



BCL ACOUSTIC TIMBER SYSTEMS

TECHNICAL INFORMATION HANDBOOK

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**“The flexibility
of a bespoke system,
with the depth of
a major supplier”**



At BCL Timber Projects Ltd we provide a flexible approach to delivering timber finishes for walls and ceilings.

Our open-configurable panel systems allow you to create unique designs in timber, whilst harnessing the benefits of prefabrication, helping to significantly reduce on-site waste, installation time and prelim costs for large commercial projects.

Deliver beautiful natural wood finishes, tailored to your design and performance requirements, with the flexibility to integrate any services, access requirements and bespoke features – all with the full design and installation depth of a major supplier.



“... Bridging the gap between off the shelf systems and bespoke solutions...”

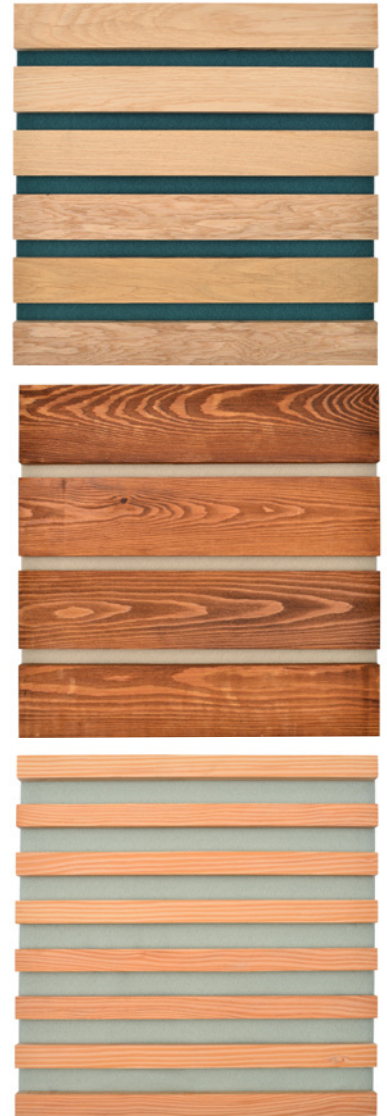




BCL Timber panel systems are designed so that there is little to no cutting on site, with panels made to suit layouts, making for quicker, easier and more efficient installation times.

Benefits of a BCL panel system:

- Solid wood - natural variation & beauty
- FSC® & PEFC certified
- Flexible panel sizes to suit layouts
- Secret fixings
- <1% on site waste
- High recycled content (typically 20%)
- High natural / organic content (typically 65%)
- Full design service
- Direct Installation by BCL
- Fire retardant / colour coatings
- Coloured acoustic fabrics
- Full systems fire tested (to EN 13501-1)
- Acoustic testing (BS EN ISO 11654:1997)



HOW TO SPECIFY?

With BCL panels, you can configure your very own panel designs, choosing from a huge range of species, colours and coatings, to create truly unique walls and ceilings that are tailored to your exact design and performance requirements.



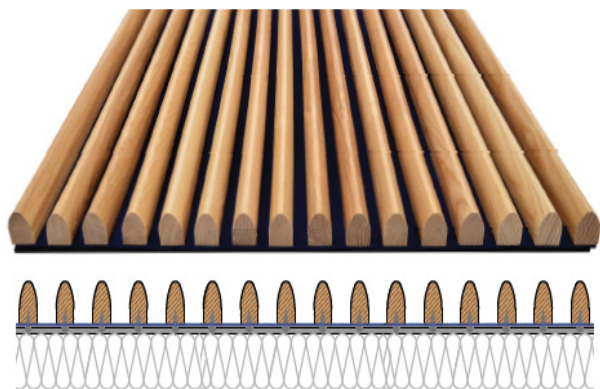
TIMBER SPECIES

Choose from over 50+ solid timber species from certified managed forests around the World. Your choice of timber species will affect the look, cost and durability of your system. You can also combine multiple species in a single panel design to create unique designs. To view our full range of species, including technical data on durability, cost, density, hardness download our Timber Species PDF.

BCL also offer the option of artificial and timber derivative materials such as veneered MDF, ply, PPC aluminium etc.

TIMBER SLAT PROFILES

You can select from typical 'square edge' timber slats, to rounded or even triangular profiles for your timber slats. You can also even combine multiple shapes to create varying textures in wood.



TIMBER SLAT SIZES

We recommend using the most cost efficient sizes of solid timber available, which are combinations of the following dimensions: 19, 25, 44, 69, 94, 119 & 144mm.

Eg. 19x44mm, 25x69mm, 19x144mm, 44x44mm etc...

Some larger size combinations (eg 119x144mm) are too large / heavy to be panelised and the max size possible can depend on the density of timber species used.

If you are wanting to use large sizes or dimensions that are different to above, we recommend contacting BCL to discuss further.

ACOUSTIC FABRIC

The acoustic fabric runs behind your timber slats and comes in several available ranges, varying in colours, texture and thickness.

We are often updating our available ranges and you also have the option of proposing alternative layers such as meshes, perforated PPC aluminium, veneered MDF / ply etc.

You can also combine multiple colours across a system to generate distinctive looks, or align with your client's brand colours.



Acoustic Class D



Acoustic Class A



ACOUSTIC PERFORMANCE

The acoustic performance of your panel system is dictated mostly by the size of spacing between timber slats, also measured as its 'open area' - which is the % of openness or gaps compared with timber surface area.

It can be calculated by the following:

$$\text{Open area} = \frac{\text{gap size}}{\text{gap size} + \text{slat width}}$$

Generally speaking the following open area % bands correspond to the following acoustic classes

40% +	= Class A
30-39%	= Class B
20-29%	= Class C
10-19%	= Class D

To view our available ranges, please [contact BCL](#) or visit our downloads area of our website.

BCL CEILING SYSTEMS

CS-1 _ Concealed Semi-Demountable System

Panels are screwed up to the underside of a fully concealed T-bar grid. Panels must be removed by mechanically unscrewing (via electric drill). This system offers greater security of panels, whilst still allowing full access.

Ideal for:

- High level ceilings,
- Pitched / banked areas,
- External soffits

CASE STUDY

London Bridge Station, London

Architect	Grimshaw	Timber Species	Western Red Cedar
Contractor	Costain	Additional Features	Class 0 SSF lacquer
Acoustic Function	Absorption	Project Size	7000 m ²
Panel Class	A & B	Completion Date	September 2019

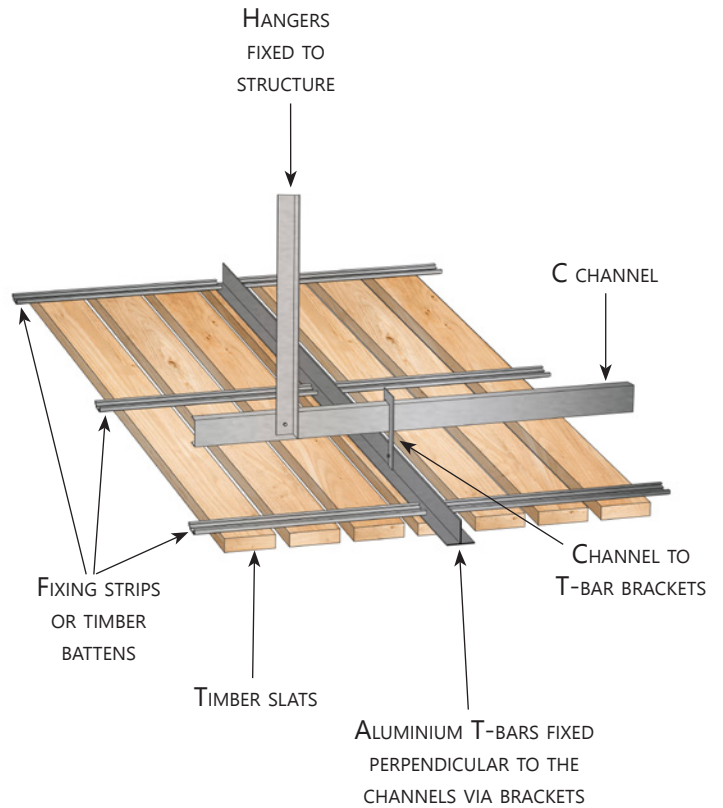


As part of the London Bridge station refurbishment, the structure which supports the railway platforms is being replaced by a series of pre cast concrete bridge decks.

The underside of the new bridge decks becomes the ceiling of the main concourse which has been clad with our high performance "Alpha" acoustic timber panel system.

The BCL "Alpha" panel system is using 7,000 square metres of western red cedar panels in three distinct patterns, providing class A and B sound absorption to reduce noise from passengers and trains.

The panels are fire treated to Euro class B, fully demountable, have fully concealed fixings, and involve integrated lighting troughs.



BCL CEILING SYSTEMS

CF-1 _ Concealed Fixed System

Panels hook on to an aluminium tube grid and cannot be removed.

This system can cope with complex geometry and is traditionally used where curves are required.

Access panels must be designated and are typically hinged to allow easy 'swing-down' access.

This system allows to use a secret fixing system to avoid any visible screw or nail.

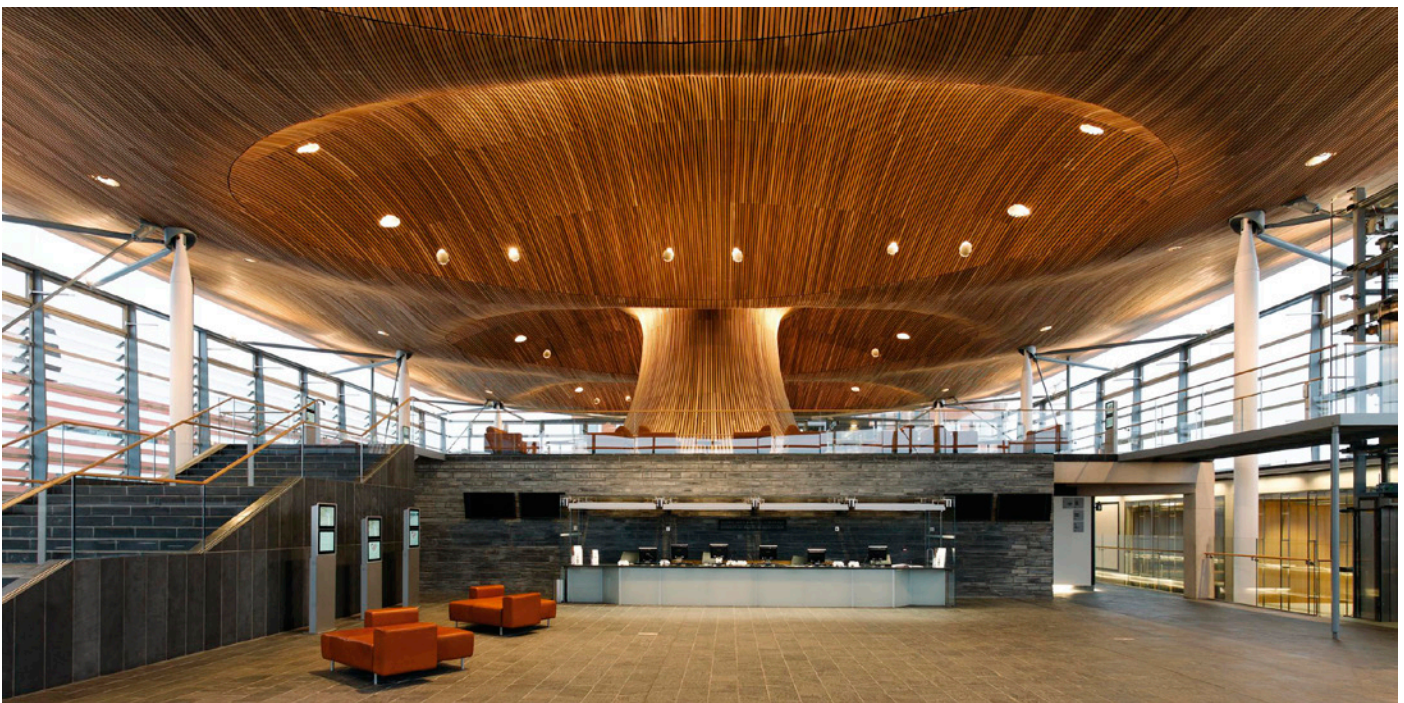
Ideal for:

- Curved geometry,
- No access requirements,
- Bomb-blast requirements (adapted grid)

CASE STUDY

The National Assembly - Wales

Architect	Richard Rogers Partnership	Additional Features	Class 0 SSF, FSC®certified, integrated lighting 100% secret-fixings.
Contractor	Taylor Woodrow		Pre-curved panels.
Acoustic Function	Absorption, reflection	Project Size	2000 m ²
Panel Class	C	Installation Time Weeks	Ceiling – 16 Weeks; Funnel – 12
Timber Species	Western Red Cedar	Completion Date	June 2005



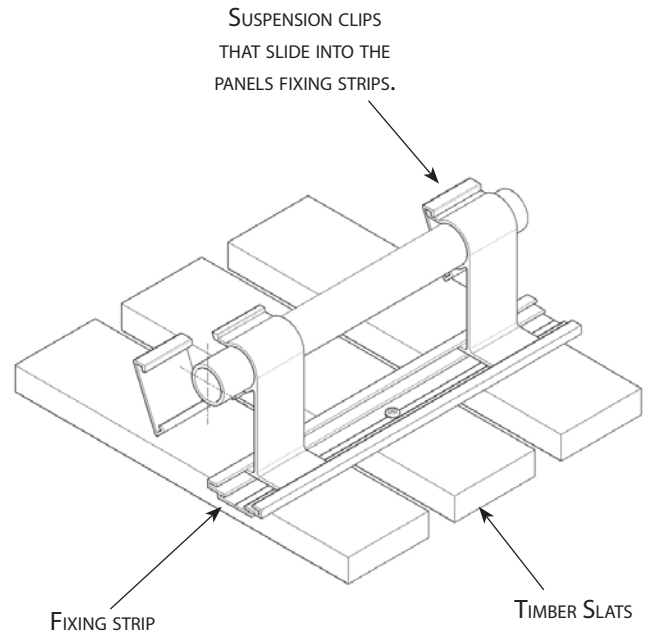
The National Assembly for Wales is one of the most recognisable modern buildings in the UK.

It was built to the highest environmental standards and incorporates a sprawling timber canopy that undulates and curves across the entire building area.

This canopy also had to have acoustic absorptive properties due to the heavy use of glass and slate flooring inside the building.

Despite the complex nature of the project, BCL's dedicated design process formulated a panel layout that allowed the entire ceiling to be delivered using only 36 different panel designs.

This provided huge cost savings for Taylor Woodrow and streamlined the construction process to allow for an efficient and controlled delivery.



BCL CEILING SYSTEMS

CD-1 _ Concealed Demountable System (T Bar System)

Panels lay into a concealed T-bar grid and can be easily demounted by simply lifting out of the support grid.

This system allows to use a secret fixing system to avoid any visible screw or nail.

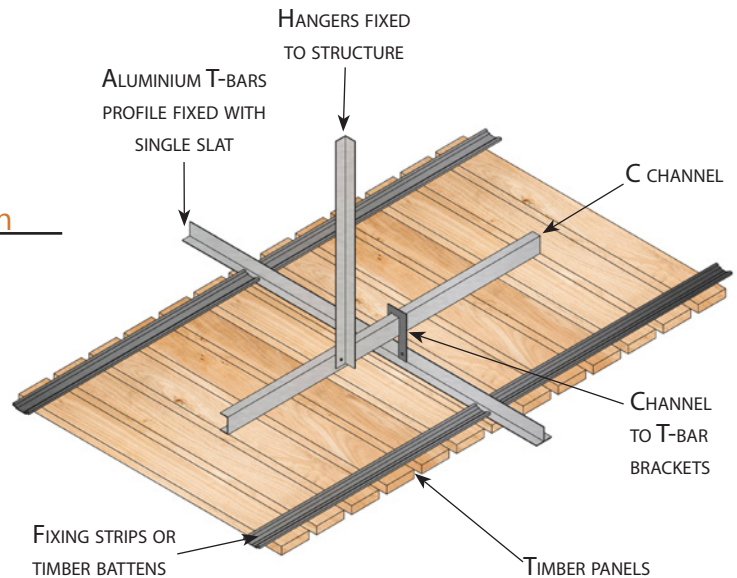
Ideal for:

- Flat ceilings,
- Low-level ceilings,
- Regular access

CASE STUDY

Haberdashers' Aske's School for Girls, London

Architect	IID Architects
Contractor	Wates
Acoustic Function	Absorption
Panel Class	A
Timber Species	Siberian Larch
Additional Features	Class 0 SSF lacquer
Project Size	1335 m ²
Completion Date	2015



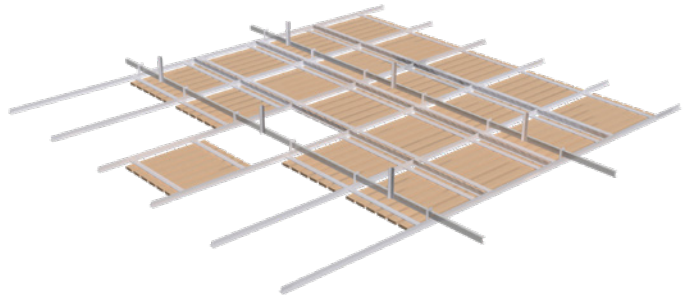
ED-2_ Tegular Demountable Baffle System

Panels lay into a traditional Tegular grid (typically 600x600mm). In this system both X and Y lines of the grid are exposed and can be powder coated to any colour.

CASE STUDY

Eldon Campus, Portsmouth University

Architect	Sheppard Robson
Contractor	Wates
Acoustic Function	Absorption
Panel Class	A
Timber Species	American White Oak
Additional Features	Class 0 SSF lacquer
Project Size	1335 m ²
Completion Date	Mid 2017



BCL CEILING SYSTEMS

CD-2_ Concealed Demountable Baffle System (H Bar System)

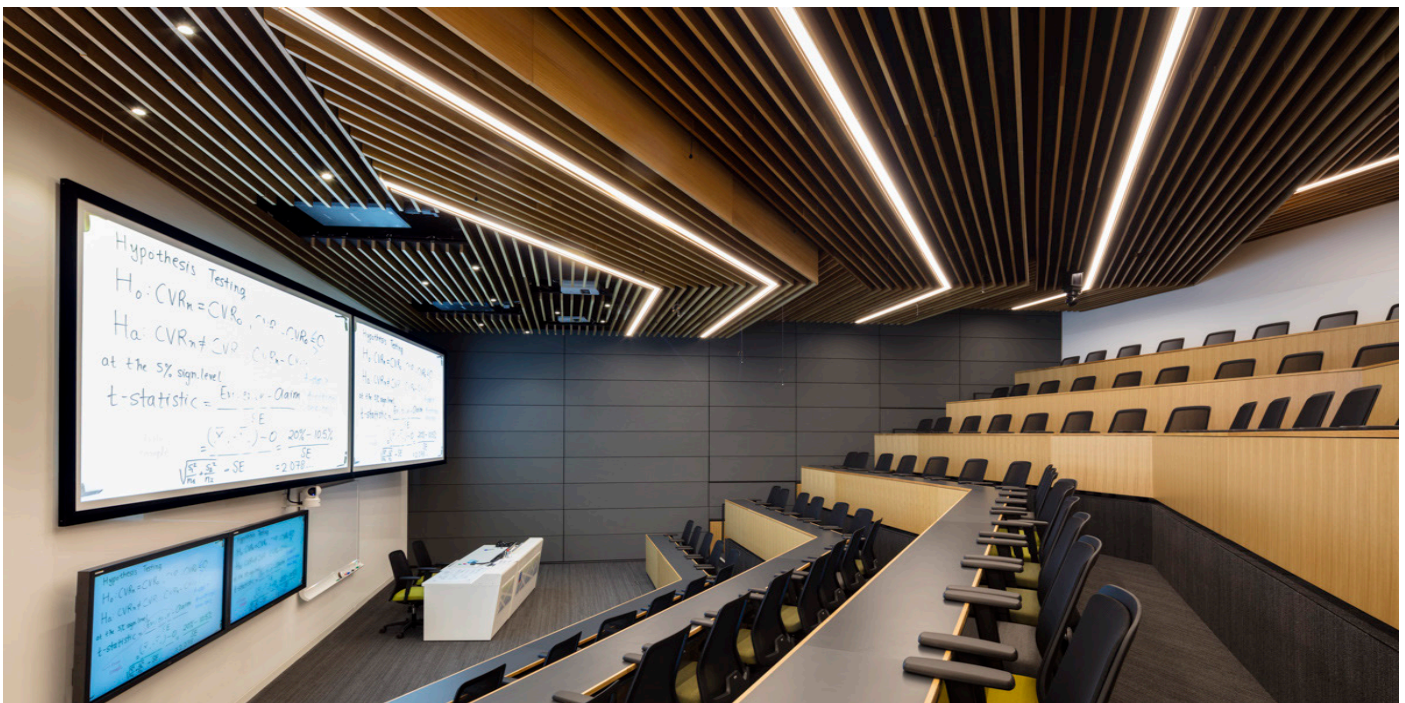
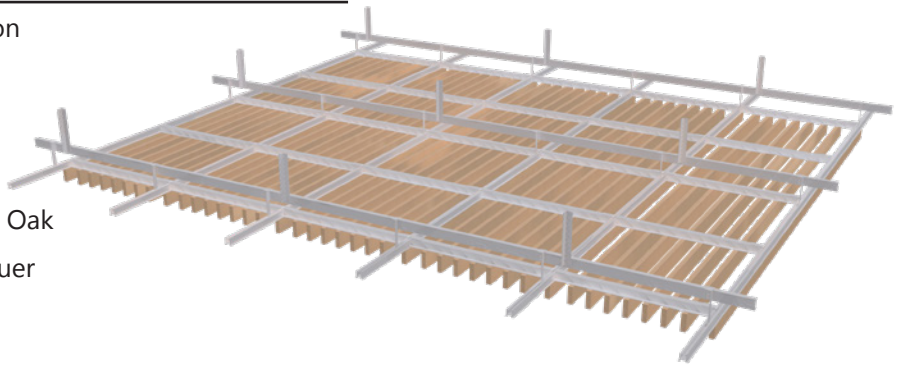
Panels lay into a concealed H-bar grid and can be easily demounted by simply lifting out of the support grid.

This system allows to use a secret fixing system to avoid any visible screw or nail.

CASE STUDY

London Business School - Sammy Ofer Centre, London

Architect	Sheppard Robson
Contractor	Wates
Acoustic Function	Absorption
Panel Class	A
Timber Species	American White Oak
Additional Features	Class 0 SSF lacquer
Project Size	1335 m ²
Completion Date	Mid 2017

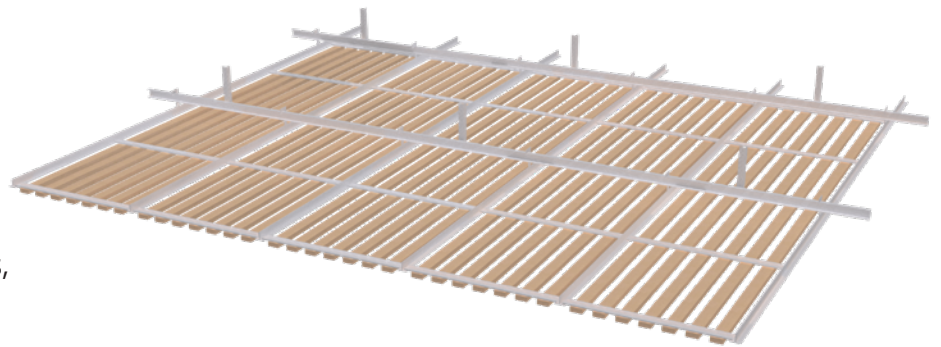


ED-1_ Semi-exposed Demountable System

Panels lay in to a semi-exposed T-bar grid, which can be powder coated to any colour. Panels are easily demounted by lifting out of the support grid.

The Centre, designed by Sheppard Robson architects and delivered by Wates construction, brings 37 seminar rooms, 6 new lecture theatres, a stunning new library and multi-use spaces to increase LBS teaching facilities by over 70%.

With the BCL system, the architects were able to specify over 1,300m² of Class A acoustic panels, integrating lighting and services all within a system that could be delivered in a just-in-time basis to site.



BCL WALL SYSTEMS

WF-1 _ Direct Fix System

Panels are screwed back to timber battens.

Panel screws are PPC coated same as fabric colour and fixed @ 600mm ccs in between gaps

CASE STUDY

UKHO Headquarters

Architect	AHR Architects
Contractor	Shepherd
Acoustic Function	Absorption
Panel Class	C
Timber Species	Larch
Additional Features	Class 0 SSF, PEFC certified. 100% secret-fixings.
Project Size	800 m ²
Installation Time	6 Weeks
Completion Date	April 2019

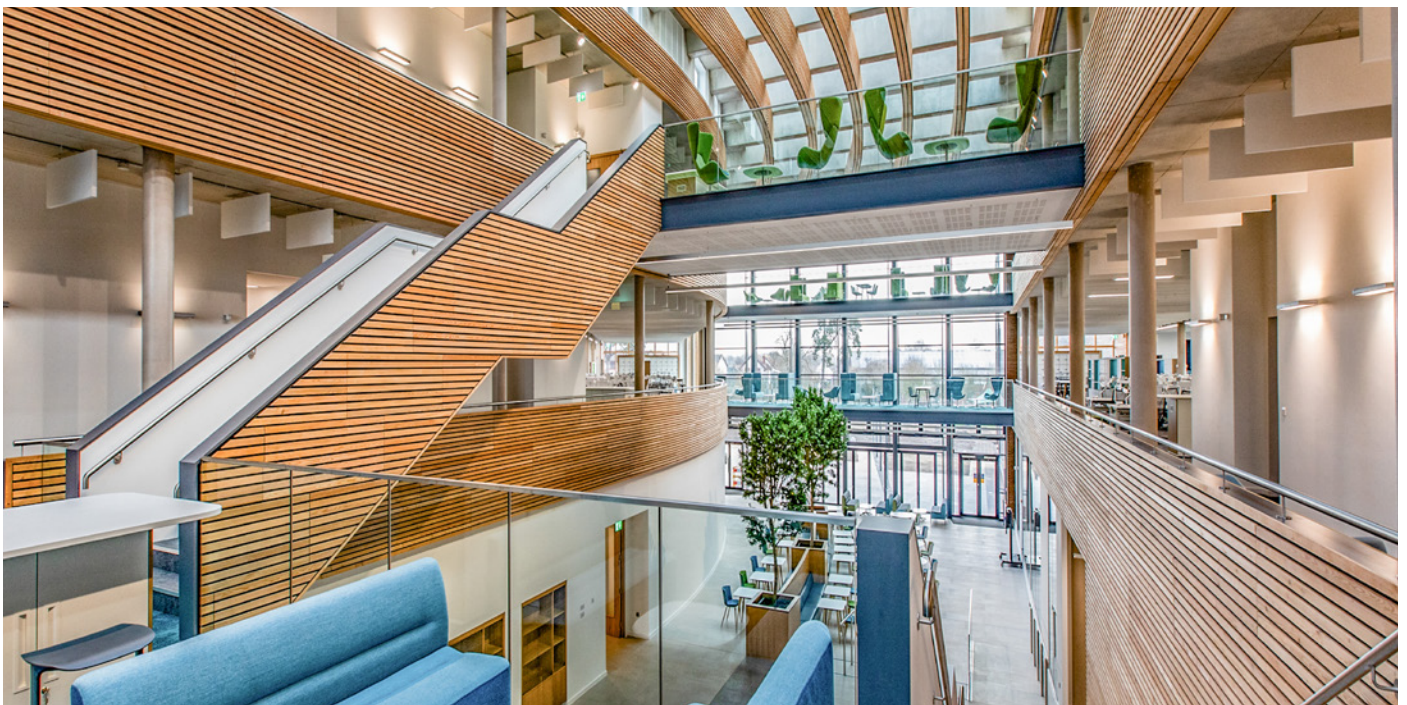
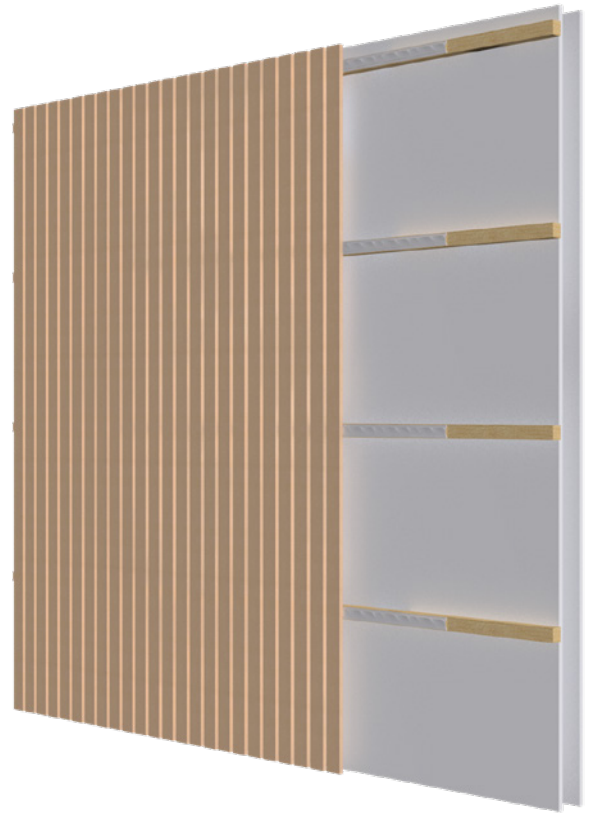


The new headquarters for the UK Hydrographic Office is a bespoke three storey office building.

Arranged around a dramatic 800m² atrium, the building accommodates 700 desks across flexible floor plates.

Suspended within the atrium are sinuous timber baffles which reinforce the visual concept whilst providing perfect acoustic control, diffusing daylight and eliminating glare.

A simple palette of horizontal larch cladding and 600mm long bricks reinforce the linear concept that is present in all aspects of the design.



BCL WALL SYSTEMS

WR1 / WR2_ Male / Female Rail System

Panels are stacked upon each other via the male-female rail and screwed back to vertical metal studs or SW timber bearer, or into a blockwall.

CASE STUDY

Thames Tower, Reading

Architect	DN-A Architect
Contractor	Bowmer & Kirkland
Acoustic Function	Absorption, reflection & attenuation
Panel Class	Acoustic Class B
Timber Species	Bamboo
Additional Features	Class 0 SSF, FSC® certified, integrated lighting, 100% secret-
Project Size	fixings. 210 m ²
Installation Time	6 Weeks
Completion Date	May 2017

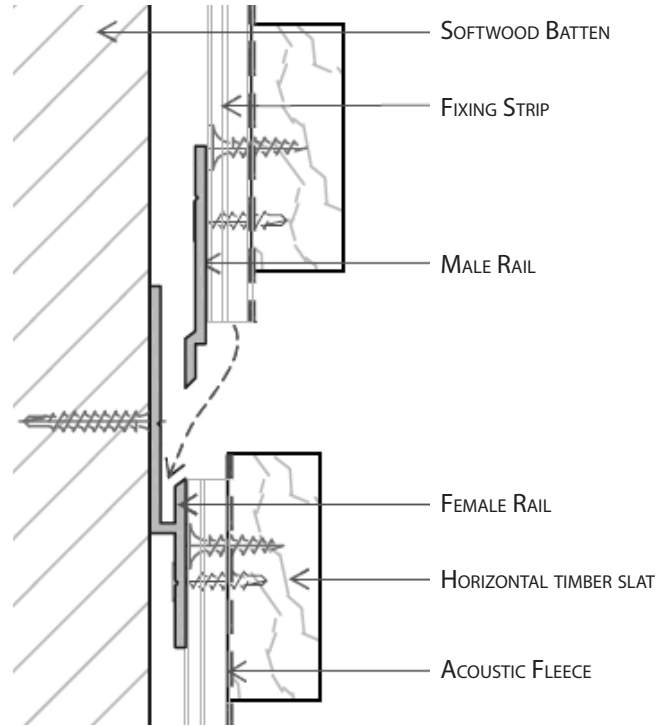


The old 1970's tower block located outside Reading train station in the heart of the town is now an exciting, newly renovated office space: Thames Tower.

Striking BCL timber panels feature heavily in the grand reception area on the ground floor with the eye catching Bamboo ceiling and wall.

The panels are made with 19 x 44mm slats with a 19mm gap. A fire retardant lacquer covers the slats, therefore the entire system has a Class 0 SSF rating.

The system cost £90,000 and was designed, manufactured and installed by BCL.



BCL WALL SYSTEMS

WC-1 _ Cover Batten System

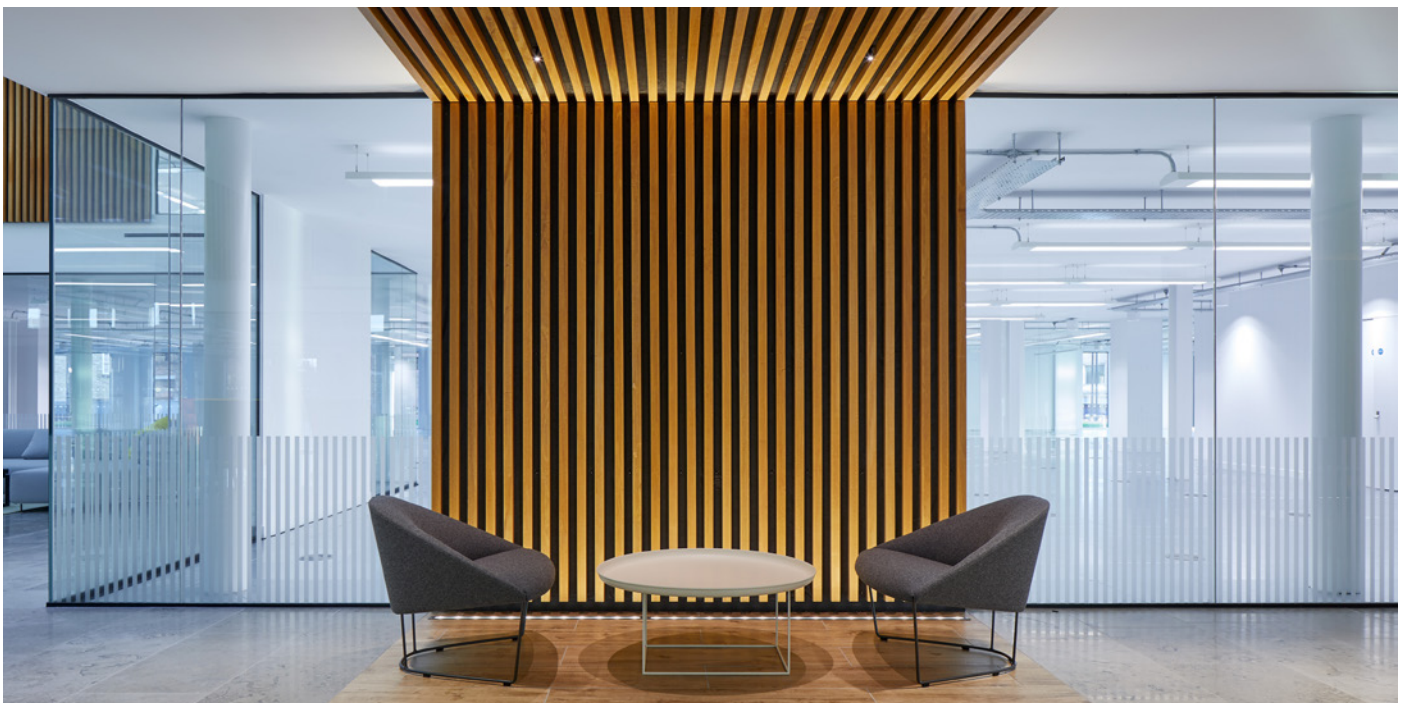
Often used for vertical panel systems, the panels are fixed direct to the timber studs or SW timber bearers, through slat gaps.

This system allows to use a secret fixing system to avoid any visible screw or nail.

CASE STUDY

The Charter Building, Uxbridge

Architect	De Novo Architecture
Contractor	
Acoustic Function	Absorption, reflection & attenuation
Panel Class	A
Timber Species	Siberian Larch
Additional Features	Class 0 SSF, FSC® certified, integrated lighting, 100% secret-
Project Size	fixings. m ²
Completion Date	2017



Class A rated BCL acoustic panels feature heavily in the impressive reception space of the newly renovated Charter Building in Uxbridge, providing the much needed acoustic absorption for the open plan reception and atrium areas.

The interior design for The Charter Building, headed up by De Novo Architecture used FSC® Idigbo, up-lit beautifully to create a series of central 'goal-post' features connecting the main areas of the building and was pigmented following BCL's bespoke colour matching service.



CONCEALED SERVICES

SURFACE MOUNTED

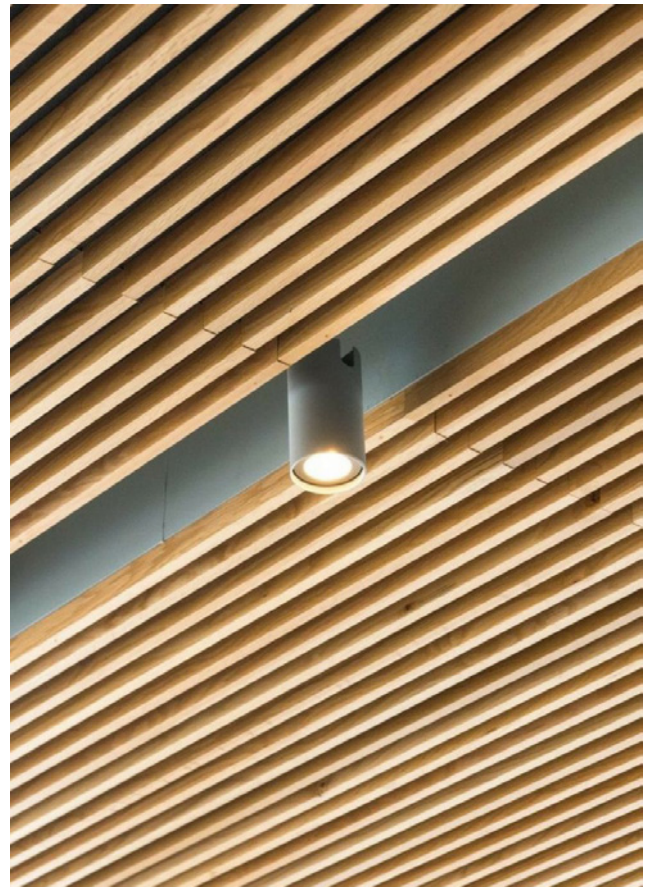
M+E items that require to be mounted on the surface of the timber slats need to be coordinated with the data sheet information, mostly on the dimension of the item itself and the width of the slat.

RECESSED

The M+E object will be fixed on the face of the fabric if the module of the pale (batten width + gap) doesn't allow the item to sit on the face of the timber. The timber slat will be interrupted around the item.

DEDICATED CHANNELS

If the design intention is to not have any interruption of the timber slats, it is possible to have a dedicated metal channel where all the M+E items will be located. The result will be much more clean and tidy.





CERTIFICATION, TESTING & PERFORMANCE

ENVIRONMENTAL

BCL are committed to upholding the values and legislation that ensure safe and environmentally conscious timber procurement. This approach is not only isolated to our timber procurement, but also in a wider context to the responsible purchasing of all construction materials related to our business.

BCL Timber Projects are also fully FSC® and PEFC certified, ensuring full chain of custody certification.

FIRE PERFORMANCE & TESTING

BCL perform 'full systems' testing to EN 13501-1 on our panel systems, as recommended by 'Approved Document part B', which sets out guidelines and requirements for commercial projects in the UK. This ensures the up most transparency to Building Control and clear compliance with fire safety regulations. We are constantly evaluating and testing our systems to stay at the forefront of safety. We have existing tests, which may be used as evidence for your project, or can perform on-demand testing of your specific configuration (as may be required), as part of our service. To discuss testing and performance in more detail, please [contact us](#).

ACOUSTIC PERFORMANCE & TESTING

BCL offer some of the highest acoustic performance available on the market, up to the very top of 'Class A' performance band and regularly test configurations to BS EN ISO 11654:1997 to ensure clear compliance to acoustic performance requirements within buildings. To discuss our acoustic testing and the performance of your system in more detail, please [contact us](#).

UNIQUE / BESPOKE TESTING

Often there may be additional testing requirements for a system, such as bomb-blast air pressure testing, deadload pull-out tests, or even Pre testing specific to a foreign region. BCL will regularly undertake such testing as part of our service to ensure full compliance on key projects. To discuss your requirements in more detail, please [contact us](#).



HERE TO HELP

Getting our knowledge to you and your project smoothly and efficiently

RESPONSIBILITY IN CONSTRUCTION

CHAIN-OF-CUSTODY (COC)

An individual parcel of timber must be tracked from the time it leaves the forest, through processing and marketing channels, to the final consumer.

This enables companies to verify that a 'certified' product has genuinely originated from a certified source.

TIMBER PRODUCT "LIFE-CYCLE" ANALYSIS

Timber and timber products may be evaluated in the future on the basis of 'life-cycle analysis' in the context of circular economy. This is an evolving process of assessment at all stages of a product's life, including resource procurement, manufacturing, construction, service life and de-commissioning or disposal at the end of its useful life.

ISO 9001:2015 QUALITY ASSURANCE

BCL's manufacturing is carried out in a modern factory environment under a comprehensive QA framework and has the capacity to take on very large systems production. Every area of the construction process is monitored and consistently reviewed.



CUSTOMER SERVICES

BCL is committed to providing outstanding customer care and is staffed by experienced personnel. Contact us on:

Tel 0118 934 4155 or Email info@bcl.uk.net

To find more info, please visit www.bcltimberprojects.co.uk

TECHNICAL ADVISORY SERVICE

BCL's construction experience, design knowledge and flexible approach allow Architects to realise even their most challenging designs, practically and efficiently.

Our Technical Advisory Service is staffed by a qualified team with specialist knowledge not only of all BCL products, but also on how those systems integrate with other architectural elements and comply with Building Regulations, Health and Safety, environmental and sustainable criteria.

RESOURCES AND TRAINING

CAD DETAILS

Request over 500 CAD drawings illustrating how typical details can be formed.

SAMPLES

Samples of timber and fabric are available on request.

Call 0118 934 4155 or Email info@bcl.uk.net

CPDs

A range of continuous Professional Development seminars.

For more information or to make a booking: info@bcl.uk.net

CALL **0118 934 4155**

EMAIL **info@bcl.uk.net**

VISIT **bcltimberprojects.co.uk**

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