials resource efficiency in construction which links to the thought process behind the NW Tool.</td>
</tr>
<tr>
<td>“WRAP guidance document”</td>
<td>This provides a link to the WRAP construction webpage which links the user to guidance regarding WRAP’s construction commitments.</td>
</tr>
</tbody>
</table>

Using the exercises in this workbook, you will amend an existing project. The project is a five storey office block constructed with a concrete structural frame. You will amend the building components, set Recycled Content Quick Wins, and assess waste reduction and segregation options.

**Navigation Task**

Click on **Start using the NW Tool**.
2.0 Register as a New User

**Navigation Task**

- You need to register as a user before you can access the Net Waste Tool.
- The Login page allows existing users to enter the tool, guests to login to the tool and new users to register. If you have registered on earlier versions of the Tool, for example the RC Toolkit; your login details will be recognised in the NW Tool.
- From the login page, click on **Register**.

**Navigation Task**

- Complete the required fields – those in bold are mandatory.
- Click **Register**. Your email address and the password you have just entered will be the login and password for the Tool.
- You are now able to access the Net Waste Tool.
The NW tool provides a suite of tools to help you maximise the resource efficiency of your construction projects. You begin by setting up your project, and then add information on the components you will be using. The Tool will then highlight opportunities for reducing waste, maximising recovery and increasing the use of recycled content (RC). You can benefit from these opportunities by setting RC and waste-related targets within your project. The target levels of waste arisings and the action required to deliver this can then be exported in a format ready for use in a Site Waste Management Plan.

The “Corporate Guest User” function allows you to invite a “corporate guest”, such as your company’s Sustainability Manager or Environment Director, to view or edit all of your projects. Enter the email address of the corporate guest in the box if you wish to use this facility. Multiple users can invite the same corporate guest, allowing that person to review a portfolio of projects. An example of this is where several project managers may be assessing different projects with the same corporate ownership or interest, and the Sustainability Manager needs to assess overall performance across all the projects for Corporate Social Responsibility (CSR) reporting.

If you wish to allow a Sustainability Manager (or other person either within or outside your organisation) to review some but not all of your projects - for example, to enable your client to prepare their CSR report - then you can provide access on a project-by-project basis within the “Manage Project” section of your project homepage. This is discussed in Section 14.0 of the workbook.
3.0 User Homepage

This page provides a list of your existing projects as well as access to My Schemes, My Guest Projects, Example Projects, Corporate Reporting and My Project Archive. The various options are explained below:

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Projects</td>
<td>Your saved projects.</td>
</tr>
<tr>
<td>My Schemes</td>
<td>Your saved construction schemes (mixed use developments and so on).</td>
</tr>
<tr>
<td>My Guest Projects</td>
<td>Projects that you have been invited to view and/or modify.</td>
</tr>
<tr>
<td>Example Projects</td>
<td>A library of example projects based on WRAP case study data.</td>
</tr>
<tr>
<td>Corporate Reporting</td>
<td>Facility for reporting the overall results from multiple projects and schemes; for example, across a company or construction programme.</td>
</tr>
<tr>
<td>My Project Archive</td>
<td>This allows you to store older projects in the archive rather than in My Projects; archived projects can be restored to My Projects if needed.</td>
</tr>
</tbody>
</table>

There are also options above the project tabs. “Tool options” provides downloads for specific information about the Tool. “User options” allow you to edit personal details and download customised Tool data. There is also a “Help” function; “Logout”; and “Add new project”, which is explained in the next task.

Navigation Task

- Click on Add new project which is the first tab at the top, left hand side of the screen (shown above).
4.0 Add New Project

You are now in the “Add new project” screen – projects can be entered from this screen in two ways:

<table>
<thead>
<tr>
<th>Section of screen</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Add one of the following types of project”</td>
<td>There are 10 modules for different project types:</td>
</tr>
<tr>
<td></td>
<td>- Housing</td>
</tr>
<tr>
<td></td>
<td>- Residential</td>
</tr>
<tr>
<td></td>
<td>- Infrastructure</td>
</tr>
<tr>
<td></td>
<td>- Health</td>
</tr>
<tr>
<td></td>
<td>- External Works</td>
</tr>
<tr>
<td></td>
<td>- Office</td>
</tr>
<tr>
<td></td>
<td>- Refurbishment</td>
</tr>
<tr>
<td></td>
<td>- Retail</td>
</tr>
<tr>
<td></td>
<td>- Bespoke</td>
</tr>
<tr>
<td></td>
<td>- Education</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Use Existing Project As Template</th>
<th>You can create a new project using an existing project as a template. To access an existing project generated by someone else, you will need to know the project ID and password for the project master copy.</th>
</tr>
</thead>
<tbody>
<tr>
<td>From your Projects Page, you can use your own saved projects as templates for new versions. Alternatively, if you wish to use one of your own or another user’s saved projects as a template for your new project, please provide the project ID and password of the project you wish to use as your source.</td>
<td>Template buildings can be WRAP’s “Example” buildings, or buildings that you have been invited to view and/or modify by other users (guest projects). These can be accessed from here, or from the user homepage. You can also use one of your previous projects as a template. (Note: users do not need a Project ID or password to create new projects from WRAP's examples.)</td>
</tr>
</tbody>
</table>
Data Entry Task

In the “Use Existing Project As Template” dialogue box enter the following data:
“Project ID”: 6587
“Password”: WRAP
“Name for my New Project”: Mason House
“Set Password for New Project”: User to select

Click Add Project.

You will be redirected to the Project homepage. (You have created a new project which has used an existing project as a template; therefore your project ID will differ from the template ID).
5.0 Project Homepage

The project homepage provides an updated summary of the project as you progress through the functions of the Tool, demonstrating the changes in resource efficiency.

The graphs on the right of the page summarise the amount of waste arisings, waste to landfill, recycled content and the cost of waste associated with the project. These graphs will fluctuate during your journey through the Tool; demonstrating the progress of efficiency targets. There is also a summary statement at the bottom of the homepage which specifies exactly what you have done in terms of resource efficiency.

Basic project information is shown to the left of the graphs, below this are the project analysis tools and to the right, the management functions of the NW Tool.

Navigation Task

- You are now in the **Project Homepage**.
- Hover the mouse over the various buttons within "Analyse Project" and "Manage Project" to see a description of their functions, as shown above.
- Hover the mouse over the different bars of the summary graphs; this shows the specific amounts of waste, recycled content and costs, as well as the measurement units.
6.0 Edit Project Details

“Edit project details” is highlighted by the red arrow in the screen image below. In this office example you only need to enter minor details because the project template provides all the necessary information relating to the specific quantities (building dimensions and basic construction type) of the office.

To create a project from scratch, it would be necessary to complete all of the project details at this stage, so that the Tool is able to calculate the default material quantities.

Data Entry Task

i) From the project homepage select the link, **Edit project details** (shown by the red arrow in the screen image below).

You are now in the **Project details** screen.
Data Entry Task

i) Within “General details”, amend the data to be the same as shown in the table below:

<table>
<thead>
<tr>
<th>Field</th>
<th>Comment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project name</td>
<td>Project name</td>
<td>Mason House</td>
</tr>
<tr>
<td>Building location</td>
<td>Building location</td>
<td>London</td>
</tr>
<tr>
<td>Project password</td>
<td>This is the password you decided earlier</td>
<td>This is the password you decided earlier</td>
</tr>
<tr>
<td>Project phase</td>
<td>Projects can be overviewed by phase, (initial, design or complete)</td>
<td>Design</td>
</tr>
<tr>
<td>Project description</td>
<td>A general description which appears on reports.</td>
<td>Five storey concrete framed office building</td>
</tr>
</tbody>
</table>

ii) Click **Save** at the bottom of the screen.

iii) Click on **Project timeline**.

6.1 Project timeline

You need to set a timescale for each of the key activities associated with the construction of the office block, including any necessary enabling work. A start and end date is input for each phase of the project elements (e.g. stairs, roof etc), in terms of month(s) and year(s), enabling you to determine the timescales associated the management of potential waste streams on site. The following exercise demonstrates the application of the timeline.

(The Project timeline can also be accessed via the Project homepage; within “Manage Project”, by clicking **Review project timeline**).
Data Entry Task

You can now see the expanded “Project timeline” (shown in the screenshot above). Some of the dates have already been entered (up to and including Windows and External Doors) to comply with the table below. Amend the final part of the project timeline to read the following:

<table>
<thead>
<tr>
<th>Element</th>
<th>Start month</th>
<th>Start Year</th>
<th>End month</th>
<th>End Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Walls</td>
<td>February</td>
<td>2010</td>
<td>April</td>
<td>2010</td>
</tr>
<tr>
<td>Internal Doors</td>
<td>February</td>
<td>2010</td>
<td>April</td>
<td>2010</td>
</tr>
<tr>
<td>Walls, Floors and Ceilings-finishes</td>
<td>March</td>
<td>2010</td>
<td>March</td>
<td>2010</td>
</tr>
<tr>
<td>IT FF&amp;E</td>
<td>March</td>
<td>2010</td>
<td>March</td>
<td>2010</td>
</tr>
<tr>
<td>Services</td>
<td>February</td>
<td>2010</td>
<td>April</td>
<td>2010</td>
</tr>
<tr>
<td>Bathrooms / Toilets</td>
<td>March</td>
<td>2010</td>
<td>May</td>
<td>2010</td>
</tr>
<tr>
<td>Kitchens &amp; Laundry</td>
<td>March</td>
<td>2010</td>
<td>May</td>
<td>2010</td>
</tr>
</tbody>
</table>

Click Save at the bottom of the screen.
The correctly amended Project timeline is shown below.
Data Entry Task

At the bottom of the “Project Details” screen:

i) Click on **Project quantities** to reveal the basic quantity information inserted about the project (shown below).

ii) Have a look at the type of information included in this section.

iii) Click on **Save & back to project homepage** at the top of the screen.
7.0 View/ Edit Components

You should now have returned to the project homepage. The next step is to view and edit the building components.

Within the office module, the Tool allows the selection of individual components to make up the project elements. This allows you to select materials with the highest recycled content or least associated waste for your project. The Tool includes a wide variety of standard components; but you can also create bespoke components if the component you need is not already included in the Tool. You can also change the size, cost or wastage rate of a component.

The tasks in this section demonstrate the options for adding, selecting/deselecting and modifying components.

You can review all of the selected components in View selected components, in the “Manage project” section of the project homepage.

Navigation Task

- Click Add Components (highlighted by the red arrow below) to view the components selected for this project.
Navigation Task

- You are now in **Add components**.
- Select the tick-boxes for "Recycled content" and "Wastage rates" in the **Show additional information** section to the right of the page.
- Click **Update grid**.
  This allows you to view estimates of potential wastage and Recycled Content rates associated with each component. The wastage associated with each waste type is listed in terms of the following:

  **Baseline wastage** - "The likely level of wastage in a given specification if no action was taken to minimise it".
  **Good Practice wastage** - "A lower level of wastage than that of standard practice. Achieved using readily available techniques".

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Navigation Task

- The components list is automatically displayed as an expanded grid. To collapse the list click in the column to the left of the component section required.
- You can, if required, collapse all of the component options by deselecting the **Auto expand grids** tick box, which is the last option within **Show additional information**, and clicking **Update grid**.
Data Entry Task

(i) Within Add Components, select the component tab Services at the top of the table (shown by the red arrow below).

(ii) Within the component grid locate the element a) Heating Generic, deselect (by clicking in the box to remove the tick) the component:

Heating System inc Heat Source Offices with Air Con

(iii) Select (by clicking in the box to add a tick) the component:

Radiator Heating System inc Heat Source Heat Only Offices

(iv) Click Save (above the table).

(v) Locate b) Heating Controls - Generic, select the component:

Controls for zoned heating systems

(vi) Click Save.

You can see that the newly selected components are highlighted in orange (shown below).
A new component can be added to the Tool by modifying an existing component or by creating it from a blank template. Adding or modifying a component should be done where more appropriate data are available than that provided in the Tool; for example, size or cost.

Information required to create new components from the blank template can be found in the following sources:

**Bill of quantities:** Unit, Rate, Qty  
**WRAP product guide:** Standard, Good, Best recycled content figures for similar components  
**Product manufacturers:** Recycled content of materials, Rate, % of rate attributed to materials  
**Tool data for other modules:** Data on other materials used in building construction

### 7.1 Changing a component’s rate

**Navigation Task**

The rate of a component represents the total cost of the component including labour and materials.

The following tasks will modify the component rate for the **External Doors Double**.

- Check that the “Component rates” box within **Show additional information** is ticked, then click **Update grid**.
- Select **Windows and External Doors** from the tabs at the top and scroll down the component list to:  
  c) **External Doors Double**.
Data Entry Task

(i) Within the "Add / Edit" window (shown below), change the rate of the doors to £2000, as shown in the table:

<table>
<thead>
<tr>
<th>Group (element tab)</th>
<th>Sub-group</th>
<th>Component</th>
<th>Rate (£/unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows and External Doors</td>
<td>c) External Doors Double</td>
<td>Aluminium framed, double glazed (d)</td>
<td>2000</td>
</tr>
</tbody>
</table>

(ii) Click Save followed by Close window.
Navigation Task

- Once the window has closed, check that the components table reflects your changes.
When you changed the rate, the Tool automatically created a new component with the new rate; so the original component needs to be deselected.

Deselect the original component, with a rate of £2147.00, by removing the tick from the “Select” box (shown above); click **Update grid** then **Save**.

You can see that the old component is deselected and the component with the new rate is selected and highlighted in orange (shown below).

---

### 7.2 Changing a component’s quantity

The following task will modify the component quantity for **Bathrooms / Toilets**.

- Select the **Bathrooms / Toilets** element tab and locate **a) Toilets** and **c) Showers**.
Data Entry Task

Edit the “User Qty” box in the grid to amend the component quantity in accordance with the table below:

<table>
<thead>
<tr>
<th>Group (upper tab)</th>
<th>Sub-group</th>
<th>Component</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathroom &amp; Toilets</td>
<td>a) Toilets</td>
<td>VC (including waste pipework)</td>
<td>22</td>
</tr>
<tr>
<td>Bathroom &amp; Toilets</td>
<td>c) Showers</td>
<td>Acrylic (including waste pipework)</td>
<td>2</td>
</tr>
</tbody>
</table>

Click Save.

NB. The Tool saves the latest component changes and does not track changes. If a mistake was made, the default component quantity is available in the column to the left of the “User Qty”; but any previous user-specified quantity will be lost.
7.3 View selected components

**Navigation Task**

You have now entered all the components for your five storey office block.

- To view all selected components, click **Save & back to project homepage**, which is at the top of the “Add components” page.
- Then select the **View selected components** button in the “Manage project” section; as shown by the red arrow below.

---

**Navigation Task**

The window which will appear is shown below.

Review the component report noting the “Default dataset component?” column. **The Yes or No values in this field indicate:**

- **Yes:** Component details from WRAP Tool internal database
- **No:** Component added by user or modified from existing product

Observe that a component within the “Windows and External Doors” category has been modified (shown by the red arrow below). Close this window and return to the **Project homepage**.
**Mason House**

The report shows your project components.

### Results

<table>
<thead>
<tr>
<th>Category</th>
<th>Element</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substructure</td>
<td>Ground Beams</td>
<td>600x600, strength C20 or higher</td>
</tr>
<tr>
<td>Substructure</td>
<td>DPC</td>
<td>Flexible sheet DPC</td>
</tr>
<tr>
<td>Substructure</td>
<td>Pile</td>
<td>Precast concrete - 300mm dia, driven</td>
</tr>
<tr>
<td>Substructure</td>
<td>Slab</td>
<td>Reinforced-in-situ concrete 360mm, C20 or higher</td>
</tr>
<tr>
<td>Substructure</td>
<td>Screw</td>
<td>Send/cement screw</td>
</tr>
<tr>
<td>Frame</td>
<td>Concrete Frame (includes columns and beams)</td>
<td>IJC cast-in-situ concrete frame, C20 or higher</td>
</tr>
<tr>
<td>Floor</td>
<td>Concrete pre cast</td>
<td>Pre-cast concrete block and beam floor, 150 thick overall; 100 thick beams located at 505mm centres - excludes screed</td>
</tr>
<tr>
<td>Roof</td>
<td>Concrete Structure System</td>
<td>In Situ concrete slab: 200mm thick, for load - reinforcement not exceeding 5% surface treatment</td>
</tr>
<tr>
<td>Roof</td>
<td>Roof covering</td>
<td>3 Coat asphalt roof covering, silver reflective paint</td>
</tr>
</tbody>
</table>

### Mason House Material Change

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>New Material</th>
<th>Old Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof</td>
<td>Reflective paint</td>
<td>Reflective paint</td>
<td>Reflective paint</td>
</tr>
<tr>
<td>Roof</td>
<td>Natural timber</td>
<td>Coniferous timber</td>
<td>Coniferous timber</td>
</tr>
<tr>
<td>Roof</td>
<td>Insulation</td>
<td>100mm expanded polyurethane rigid board, poly CWP</td>
<td>100mm expanded polyurethane rigid board, poly CWP</td>
</tr>
<tr>
<td>Walls</td>
<td>Interior walls (per flight)</td>
<td>150mm wide pre-cast concrete dog-leg corbel: 2000 storey-height</td>
<td>100mm wide pre-cast concrete dog-leg corbel: 2000 storey-height</td>
</tr>
<tr>
<td>Walls</td>
<td>External walls (per flight)</td>
<td>1800mm diameter mild steel spiral staircase: 3000 storey-height</td>
<td>1800mm diameter mild steel spiral staircase: 3000 storey-height</td>
</tr>
<tr>
<td>External Walls</td>
<td>Exterior skin</td>
<td>Half brick thickness facing brickwork: 4350 / 1000</td>
<td>Half brick thickness facing brickwork: 4350 / 1000</td>
</tr>
<tr>
<td>External Walls</td>
<td>Insulation</td>
<td>50mm mineral wool insulation wall batts</td>
<td>50mm mineral wool insulation wall batts</td>
</tr>
<tr>
<td>External Walls</td>
<td>Insulation</td>
<td>Untreated cavity wall: 70 to 85mm cavity</td>
<td>Untreated cavity wall: 70 to 85mm cavity</td>
</tr>
<tr>
<td>External Walls</td>
<td>Insulation</td>
<td>Pre cast concrete slab: 600x600x100mm</td>
<td>Pre cast concrete slab: 600x600x100mm</td>
</tr>
<tr>
<td>External Walls</td>
<td>Insulation</td>
<td>External wall: Inner Skin, Cavity block construction; inner skin aerated concrete blocks - 100mm</td>
<td>External wall: Inner Skin, Cavity block construction; inner skin aerated concrete blocks - 100mm</td>
</tr>
<tr>
<td>Windows and External Doors</td>
<td>Glazing system</td>
<td>Double glazed windows: aluminum, coated, side/top hung</td>
<td>Double glazed windows: aluminum, coated, side/top hung</td>
</tr>
<tr>
<td>Windows and External Doors</td>
<td>Exterior skin</td>
<td>External walls: Inner Skin, Cavity block construction; inner skin aerated concrete blocks - 100mm</td>
<td>External walls: Inner Skin, Cavity block construction; inner skin aerated concrete blocks - 100mm</td>
</tr>
<tr>
<td>Windows and External Doors</td>
<td>Double glazed doors:</td>
<td>50mm thick x 1750mm x 2200mm</td>
<td>50mm thick x 1750mm x 2200mm</td>
</tr>
<tr>
<td>Windows and External Doors</td>
<td>Double glazed doors:</td>
<td>2000mm x 2000mm</td>
<td>2000mm x 2000mm</td>
</tr>
<tr>
<td>Windows and External Doors</td>
<td>Exterior skin</td>
<td>External skin: double glazed scissor and doors: aluminum, coated; non-magnetic</td>
<td>External skin: double glazed scissor and doors: aluminum, coated; non-magnetic</td>
</tr>
<tr>
<td>Windows and External Doors</td>
<td>Exterior skin</td>
<td>Aluminum frame, powder coated</td>
<td>Aluminum frame, powder coated</td>
</tr>
</tbody>
</table>

Two layers 12.5 mm wallboard, one
8.0 Set Recycled Content Quick Wins

The Tool identifies the standard, good and best practice levels of Recycled Content (see Glossary for definitions), and highlights the opportunities to increase the Recycled Content to good practice in your specified building. The recycled content ‘Quick Wins’ can be achieved through the substitution of ‘standard practice’ products by equivalent ‘good practice’ products. Quick win opportunities are identified by the Tool based on the information entered by the user and the Tool’s internal database of building components.

The Tool automatically defaults to showing 10 quick wins. It is possible for users to adjust this figure by selecting the drop down box labelled “Max Quick Wins to show” and selecting either 5, 10, 15, 20 or all.

Navigation Task

- From the Project homepage, select Set Recycled Content Quick Wins (highlighted by the red arrow above).

Review the “RC Quick Wins” screen. The table lists the most significant opportunities to improve the recycled content of your project by using products with good practice levels of recycled content. In the case of your own project, you must review the list and select which Quick wins you intend to pursue.

Once the relevant products have actually been procured and used in the project you can update this table by checking the “Confirm actual use” box for the components in question.
Worked Example 29

**Data Entry Task**

i) Review the listed Quick Wins (shown below), and select the following five components as your quick wins by checking the “Select” boxes:

- Pre-cast concrete block and beam floors; 150 thick overall; 100 thick blocks; beams at 525mm centres - excludes screed
- RC In-situ concrete frame Generic, C30 or higher
- 1500mm x 2100mm fully double glazed FD60 doors; 6mm clear Pyroshield glass; stainless steel frame
- External walls, Inner Skin, Cavity block construction; inner skin aerated concrete blocks - 100mm
- Two layers 12.5 mm wallboard, one side only, to studwork measured separately

ii) These are your proposed Quick Wins (products which will be substituted in order to attain a higher recycled content target). Note that more Quick Wins can be displayed by altering the “Max Quick Wins to show” drop down box.

iii) Once you have selected your Quick Wins click Save.

---

**Navigation Task**

- After selecting and reviewing RC Quick Wins, there is the option to note reasons for selecting, or not selecting potential Quick Wins.

- You can do this by clicking the Notes icon alongside the relevant component in the Quick Wins table. The screenshot below shows the “Add notes” window which will appear.

- After you have added any notes to the Quick Win components, click Save & back to project homepage.

Note: Quick Win selections can be modified at any point by clicking ‘Set Recycled Content Quick Wins’ from the project homepage.
Navigation Task

- Now you have returned to the project homepage.

- Observe the summary statement at the bottom left of the screen (highlighted below). This shows the effect of the RC Quick Wins you have selected: “You have increased the recycled content of your project by 2%.”
9.0 Set Waste Reduction Actions

This section enables you to identify and document opportunities to reduce waste generated on site by increasing the target levels for waste reduction.

This is achieved by observing the various waste streams organised by the Tool, setting targets for specific waste streams and components for waste reductions and assigning actions to ensure delivery. The components targeted for waste reduction will form the basis of the objectives and targets programme within the SWMP. The following exercises will demonstrate how you can set waste reduction actions.

* If establishing new target level, you should specify target levels between standard and good practice in terms of wastage.

---

**Navigation Task**

- Select Set Waste Reduction Actions (shown on the project homepage above).
- Review the various waste streams and select the options within Show additional information to highlight “wastage rates”, “materials wasted at baseline” and “materials wasted at good”.
- Click Update grid and observe the waste levels for each component within the various waste streams.
- Also observe the option of Select units on the left of the page. You can use this to change the view from the value of wasted materials to the mass of waste.
Data Entry Task

By scrolling down the grid it is easy to see which waste streams carry the highest cost or mass of waste. Within each waste stream, components are ordered by “Improvement potential (£)”. Components at the top of the list have the highest improvement potential. This is the difference between good practice and baseline wastage.

Based on the improvement potential of waste streams you can set waste reduction actions for a particular waste stream or component. Setting a “Target wastage rate” for a specific component is also an option; this would usually aim to be between the baseline and good practice rates so that the target is attainable.

i) Scroll down the waste streams to **Waste stream: Metal** (shown below).

ii) At the top of the “Actions” column for this waste stream select **Set actions for waste stream** (also shown below).
**Data Entry Task**

i) The “Select action for waste stream: Metal” window (shown below) has five tabs. Within this window, insert the following waste reduction actions under the relevant action tabs and check the box for **Select this action**:

<table>
<thead>
<tr>
<th>Waste Stream</th>
<th>Action Number tab</th>
<th>Waste Reduction Actions</th>
<th>User Notes</th>
<th>Action Owner</th>
<th>Action Reviewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal</td>
<td>1</td>
<td>Negotiate a ‘take back’ arrangement with the supplier</td>
<td>Have contractual arrangements with specialist contractors to take away all metal wastes for recovery</td>
<td>Mr Grape</td>
<td>Mr Melon</td>
</tr>
<tr>
<td>Metal</td>
<td>3</td>
<td>Standardise specifications for this material</td>
<td></td>
<td>Mr Plum</td>
<td>Mr Melon</td>
</tr>
<tr>
<td>Metal</td>
<td>User Actions</td>
<td>Store off cuts for reuse</td>
<td>Establish storage area for off-cuts &amp; reuse these where possible</td>
<td>Mr Orange</td>
<td>Mr Melon</td>
</tr>
</tbody>
</table>

ii) Click **Save** within Action 1, 2 and User Actions followed by **Close window**.

NB. Each window for each action tab is shown below.
Action 1

Select action for waste stream: Metal

Negotiate a 'take back' arrangement with the supplier.

Action Details

Suppliers often have the ability to 'take-back' waste materials either for resale, or for recycling. It is usually necessary to segregate these on site and return materials that are uncontaminated with other materials. This is an effective method of achieving 'closed loop' recycling.

User Notes

Have contractual arrangements with specialist contractors to take away all metal wastes for recovery

Action Owner

Mr Grape

Action Reviewer

Mr Melon

Save Close window Further WRAP Guidance for this action

Action successfully saved!

Action 3

Select action for waste stream: Metal

Standardise specifications for this material

Action Details

Standardising this material creates opportunities to re-use off cuts. It also allows materials to be stored and reused when required, negating the need for multiple wastage allowances. Repetition can also lead to improved quality, resulting in the need for less rework.

User Notes

Action Owner

Mr Plum

Action Reviewer

Mr Melon

Save Close window Further WRAP Guidance for this action

Action successfully saved!
Select action for waste stream: Metal

Store off cuts for reuse

Action Details
Not all off cuts are waste. Establish a central depot for cut materials that are suitable for reuse and then encourage operatives to use this free source of materials.

User Notes
Establish storage area for off-cuts & reuse those where possible

Action Owner
Mr Orange

Action Reviewer
Mr Melon

Save Close window Further WRAP Guidance for this action
9.1 Editing the target wastage rate

**Navigation Task**

- Scroll up the “Set waste reduction actions” page to **Waste stream: Inert**.
- Select **Set actions for this component** (highlighted below) for:
  
  *Half brick thick facing brickwork £350 / 1000 (Bricks & Blocks)*

A window titled “Half brick thick facing brickwork £350 / 1000” appears; observe the **Target wastage rate** at the top of the box.

The baseline wastage rate is shown as 20% and the good wastage rate is shown to be 10%. It is important to set an attainable target rate within your project. The next task will show you how to amend wastage rates within the Tool.
Data Entry Task

i) The user defined target is currently 20% which is the same as the baseline. Change this rate by changing the value to 15%, and click Save. This target is halfway between the baseline and good wastage rate; this should be an attainable target.

ii) Click the User Actions tab (shown below) and select from the drop-down menu:

   Establish an approach to quality control to avoid wastage and rework

iii) Select this action in the tick-box and enter the following information:

   User Notes: Implement QA checks
   Action owner: Mr Pear
   Action reviewer: Mr Melon

iv) Click Save and Close window.
Worked Example   38

Navigation Task

- The page will automatically reload to reflect your changes in the reduction actions grid.

- Observe that in the “User defined target wastage rate (%)” column, the rate has fallen for *Half brick thick facing brickwork*, from 20% to 15% (shown below) and the cost reduction for this component (if this target is met), has increased from £0 to £1,539.

- Click *Save and back to project homepage*. 
## Set waste reduction actions

1. Review the potential to reduce waste arisings
2. Set waste reduction actions
3. Set target wastage rates
4. Select material(s) that will be retained on site

### Select units
- [ ] Volume of wasted materials
- [ ] Mass of waste

### Display total figures

### How many components per waste stream?

<table>
<thead>
<tr>
<th>Component name</th>
<th>Total material (t)</th>
<th>Baseline wastage rate (%)</th>
<th>Good waste site (%)</th>
<th>Material cost at baseline ($)</th>
<th>Material cost at goal ($)</th>
<th>Improvement potential (%)</th>
<th>Actions</th>
<th>Optional wastage rate (%)</th>
<th>Reduction in material (%)</th>
<th>Reason for cut costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC In-situ concrete frame Gen4 – 350 or higher (Concrete in-situ (Sieved))</td>
<td>205.9</td>
<td>4.0</td>
<td>2.89</td>
<td>14,578</td>
<td>7,539</td>
<td>7,039</td>
<td>Set actions for this component.</td>
<td>4.00</td>
<td>4.00</td>
<td>Set actions for this component.</td>
</tr>
<tr>
<td>Concrete thin facing (wall – 230 / 600 (Brick &amp; Block))</td>
<td>30.7</td>
<td>20.60</td>
<td>10.00</td>
<td>6,126</td>
<td>2,078</td>
<td>3,078</td>
<td>Set actions for this component.</td>
<td>20.00</td>
<td>20.00</td>
<td>Set actions for this component.</td>
</tr>
<tr>
<td>Rectangular voids, lower Gen4, Concrete block constructions inner skin aerated concrete blocks – stonew (brick &amp; block)</td>
<td>12.44</td>
<td>20.60</td>
<td>5.00</td>
<td>2,469</td>
<td>603</td>
<td>1,857</td>
<td>Set actions for this component.</td>
<td>20.00</td>
<td>0</td>
<td>Set actions for this component.</td>
</tr>
<tr>
<td>Steel reinforcement slab – 300mm thick (Panels) reinforcement not exceeding 5% surface treatment (Concrete in-situ (Sieved))</td>
<td>87.9</td>
<td>4.0</td>
<td>2.89</td>
<td>3,804</td>
<td>1,792</td>
<td>1,752</td>
<td>Set actions for this component.</td>
<td>4.00</td>
<td>0</td>
<td>Set actions for this component.</td>
</tr>
<tr>
<td>Reinforced in-situ concrete 350mm, Gen4 or higher (Concrete in-situ (Sieved))</td>
<td>62.45</td>
<td>4.00</td>
<td>2.89</td>
<td>2,466</td>
<td>1,248</td>
<td>1,248</td>
<td>Set actions for this component.</td>
<td>4.00</td>
<td>0</td>
<td>Set actions for this component.</td>
</tr>
<tr>
<td>Tile – Concrete interlocking (Concrete pre-cast)</td>
<td>9.54</td>
<td>5.00</td>
<td>5.00</td>
<td>763</td>
<td>477</td>
<td>286</td>
<td>Set actions for this component.</td>
<td>8.00</td>
<td>0</td>
<td>Set actions for this component.</td>
</tr>
<tr>
<td>VC (including waste paper/waste (Tiles and Ceramics))</td>
<td>22.9</td>
<td>3.50</td>
<td>1.90</td>
<td>209</td>
<td>123</td>
<td>216</td>
<td>Set actions for this component.</td>
<td>3.00</td>
<td>0</td>
<td>Set actions for this component.</td>
</tr>
<tr>
<td>VC (including waste paper/waste (Tiles and Ceramics))</td>
<td>22.9</td>
<td>3.50</td>
<td>1.90</td>
<td>209</td>
<td>123</td>
<td>216</td>
<td>Set actions for this component.</td>
<td>3.00</td>
<td>0</td>
<td>Set actions for this component.</td>
</tr>
<tr>
<td>Precast concrete – 200mm thick, driven Concrete pre-cast)</td>
<td>9.72</td>
<td>1.00</td>
<td>0.80</td>
<td>97</td>
<td>0</td>
<td>97</td>
<td>Set actions for this component.</td>
<td>1.00</td>
<td>0</td>
<td>Set actions for this component.</td>
</tr>
<tr>
<td>Reinforcement steel (Concrete in-situ (Sieved))</td>
<td>3.73</td>
<td>5.00</td>
<td>2.89</td>
<td>287</td>
<td>50</td>
<td>93</td>
<td>Set actions for this component.</td>
<td>3.00</td>
<td>0</td>
<td>Set actions for this component.</td>
</tr>
</tbody>
</table>
10.0 Set Waste Segregation Options

This stage helps you to select the number and type of waste streams to segregate each project month, to help reduce waste disposal costs and increase the potential for waste recovery (subject to space constraints). The key activity in this stage is to identify the waste streams that will be segregated during the project.

A programme of waste segregation will be based on the project details and timeline. To enable effective implementation of an effective waste management plan this section enables you to:

- assess the options for waste container sizes and disposal rates,
- identify opportunities for manufacturer take back of product waste,
- identify waste disposal costs associated with segregation of waste streams, and
- assess the cost implications to the project of segregation of selected waste streams.

Observe that the summary statement at the bottom of the project homepage has updated (shown below). You have saved £1,539 of materials from being wasted by specifying the actions in the previous exercise.
1. Select your waste containers and review disposal rates

**Navigation Task**

- Close the window and select option 2 **Select components that will be returned** consider the options for components for take-back (shown below).
2. Select components that will be returned

Selection of components for take back / reclamation

Use this screen to select the components that you intend to return directly to the supplier or to a third party for reprocessing.

<table>
<thead>
<tr>
<th>Component</th>
<th>Qty of wasted / unused material (m³)</th>
<th>Cost of take back (£/m³)</th>
<th>Qty subject to take back</th>
<th>Total cost (£)</th>
<th>Qty of material diverted from landfill (m³)</th>
<th>Select</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasterboard</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry lined plasterboard and vinyl wallpaper</td>
<td>9.48</td>
<td>£10.00</td>
<td>100.00 %</td>
<td>180.12</td>
<td>9.480817</td>
<td></td>
</tr>
</tbody>
</table>

Save  Close window

Navigation Task

- Close this window and select the final option **Select the number of waste streams to segregate**, evaluate the cost of waste disposal depending on the number of waste streams (shown below).

- Three to five waste streams appear to be the most cost effective option for this project; however, this is based on using only 8 yrd³ skips. It may be possible to improve the cost by simply changing the skips which are used.

- Close the window and return to the **Segregation Strategy** page.
3. Select the number of waste streams to segregate

<table>
<thead>
<tr>
<th>Waste strategy</th>
<th>Cost of waste disposal for project (£) *</th>
<th>Select</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 waste stream</td>
<td>£16,972.80</td>
<td></td>
</tr>
<tr>
<td>2 waste streams</td>
<td>£15,277.60</td>
<td></td>
</tr>
<tr>
<td>3 waste streams</td>
<td>£15,114.40</td>
<td></td>
</tr>
<tr>
<td>4 waste streams</td>
<td>£15,114.40</td>
<td></td>
</tr>
<tr>
<td>5 waste streams</td>
<td>£15,114.40</td>
<td></td>
</tr>
<tr>
<td>6 waste streams</td>
<td>£15,114.40</td>
<td></td>
</tr>
</tbody>
</table>

*the cost of waste disposal is the optimum cost that could be achieved through segregation of different waste streams. In some cases the optimum number may be less than the maximum number of segregation streams available. If you have selected to return product to the manufacturer through a take back programme, this will automatically be selected as the second segregation stream (even if this is not the lowest cost option).

Data Entry Task

i) Click option 1 Select your waste containers and review disposal rates.

ii) Within the window, amend the waste containers volumes by selecting the radio button for each waste stream as specified in the table (shown in the screenshot below):

<table>
<thead>
<tr>
<th>Waste stream</th>
<th>Waste container volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inert</td>
<td>6.1</td>
</tr>
<tr>
<td>Plasterboard</td>
<td>0.75</td>
</tr>
<tr>
<td>Metal</td>
<td>6.1</td>
</tr>
<tr>
<td>Timber</td>
<td>3.8</td>
</tr>
<tr>
<td>Mixed Waste</td>
<td>6.1</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0.75</td>
</tr>
<tr>
<td>User defined waste</td>
<td>0.75</td>
</tr>
<tr>
<td>Packaging</td>
<td>3.8</td>
</tr>
<tr>
<td>Take Back</td>
<td>0.75</td>
</tr>
</tbody>
</table>

(iii) Click Save.
Navigation Task

In the Waste container details window (shown above), observe the change in disposal costs per container through the alteration in the waste container volumes.

- Close the window. A pop-up will ask you to confirm that your changes will now be reflected in the segregation strategy grid, click ok.

- Click the third option, Select the number of waste streams to segregate (shown below).
In the **Select the number of waste streams to segregate** window (shown below), observe the reduction in waste disposal costs for 2 waste streams as a result of the changes you made in waste container volumes.

Select the number of waste streams with the lowest disposal cost (3 waste streams) and click **Accept selected strategy**. Close the window.

NB. The waste stream costs provide information on the overall costs of waste disposal (assuming the selected waste container sizes and disposal costs) for the project. For your own project you must decide how many waste streams can be accommodated on site, based on known space constraints. It may not be feasible to have the highest number of waste streams (due to lack of space); the Tool aims to help and inform your decision making process.
Worked Example

**Navigation Task**

You should now have returned to the *Segregation Strategy* page. The Tool now displays an updated segregation strategy on the screen (highlighted below), with (up to) your chosen number of waste containers selected against each month. By default the mixed waste stream is selected for every month. Review the segregation options displayed in the grid (this grid represents option 4 of the strategy steps).

- Look at the number of waste streams for June 2009 – September 2009, and the disposal costs. There are 3 waste streams in this project period.
Navigation Task

- Select **October 2009** from the drop-down menu above the grid (indicated below).
Navigation Task

- Observe that in October, there is now an additional waste stream for **Timber** (shown below).

Data Entry Task

There is another option for reducing on site waste: Selecting components for take back.

i) Click option 2 **Select components that will be returned**.

ii) **Dry lined plasterboard and vinyl wallpaper** is suggested as a component for take back. Select this component.

iii) Click **Save** and **Close window**.
Worked Example

Navigation Task

- Click on the thumbnail graph under the title Waste arisings over time (shown below), to review a graph showing the different types of waste you have generated for each month of your project.
- This should help to understand the waste containers suggested by the tool.
- Close the window and select Save & back to project homepage.
You should now have returned to the project homepage. After completing the segregation strategy for this project, you can appreciate the significance of reducing the amount of waste in terms of disposal costs. Additional waste reduction actions may reduce waste costs further still.

i) Click **Set Waste Reduction Actions** from the Project Homepage and scroll down the component list to **Waste stream: Plasterboard**.

ii) Alongside the component **Dry lined plasterboard and vinyl wallpaper (Plasterboard)**, select **Set actions for this component** (shown below).
Data Entry Task

iii) Within the component window (shown below), alter the **Target wastage rate** to **15%**: this sets a good wastage rate for this component within the project.

iv) Click **Save**.
Data Entry Task

i) As shown in the screenshot above, select the “Action 3” tab in the component window.

ii) From the drop-down menu of component actions, select:

   - Provide dedicated storage area(s) with protection from weather and accidental damage

   Select the tick-box alongside this action.

iii) Insert the “Action Owner” and “Action Reviewer” as:

   - Mr Apple
   - Mr Melon

iv) Click Save.
Data Entry Task

v) Click the “Action 4” tab and select, from the drop-down menu:
   * Negotiate a ‘take back’ arrangement with the supplier
   Select the tick-box alongside this action (as shown above).

vi) Insert the “Action Owner” and “Action Reviewer” as:
   * Mr Mango
   * Mr Melon

vii) Click **Save** and **Close window**. The waste reduction actions grid will reload to reflect your changes.

Navigation Task

- You should now be in the “Waste reduction actions” screen (shown below).

- Note that within the component grid, the “User defined target wastage rate (%)” for:
  * Dry lined plasterboard and vinyl wallpaper (Plasterboard) has changed from 22.5% to 15%,
  reflecting your amended target of a ‘good’ wastage rate.

- Also observe the “Reduction in waste if the target is met (£)”. This has changed from 0 to £2,648 (shown below).
Selecting particular components to “Retain on site” is another way to minimise waste; it can be used if you intend for the component to be retained, recycled or reused on site.

- Select the tick-box in the “Retain on site” column (shown below) for the following components:

**Waste stream: Inert**
- RC In-situ concrete frame Generic, C30 or higher (Concrete in-situ (Screed))
- In-situ concrete slab; 200mm thick; formwork; reinforcement not exceeding 5%; surface treatment (Concrete in-situ (Screed))
- Reinforced in-situ concrete 350mm, C30 or higher (Concrete in-situ (Screed))

**Waste stream: Metal**
- RC In-situ concrete frame Generic, C30 or higher (Metals (Ferrous))
- Reinforced in-situ concrete 350mm, C30 or higher (Concrete in-situ (Screed))

- Click Update grid.
Review the information displayed for each waste stream and its components (shown above).

The column titled “User defined target wastage rate” is the target you are aiming to achieve by selecting the identified waste reduction action.

Within the Metal waste stream many of the components listed are shown to have a high wastage rate. Certain components (for example; Double glazed windows; aluminium, coated; side/top hung (Metals (Non-Ferrous))) would usually be Modern Methods of Construction (MMC – see Glossary) components and constructed off-site; so you would be expected their wastage rates to be lower than the default values shown.

To amend the “User defined target wastage rate”, click Set actions for this component for: Radiator Heating System inc Heat Source Heat Only Offices (Metals (Ferrous)).
Data Entry Task

i) In the component window (shown below), alter the **Target wastage rate** to **0.5%**.

ii) Click **Save** and **Close window**.

iii) Alter the **Target wastage rate** to **0.5%** by clicking **Set actions for this component** for each of the following components within the metal waste stream:

- Hot & Cold water service Offices (Metals (Non-Ferrous))
- 1500mm x 2100mm fully double glazed FD60 doors; 6mm clear Pyroshield glass; stainless steel frame (Metals (Ferrous))
- Double glazed windows; aluminium, coated; side/top hung (Metals (Non-Ferrous))
- 50mm thick x 1750mm x 200mm double glazed aluminium doors; doubled glazed units; aluminium frame; powder coated finish; insulated (Metals (Non-Ferrous))

iv) Once you have altered the rate in each component window, clicked **Save** and close the window; the page will reload to reflect the changes that you have made.

Note the updated wastage rates (shown in second screen image below) and also the reduction in waste if the target is met (£), which is in the column to the right of the wastage rate.

v) Click **Save & back to project homepage**.

---

![Image of Waste Reduction Actions](image-url)
### Worked Example

<table>
<thead>
<tr>
<th>Waste stream</th>
<th>Material</th>
<th>Set actions for waste streams</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRY-LINED PLASTERBOARD AND WOOL WALLPAPER (Plasterboard)</td>
<td></td>
<td>25.330 22.90 18.00 7.645 5.296 2.649</td>
</tr>
<tr>
<td>WASTE STREAM: METAL</td>
<td></td>
<td>285,616 3.00 3.00 5.00 1.85 0.00 0.00 1.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>Radiator Heating Systems in need: Source: need: Only Offices (Metal-Persuasive)</td>
<td></td>
<td>1,294,264 2.00 2.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>Hot &amp; Cold Water Service: Offices (Metal-Persuasive)</td>
<td></td>
<td>3.00 3.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>LUMBER 200mm x 300mm: Fully-glazed double doors; door to Parnell; glass, stainless steel frame; (Metal-Persuasive)</td>
<td></td>
<td>0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>Double glazed minimal: aluminium, panels, sliding hung (Metal-Persuasive)</td>
<td></td>
<td>0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>LC in-via frame: Groves; C30 or higher (Metal-Persuasive)</td>
<td></td>
<td>0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>Reinforced in-concrete frame: Groves; C30 or higher (Metal-Persuasive)</td>
<td></td>
<td>0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>150mm x 170mm x 150mm: Double glazed: aluminium doors; double glazed: lint; aluminium frame, powder coated; Steel repairs included (Steel-Persuasive)</td>
<td></td>
<td>0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>Entrance: double glazed screens and doors; aluminium, coated in insomnium (Metal-Persuasive)</td>
<td></td>
<td>0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>Unit to 250 cm high: 150 cm wide; 250 cm wide; including: door frame (Wood-Persuasive)</td>
<td></td>
<td>0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>WASTE STREAM: TIMBER</td>
<td></td>
<td>0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>150mm x 200mm structural gluing asphalt solid wax flush door: door; door: solid wax flush door (Pitch-Persuasive)</td>
<td></td>
<td>0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
<tr>
<td>150mm x 200mm: Fully double glazed: double doors; door to Parnell; glass, stainless steel frame (Timber-Persuasive)</td>
<td></td>
<td>0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00</td>
</tr>
</tbody>
</table>

Material change for a better environment
11.0  Set Waste Recovery Options

Navigation Task

- The **Set Waste Recovery** option of the NW Tool allows you to review the most significant opportunities to improve recovery rates and reduce the quantity of waste going to landfill.

- Select **Set waste recovery options** from the project homepage (shown below). Also observe that the summary statement has altered at the bottom of the project homepage due to the recent waste reduction actions. "You have saved £11,769 of materials from being wasted and reduced the waste management costs by £4,516".

---

**Wrap**

Material change for a better environment

Welcome > My projects > Mason House

Mason House – London

- Project ID: 6743
- Date created: 11/11/2008 15:54:37
- Last Updated: 12/11/2008 09:04:42
- Project type: New build (including flats)
- Construction value: £3,000,000
- Project description: FIVE story concrete framed office block.
- Project status: Locked for editing by template user on 12/11/2008 08:53:21

**Analyze Project**

- Add Components
- Set Waste Reduction Actions
- Set Waste Segregation Options
- Set Waste Recovery Options
- Set Recycled Content Quick Win
- Add demolition & other non-construction waste
- Targets & Requirements

**Manage project**

- Review project timeline
- Guest users & responsibilities
- Project audit history
- Generate reports
- View selected components
- Uploaded assets

---

You have saved £11,769 of materials from being wasted and reduced the waste management cost by £4,516. You have increased the recycled content of your project to 2%.

---

Navigation Task

- The page **Set waste recovery actions** is now displayed, within **Show additional information**, tick the boxes “Benchmark recovery rates” and “Benchmark waste to landfill” (shown below).

- Click **Update grid** and observe the baseline, good and best recovery rates.
Navigation Task

- Within **Set waste recovery actions** select **Set project wide waste recovery actions**, located near the top of the page, underneath **Select units**. This is highlighted by the red arrow below.
Data Entry Task

The pop-up window for **Set project wide waste recovery actions** is displayed below.

i) Tick the boxes for:
   - Identify individual responsible for training site operatives in waste and materials handling
   - Ensure your waste contractor provides accurate waste information
   - Provide clear labelling on skips
   - Measure your own wastes leaving site
   - Negotiate financial incentives for materials recovery
   - Maintain a tidy and efficient site
   - Ensure skips are located in an appropriate location

ii) Click **Save** and **Close window**. The waste recovery grid will reload to reflect the changes that you have made.
Observe the grid (shown below) which lists the waste streams and improvement potential. The Inert waste stream is shown to have the highest wastage and highest potential for improvement through waste recovery options.

- Select **Click here to select a destination** within the Inert waste stream (highlighted below).
Within the **Select waste recovery actions for inert** window (shown below), select the tick-box for: **Segregate soils and aggregates**

In the **Select Disposal Routes** drop-down menu click on the option: **Recycling centre**

The window will automatically update the waste stream recovery rate (to the right of the drop-down menu). The recovery rate has increased to 80%, click **Save** and **Close window**.
Observe the data changes in the recovery options table (shown below). “Recycling centre” is displayed as the destination for inert waste.

Click **Save & back to project homepage**.
### Set waste recovery actions

1) Review the potential to increase the recovery of wastes
2) Set waste destination for each waste stream
3) Set a target recovery task for each waste stream

#### Select units
- Volume of waste
- Mass of waste

#### Set project-wide waste recovery actions

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Total waste (m³)</th>
<th>Improvement potential (m³)</th>
<th>Destination</th>
<th>Target recovery rate %</th>
<th>Target waste diverted from landfill (relative to baseline practice) (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste streams: Total</td>
<td>80.54</td>
<td>20.51</td>
<td>Click here to select a destination</td>
<td>80</td>
<td>6.05</td>
</tr>
<tr>
<td>Bricks &amp; Blocks</td>
<td>67.32</td>
<td>11.33</td>
<td>Recycling centre</td>
<td>80</td>
<td>3.13</td>
</tr>
<tr>
<td>Concrete pre-cast</td>
<td>23.21</td>
<td>4.04</td>
<td>Recycling centre</td>
<td>80</td>
<td>2.12</td>
</tr>
<tr>
<td>Waste streams: Floorboard</td>
<td>6.23</td>
<td>2.26</td>
<td>Click here to select a destination</td>
<td>0</td>
<td>-4.40</td>
</tr>
<tr>
<td>Waste streams: Metal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>80.54</td>
<td>20.51</td>
<td>Click here to select a destination</td>
<td>0</td>
<td>-6.82</td>
</tr>
<tr>
<td>Metal (Non-Portable)</td>
<td>0.01</td>
<td>0.01</td>
<td>Not yet selected</td>
<td>0</td>
<td>-0.11</td>
</tr>
<tr>
<td>Metal (Pre-Cast)</td>
<td>0.01</td>
<td>0.00</td>
<td>Not yet selected</td>
<td>0</td>
<td>-0.01</td>
</tr>
<tr>
<td>Metal (Portable)</td>
<td>0.01</td>
<td>0.00</td>
<td>Not yet selected</td>
<td>0</td>
<td>-0.01</td>
</tr>
<tr>
<td>Waste streams: Timber</td>
<td></td>
<td>0.50</td>
<td>Click here to select a destination</td>
<td>0</td>
<td>-1.74</td>
</tr>
</tbody>
</table>
12.0 Add Demolition & other Non-Construction Waste

The tool allows you to specify whether your project includes a demolition and other non-construction waste, and enter estimates of the waste tonnage produced. This function is not relevant in the majority of projects; but it is available if demolition is part of the construction process.

You can accept default estimates, or enter your own estimates. This section of the Tool includes links to guidance documents to assist you.

Navigation Task

- Click on **Add demolition & other non-construction waste**, which is highlighted above.

- The “Demolition - User estimates of demolition and other non-construction wastes” window (shown below) will open.

- Review the options in this window. Observe that it is not possible to enter “Estimated Tonnage” for this project. This is because the pre-selected options within this template exclude demolition as a source of waste during construction. This may be different for your own project.

- Close this window.
User estimates of demolition and other non-construction wastes

Please enter details of any non-construction related wastes relating to the project. If your project involves building demolition you could use the following demolition bill of quantities estimator to get an indication of the likely level of demolition materials.

Alternatively the demolition protocol provides a structured process for identifying the likely types and quantities of demolition waste in more detail (click here to download).

<table>
<thead>
<tr>
<th>Material</th>
<th>Estimated Tonnage</th>
<th>Actual Tonnage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masonry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asphalt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggregates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ferrous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Ferrous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plasterboard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazardous - asbestos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excavation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Save  Accept Defaults  Calculate Totals  Total: 0

DemolitionDetails.aspx?z=Z8a6pYHmK7h4Ql9cMz2y4pBY4fqeU
13.0 Targets & Requirements

The final management function of the Net Waste Tool allows you to review and select targets and requirements for levels of waste and recycled content in your project.

**Waste Recovery and Reductions Requirements**

“In England from the 6th April 2008 it is a mandatory that projects with a construction value exceeding £300,000 must have in place a Site Waste Management Plan (SWMP)”

The intention of the Site Waste Management Plan is to ensure:

- efficient use is made of all resources used in construction;
- minimize the amount of construction material going to landfill and where possible facilitate opportunities for waste recovery by reuse or recycling; and
- demonstrate a commitment to comply with all relevant legislation.

For Wales and Northern Ireland there is at present no legal obligation for the provision of a Site Waste Management Plan. However, the provision of a SWMP will provide a structured framework to manage the impact of use of resources, effectively reduce the environmental impact of construction, facilitate legal compliance and reduce costs associated with procurement and use of materials.

Where applicable, this standard requirement can be entered automatically by clicking **Adopt Recommended Requirement**

**Recycled Content Targets**

Recycled content targets (such as a client requirement or corporate policy benchmark) can be entered for each assessed project, so that the Tool can report against them. It is possible to enter both a minimum target and a higher stretch target if required.

“Standard recommended procedure is that at least 10% of the total value of materials used should derive from recycled and reused content in the products and materials selected. In addition, show that the most significant opportunities to increase the value of materials derived from recycled and reused content have been considered, such as the top ten Quick Wins or equivalent, and implement good practice where technically and commercially viable.”

Where applicable, this standard requirement can be entered automatically by clicking **Adopt Standard**.
Select the **Targets & Requirements** button which is highlighted above.

The screen which appears (shown below) gives you the opportunity to enter any waste or recycled content requirements or to adopt the WRAP recommended requirement.

Within the “Waste reduction and recovery requirement” section, select the **Adopt Recommended Requirement** button; the WRAP recommended requirement appears.
Navigation Task

- Scroll down and click **Adopt Standard** in the “RC Requirement” section (shown below); then click **Save** and return to the project homepage.
The **Manage project** box is located on the bottom right of the project homepage. This part of the Net Waste Tool gives you access to “Review project timeline”, “Guest users and responsibilities”, “Project audit history”, “Generate reports”, “View selected components” and “Upload actuals”.

The “Review project timeline” and “View selected components” functions were visited earlier in the workbook. Within Section 6.1 of “Edit Project Details” the option to review the project timeline is discussed; and viewing selected components is explained within Section 7.3 of “View/Edit Components”.

---

**Worked Example**

---

**Material change for a better environment**

**Welcome > My projects > Mason House**

**Mason House - London**

**Project ID:** 6745

**Date created:** 12/11/2006 09:40:32

**Last Updated:** 12/11/2006 11:10:18

**Project type:** New Build (including Ref)

**Construction value:** £2,006,000

**Project description:** Five storey concrete framed office block.

**Project status:** Locked for editing by Examples User on 12/11/2006 18:03:23

**Analyse Project**

- Add Components
- Set Waste Reduction Actions
- Set Waste Segregation Options
- Set Waste Recovery Options
- Set Recycled Content Quick Wins
- Add densities & other measures
- Targets & Requirements

**Manage project**

- Review project timeline
- Guest users & responsibilities
- Project audit history
- Generate reports
- View selected components
- Upload actuals

You have saved £1,720k of materials from being wasted and reduced the waste management cost by £4,516. You have increased the recycled content of your project by 2%.

www.detailed.performance
14.1 Guest users and responsibilities

The Tool allows multiple users to view and/or edit building details. To invite a guest user to view or edit your project, the following details must be entered:

- name;
- company;
- email address; and
- privileges (Read only or Full access)
  - Full access will give guest users full editing rights over your project, including save rights.
  - Access can be removed at later stages (if required).

A message to the invited guest user can be entered if you wish; however this is optional as the Tool generates a default message which is emailed automatically to the guest user.

Data Entry Task

i) Enter the required details to invite a guest user to your project (if required) - once complete, click Add to list. The invited guest should then be displayed under the “Authorised Users” section.

ii) Click Save & back to project homepage.
14.2 Project audit history

Any amendments made to your project can be recorded in the “Project audit history” screen. Entering simple explanatory data will enable you and guest users to review the current status of the project.

**Navigation Task**

- Click **Project audit history** in the “Manage project” section to open the audit history screen.

**Data Entry Task**

1) Enter some notes in the **Changes made by (Example User)** box and then click **Save**.
14.3 Generate reports

The NW Tool automatically generates four levels of report. These are useful for different applications within the construction process. A description of these reports and examples of their use are listed below.

<table>
<thead>
<tr>
<th>Report</th>
<th>Description</th>
<th>Example application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Waste Report</td>
<td>Summary of waste by volume and mass and strategy adopted defined by the user.</td>
<td>Outline Planning Application, Internal CSR report.</td>
</tr>
<tr>
<td>Project Summary Report</td>
<td>High level information on the building, the associated recycled content requirement and whether this has been achieved. It also lists the selected Quick Win items with an explanation as to why they have been used.</td>
<td>Outline Planning Application, Internal CSR report.</td>
</tr>
<tr>
<td>Recycled Content Management Report</td>
<td>Full information on the building details (dimensions and specifications) together with information on recycled content performance, selected Quick Wins, Guest Users and Audit data.</td>
<td>Outline / Full Planning Application.</td>
</tr>
<tr>
<td>Project Component Report</td>
<td>Component dataset for a building together with information on recycled content and rates.</td>
<td>Design team internal report, Research and development focused report.</td>
</tr>
</tbody>
</table>
## Navigation Task

- Click **Generate reports** in the "Manage project" section.
- Click (highlighted above) to see the printer friendly report of the **Project summary report** (shown below).

### Project Name: House

<table>
<thead>
<tr>
<th>Achievement</th>
<th>Recycled content (%)</th>
<th>Waste savings (£)</th>
<th>Waste to landfill (%)</th>
<th>Value of wasted materials (£)</th>
<th>Cost of waste disposal (£)</th>
<th>Total cost of waste (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard / Baseline</td>
<td>15.65 %</td>
<td>440</td>
<td>320</td>
<td>£52,082</td>
<td>£11,414</td>
<td>£63,538</td>
</tr>
<tr>
<td>Good</td>
<td>21.01 %</td>
<td>321</td>
<td>160</td>
<td>£40,533</td>
<td>£9,829</td>
<td>£49,362</td>
</tr>
<tr>
<td>Targeted</td>
<td>10.47 %</td>
<td>428</td>
<td>41</td>
<td>£70,312</td>
<td>£21,199</td>
<td>£91,511</td>
</tr>
</tbody>
</table>

### Selected RC quick wins

<table>
<thead>
<tr>
<th>Option</th>
<th>Impact on whole project recycled content level (%)</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precast concrete block and beam flooring; 150 thick overall; 130 thick</td>
<td>0.96 %</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Brick: beams at 235mm centres - end sides aired</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC Iraku concrete frame Grade C20 or higher</td>
<td>0.88 %</td>
<td>Not Provided</td>
</tr>
<tr>
<td>100mm x 100mm x 100mm = fully glazed P100 doors; 9mm clear</td>
<td>0.84 %</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Plywooded glass: stainless steel frame</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External walls, Inner Skin, Cavity block construction; inner skin assisted 0.29 %</td>
<td></td>
<td>Not Provided</td>
</tr>
<tr>
<td>Concrete blocks &gt; 100mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two layers 12.5 mm wallboard, one side only, substock measured 0.21 %</td>
<td></td>
<td>Not Provided</td>
</tr>
</tbody>
</table>
14.4 Upload actuals

This function of the Tool is to be used at the end of the project, to input the actual data of waste produced during the project. It is not used in this example; however, it will be useful in your own construction project to review your actual waste compared to your targets.

**Navigation Task**

- Click on **Upload actuals** in the “Manage project” section.
- The window which appears is shown below. Review the options for methods of entering in the actual data.
- Click **Close window**.

---

![Upload actual data](image-url)
15.0  Project Summary

This function of the Tool gives a detailed summary of the project performance in terms of waste and Recycled Content. It supports the “Generate report” tool by providing concise information about the project.

Navigation Task

- Click on View detailed performance below the summary statement in the project homepage screen.
- The window which appears is shown below. Review the data presented.
Navigation Task

- Scroll down to view the project's performance against the baseline (see below).
- Once you have finished reviewing the project's performance in terms of Recycled Content and waste, click **Back to project homepage**.
### Project Details

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Project Reference</th>
<th>Total Data Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mason House</td>
<td></td>
<td>5.0</td>
</tr>
</tbody>
</table>

#### Project Performance

<table>
<thead>
<tr>
<th>Achievement</th>
<th>Recycled content</th>
<th>Waste arising (t)</th>
<th>Waste to landfill (t)</th>
<th>Value of wasted materials (£)</th>
<th>Cost of waste disposal (£)</th>
<th>Total cost of waste (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>15.05%</td>
<td>440</td>
<td>209</td>
<td>553</td>
<td>£23,822</td>
<td>£24,144</td>
</tr>
<tr>
<td>Targeted</td>
<td>18.47%</td>
<td>450</td>
<td>41</td>
<td>£70,913</td>
<td>£71,950</td>
<td>£90,780</td>
</tr>
</tbody>
</table>

#### Selected RC quick wins

<table>
<thead>
<tr>
<th>Option Description</th>
<th>Impact on whole project recycled content level (%)</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-cast concrete block and beam floors, 110% overall, 105% block</td>
<td>0.84%</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Load-bearing masonry walls and interior walls - excludes internal walls</td>
<td>0.88%</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Pre-cast concrete frame structure, 185% or higher</td>
<td>0.45%</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Pre-cast concrete block construction, inner side aerated</td>
<td>0.35%</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Two layers 2.5 mm wallboard, one side only, to studwork measured independently</td>
<td>0.21%</td>
<td>Not Provided</td>
</tr>
</tbody>
</table>

#### Improvement against baseline

<table>
<thead>
<tr>
<th>KPI</th>
<th>Targeted Qty</th>
<th>Targeted Improvement</th>
<th>Actual Qty</th>
<th>Actual Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in waste to landfill (%)</td>
<td>11%</td>
<td>30%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Total reduction in waste (%)</td>
<td>10</td>
<td>2%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Reduction in value of wasted materials (£)</td>
<td>£11,769</td>
<td>14%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Reduction in waste disposal costs (£)</td>
<td>£7,204</td>
<td>51%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Tonne (over 2000 t)</td>
<td>1</td>
<td>2%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Waste (over 2500 m³)</td>
<td>1067</td>
<td>5%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Potential reduction in carbon dioxide impact (t)</td>
<td>4</td>
<td>1%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Increase in use of recovered material / RC Content (%)</td>
<td>636</td>
<td>85%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Waste reused on site (%)</td>
<td>125</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

---

**Navigation Task**

- You have now completed the workbook.
- You can logout by clicking **Logout** in the toolbar shown below.
www.wrap.org.uk/nwtool