



**HOWARTH
TIMBER
ENGINEERED
SOLUTIONS**

FOCUSING ON TIMBER ENGINEERING EXCELLENCE

With a dedicated team of timber engineering experts, the very latest manufacturing processes and a strong environmental policy, Howarth Timber Engineered Solutions prides itself on offering proven Timber Engineering Excellence.



I Beams • Metal Web Beams • Trussed Rafters • Spandrel Panels • Cladding

CONSULTATION
DESIGN
MANUFACTURE
DELIVERY
INSTALLATION

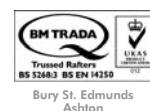
WELCOME TO HOWARTH TIMBER ENGINEERED SOLUTIONS...

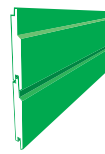
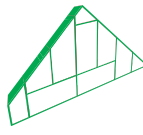
...your dedicated timber engineering partner. Howarth Timber Engineered Solutions is a leading timber engineering specialist, located at four purpose-built sites strategically positioned across the UK. Renowned for its team of timber engineering experts, the very latest manufacturing processes, integrated supply chains and strong environmental credentials, Howarth Timber Engineered Solutions prides itself on always achieving timber engineering excellence.

Part of the Howarth Timber Group of companies, Howarth Timber Engineered Solutions provides the complete service, including consultation at the initial stages of a project through to design, manufacture, delivery to site and installation.

We operate an externally audited ISO 9001:2000 quality management system, as well as product conformity schemes for roof trusses.

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TECHNICAL EXCELLENCE



As timber specialists, Howarth Timber Engineered Solutions offers first class design, production and installation services across the whole of the UK. We are proud of our reputation for quality and reliability in our partnerships with some of the very top names in house building, specification, structural engineering and the public sector.

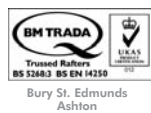
Our integrated management systems – doing things right, first time, every time - make sound business sense, both for us and for our clients and partners. Our externally audited standards demonstrate not only a commitment to being at the leading edge in management systems but, more importantly, they reinforce our corporate policy to provide added value and an attitude of continuous improvement of processes.

Design. Using the UK's most advanced software, Howarth Timber Engineered Solutions' team of specialist designers undergo rigorous in-house training to ensure that efficient solutions are generated for your project. From simple domestic structures to the most complex configurations, Howarth can help you make the most of roof space, create engineered timber floors for predictable performance or provide a complete timber structure. The service includes full manufacturing specifications and feasibility studies. All timber designs comply with BS5268.

Manufacturing. Our manufacturing sites provide national coverage, and our skilled engineers offer a personal service that is second to none. Computer controlled manufacturing conforms to the requirements of ISO 9001:2000 Quality Assurance Standard to ensure code compliance, and is subject to third party audits by BM-TRADA.

Installation. On a project-by-project basis, our experienced contracts managers and erecting teams will work closely with your construction staff to assess risks, prepare method statements and complete the installation process.

Warranties. We can provide client collateral warranties underwritten by appropriate professional indemnity insurance.



PERFORMANCE THAT MAKES A DIFFERENCE



During recent years, increased levels of environmental awareness have led to an improvement in the energy efficiency requirements of buildings. Howarth Timber Engineered Solutions offers solutions to meet, and often surpass, the latest legislative requirements.

Energy efficiency. Timber engineering provides the ideal platform for introducing a highly insulated building envelope. For instance, a high performance timber frame specification is capable of making a significant, cost-effective contribution towards the whole building energy performance rating. In addition to energy savings, building in timber frame also reduces CO₂.

Durability. Modern day production techniques generate a highly engineered solution. Timber retains its natural, dynamic and durable qualities, the result of detailed design and quality controlled manufacturing processes. As with all organic materials, wood requires protection from the elements, and a well designed and protected timber frame structure will have a service life at least equal to its masonry equivalent.

Fire aspects. When properly designed and constructed in accordance with building regulatory requirements, a timber frame construction presents no more of a fire risk than other forms of construction.

Moisture resistance. By its very nature, wood is sensitive to exposure to moisture. However, with effective detailing and an attention to detailing on site, this risk is effectively eliminated. In the case of flooding, once waters have subsided the inundated building can be quickly reinstated. Unlike masonry structures, which may require several months' drying before internal linings are reinstated, timber framed structures regain their integrity normally within a few weeks once the damaged internal linings (plasterboard) and moisture sensitive insulation have been removed and the low level timbers allowed to dry.





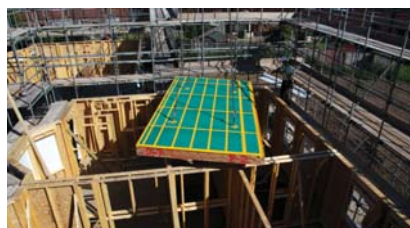
SPEED AND EFFICIENCY I BEAM MANUFACTURE

Howarth Timber Engineered Solutions understands that in an ever changing industry, where regulation, legislation and technology impact to create confusion and uncertainty, there is a need for innovation and simplification of the construction process. As one of the first businesses to introduce engineered timber products into the UK, we are extremely proud of the design and engineering that has gone into our I beam.

The I beam is a professionally engineered composite timber product manufactured within a quality assured process. As with all Howarth Timber Engineered Solutions's products, the supply chain is managed to ensure consistent quality and sustainability credentials. The result is that the frequency of naturally occurring defects, which can impair the performance of solid timber products, is reduced.

The structural timber I beam can be produced in a range of depths and spans to suit domestic and commercial applications. As an engineered composite, the beam dimensions are not restricted by the available dimensions of natural sawn timber. The high-strength to low-weight ratio of the I beam enables larger beams to be readily transported and handled on site.

Although the I beam can be incorporated in a range of fabricated assemblies, it is also sufficiently lightweight and can be readily cut and installed using conventional construction techniques, making it a highly flexible and adaptable product.







SAVING YOU TIME & MONEY METAL WEB BEAMS

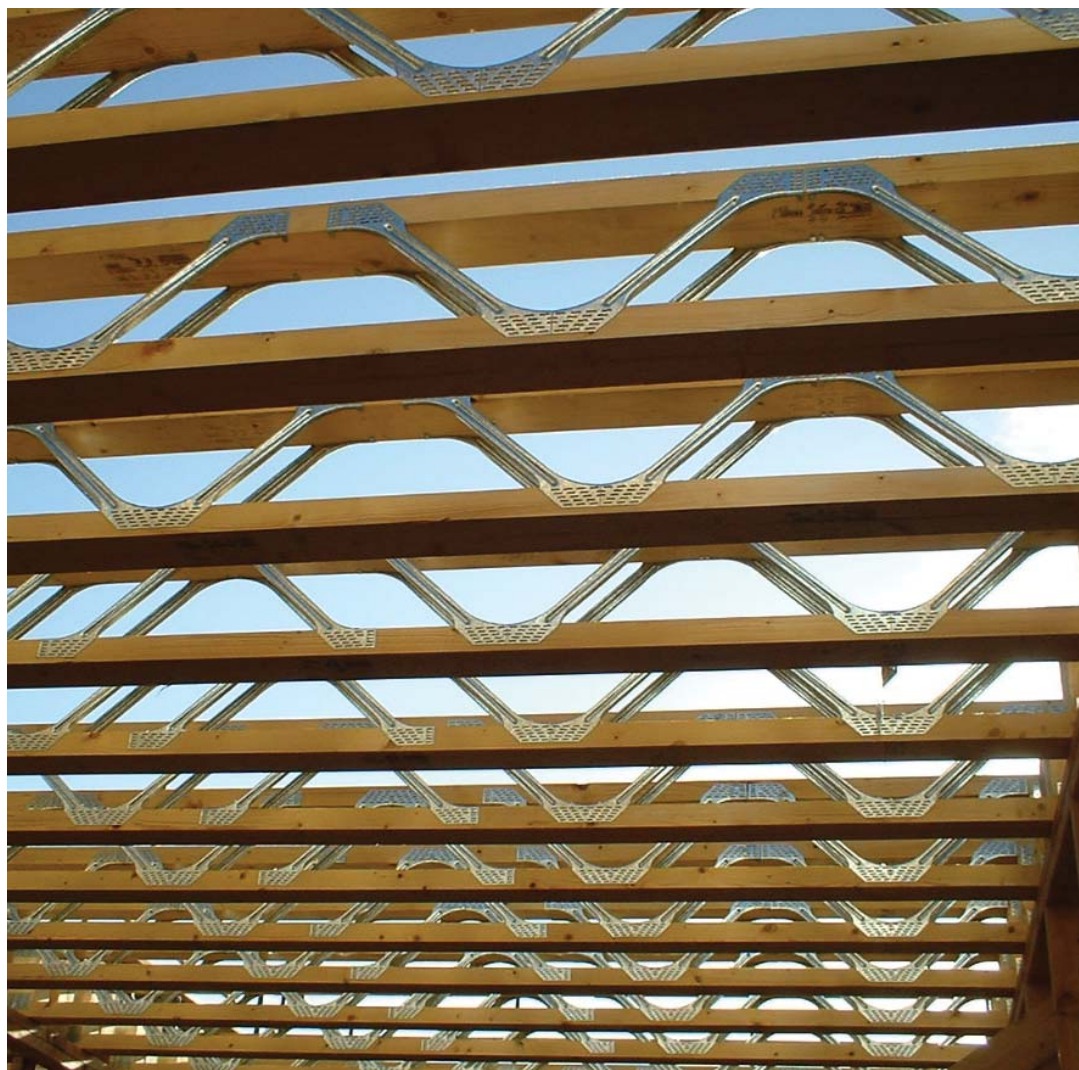
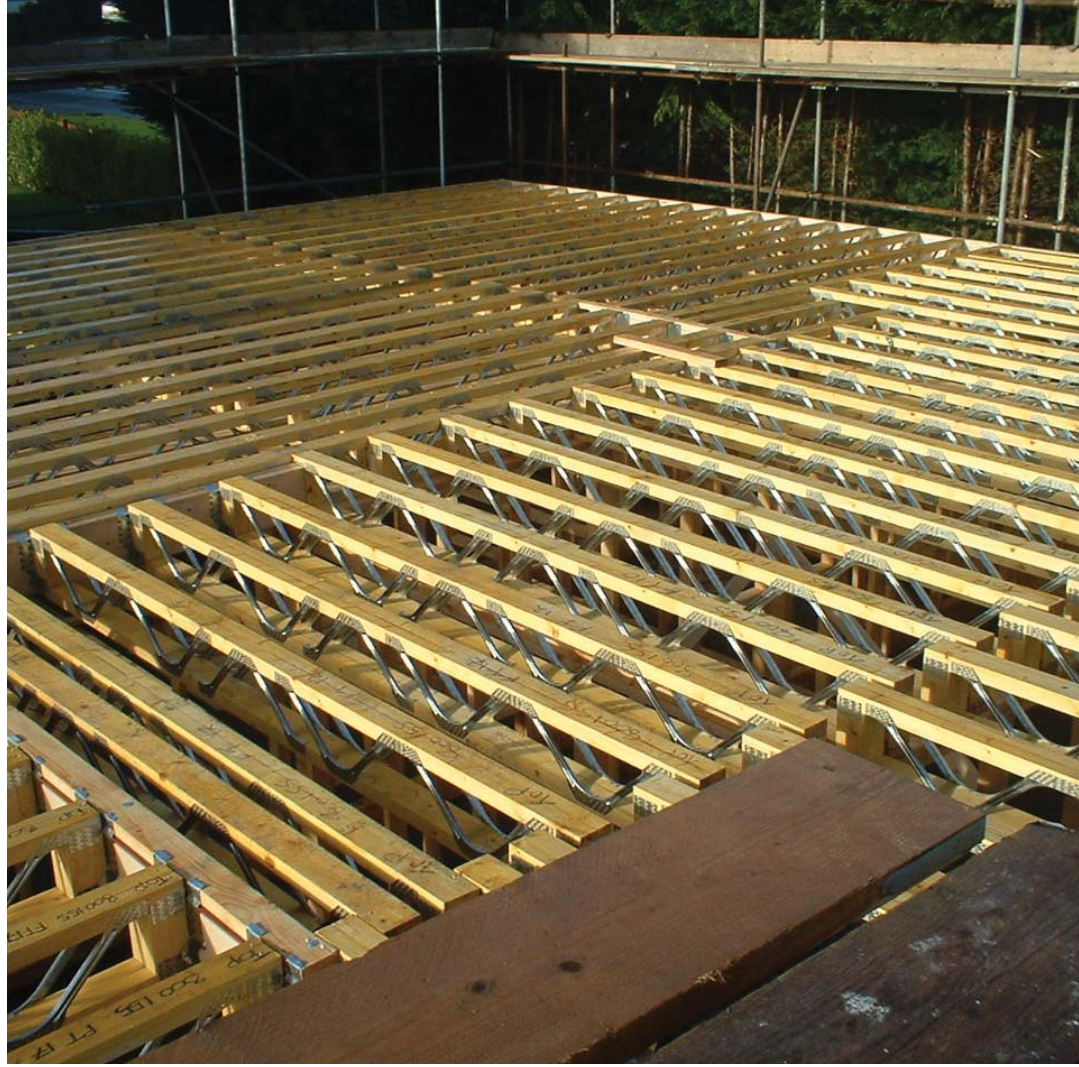
Metal web beams combine structural softwood chords with high strength steel webs to form a lightweight, structural beam for use in a range of floor or wall applications. As a fully engineered solution, metal web beams are simple to set out and install and, crucially, allow for services to run virtually unimpeded.

Metal web beams can span greater distances than solid or fabricated timber alternatives and, given that they provide an economic alternative to steel or concrete beams, considerable savings can be made in the use of raw materials. The open web design makes for simpler and faster installation on site, thereby reducing labour costs. The higher structural integrity of the beam reduces the need for additional intermediate supports, further reducing design and overall construction costs.

The POSI beam is available in a range of depths from 202 to 421mm, offering a diverse range of structural options for the floors and walls of domestic and light commercial constructions. Howarth Timber Engineered Solutions provides a comprehensive design service where we, in collaboration with the building designer, will evaluate the feasibility and subsequently develop an appropriate design solution. In recognition of the considerable time savings that can be achieved with off-site fabrication and assembly, Howarth Timber Engineered Solutions can also supply components ready assembled in cassette form.

Particularly useful for larger project or developments, all POSI beam products are location-coded and bundled specifically for plot or project delivery. We can provide details and guidance on load weights and dimensions for organising and managing site lifting and installation.







QUALITY YOU CAN RELY ON TRUSSED RAFTERS

Now considered part of traditional constructional technology, Howarth Timber Engineered Solutions has been manufacturing trussed rafters for more than 30 years. Engineered trussed rafters still offer the most cost effective and flexible design solution to simple and complex pitched roof constructions.

Howarth's team will formulate a practical design solution based on the supplied architectural outlines or details. This can be undertaken as a single commissioned solution or in collaboration with the primary design team. Howarth Timber Engineered Solutions provides technical advice, design guidance and installation information for each project.

HTE offer two design options:

- 1. Complete roof design - we undertake full design responsibility for the complete roof which includes the design and supply of all structural elements, i.e. roof trusses, infill timber, wind bracing and any associated structural metalwork.**
- 2. Component only design - we undertake design responsibility for the roof trusses and any associated bracing.**

Regardless of whichever option is selected, each project is designed for specific loading and service class in accordance with BS 5268 PT3. Howarth Timber Engineered Solutions can provide the appropriate design warranty and we are able to fully certify our supply chain in accordance with recognised industry standards. In addition, Howarth will evaluate health and safety risks in accordance with CDM Regulations and provide advice so that a full and accurate risk assessment and method statement for site operations can be prepared.

Our design and production process is fully integrated. This generates the necessary geometric profiles, the appropriate timber grade and section, and type and size of connector plate. An automated manufacturing process establishes the truss profile by positioning within a range of jigs and press types, which are selected to reflect the complexity and size of the truss. Where required, timber can also be preservative treated.

All Howarth Timber Engineered Solutions trussed rafters are loaded vertically onto a customised trailer and delivered to site at pre-arranged dates and times. Deliveries will require some form of mechanical off-loading and Howarth Timber Engineered Solutions can provide guidance on load weights and dimensions.







A TRUSTED SOLUTION SPANDREL PANELS

Spandrel panels are pre-assembled structural pieces used as separating walls or external gables, typically supplied as part of a structural roof package.

Howarth Timber Engineered Solutions's spandrel panels are specifically designed and fabricated to complement our range of engineered products and to replace the need for conventional masonry, which is expensive and time consuming to build in-situ.

As the composition of Howarth's spandrel panels is based on current robust standards there is no requirement for pre-completion testing.

As with all Howarth Timber Engineered Solutions' products, each roof structure incorporating spandrel panels is designed in accordance with the Robust Details certification scheme. Howarth can provide the appropriate design warranty and we are able to fully certify our supply chain in accordance with recognised industry standards.

Howarth Timber Engineered Solutions' spandrel panels are loaded vertically or horizontally, as size and configurations allow, onto customised trailers, and delivered to site at pre-arranged dates and times. Once on site the panels will require some form of mechanical off-loading and must be stored vertically. Appropriate lifting and temporary support must be provided at high level to facilitate installation, and Howarth Timber Engineered Solutions can provide guidance on load weights and dimensions.







COMPLETING THE PICTURE CLADDING SOLUTIONS

With customers ranging from local builders and renovators to major contractors and national house builders, Howarth Timber Engineered Solutions is uniquely qualified to meet your timber cladding requirements. Increasingly, timber cladding is being specified by local authorities, architects and developers for its environmental credentials and for its ease of working, natural beauty, performance and competitive price. Please contact us for more information.

HOWARTH TIMBER ENGINEERED SOLUTIONS / CASE STUDY

KENTMERE PRIMARY SCHOOL, ROCHDALE

A range of sustainable engineered timber products was specified and installed in the construction of a new planetary-themed central hall and classrooms at Kentmere Primary School in Rochdale.

The contractor asked Howarth Timber Engineered Solutions to consider the financial and environmental benefits of completely rebuilding it around a timber frame, using existing groundworks. Having proved the case for this approach, Howarth was commissioned to supply the framing for the two-storey design, along with timber roof structures and more than 250, 140mm fully insulated spandrel timber wall panels. Products were assembled offsite and delivered in stages to ensure efficient integration with all parts of the construction process.

The contractor also specified an exposed Glulam laminated roof feature to span the main hall, which was designed, supplied and pre-assembled by Howarth Timber Engineered Solutions before being hoisted into final position.





HOWARTH TIMBER ENGINEERED SOLUTIONS / CASE STUDY

NOMAD HOMES BUILT WITH ENGINEERED TIMBER SOLUTIONS

A range of sustainable timber products was supplied and installed in the construction of 13 new social housing bungalows in North Shields.

The homes were specified with soffits and fascia boards, insulated structural spandrel wall panels and engineered timber joists supplied and installed by Howarth Timber Engineered Solutions.

A very demanding timeframe of 28 weeks to clear the site and construct the new homes placed pressure on all suppliers to the project, and Howarth rose to the challenge by condensing its lead time by four weeks in order to help the contractor meet its obligations.

Access and egress to the site presented further challenges but, through careful management and co-ordination throughout the construction process, the project was completed successfully and ahead of schedule.

Total build costs for the project was £1.13m and the homes are now occupied.

HOWARTH TIMBER ENGINEERED SOLUTIONS / CASE STUDY

FORMER MILL SPANNED WITH HOWARTH'S ENGINEERED ROOF TRUSSES

Howarth Timber Engineered Solutions manufactured and delivered to site around 90 bespoke timber trusses, each 16.7m metres long, to span the roof void of a refurbished mill, now converted into 30 high quality apartments.

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The building, known as The Spinning House, is widely regarded as one of Batley's finest former textile houses, and has been sympathetically converted into desirable accommodation. Howarth was appointed to design and manufacture the roof trusses, bracing and associated metalwork, based on its successful track record in major projects.

The inner shell of the 19th century building presented many challenges to the design of the roof trusses. Several existing structural steel beams had to be accommodated in the fit, along with an irregular layout of internal walls. Furthermore, the roof space was designed to accommodate two attic apartments and a hallway in each truss.

Specialist vehicles were hired to transport the trusses to site, which is located in a built-up and highly populated area of the West Yorkshire town.





Boise Cascade *Engineered Wood Products*

Boise Cascade is one of the world's leading producers of engineered wood products. Sustainably manufactured in state-of-the-art facilities, BCI® Joists, VERSA-LAM® beams and VERSA-STRAND® rimboards enable the company to provide our customers with high quality and cost competitive floor and roof solutions from stock.



HOWARTH **TIMBER ENGINEERED** **SOLUTIONS**

TIMBER ENGINEERING EXCELLENCE

working with



MiTek is the world's leading supplier of connectors, software, technical services and machinery to the timber engineering industry. MiTek is proud to supply Howarth Timber Engineered Solutions with its requirements for the design and manufacture of trussed rafters and Posi-Joist metal web.



SIMPSON

Strong-Tie

Simpson Strong-Tie designs and manufactures the widest range of connectors available for engineered timber construction. These include restraint straps and joist hangers for timber or masonry, as well as a host of truss clips and roofing connectors. CE approved solutions reduce house building time and cost.



Swish **BUILDING PRODUCTS**

Swish Cellular PVC works well as a sustainable, weatherproof roofline system, protecting timber roof trusses from the elements without the need for maintenance. Swish offers the most sustainable PVC roofline package, with a rainwater system containing 84% recycled material that creates 70% less carbon during manufacture. PVC is 100% recyclable.



Swedish timber producing group Vida is proud to be a supplier of CLS and TR26 products to Howarth Timber Engineered Solutions. Vida Wood UK is committed to providing a fast and efficient service from terminals in Chatham and Rochester for the supply of timber to Howarth's timber roof truss manufacturing plants. The Vida group supplies PEFC or FSC certified timber products that are graded to European Standards.



Howarth Timber Engineered Solutions is proud to offer innovative solutions. Reinforcing this is a comprehensive network of leading supply chain partners, many of which are innovators in their own particular field of expertise. Howarth Timber Engineered Solutions values the strong working relationships it enjoys with its supply chain, and the benefits to our own customers are numerous.

th leading supply partners...



EGGER (UK) Ltd has supplied Howarth Timber Engineered Solutions with premium tongue and groove flooring boards for many years, cementing a strong working relationship. These value-added P5 grade products include EGGER Protect and EGGER Peel Clean Xtra, giving an innovative edge to Howarth Timber Engineered Solutions' extensive stock range.



ITW Industry is proud to be long standing suppliers to Howarth Timber Engineered Solutions. Our Cullen timber engineering connector range is used for Howarth's roof truss and I-Joist construction, whilst our Paslode, Duo-Fast, Haubold and SPIT powered fastening systems are used to assemble off-site manufactured components.



Howarth Timber Engineered Solutions

The complete timber engineering solution providing national coverage with a local focus

ASHTON

Howarth Timber Engineered Solutions Ltd.
Moss Sawmills, Katherine Street,
Ashton-Under-Lyne, Lancashire
OL7 0AG

Tel: 0161 339 4581
Fax: 0161 343 2220
Email: ashton@howarth-te.com

BRIGHTON

Howarth Timber Engineered Solutions Ltd.
Brighton Airfield, Highfield Road,
Bubwith, Selby
YO8 6LY

Tel: 01757 288 300
Fax: 01757 288 796
Email: brighton@howarth-te.com

BURY ST EDMUNDS

Howarth Timber Engineered Solutions Ltd.
Howarth House, Hollow Road
Bury St Edmunds, Suffolk
IP32 7QW

Tel: 01284 772 700
Fax: 01284 755 567
Email: bury@howarth-te.com

HUDDERSFIELD

Howarth Timber Engineered Solutions Ltd.
Railway Sawmills, Burbeary Road
Lockwood, Huddersfield
HD1 3UN

Tel: 01484 513 377
Fax: 01484 425 675
Email: huddersfield@howarth-te.com



For further information email:
info@howarth-te.com

Visit our comprehensive website:
[www.howarth-timber.co.uk/
timber-engineering](http://www.howarth-timber.co.uk/timber-engineering)

