



Ayrshire Metals Limited





CONSTRUCTING THE FUTURE WITH STEEL FRAMING SYSTEMS

Ayrshire Metals Limited is one of the UK's leading manufacturer of cold rolled steel profiles, offering quality products and reliable service. Backed by over a hundred years specialist experience, expert assistance is always available.



Ayrshire Steel Framing

Numerous benefits are available when compared with masonry and timber building structures. The load and span carrying capabilities of light steel frames makes this form of construction ideal for a wide range of applications. Ayrshire Steel Framing also includes our **AyrFrame™** modular building system.



SwageBeam™ – Portal Framed Building System

Our system is a fast and economic method of creating single and multiple span buildings. **SwageBeam™** is used throughout in conjunction with specially designed eaves and ridge brackets to create a lightweight high-performance structure. A total package from design through to completion is available.



SwageBeam™ – Mezzanine Floors

Various options are available to those wishing to build storage platforms and mezzanine floors. **SwageBeam™** floor beams can be used throughout as in the case of our Slimline '220' and Slimline '300' systems or alternatively with heavy hot rolled main beams. A comprehensive range of accessories completes the package.



Purlins & Rail Sections

Ayrshire's comprehensive Zeta I, Zeta II, Zed Purlins and cladding rail systems cater for most requirements and are all compatible with sleeved, double-span and heavy-end bay systems with which we can also provide accessories such as cleats and sag bars.

Ayrshire Metals manufactures a range of different cold rolled steel framing systems to suit a variety of requirements. Most of our product range is manufactured from S450 high grade zinc coated galvanised steel and a variety of sizes, lengths and gauges are available to order.

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Product:	ASF
Location:	Kirkcaldy
Architect:	BDP Architects
Main Contractor:	Balfour Beatty
SFS Installer:	PFP
Scheme:	Hospital
Scope:	Installation of Ayrshire ASF to form panels within structural steel frame

In 2011 a major new wing was completed at Victoria Hospital, Kirkcaldy and comprised of 17 Wards, 11 Operating Theatres, an A&E Unit and a Maternity Unit.

Ayrshire Metals Limited are proud to have supplied Steel Framing for this £150m development.

Ayrshire Steel Framing was used as an infill system between the main steel structure, ready for insulation and cladding, thereby effectively creating a Rapid Dry Envelope.

During Construction



Barnsley College



Barnsley College is a further education college just outside the town centre of Barnsley and covers just over one acre in area.

The £50 million development programme of Barnsley College offers external windows to each major teaching area, providing natural daylight via elements such as the Atrium and used **Ayrshire Steel Framing** for infill walling when constructing the external envelope of the building. **Ayrshire** designed and supplied on time, some 70 tonnes of structural framing over a 6 month period. The versatile nature of our system enabled various cladding types to be supported, these included terracotta rainscreen, acrylic render and aluminium panels.

The College provides 'A' Level, vocational courses and higher education courses. After seven years of planning and over two years of building, Barnsley College opened the doors of its new campus to students on the 5th September 2011.

During construction, the make-up of the building had been derived to respond to the College's requirement in keeping the basement in operation whilst this exciting new project was being completed.

Product:	ASF
Location:	Barnsley, Yorkshire
Architect:	Jefferson Sheard
Main Contractor:	Miller Construction
SFS Installer:	ACE Partitions
Scheme:	College
Scope:	Installation of Ayrshire ASF to form panels within structural steel frame



*Artist impression



Product:	ASF
Location:	Blackpool
Architect:	Cassidy & Ashton
SFS Installer:	Silver Lining
Scheme:	Two storey school comprising classrooms, gym, halls & offices
Scope:	Installation of Ayrshire ASF to form panels within structural steel frame

Lotus School in Blackpool is a £5 million purpose built facility for children with social, emotional and mental health needs (SEMH). The school is built over two stories with classrooms on both floors along with a science lab, school hall, and specialist therapy rooms. The school caters for 48 local students who were previously reliant on Educational facilities outside of the Blackpool Borough.

Ayrshire Metals worked alongside the Main Contractor and appointed Sub-contractor to design and deliver a robust Ayrshire steel framing (ASF). **Ayrshire Metals** attended design team meetings to ensure the ASF system met both the Clients and Main Contractors requirements. The **ASF** system comprised of panels spanning the structural steelwork at ground and first floor along with the parapet.

The **ASF** system allowed for a Rapid Dry Infill between the structural steel and is designed to form an inner leaf of the external walls providing a dry environment for internal trades to gain access much quicker compared to traditional building methods. The **ASF** system also acted as a carrier for external cladding, in this case a brickwork leaf to ground floor and insulated render to first floor.

In total 15 tonnes of Cold Rolled Steel was delivered to Lotus School with the install of the **ASF** system taking a duration of 5 weeks. The rapid installation of the **ASF** system allowed the project to continue ahead of programme allowing students to benefit from the Educational facility from summer 2020.



1st Way Wembley



EDUCATION

Wembley Park is one of the largest regeneration projects in the country, with a re-development plan of £2.5 billion. Located at the heart of Wembley, opposite England’s National Football stadium is 1st Way Campus development.

1st Way Campus will provide 678 beds for the ever-growing student population, with a gym, sports lab, canteen, library and student union on site. It will provide academic and office space for the University College of Football Business.

The local area offers fantastic leisure facilities; Wembley Stadium, SSE Arena, London Designer Outlet plus numerous food options, making it a vibrant, desirable place to work & live. 1st way campus is extremely well connected to central London, with a 20- minute tube journey to King’s Cross Station.

Location:	Wembley, London
Architect:	CZWG Architects LLP
Developer:	Cole Waterhouse
Installer:	CCS Facades Ltd
Scope:	To provide infill SFS to form the external walls at ground floor and for the 3 roof top penthouses. The structure was designed to be used as student accommodation and office space.

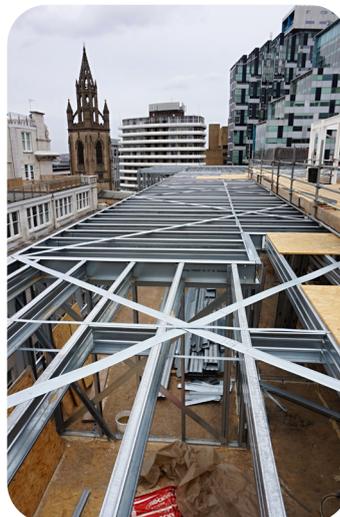
Ayrshire are extremely proud to have been the system of choice on the 1st Way campus development for one of our key partners CCS Facades. We designed and supplied steel framing to form the external walls. Through early collaboration we were able to provide the SFS infill across the entire ground floor, utilising our compound members to form the opening frameworks. The upper floors were formed using a SIPS system but Ayrshire Steel Framing was used on the ground floor for its robustness and spanning capabilities. We also provided steel framing to form the free-standing parapets and to be used as the external walling on the top floor penthouses.



Product:	ASF Full Structure
Location:	Liverpool
Structural Engineer	Elliot Bond Consulting
Architect:	Falconer Chester Hall
Main Contractor:	Legacie Developments
SFS Installer:	Elite (UK) Construction
Scheme:	Two storey extension to an existing building to create luxurious residential apartments, just 200m from Liverpool Town Hall
Scope:	Design and value engineer a load-bearing full structure with sloping walls at the top floor.

Working with the Structural Engineer (SE) early on allowed some tweaks to the floor layout to make it more cost-effective for a full structure build, thereby saving the client money. Part of the initial design showed an expensive angled façade option on the top floor. Our specification team proposed an alternative value engineered solution which was agreed by our engineers and gratefully accepted by the whole design team.

Early involvement is key when aiming to offer a value engineered approach, too many times we see a rushed purchase of steel sections, resulting in higher costs for foundations and primary frame elements. The advice from our specification team is simple, pick either Time or Cost as the Quality at Ayrshire Metals is always assured.



Birchway Eco House



RESIDENTIAL

Birchway Eco-Community is an exciting innovative housing initiative developed by Paradigm Housing Group in partnership with the London Borough of Hillingdon.

The unique eco development of 5 apartment blocks with 'green' curved roofs and solar powered communal areas sets new standards in environmentally-friendly design and construction. Off-site construction begins at **Ayrshire Metals Limited** with the manufacture of cold-rolled, **AyrFrame™** modules from galvanised steel.

Delivery of fully fitted steel-framed 'rooms' direct to site speeds up the building process resulting in considerable cost savings, reduced on-site construction noise and safer building methods.

Carbon emissions from material suppliers are minimised as completed modules are delivered in a single journey on low-emission transport.

Involvement with the Birchway project has enabled **Ayrshire Metals Limited** to demonstrate its commitment to environmentally sustainable construction.

Product:	AyrFrame™
Location:	Hillingdon
Consulting Engineer	Peter Dann Consulting
Scheme:	Affordable Housing
Scope:	Modular AyrFrame™ Unit





Product:	ASF
Location:	Perranporth, Cornwall
Architect:	Stride Treglown
Main Contractor:	Acorn Blue: Client Interserve: M/C
SFS Installer:	DNS Interiors
Scheme:	Beach-side Apartments
Scope:	Create a new development of apartments to replace out of date original building

With more people looking for the perfect staycation in the UK, and 57% of UK population preferring to stay on UK soil, More and more apartments are popping up all over the UK.

With possibly the best location on the north Cornwall coast this stunning set of apartments were built in the traditional Cornish town of Perranporth.

Ayrshire supplied all the **ASF** steel framing to complete this stunning build, with views straight out over the sea.

Assisting with Elevations and full calculations to make for a straight forward build, this backed up with the sales and engineering staff that were on hand from start to finish.

As with all **Ayrshire** supplied products sections are formed as a bespoke part that is engineered in house at our manufacturing plant in the Midlands.

Our aim is to accomplish the optimum design by using our AyrSuite™ software to calculate the best most cost effective solution for our clients.

With our long and established background of supplying to projects in all shapes and sizes around the world, any client can rest assured that they are getting the highest quality in all areas.



Buena Vista, Gibraltar

RESIDENTIAL



The Buena Vista development is a luxury collection of executive town houses and detached villas with gardens, solarium's and swimming pools.

Located in Gibraltar on the historic site of the Buena Vista Battery this unique development has continental views across to Africa and Europe.

Ayrshire Metals worked closely with the Engineers and Construction firm to provide Light Gauge Steel Framing as the primary structure, reducing the need for deep foundations and increasing the speed of construction.

The light weight frames are structurally efficient providing a cost effective system.

The versatility of the system allowed the designers to customise the buildings to suit specific home owners choices.

Product:	ASF
Location:	Gibraltar
Architect:	AKS
SFS Installer:	Proseal
Scheme:	Luxury Houses
Scope:	Ayrshire Steel framed houses



RESIDENTIAL



Product:	ASF
Location:	Leeds
Architect:	Den Architectural
Main Contractor:	Demec Property
Installer:	Demec Property
Scheme:	33 Flats
Scope:	Install internal ASF to support primary frame

The construction of a block of 33 flats, in York Road, Leeds required additional support. The exclusion of windposts in the buildings primary structure meant additional bracing was required. Ayrshire engineered a design with a robust solution fixed internally to the outer wall. A header track allowed for the deflection of the expansion between floors. The image below shows the fixed point against the outer wall and the bottom image shows the completed stud panel.



34-36 Madingley Road



RESIDENTIAL

Installer comments:

“Using **Ayrshire Metals** proved to be advantageous on the Madingley Road project. By manufacturing and delivering the required sections in just under 2 weeks, it allowed us to start on site quicker. This allowed us to meet the demands of the contractor, Dean & Dean Construction. The main objective set was to ensure the build was weather-proofed quickly so that other trades could start on site earlier than if it were a traditional build method.”

“We would highly recommend using **Ayrshire Metals** to Clients/Developers/Main Contractors who are looking for a manufacturer to produce high quality and efficient designs, manufacture & deliver a high-quality product with good turnaround times”

“Dan West at West Drylining & Facades”

Product:	ASF Infill
Location:	Cambridge
Architect:	PIP Architecture
Main Contractor:	Dean & Dean Construction
SFS Installer:	West Drylining & Facades
Scheme:	10 two-bedroom & 6 one-bedroom apartments
Scope:	Installation of Ayrshire light gauge infill steel framing to form panels within an RC frame

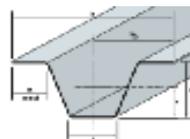




Product:	TH80
Location:	London
Architect:	Entourage Live
Main Contractor:	Acorn Event Structures
Installer:	Acorn Event Structures
Scheme:	Theatre
Scope:	Creation of temporary theatre structure that could be easily de-constructed

Acorn Event Structures is one of the UK's largest providers of indoor and outdoor scaffold based event structures, specialising in the supply and installation of a wide range of temporary structures and ancillary support services. In this instance they were tasked with the creation of a temporary theatre structure at the former BBC Media Village site at White City in West London.

The temporary nature of the project made it unique. It needed to be built on an existing car park area and would have a projected life of just two years. This could be extended on inspection and an extension to the existing lease of the land. The structure also needed to have the capability to be taken down and rebuilt and re-purposed at another location (should the client require it).



Our pressed TH80 (80mm deep) Top Hat Profile was used to build the main dome structure of the Auditorium (the vertical section shown clearly in the image below).



This provided a sound structural member with which to affix the horizontal cladding panels (again shown clearly in the images adjacent).

The panelling was erected speedily and in such a way as to be easily dis-assembled at the end of the expected life of the project.



National Convention Centre, Dublin



COMMERCIAL

The Convention Centre Dublin, opened in Sept 2010. It is Ireland's state-of-the art international conference and event venue, positioned in the Spencer Dock area on the banks of the River Liffey.

Designed by top Irish architect Kevin Roche, the €400m Convention Centre includes a 2,000-seat auditorium, 4,500m² of flexible exhibition and banqueting space, multi-purpose meeting rooms, conference and lecture areas.

Ayrshire Metals Limited one of Britain's leading manufacturer of cold rolled steel profiles, are proud to have supplied lightweight load-bearing steel stud wall panels as a structurally-efficient and cost effective construction solution for this iconic landmark building.

Product:	ASF
Location:	Dublin
Architect:	Kevin Roche
Main Contractor:	John Sisk & Sons
SFS Installer:	Errigal Contracts
Scope:	Installation of Ayrshire Steel Framing to form wall panels



COMMERCIAL



Product:	Zed Purlin / Zeta Purlin
Location:	Pershore, Evesham
Architect:	Stride Treglown
Installer:	John Ruck
Scheme:	Warehouse & Distribution
Scope:	Increase the warehousing space to accommodate increased business capacity.

When Marshall's were looking to expand into new warehousing, they chose John Ruck Construction Ltd a company with an established and enviable reputation in their industry to build their new warehouse and distribution centre.

Our sections form the main roof structure and side rails of the building. The sections used on this project were the 'Z' Purlin and 'Zeta 2' Purlin to which the cladding would be added. The Purlins are fixed to the hot rolled primary frame using cleats and form the structural integrity of the building.

In all this 66,000 square foot project was facilitated by using 27 tonnes of cold rolled galvanised steel Purlins provided by Ayrshire Metals Ltd and was completed on time and within budget to the total satisfaction of Marshall's Transport Ltd.



Oulton House Farm Agricultural Building

COMMERCIAL



Oulton House Farm required a new purpose built Agricultural Building to farm cattle. The new building will house up to 500 cattle with the client optimistic that the new and improved environment for the cattle will increase milking returns. The cold rolled sections of the building were designed and detailed in Ayrshire Metals AyrSuite™ 5 software. The Zeta 1 Purlin negates the requirement for anti-sag bars for the majority of modern roofing applications up to 7.6 meter spans, making the Zeta 1 the ideal choice for this project as it offers maximum efficiency and cost effectiveness.

Progress on the build was swift due to the Zeta 1 sleeved system being utilised. The Ayrshire Metals sleeved system uses single bay Purlin lengths joined with connecting sleeves at alternate supports. All Purlins were sleeved across the penultimate support. This system is considered to be the most efficient on the majority of roofs sloping less than 12 degrees and having bay centres up to 7.6 metres.

Product:	Ayrshire Zeta Purlin
Location:	Staffordshire
Main Contractor:	RNH Construction
Installer:	RNH Construction
Scheme:	Agricultural Building to house cattle
Scope:	Construction of a portal framed agricultural building



The finished building showcases the benefits of consulting Ayrshire Metals at an early design stage. The building now provides increased access and movement for the cattle which met the design requirements from the client.



Product:	Zed Purlin / Zeta Purlin
Location:	A40 Oxford
Main Contractor:	Spec Projects
Installer:	John Ruck
Scheme:	Commercial Business Units
Scope:	Provide small to medium business units with excellent transport links for the lease/ rental market

The area known as Stanley Court is a new development comprising of 34 units within an established commercial area of the town.

The buildings incorporate the use of Ayrshire Metals 'C' and 'CW' galvanised steel section to make the mezzanine floor at mid- level as clearly seen in the image below.

Ayrshire Metals Limited was the chosen supplier by John Ruck Construction Ltd because they hold the same values of delivering an excellent customer experience, excellent factory-built precision components and ensuring that products and components are delivered to site within timescales to facilitate the build programme.



Instant Living Space

MIXED USE



Instant Living Spaces constructed an annexed office and roofing refurbishment to Grade 2 listed police station in Saffron Walden.

The use of SFS infill for walls and construction of an additional free-standing structure enabled bespoke detailing and creation of additional space in a build that has stringent restriction imposed on it due to its listed status, whilst being in keeping with the character of the building.

Product:	ASF
Location:	Saffron Walden
SFS Installer:	Instant Living Spaces
Scheme:	Refurbishment of Grade 2 listed Police Station
Scope:	Roof refurbishment and annexed office





Product:	SwageBeam™
Location:	Henley-on-Thames
Main Contractor:	Greenland
Installer:	Greenland
Scheme:	Design Studio
Scope:	Create a floating design studio that blends in with surroundings

As a business we see a vast number of projects that we will create feasibility studies to assist the customer on whether the project is feasible or not. A private client of the business approached us with an unusual request, to create a floating design studio. The site, nestled in the leafy Oxfordshire town of Henley on Thames right next to the river was going to be a unique opportunity to explore the **Ayrshire** product range.

After an initial meeting with the client and their Architect we were given free rein to develop ideas for the studio. The main focus point was that the studio, located so close to the river was subject to annual flooding of around 1-3 foot of water. So, the idea was hatched that instead of building the studio on stilts due to planning constraints it would float as the water level rose. The main reason Ayrshire was involved was one

of our products selling points “build fast and light” and this appealed to the design team as they were looking to build in a limited time window. A raft made from our unique SwageBeam™ range of products that would create a robust matrix to attach floatation tanks to enable the entire building to float.

Again, the benefit of using Cold rolled steel is that it is far lighter than conventional Hot rolled and yet gave all the required specification to do the job.

Site surveys done and with the help of the area sales manager the client was able to use Ayrshire’s AyrSuite™ software to detail the sections ready for installation. Time was also spent surveying the site location as access was going to be restricted, requiring the use of a High ab to make the delivery go as smoothly as it could.

The building of the structure was taken on by the client’s own team that found the bolt together nature of the product quick and easy to erect.

Luckily the floods have not been to bad over the last year and the full elevation has not had to be tested, however this stylish and unique building gives peace of mind to the owner.

Centenary Square

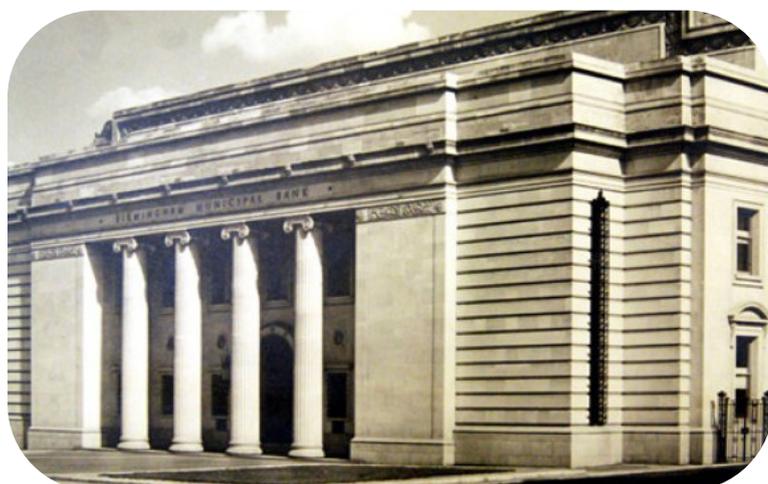


MIXED USE

The Birmingham Municipal Bank was created by the local authority in 1916 to enable ordinary people to save their wages and to support the war effort. The building located on Broad Street in Birmingham City Centre was bought by the university of Birmingham in November 2017.

The university bought the derelict grade II listed building with plans to create a venue to showcase its work and research. The building will accommodate a programme of exhibitions and events for the community and provide work spaces for graduate start-up businesses.

The Broad street facing front remains unchanged with the iconic columns, however a complete overhaul of the southern end which required Ayrshire steel framing to create an elegant rear entrance to the main hall.



Product:	ASF
Location:	Broad Street, Birmingham
Architect:	Glancy Nicholls Architects
Main Contractor:	Galliford Try
Installer:	Stone Connection (UK) Ltd
Scope:	Infill SFS walling to form new entrance to the old municipal bank, Birmingham. Structure is a listed building, designed by T. Cecil Howitt that is being transformed into a multi-use building for the University of Birmingham.

Ayrshire steel framing was used to infill a new hot rolled steel frame, which was then clad in new polished stone cladding provided by Stone Connection UK Ltd. The Ayrshire Metals engineer's designed opening frameworks to allow for fenestrations in the façade to accompany windows and louvres. Ayrshire steel framing also formed parapets at roof level and provided infill around the existing glass roof and trusses.

Royal Chamber & Terrace, Guernsey

MIXED USE



Product:	ASF
Location:	St Peter Port, Guernsey
Architect:	Capita Architecture
Scheme:	Residential Development
Scope:	External RDE walls

Located in the picturesque sea views of Guernsey, **Royal Terrace** is a 90,000 sq.ft mixed commercial & residential project.

In the same block is **Royal Chambers**, a 60,000 sq.ft office building.

The Royal project is valued at a royal £200m!

Ayrshire Metals Limited played their part in this Royal project by supplying Ayrshire steel framing.

Ayrshire steel framing is an innovative and cost effective alternative to traditional bricks and mortar.

Moreover, it is a cost effective way to add significant value to your project.

Ayrshire Metals Limited is one of Britain's leading manufacturer of cold rolled steel profiles, offering quality products and reliable service. Backed by over fifty years specialist experience, expert assistance is always available.

Ayrshire Metals have a team of dedicated engineers based at our head office in Daventry, who work alongside our sales team to support your business throughout the tender and construction process. They achieve this by designing the most cost effective and efficient designs for your build, by utilising their experience and our unique **AyrSuite™** software with incredibly quick turnarounds!

Ekky Village

MIXED USE



Bespoke Construction Services played an important role in the delivery of this project. Ayrshire Metals Limited worked closely with Bespoke's on-site teams to deliver not just a fast build solution but an elevation design service that was both quick and very cost effective compared to the normal market costs.

Bespoke frequently had to review on site details that weren't exactly as per plan, but discussions with our engineers soon found solutions for every problem, so that their work met the required timescales. Even when some of the slab edges were protruding by over 400mm compared to the connections above (Shown in the 3 below images), Ayrshire Metals Limited managed to provide a cost-effective solution to get around the problems at hand.

Product:	ASF Infill
Location:	Summerfield St, Sheffield
Structural Engineer:	Elliott Bond Consulting
Architect:	Acanthus WSM Architects
Main Contractor:	Winvic Construction
SFS Installer:	Bespoke Construction Services
Scheme:	Mixed development project ranging from 5 to 10 storeys providing 447 student and 237 build to rent apartments, including café bars and restaurants at ground level.
Scope:	Design a Steel Framing System (SFS) solution and provide cost-effective elevation drawings for insurance sign-off.





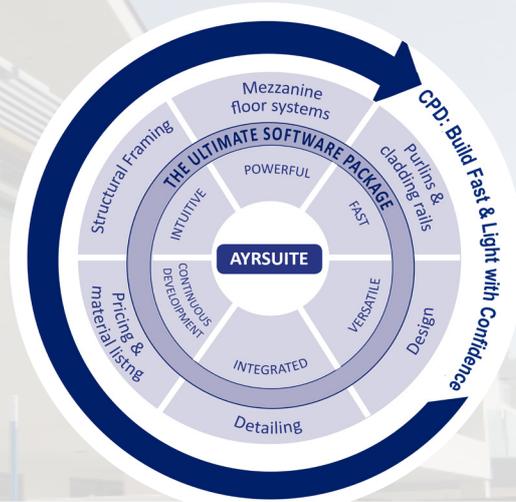
Ayrshire Metals Limited

To learn more about:-

Ayrshire Steel Framing

& to obtain a **FREE** copy of our software **AyrSuite™**

Please contact our experienced sales team who will be happy to assist.



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LIGHT STEEL FRAME
ASSOCIATION
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