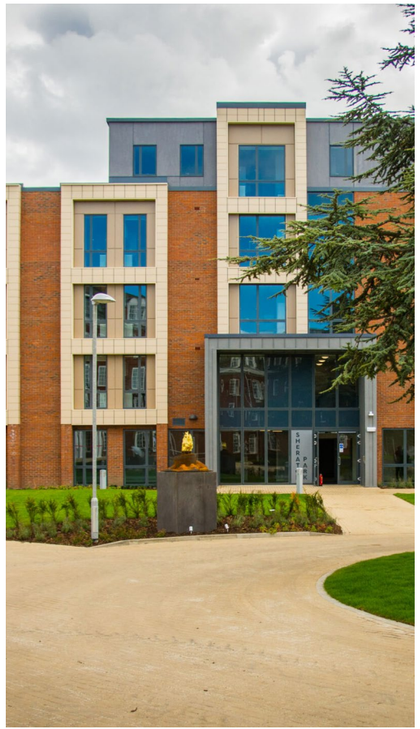


Capability Statement: **Education**







Welcome to Fairhurst

We are a leading UK-based engineering consultancy and have been providing high quality services to our clients for over 120 years.

Over time the business has evolved from a civil and structural design practice to become a major multidisciplinary consultancy. Fairhurst's success is built on lasting relationships and repeat business. Our reputation for skill, expertise, and personal commitment ensures the successful delivery of innovative, cost-effective, and sustainable solutions. At Fairhurst, you can be confident that your project is as important to us as it is to you.

About Us

Our consultancy spans multiple disciplines, providing clients with a comprehensive 'one stop shop' experience for any project.

Tailoring our services to your unique requirements, our qualified and experienced personnel are readily available for support at all stages.

Our management structure ensures that the Partners are personally involved and responsible for the successful delivery of each and every project.

Our Disciplines

- Civil Engineering
- Structural Engineering
- Transportation
- Geotechnical and Environmental Engineering
- Transport Planning
- Planning and Development
- Landscape and Urban Design
- Water Services
- Health and Safety
- Mining Legacy Specialists (JWHRoss)

We offer our services across ten disciplines, drawing on our expertise in the UK.

National Coverage, Regional Expertise

With over 500 staff across 17 offices in the United Kingdom, we cover a wide range of disciplines and offer comprehensive support. Our commercial awareness and regional expertise ensure practical solutions that meet the complex requirements of any development.



Our offices

- Aberdeen
- Bristol
- Dundee
- Edinburgh
- Elgin
- Glasgow
- Huddersfield
- Inverness
- Leeds
- London
- Newcastle
- Plymouth
- Sevenoaks
- Taunton
- Thurso
- Watford
- Westhill

17 Offices | **20** Partners | **500+** Technical Staff

Our Approach

Specialised Service

We allocate a key project lead and on larger projects, this will be a Partner or Technical Director. The Partners are all practicing engineers focussed on tailoring our service to suit each client and project's individual needs.

Innovation

We pride ourselves in embracing innovation and changing technologies; keeping abreast of emerging trends and challenging ideas on every project. Our broad sector experience affords the ability to share new ideas across our business.

Delivering Value

We analyse the client's project needs and utilise our sector experience in value engineering to maximise cost savings and share best practices. We aim to deliver cost effective and efficient designs that evolve with the project over time.

Flexibility & Responsiveness

We work with our clients to overcome any challenges and adopt a flexible approach to the technical solutions offered. Where unforeseen situations develop, we work with you to overcome these in a proactive manner.

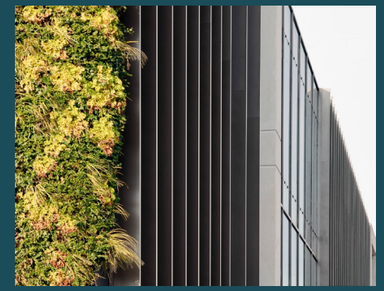
Collaboration

We value the importance of developing our working relationships with all project stakeholders to ensure the success of each project and to demonstrate our expertise.

Programme Management

We implement control and reporting mechanisms to identify and communicate potential threats early in a programme while adhering to financial reporting principles to manage budgets and expenditures successfully.





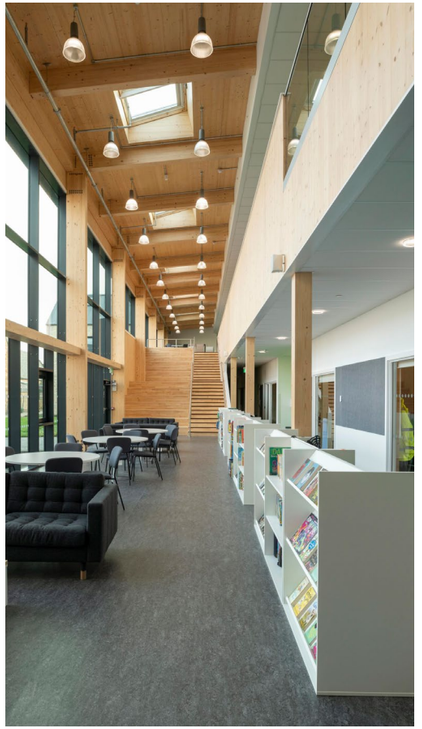


Education

Fairhurst has successfully undertaken works on a number of educational facilities offering multidisciplinary services to clients for projects of all sizes.

We developed a strong sense of the issues surrounding educational developments and the importance of excellent working relationships with the client. As a result, the firm has been able to add value to projects by adopting a proactive and flexible approach achieved through practical and deliverable measures to satisfy the Local Planning Authority and our clients. This has resulted in innovative and cost effective solutions delivered on site.









Skills and Services

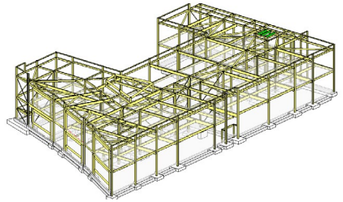
Civil Engineering

- Design and feasibility
- Drainage condition and capacity surveys
- Hydraulic and Hydrological Analysis
- Flood Analysis and Control
- Water Supply and Sewerage Treatment
- Highway and Infrastructure Design
- Car Park Design
- Preparation of specifications and Construction Drawings
- Advice during construction period



Structural Engineering

- Design management, review & co-ordination at feasibility and main design stages
- Resourcing and programme control
- Structural design
- Structural Inspections
- Co-ordination of initial surveys and reporting
- Production of Tender / Cost Information
- Assistance with Sub-contactor design development
- Construction Assistance and efficient resolution of site queries



Geotechnical & Environmental

- Initial site specific enquiries (coal authority, environment agency, etc.)
- Environmental site survey/ walkover
- Geo-environmental desk study including constraint plans
- Design of site specific site investigations
- Close liaison with schools to agree time frames and access arrangements
- Management of intrusive investigation
- Production of geo-environmental interpretative reports



Transportation

- Detailed site assessments to establish existing issues
- Feasibility studies including assessment of new schools locations
- Advice on transportation strategy, car parking, internal circulation, traffic management, accessibility, servicing and site access
- Preparation of Transport Assessments / Statements.
- Preparation of framework Travel Plans to encourage sustainable travel
- Proactive approach to school planning applications, which can often prove to be contentious at a local level
- Negotiation with Council officers on highway mitigation and traffic management measures
- Agreement and design of temporary construction access

Planning

- Land allocations and planning policy analysis
- Design and feasibility
- Site Investigation
- Appraising architectural proposals
- Co-ordinating supporting Environmental Assessments
- Delivery of Public Consultation Events
- Liaison with Local Planning Authority
- Attendance at Planning Committee Meetings
- Drainage Impact Assessments
- Transport and Traffic Orders



Landscape Architecture

- Feasibility Studies
- Landscape Walkover Surveys
- Initial Concept Designs
- Landscape Masterplanning
- Detailed external design
- Consultations
- Detailed playing field design
- Preparation of contract documentation
- Notifiable species and tree assessments and development appraisal



KEY PROJECT EXPERIENCE

UCL Pearl

Location: London, Greater London
Role: Civil, Structural

PEARL, the Person Environment Activity Research Laboratory, is University College London's (UCL) first net-zero carbon in-use building.

This new and unique research facility for the creation of full-sized environments will test how people use infrastructure and cities, with the goal of improving urban design, for a more accessible and sustainable future.

PEARL's objective is to improve the built environment and the way we interact with it. Life-sized environments, such as a railway station, high street, or a town square for example, will be built under controlled conditions to examine how people of all abilities interact with their urban environment and each other.

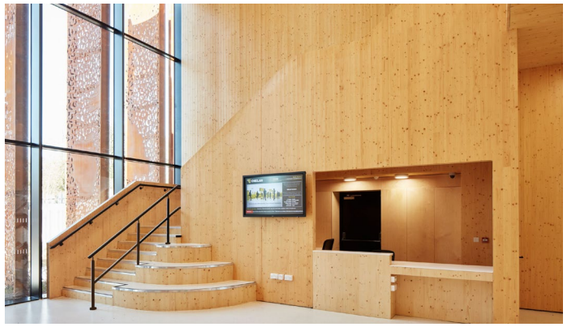
Built on a former brownfield site the building is more of a film set rather than a warehouse. The long span roof trusses are designed to support numerous lights and acoustic curtains so that different conditions and environments can be created. The teaching space and breakout spaces are formed from cross laminated timber (CLT) load bearing walls and floors. The CLT 'box' is built within the main building and can be removed or altered in the future.

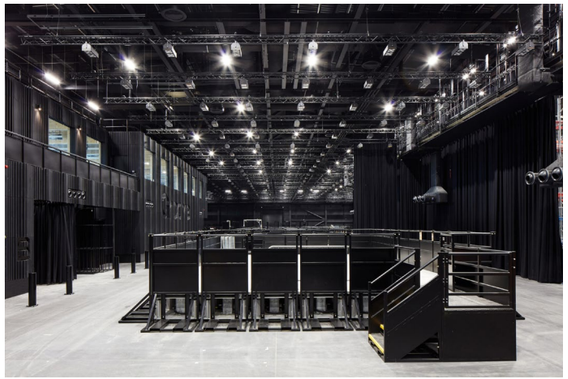
Fairhurst value engineered the foundation solution from the proposed piled foundations to traditional pad foundations. This saved time and costs for a very tight programme.

AWARDS

- Net Zero Award, Building Awards, 2022
- Regional Award, RIBA London Award, 2023















KEY PROJECT EXPERIENCE

Science Teaching Hub

Location: Aberdeen
Role: Civil, Geotechnical & Environmental, Structural, Transport Planning, Water Services

Fairhurst was appointed to design a new state-of-the-art Energy Building on the campus of the University of Aberdeen.

The development was required to replace existing facilities around the campus and incorporate enhanced teaching and research facilities.

Our commission included the design of all civil and structural elements of the project including specialist geotechnical and environmental input.

In the early development stages of the project, it was found that a reinforced concrete braced frame supporting a post-tensioned concrete flat slab best satisfied the critical design requirements. This included floor response criteria, accommodation of building services, defined clear spans, and future flexibility.

Our use of Revit enabled us to significantly contribute to enhanced pre-construction coordination exercises, which delivered notable advantages to the construction programme.

KEY PROJECT EXPERIENCE

Inverurie Community Campus

Location: Inverurie, Aberdeenshire
Role: Civil, Geotechnical & Environmental, Structural, Transport Planning, Water Services

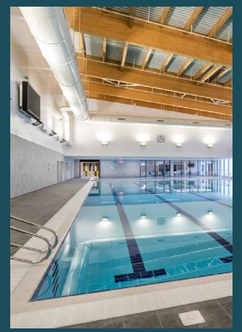
This new Community Campus incorporated Inverurie Academy, adjacent community facilities and St Andrew's School, which caters for children and young people with additional support needs.

The facilities can accommodate up to 1600 pupils and staff alongside a large volume of community facilities, including four swimming pools, a dance studio, a four-court games hall and a gymnastics area. External works include a new car park on an adjacent site (Victoria Park), three new sports pitches and extensive landscaped areas.

Fairhurst was involved with this project from the outset, commissioning initial site surveys and ground investigations in addition to detailed drainage and other surveys. We provided full structural design utilising a range of materials, including a three-storey composite steel frame for a primary three-storey block, a timber frame structure for a single-storey St Andrew's School annex, a steel frame with glued laminated (glulam) timber beams for the swimming pool annex and a steel frame for the sports area. Building foundations were designed and coordinated with retaining walls associated with swimming pools and a basement plant room. Fairhurst modelled structural elements in 3D using Revit software with modelling extending to BIM Level 2.













KEY PROJECT EXPERIENCE

Dame Allan School

Location: Newcastle Upon Tyne, Tyne and Wear
Role: Civil, Structural, Geotechnical & Environmental, Transport Planning

The project involved the demolition of existing school buildings and the construction of a new two-storey school extension which comprises classrooms, offices, laboratories and art exhibitions.

Flexible layouts were developed to tie in with existing school buildings and make the most of the constrained space available on site.

Fairhurst's multidisciplinary design team worked closely with the project team during RIBA Stages 2, 3, and 4 to provide concept and technical designs for civil, structural, geotechnical and transport aspects of the development.

In order to achieve the client brief and design intent, we developed a lightweight braced steel frame that would offer flexible educational spaces. Careful coordination of services, levels and structural penetrations were essential to provide a fully functional extension that tied into the levels of the existing school building.

The development of the proposals required careful consideration of the existing site constraints, such as deep made ground, services and mine workings. The expertise of our Geotechnical and Structural teams resulted in the development of cost effective and practical groundwork solutions that negated the need for deep, suspended substructures.

KEY PROJECT EXPERIENCE

Merkinch Primary School

Location: Inverness
Role: Civil, Structural, Geotechnical & Environmental

Merkinch Primary School is an innovative, sustainable construction project to extend an ageing school building which dates to the mid-19th Century.

The building has two main elements, a classroom wing and a community/school complex wing, which comprises of an Assembly/Games Hall and Nursery facilities. It is intended that the school extension will serve the community as a whole.

The school is constructed using CLT (Cross Laminated Timber) and Glulam to achieve the high sustainability and low energy use objectives set out by the Client.

The construction and design is considered as a benchmark standard for future education buildings in the region.

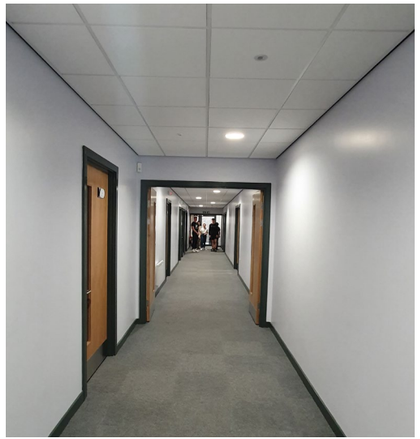
Fairhurst was appointed to design and detail a structural platform, raft foundation solution and ancillary engineering aspects, including full CLT design and specifications, together with fabrication drawings.















KEY PROJECT EXPERIENCE

Durham Sixth Form Centre

Location: Durham
Role: Civil, Structural

A new build sixth form centre build within a flood zone 3. A challenging site given the flooding risk to the site and the change in levels across the site.

Fairhurst worked with the local authority and environmental agency to agree on new levels for the proposed building as well as flood compensation under and around the new building.

A simple steel frame allowed a fast construction period and working extended hours during the school holidays allowed the project to be completed for the new academic year.

A flexible building to allow different room layouts and teaching spaces were achieved with movable partitions supported by the new steel frame.

KEY PROJECT EXPERIENCE

Teesside University Business School

Location: Middlesbrough, North Yorkshire
Role: Civil, Structural, Geotechnical & Environmental

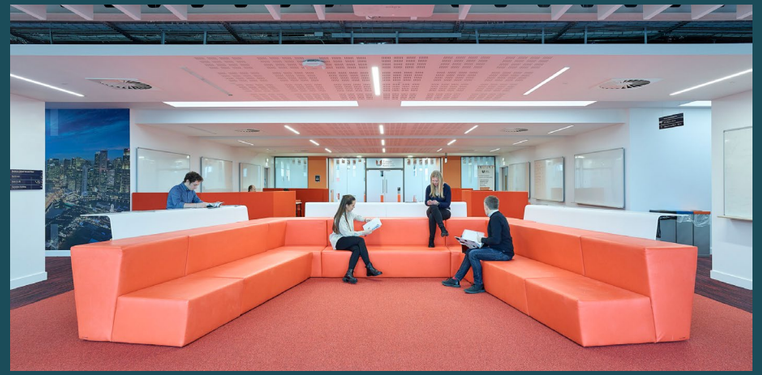
Located within Teesside University (TU), the existing business school building was proposed to be refurbished to enhance the use of space as well as to update its current look.

The northern entrance extension was proposed to be added as part of the works to provide an atrium-like lobby and entrance.

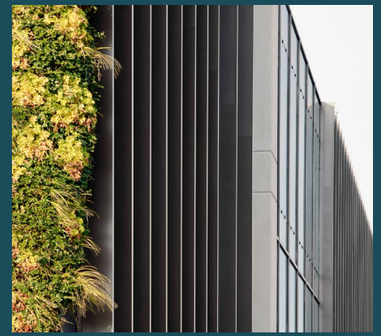
The footprint of the new north entrance extension was congested with services for the Business School and the wider site. As the diversion of these services would greatly affect the timeline and activities within the university, an innovative shallow piled slab using the smallest sectional flight auger (SFA) piles possible was designed to incorporate the existing services on site.

Finite element analysis of the foundation slab was carried out with irregular pile positions located carefully on-site to avoid existing services using pilot holes. A collaborative working approach between the ground worker, piling contractor, main contractor and Fairhurst was taken during the construction stage.

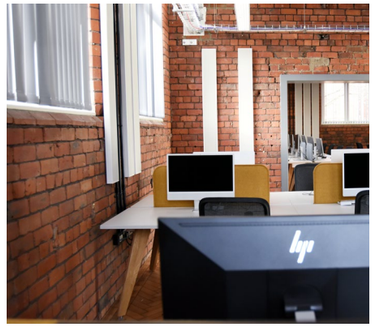


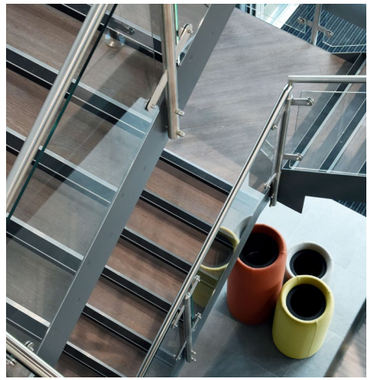














KEY PROJECT EXPERIENCE

The Buttery

Location: Middlesbrough, North Yorkshire
Role: Civil, Structural, Geotechnical & Environmental

As part of Teesside University's £300m campus masterplan, the historic Buttery building was extensively revamped and a new entrance extension constructed, with full height glazing and corten steel cladding.

The regeneration of The Buttery has provided postgraduate students with collaborative workspaces, quiet study zones, media booths and state of the art digital facilities, all within a bright and contemporary environment.

Design proposals ensured that the building's heritage features were maintained and expressed within the modern education spaces. Parquet flooring, exposed brickwork, timber beams and trusses were all revived during the construction works.

Fairhurst worked closely with the design partners and regularly engaged with the client and contractor to develop structural proposals that were sympathetic to the original features of the historic structure. In order to achieve this, Fairhurst undertook a Structural Assessment of the century old structure to determine existing structural layouts and load capacities which dictated the completed aesthetics.

AWARDS

- Shortlisted - Regeneration and Retrofit Award, Constructing Excellence North East Awards, 2024

KEY PROJECT EXPERIENCE

Student Life Building

Location: Middlesbrough, North Yorkshire
Role: Civil, Structural, Geotechnical & Environmental, Transport Planning

As part of a wider masterplan, this new building and flexible spaces are aimed at supporting the diverse student community at Teeside University

The fully digital-enabled space also houses the ergonomic and collaborative working spaces for the students helping them to enhance their creativity and innovative skills.

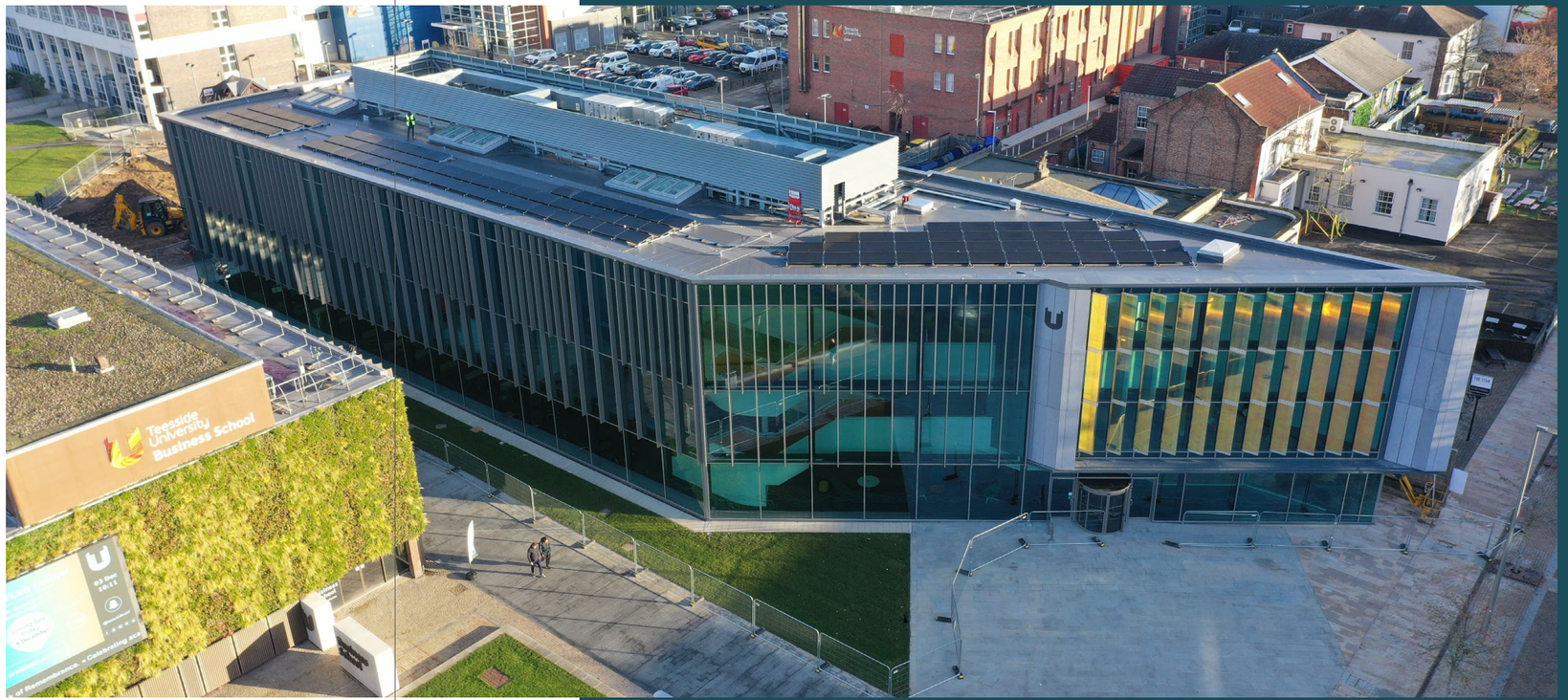
The structural solution adopted for the building was a braced steel frame with composite slabs formed using a profiled metal deck. The spaces within the building are quite unique in their arrangement as they cater for a variety of uses.

As such, the mixture of open spaces and private spaces integrates well with the illusion of floating cubicles within the open space. The double-height open atrium area was achieved using hanger steel posts to support the upper floors. The structural framing using hot-rolled steelwork played a huge part in delivering this vision.

Building Information Modelling (BIM) was employed on this project, facilitating clash detection and resolution at an early stage, through the use of Revit software and a collaborative team approach.

AWARDS

- Pupil/Student Experience Teesside University, Education Estates Awards, 2020
- UK National Awards for Education, RICS, 2020
- Education Award, RICS North East, 2020
- Structural Awards – Large Project, Special Commendation, Institution of Structural Engineers (Northern Counties), 2020







KEY PROJECT EXPERIENCE

Campbeltown Grammar School

Location: Campbeltown, Argyll & Bute
Role: Civil, Geotechnical & Environmental, Structural, Transport Planning

The project consists of a new-build grammar school located on the site of an existing school. In addition to structural design services, the commission comprises associated civil works including drainage, access roads and parking, external play areas and a new sports pitch.

A significant new culvert was constructed as part of the enabling works, to relieve flooding issues at the site and to accommodate surface water flows from the new school.

Geotechnical and geo-environmental input was provided for the foundation design and site remediation.

The site is restricted, with the existing school requiring to remain in operation during the construction of the new development. The new structure is in close proximity to the existing school building, therefore phasing of site drainage and foundation solutions were key considerations during the design phase.

The new structure is steel-framed, supported on a combination of piled foundations and ground-bearing pads; to suit the variable ground conditions.

Integrated design services provided by Fairhurst benefited the project, and focus on the challenges presented by a restricted site ensured a successful coordinated design solution was delivered.

KEY PROJECT EXPERIENCE

Oban High School

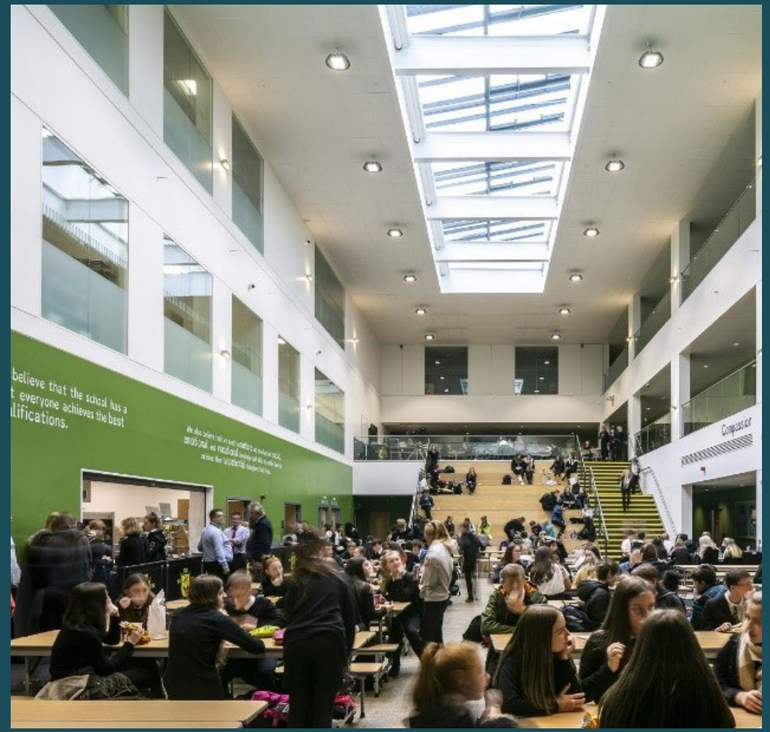
Location: Oban, Argyll
Role: Civil, Geotechnical & Environmental, Structural, Transport Planning

Fairhurst was appointed to assist in the development of a new-build school in Oban. The proposed development is to comprise a 4-storey L-shaped steel frame structure with associated outbuildings. The development area is located on the footprint of the school's existing rugby pitch.

Following a detailed review of the previous ground investigation reports, it was established that there was the potential for challenging ground conditions on the new footprint. The site is positioned on the boundary of a deep glacial channel with bedrock near the surface toward the back of the proposed structure and the front position over 20m of poorly consolidated alluvial deposits. Fairhurst undertook a detailed ground investigation including probe and cored boreholes to build a 3D ground model. This allowed a high level of confidence to be attributed to the proposed piling and foundation design – improving project cost certainty.

Fairhurst worked closely with the ground investigation contractor to optimize timescales on site, utilizing the 'working window' of the school holidays. The plant for the Oban investigation was scheduled with other investigations in what is a relatively remote and costly area to mobilise to, providing a cost saving to the client whilst achieving the required data collection. Being in regular communication with the contractor meant as the investigation works progressed, operational decisions could be made to adjust the quality of data gathered, without increasing the overall costs.











KEY PROJECT EXPERIENCE

West Linton Primary School

Location: West Linton, Scottish Borders
Role: Landscape & Urban Design

As part of the Scottish Borders Council Framework Agreement, Fairhurst was commissioned to provide full Landscape Architectural services for the design and build of the new primary school. This is the first new school to be built within the 'Borders Primary Schools Programme' (BPS) Framework on behalf of the Scottish Government's Committee for Education and Life Long Learning.

Fairhurst provided a full range of services, from initial site investigation, survey and conceptual sketch design through to the preparation of landscape proposal plans to form part of the planning submission. Following planning approval, Fairhurst progressed the Tender proposals through to construction, providing detailed design, landscape specification and contract administration for the scheme.

The landscape proposals were designed with careful consideration to the surrounding environment and rural context of the Scottish Borders. The use of native pine and birch groves within the school create a distinctive design, highly influenced by the school's surroundings. The design also responds to the requirements of the school, creating a varied network of spaces that encourage different types of learning experiences. These include a school orchard, kitchen garden allotments, a wildlife trail, wildflower meadow, mounded play area, sports pitch and MUGA.

Fairhurst created and delivered a strong design concept based on local character, utilising key features to create a valuable educational resource. This has produced a unique landscape design that adds value to the site, providing a range of spaces for the school and surrounding community to engage with in line with all relevant design guidance. These will assist in curriculum learning, enhance play experiences, creating unique environments and a sense of place for pupils, staff and the local community, setting the benchmark for design for future SBC schools.

KEY PROJECT EXPERIENCE

Alness Academy

Location: Alness, Ross and Cromarty
Role: Civil, Structural, Geotechnical & Environmental, Transport Planning

Supported by funding from the Scottish Futures Trust, Highland Council commissioned the education and community use facilities including a new building for 660 pupils, 25m swimming pool, games hall, gymnasium and two floodlit 3G pitches.

The new building was constructed adjacent to the existing school, which remained operational during construction, presenting a number of challenges for the engineering design and coordination. The structural design included shallow foundations and ground floor slab, supporting a steel braced frame with in-situ concrete composite upper floor and roof slabs.

Fairhurst was involved from project inception through to completion. This included working through the Hubco processes, statutory approvals and included earthworks modelling, drainage design, Transportation Assessment, in addition to the detailed structural design.

Fairhurst provided a comprehensive service on all aspects of the project from initial surveys through to construction phase project support.





Contact Us

If you have an engineering project with which you would like Fairhurst to be involved, or want more information on our skills, experience and services, please contact our nearest office.

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