

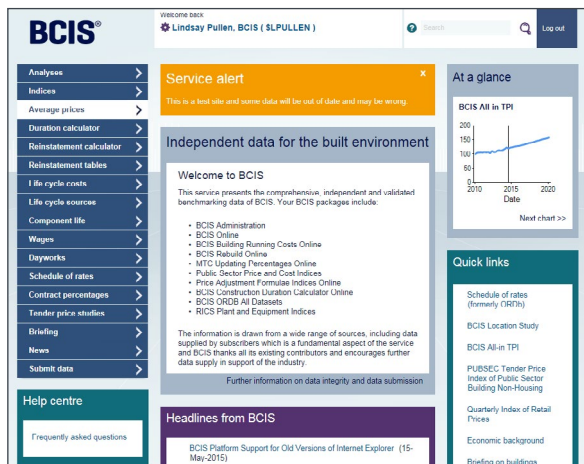
BCIS[®]

BCIS Tutorial

Using BCIS online



A Quick Tutorial



BCIS Online is a huge resource of Cost Analyses, Indices, Studies and Forecasts.

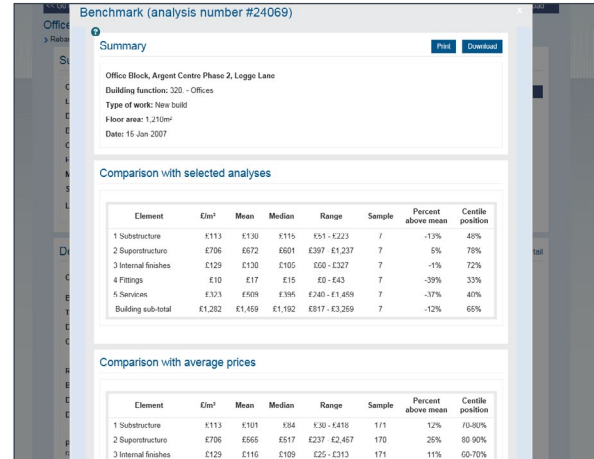
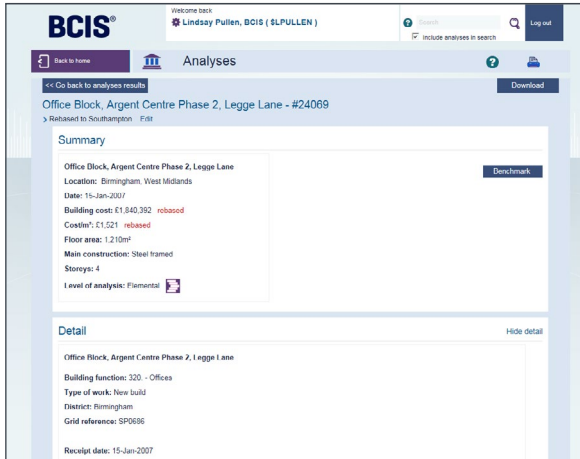
A typical subscription to BCIS Online, BCIS Rebuild Online, Building Running Costs Online and Schedules of Rates will open with the page below. The following tutorial will walk you through how to make the best use of the service.

NB All examples were correct at time of writing – but data is always being added to the service so the results you will see will differ.

Example 1	Analyses.
Example 2	Indices.
Example 3	Average Prices.
Example 4	Reinstatement Calculator [for house insurance].
Example 5	Life Cycle Costs and Component Life.
Example 6	Duration Calculator.
Example 7	Tender Price Studies.
Example 8	Schedule of Rates.

Example 1

Analyses – BCIS Online worked example



Objective

To find a detailed analysis from the BCIS database that has a close fit with the requirements of the future owner of the building and to adjust it for time and location.

Let's suppose the future owner intends to have a 4 storey 1250 m² office block built in Southampton, Hampshire.

Method

Log into the BCIS home page and click on 'Analyses' from the menu.

Click on '300 Administrative, commercial, protective facilities'.

From the Select Function menu, tick box 320.

Click on 'Close and Apply'.

Under 'Age of Analyses' leave at the 2007 default

Go to Define and select 'Building Specification' or select 'Next' at the bottom of the page.

Under Type of Work deselect all then select New Build.

Under Floor Area set default to 1250m².

Set floor area to 3 to 5.

Under number of storeys set default to range based on 4.

It can then be seen from the bottom of the screen that there are less than 20 Elemental analyses selected. Click on the link for Elemental to show the selected analyses.

You can adjust the selected analyses to the current date and selected location of Southampton by clicking on 'Rebase' at the top of the screen. Adjust the date for the current quarter and 'close' then adjust location to Southampton by expanding the menu. Click 'Close'. Click on 'Results' from the top bar or click 'Next' at the bottom of the page.

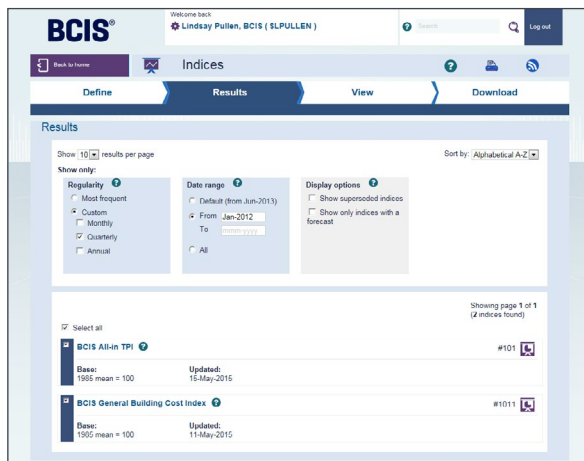
An example from the brief description of chosen projects might be Analysis # 24069 – Office Block, Argent Phase 2, Legge Lane, which shows a cost of £1608 [at time of writing]. Click on job title to get the full analysis.

There is the possibility of downloading this in CSV and XML formats.

You also have the option to click on 'Benchmark' to get comparative data to see how a chosen cost analysis compares with averages for similar schemes.

Example 2

Indices



Date	Index	Sample	On year	On quarter	On month
3Q 2013	234	32	4.9%	-0.8%	
4Q 2013	239	35	6.7%	2.1%	
1Q 2014	246	34	5.1%	2.5%	
2Q 2014	256	27	8.5%	4.1%	
3Q 2014	260	Forecast 17	6.6%	-2.3%	
4Q 2014	266	Forecast 18	7.1%	2.4%	
1Q 2015	258	Forecast 7	4.9%	0.6%	
2Q 2015	262	Forecast	2.3%	1.6%	
3Q 2015	265	Forecast	6.0%	1.1%	
4Q 2015	267	Forecast	4.3%	0.8%	
1Q 2016	269	Forecast	4.3%	0.7%	
2Q 2016	273	Forecast	4.2%	1.5%	
3Q 2016	276	Forecast	4.2%	1.1%	
4Q 2016	280	Forecast	4.9%	1.4%	
1Q 2017	284	Forecast	5.6%	1.4%	
2Q 2017	289	Forecast	5.9%	1.8%	

The two key BCIS indices are the All-in Tender Price Index (TPI) and the General Building Cost Index (GBCI). Both indices are forecast five years ahead.

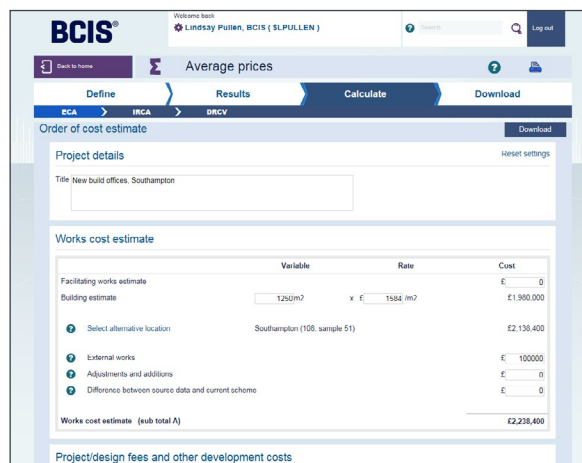
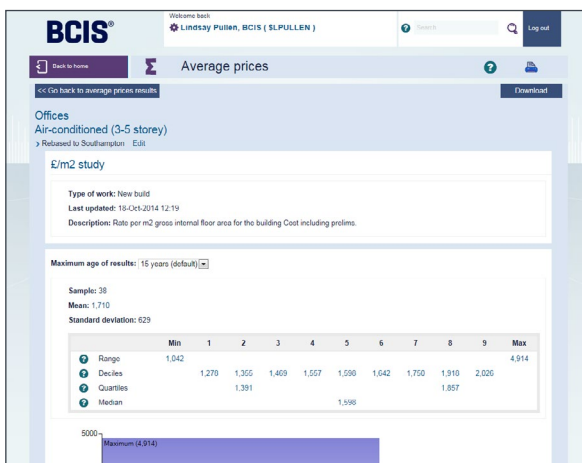
TPI measures the change in the cost to the client of 'procuring' his built asset inclusive of contractor's margins. It is calculated by comparing prices in accepted tenders against a base schedule.

GBCI measures the change in the cost to the building contractor of obtaining his input costs of labour and materials before adding his profit.

Objective	To download the two key indices TPI and GBCI with forecasts.
Method	From the BCIS opening page click on 'Indices'.
	Select 'BCIS Tender Price Indices'.
	Select 'BCIS All-In TPI'.
	Select 'Close and Apply'.
	Select 'BCIS Cost Indices'.
	Select 'BCIS General Building Cost Index'.
	Select 'Close and Apply'.
	Click 'Next - Results'.
	Under 'Regularity' select quarterly.
	Set date say, Jan 2012, from date range menu.
	Click 'Next View'.
	Click 'Table View', from the icons top right of page.
	The two key BCIS indices will be displayed side-by-side for direct comparison.
	Note: Index methodologies are available using the '?' icon. Note: Graphs can be seen by clicking on the graph view icon. Note: You can also see date of last change to the indices - click 'Recent changes'.
Other key indices include the Price Adjustment Formulae Indices (PAFI), Maintenance Cost Indices, House Rebuilding Cost Index, Measured Term Contract updating percentages, etc.	

Example 3

Average Prices – £/m²



Objective

To calculate the projected cost for a 1250m² 4 storey air conditioned office block to be built in Southampton and tendered in six months' time.

Method

Open BCIS Online and select 'Average Prices'.

Expand 'Building Function Category 300 Administrative, Commercial, Protective Facilities'.

Select CI/Sfb 320, 'Close and apply'.

From the menu bar select 'Rebase'.

Adjust for Date and Location.

Click on Date Factor.

Adjust to 2Q15 and Close.

Click on Location Factor.

Expand South East – Hampshire – select Southampton then Close. [Note: the postcode can be used instead].

Click 'Next – Results' and average prices for Air Conditioned Offices and Non Air Conditioned Offices will be shown. [Note: It is worth setting the maximum age of results so that only newer analyses are included, say 10 years if the sample size is adequate.]

From the table click on 3-5 storey Air conditioned offices to reveal the mean, deciles and other statistics with accompanying graphs [see screenshot].

Click on the mean £/m² for 'Offices, 3-5 storey' for three options:

- 'Early Cost Advice'
- 'Insurance Reinstatement Cost Advice'
- 'Depreciated Replacement Cost Valuation'.

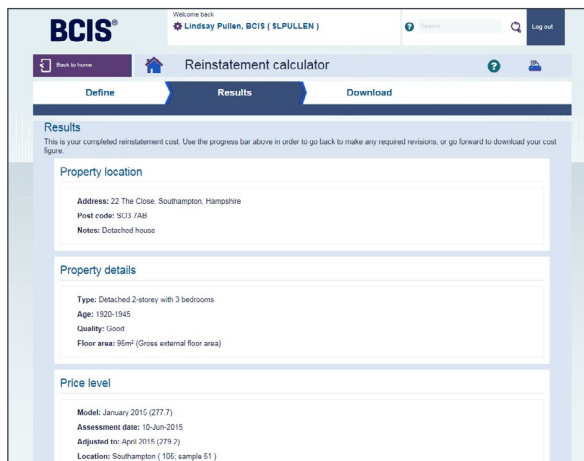
Click on 'Early Cost Advice' to reveal a template for estimating the desired cost.

Enter 1250m in the m² box as the floor area of the proposed office.

Add say 13 % for fees and £100,000 for external works or other parameters. For further help, click on the large ? icon at the top right of the page.

This estimate can be downloaded as a PDF using the download button at the bottom of the page.

Reinstatement Calculator



The Reinstatement Calculator is a specialist service developed in conjunction with the Association of British Insurers, enabling a swift insurance calculation for a range of domestic houses and flats.

Objective	To calculate the reinstatement cost for a good condition detached 95m² 3 bedroom 2 storey house built in the 1930s in Southampton.
Method	<p>Open BCIS Online and select Reinstatement Calculator.</p> <p>From 'Define' select the type of property - 'House'.</p> <p>Click 'Next - Property Details'.</p> <p>Click on Location Factor - South East - Hampshire - select Southampton. 'Close'.</p> <p>Complete address details as necessary and any relevant notes.</p> <p>In 'Property details' select from drop down menus - Detached + 2 Storey + No of Bedrooms + Age of Property + Quality.</p> <p>Fill in Floor area of 95m², externally.</p> <p>Go to 'Define - 3 Features and adjustments' at bottom of page.</p> <p>Here you can put in additional relevant information</p> <ul style="list-style-type: none"> • Click on 'Design/shape' • E.g. drop down menu for roof type or • Click on 'Specification' • E.g. 'Facing brick' • E.g. 'Security alarm installed'. <p>Click 'Next - Results'.</p> <p>Click 'Next - Download' for a printed PDF report.</p>

Example 5

Life Cycle Costs

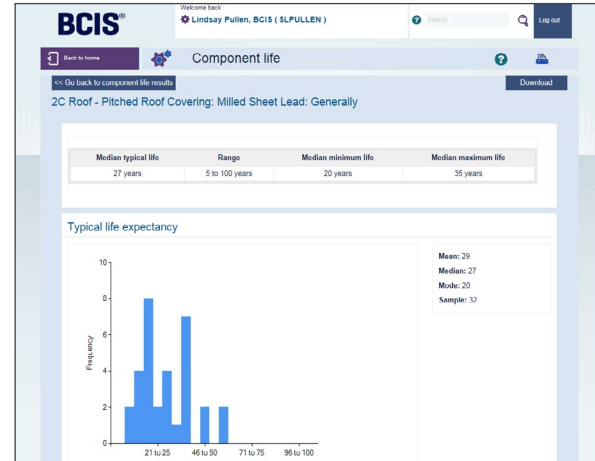
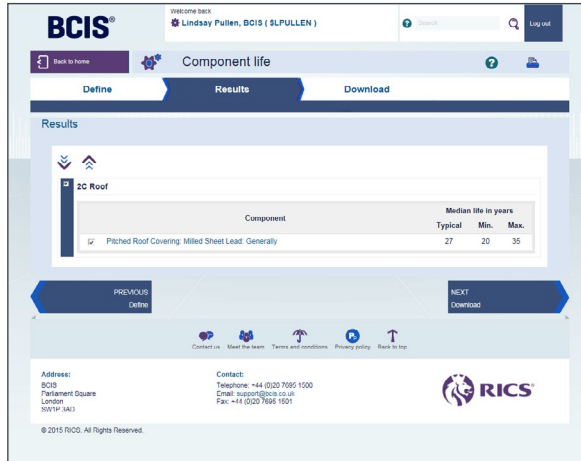
Name	Maintenance (£/100m ² /annum)			Operation (£/100m ² /annum)			Total
	Decorations	Fabric	Services	Cleaning	Utilities	Administrative costs	
Offices: Air conditioned	296	1,311	2,477	4,074	2,004	5,132	15,600

Source	Maintenance (£/100m ² /annum)			Operation (£/100m ² /annum)			Total
	Decorations	Fabric	Services	Cleaning	Utilities	Administrative costs	
Jones Lang LaSalle OSCAR Reports - Air-conditioned Offices	0	667	2,110	0	893	1,808	2,368
International Electronics Company - Office Building	0	0	0	2,728	2,220	3,548	10,712
Various Offices - Property Occupancy Cost Analysis - Office POCA	0	754	1,524	0	0	0	0
London Office Block - Office Occupancy Costs	81	1,480	2,341	3,902	3,001	7,031	7,587
The Anderlyn Consultancy - A Study in the Cost of Office Premises - Repairs and Maintenance - Air-conditioned Offices	0	0	0	4,822	0	0	0
The Facilities Business/Facilities Management - Facility Performance Profiles - General Purpose Office Facility	0	0	0	2,001	928	4,611	0
The Facilities Business/Facilities Management - Facility Performance Profiles - Headquarters Office Facility	0	0	0	2,337	1,151	5,752	0
Building Whole Life Cost Models - Model Office Building - 40,000m ²	0	830	3,621	0	1,790	5,508	6,959
Building Whole Life Cost Models - Model Office Building - 100,000m ²	0	830	2,165	0	1,791	5,599	4,823
Building Whole Life Cost Models - Model Office Building - 200,000m ²	0	830	1,972	0	1,791	5,586	3,583
Building Whole Life Cost Models - London Office Block - 150,345m ²	0	360	5,454	0	3,130	6,653	9,870
Building Whole Life Cost Models - London Office Block - 93,429m ²	0	534	2,641	0	2,628	4,675	0

Objective	To ascertain the annual expenditure on air conditioned offices somewhere in the South East of England.
Method	<p>Click on 'Life Cycle Costs' from the BCIS main menu.</p> <p>Expand '300: Administrative, Commercial' Protective Facilities by clicking on the arrow.</p> <p>Select '320 Air conditioned offices'.</p> <p>Click on 'Rebase' at bottom right of page.</p> <p>Adjust for 4th Quarter 2014 and South East Location.</p> <p>Click 'Next - Results'.</p> <p>Click on 'Offices Air conditioned for sources, a BCIS estimate and a pie chart of average costs per 100m².'</p> <p>Go back to 'Life Cycle Cost results' and click on 'Calculate', for example, to get a time projection for a 30 year life cycle cost expenditure.</p>

Example 5

Component Life



Objective

To calculate the life span of a building component. In this case a lead covered, pitched roof.

Method

Click on 'Component Life' from main menu.

From 'Define' click on '2C Roof'.

Tick 'Pitched Roof Covering Milled Lead Sheet Generally'.

Click 'Close and Apply' from bottom right of screen.

Click 'Next - Results'.

Click on 'Pitched Roof Covering Milled Lead Generally' to reveal bar charts.

Example 6

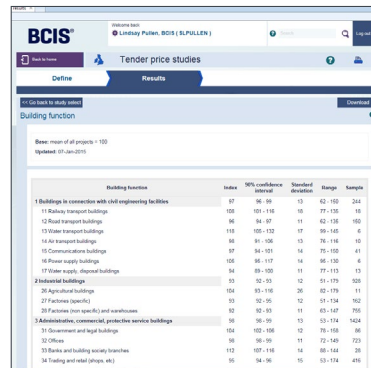
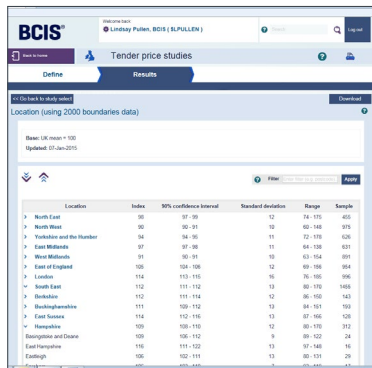
Duration Calculator

The screenshot shows the 'Define' stage of the BCIS Duration Calculator. It features a 'Date' field at the top. Below is a 'Model' section with radio buttons for 'New Build, Construction' (selected) and 'Refurbishment, Construction'. The 'Project' section contains a 'Title' field with 'New Build Offices, Southampton', a 'Contract value' field with '250000', a 'Building function' dropdown menu set to 'Offices', a 'Procurement' dropdown menu set to 'Design and build', a 'Selection of contractor' dropdown menu set to 'Single stage tendering', and a 'Client organisation' dropdown menu set to 'Private'. At the bottom of the form, there are three location-related options: 'Date: 2Q 2015 (202, forecast)', 'Location factor', and 'UK mean location'. A blue arrow button labeled 'NEXT Calculation' is positioned at the bottom right.

The screenshot shows the 'Calculation' stage of the BCIS Duration Calculator. The header includes the BCIS logo, a user profile for 'Lindsay Pullen, BCIS (SLPULLEN)', and a search bar. The main content area is titled 'Duration calculator' and has three tabs: 'Define', 'Calculation' (active), and 'Download'. Below the tabs, the project title 'New Build Offices, Southampton' is displayed. The main text states: 'The estimated construction duration from Start on Site to Construction Completion is 41 weeks (this is an average for the project as described below). The 50% confidence interval for this estimate is 42 to 46 weeks. Individual projects will take more or less time than the average. The 90% prediction interval for individual projects is 27 to 71 weeks.' Below this, it says 'The estimate is based on the following project details:' followed by a list of details: 'Contract value: £2,500,000 at 2Q 2015 (202, forecast) prices and UK mean location level', 'Building function: Offices', 'Procurement: Design and build', 'Selection of contractor: Single stage tendering', and 'Client organisation: Public'. At the bottom, there are two blue buttons: 'PRE-1079.03 Define' and '41-51 Download'. The footer contains navigation links like 'Meet the team', 'Terms and conditions', 'Privacy policy', and 'Back to top', along with contact information for BCIS and the RICS logo.

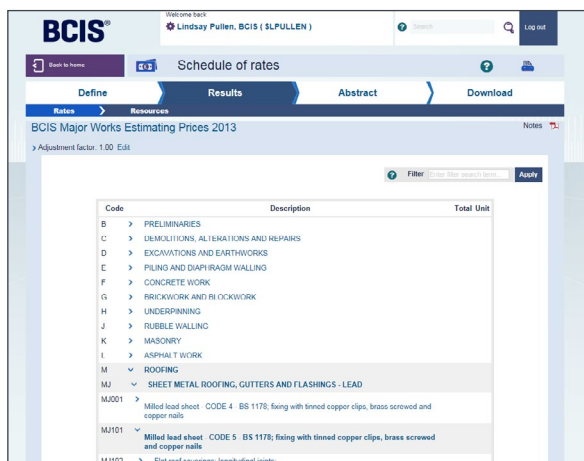
Purpose	To give an indication of the likely construction time for a proposed project. In this case, how long will it take to construct a design and build office block in Southampton, estimated to cost £2,990,000 for a private client?
Method	Open the Duration Calculator from the BCIS Online menu. Set to 'Current Date' and 'New Build' for this example. Fill in job title and contract value, then from the drop down menus select offices, design and build, single stage tender, private. Adjust for location. Click on Location Factor – South East – Hampshire, select Southampton. Click 'Next – Calculation'.
End result	For our example, a design and build office block of £2,990,000 in Southampton, the expected construction period is 41 weeks but depending on circumstances, could be between 25 and 67 weeks.

Tender Price Studies



Background	Over the years, BCIS has indexed thousands of projects from Abattoirs to Warehouses. Statistical analysis of these projects has allowed BCIS to calculate various variables including Location, Building Function, Height, Site Working Space and Access, and the difference made by New Build or Conversion.
Objective	To utilise the BCIS data to make adjustments to building cost data.
Method	<p>From the BCIS Online menu select 'Tender Price Studies'.</p> <p>Select Location then click on Results in the top navigation bar.</p> <p>Click on 'expand all'.</p> <p>Each region has a drop down menu that expands through Counties to Local Authority boundaries, e.g. Click on South East and expand through to county and borough level. The result for, say, Southampton is 111 which compares to a UK Mean of 100. If we do the same exercise for Newcastle upon Tyne in the North East, we get an answer of 93. This suggests it is 111/93 or 19.4% more expensive to construct a building in Southampton than it is in Newcastle.</p> <p>[Note: these studies are updated regularly].</p> <p>Return to the Tender Price Studies page for further studies.</p> <p>Choose, for example, 'General' and tick box.</p> <p>Click on 'Next and Define - 2 Study Select' at the bottom right of the page.</p> <p>Choose, for example, 'Building function' and tick box.</p> <p>Click 'Next - Results' at the bottom right.</p> <p>It can be seen that certain types of project are more expensive to procure than others. Churches, with an index of 110, compare with Factories with an index of 94. This shows that Churches attract a premium due to complexity among other factors.</p> <p>Return to the Tender Price Studies page by clicking on define in the top navigation bar then 'Type of study' for further studies including 'Type of work', 'Building height', 'Site working space', 'Site access', 'Selection of contractor' [procurement route] and 'Contract sum'.</p>

Schedule of Rates



Objective

To derive a price for building work at, say, 4Q2015 levels, in the Southampton area.

In this particular case for a shallow pitched roof with code 5 lead covering with welted joints.

Method

Select 'BCIS Major Works Estimating' for example.

Tick 'BCIS Major Works Estimating Prices 2015'.

Click 'Next – Define 2 Adjustments' and select 'Adjustment Selection'.

Set parameters to All-In TPI, 2015 using the pull down list, click on location factors and expand South East Region Hampshire and select Southampton from drop down menus. Click 'Close'. This returns you to the Adjustment page.

Assume, say, 13% for Preliminaries [latest % is available from the Contract Percentages section of BCIS if required] and say 5% for Overheads and Profit.

Click 'Next – Results' from the bottom of the page.

Select in order

M 'Roofing'

MJ 'Sheet Metal Roofing Gutters and Flashings – LEAD'

MJ101 'Milled lead sheet CODE 5' BS EN 12588, fixing with tinned copper clips, brass screwed and copper nails

MJ103 'Sloping roof coverings over 10 degrees but not exceeding 50 degrees from horizontal; longitudinal joints'

MJ103C Welts. Clicking on '+' to add to abstract.

Resultant price at time of writing is £163.53/m².

Clicking on the rate will tell you this is a Specialist price. Other rates in the schedule will give you a breakdown of the labour and materials making up the rate.

CONTINUED

Example 8

Schedule of Rates (continued)

Code	Description	Total Unit
B	PRELIMINARIES	
C	DEMOLITIONS, ALTERATIONS AND REPAIRS	
D	FOUNDATIONS AND LEAK PROBLEMS	
E	PAVING AND DRIVEWAYS/WALLING	
F	CONCRETE WORK	
G	BRICKWORK AND BLOCKWORK	
H	UNDERPINNING	
J	RUBBLE WALLING	
K	MASONRY	
L	ASPHALT WORK	
M	ROOFING	
MJ	SHEET METAL ROOFING, GUTTERS AND FLASHINGS - LEAD	
MJ101	Milled lead sheet CODE 5 BS 1178; fixing with tinned copper clips, brass screwed and copper nails	
MJ102	Flat roof coverings, longitudinal joints:	
MJ103	Sloping roof coverings over 10 degrees but not exceeding 50 degrees from horizontal, longitudinal joints:	
MJ103A	wood cored rolls	216.00 m ²
MJ103B	hollow rolls	222.90 m ²
MJ103C	wefts	193.05 m ²
MJ103D	standing seams	211.88 m ²
MJ104	Sloping roof coverings over 50 degrees from horizontal and vertical coverings, longitudinal joints:	
MJ105	Work to dormer and the like:	
MJ105A	Raking cutting	15.25 m
MJ105A	Curved Cutting	20.88 m
MJ105A	Wolled edges	8.19 m
MJ105A	Deadened edges	5.20 m
MJ110A	Walter seams	5.97 m

Code	Description	Quantity	Unit	Rate	Total
APPROXIMATE ESTIMATING RATES					
LEVEL ONE COMPOSITES					
ROOFS					
Timber pitched roof of traditional framed construction with hipped ends in sawn softwood; wall plates; rafters; joists; bidders; bangers; lags; struts, purlins, ridgeboards; all timber treated with preservative					
Roof pitch: 22.5 degrees; rafters at 600 mm centres (trusses at 2400 mm centres); spanning:					
Z1DKBA	10.00 m				1.00 m ²
N	WOODWORK				
NA	CARICASSING ITEMS				
NA001	Sawn softwood, Building quality, untreated NOTE: The prices in this section allow for untreated timber; the following allowances should be made to material prices for preservative treatment, special qualities and special openings etc; preservative treatment + 15% stress grading OS + 7% stress grading SS + 25% gauging + 6% special opening + 15% long lengths - 5.1, 6.0 m + 2% 6.3, 7.2 m + 15% 7.5 and over + 20%				
NA005	Pitched roofs including ceiling joists:				
NA005A	25 x 100 mm	0.36	m	3.80	- 1.44
NA005C	75 x 175 mm	0.07	m	6.74	- 0.47
NA005F	38 x 100 mm	5.08	m	5.08	- 25.80
NA005I	50 x 100 mm	0.20	m	5.70	+ 1.14
NA005I	50 x 100 mm	0.11	m	5.70	- 0.63
NA006	Kerfs, bangers and the like:				
NA006M	75 x 100 mm	0.34	m	8.55	+ 2.91
	Overheads and Profit				32.41

Method (continued)

Now go back to 'Results' to look at Approximate Estimating Rates to get a composite rate for timber pitched roof construction and expand as follows:

- Z Approximate Estimate Rates
- Z1 Level One Composite
- Z1D Roofs
- Z1DK Timber pitched roofs with hipped ends...
- Z1DKB Roof Pitch 22.5 degrees, rafters at 600mm centres...
- Z1DKBA + 10.00m 71.96/m²

Note: Clicking on the rate of £71.96 gives a complete breakdown of the build up for the rate calculation.

Click 'Next - Abstract to use'.

This will give you the facility to input quantities to give a bill total. This could be done to build up a complete approximate estimated cost for a whole building.

These examples are designed to give you a flavour of what BCIS Online offers, and how to navigate around it. You should now have the knowledge to discover other data and tools available on BCIS Online.



Confidence through professional standards

RICS promotes and enforces the highest professional qualifications and standards in the development and management of land, real estate, construction and infrastructure. Our name promises the consistent delivery of standards – bringing confidence to the markets we serve.

We accredit 118,000 professionals and any individual or firm registered with RICS is subject to our quality assurance. Their expertise covers property, asset valuation and real estate management; the costing and leadership of construction projects; the development of infrastructure; and the management of natural resources, such as mining, farms and woodland. From environmental assessments and building controls to negotiating land rights in an emerging economy; if our members are involved the same professional standards and ethics apply.

We believe that standards underpin effective markets. With up to seventy per cent of the world's wealth bound up in land and real estate, our sector is vital to economic development, helping to support stable, sustainable investment and growth around the globe.

With offices covering the major political and financial centres of the world, our market presence means we are ideally placed to influence policy and embed professional standards. We work at a cross-governmental level, delivering international standards that will support a safe and vibrant marketplace in land, real estate, construction and infrastructure, for the benefit of all.

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