



SUSTAINABILITY

Through Thoughtful Design



Simon Bell
Director

We're committed to a more sustainable built environment for future generations and our aim is bold and ambitious: Everything we design by 2025 will meet the RIBA 2030 Sustainable Outcomes.

As a Landscape Architect I have always had a respect and appreciation of the environment, its ability to sustain us, delight us and inspire us. While it also has an incredible ability to recover and reclaim the man-made world, as a global society we simply don't appreciate the fragility of the natural systems that support us all.

Today, the impact of our lifestyles on the global eco system has been brought home to the masses by Sir David Attenborough and Greta Thunberg. Both have taken a stand and inspire the world to consider its impact on our planet and demand our governments to do better. And yet, the global climate crisis has been eclipsed, for now, by another crisis, the COVID-19 pandemic. This in itself has forced us to recognise the importance of our actions and take stock, analysing the things we do in our day to day lives that make us happy, including access to green space and nature, our family and the communities we live in. Now, what is important for us all to remember is that when we start to get through this crisis the climate crisis won't have gone away.

What is positive, though, is the growing understanding of the impact we are having on the world and an increasing awareness that we must act quickly and decisively to change that trajectory.

At HLM Architects our portfolio is diverse and our client base wide. Our focus is on taking our practice and our clients on a journey to deliver more sustainable buildings and places. Some projects may not yet meet our aspirations but we will ensure that everything we design by 2025 will meet the RIBA 2030 Sustainable Outcomes.

Our work to date showcases an increasing number of clients who want to deliver the highest performing buildings for their employees, students and customers, these early adopters will help us to demonstrate the benefits of raising the bar. At HLM, we're looking forward to a more sustainable future.



Our focus is on taking our practice and our clients on a journey to deliver better. Together, we can deliver zero carbon.

Contents

4	The Climate Emergency
6	Our Approach
7	Thoughtful Design Toolkit
8	Our Services
11	Tigh na Croit
12	Keele University Innovation Centre 7
13	Zero Carbon Nurseries
14	TIC Zone
15	National Manufacturing Institute Scotland
16	The Concourse
17	Al Karamah
18	Carnival Pool
19	Boyd Orr Building
20	Summary
21	About Us/Contact

The Climate Emergency

The built environment accounts for 39% of global carbon emissions and it’s time for the industry to embrace change and adapt.

The UN describes climate change as one of the most pervasive and threatening issues of our time, with far reaching impacts in the twenty-first century. It goes on to say climate change is expected to have unprecedented implications on where people can settle, grow food, build cities and rely on functioning ecosystems for the services they provide. In many places, temperature changes and sea level rise are already putting ecosystems under stress and affecting human wellbeing.

- The global average temperature in 2019 was 1.1 degrees Celsius above the pre-industrial period, according to the World Meteorological Organization. (WMO.)
- 2019 concluded a decade of exceptional global heat, retreating ice and record sea levels driven by greenhouse gases produced by human activities. (WMO)
- Average temperatures for the five-year (2015–2019) and ten-year (2010–2019) periods are the highest on record. (WMO)
- 2019 was the second hottest year on record. (WMO)

Nations agreed to a legally binding commitment in 2015, called the Paris Agreement, to limit global temperature rise to no more than 2.0C above pre-industrial levels, but also offered national pledges to cut or curb their greenhouse gas emissions by 2030. The initial pledges of 2015 are insufficient to meet the target, and governments are expected to review and increase these pledges as a key objective at COP26 in Glasgow, UK in November 2020. This conference has currently been postponed due to COVID 19. The success or otherwise of this conference will have stark consequences for the world. If countries cannot agree on sufficient pledges, in another 5 years, the emissions reduction necessary will leap to a near-impossible –15.5% every year. Countries are not on track to fulfil the promises they have made.

Scientists believe we must restrict global temperature rise to 1.5 degrees Celsius above the pre-industrial period. There will still be serious climate impacts at 1.5°C, but this is the level scientists say is associated with less devastating impacts than higher levels of global warming. Every fraction of additional warming beyond 1.5°C will bring worse impacts, threatening lives, livelihoods and economies.

Source: Intergovernmental Panel on Climate Change (IPCC)

- At 1.5°C, over 70% of coral reefs will die, but at 2°C over 99% of all reefs will be lost.
- Insects, vital for pollination of crops and plants, are likely to lose half their habitat at 1.5°C but this becomes almost twice as likely at 2°C .
- The Arctic Ocean being completely bare of sea ice in summer would be a once per century likelihood at 1.5°C but this leaps to a once a decade likelihood at 2°C .
- Over 6 million people currently live in coastal areas vulnerable to sea level rise at 1.5°C degrees, and at 2°C this would affect 10 million more people by the end of this century.
- Sea-level rise will be 100 centimetres higher at 2°C than at 1.5°C.
- The frequency and intensity of droughts, storms and extreme weather events are increasingly likely above 1.5°C.

In many places, temperature changes and sea level rise are already putting ecosystems under stress and affecting human wellbeing.

To prevent warming beyond 1.5°C would require a reduction in emissions by 7.6% every year from this year to 2030.

On 27 June 2019 the UK became the first major economy in the world to legislate to end its contribution to global warming by 2050, increasing the ambition of its commitments to reduce greenhouse gas emissions under the Climate Change Act 2008.

The Built Environment contributes to approximately 30% of the UK’s total carbon footprint. The UK Government is committed through the Climate Change Act to reduce CO2 emissions to 80% of 1990 levels by the year 2050 through a programme of CO2 emission reductions.

To achieve this we must consider zero energy / carbon in operation, zero embodied energy / carbon and climate adaptation.

Source: Intergovernmental Panel on Climate Change (IPCC)



Our Approach

With the built environment accounting for 39% of global carbon emissions we recognise our collective responsibility to create places which significantly reduce the impact on the world. Through our thoughtful design culture, we have reinforced our passionate belief in making every project as sustainable as possible. We support our clients to make informed choices which will impact positively on our climate, support the health and wellbeing of our communities and protect the biodiversity of our natural systems.

We have adopted the targets and approach set out by the RIBA in their 2030 Sustainable Outcomes Guide. We are determined to guide and influence our clients, as responsible advisors, to commission projects that achieve these targets and have set ourselves a bold and ambitious goal that all projects designed in our studios will be capable of meeting these targets by 2025.

Our aim is simple, to deliver the highest performing buildings which have a positive impact on the lives of those who use them and a positive impact on the world for future generations.



Our Design Approach

Our design approach focuses on 8 key themes covering environmental, social and economic sustainability:

1. Net Zero Operational Carbon
2. Net Zero Embodied Carbon
3. Sustainable Water Cycle
4. Sustainable Connectivity and Transport
5. Sustainable Land Use & Ecology
6. Good Health & Wellbeing
7. Sustainable Communities and Social Value
8. Sustainable Life Cycle Cost

We have developed strategies and design principles for each of these themes aligned to the RIBA Plan of Work ensuring that they are embedded in our thinking from the inception of a project. We employ a suite of tools to measure the metrics associated with these themes as our design progresses and test the outcomes through our post occupancy evaluation process.

Thoughtful Design Toolkit

Our ‘Thoughtful Design Toolkit’ seeks to address the challenge of ensuring that the vision and ambition of the project is met and delivered from briefing to completion by using data-enabled processes throughout the life of the project.

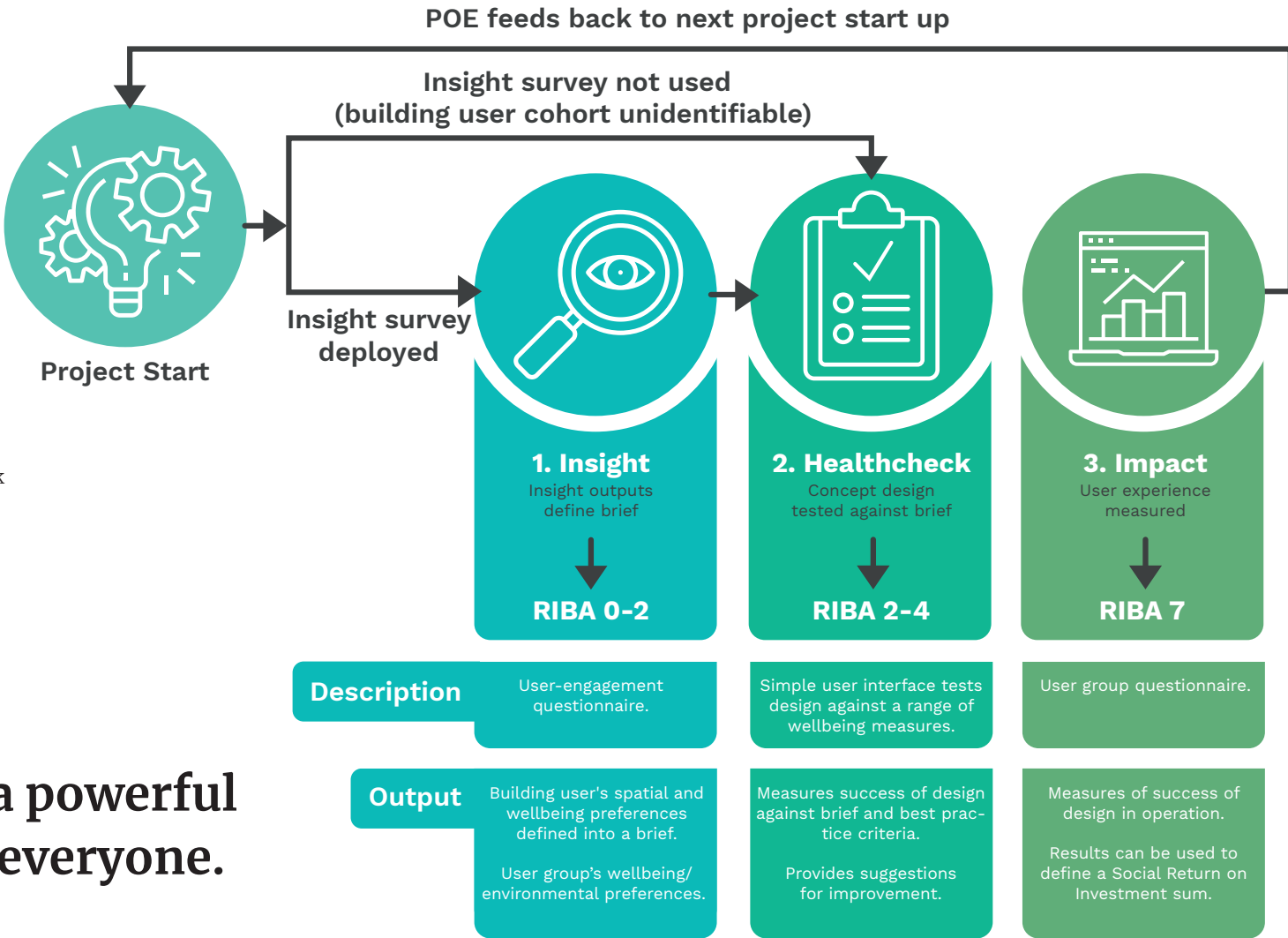
There are three parts to the toolkit:

1. HLM_Insight
2. HLM_Healthcheck
3. HLM_Impact

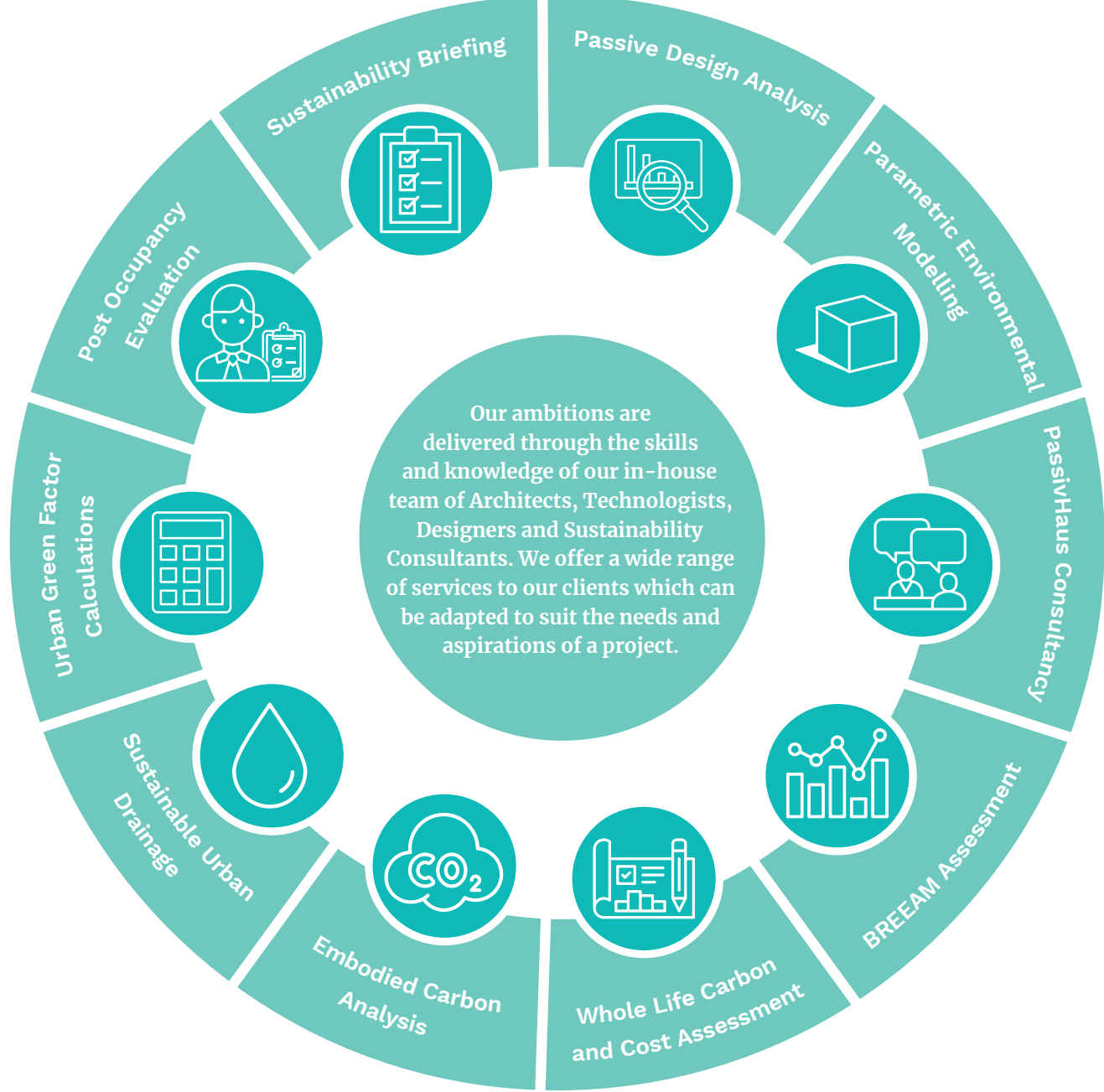
Each of these tools uses data to advance our understanding of what people want and need from the built environment. They enable designers to work in assurance that their proposals will deliver what building users demand, and they help clients make better-informed decisions about targeting their investment in facilities.

Together they form a powerful toolkit that benefits everyone.

Overview of HLM Thoughtful Design Toolkit



Our Services



Sustainability Briefing

We can help you to develop high level, measurable sustainability aspirations for your projects. This can include an assessment of existing assets to determine their potential for reuse, reviewing Post Occupancy Evaluation feedback and identifying relevant and emerging policies, guidance and strategies.

Passive Design Analysis

We determine the factors to reduce energy demand, increase efficiency and reduce reliance on active building services by exploiting building form, orientation and the use of natural heat, air and light. Passive Design Analysis should be carried out early in the design process where measures are straightforward to incorporate, and they provide the greatest value.

Parametric Environmental Modelling

As an extension of the Passive Design Analysis, we use innovative parametric modelling techniques to assess multiple iterations of a concept design for optimal efficiency. This can include the modelling and analysis of complex façade designs and systems.

PassivHaus Consultancy

The Passivhaus Standard is a proven approach to delivering buildings with excellent indoor air quality, thermal comfort and low energy in use and as a consequence low carbon emissions. HLM have a team of Certified Passivhaus Consultants, Architects, Technologists and Sustainability Consultants with Passivhaus experience to deliver thoughtfully designed buildings to achieve the Passivhaus standard.

Whole Life Carbon and Cost Assessment

Whole life carbon assessments give a true picture of a building's energy and carbon emissions across its entire lifespan. We can help you identify direct emissions (those you can control such as primary energy), indirect energy emissions (those that are a consequence of your activities but that you cannot control) and other indirect emissions (such as business travel and waste disposal). Whole Life Cost Assessments inform capital and operational expenditure decisions, supporting the sustainability measures to help achieve our Net Zero Operational Carbon targets on all projects by 2025.



BREEAM Assessment

BREEAM is the world's leading sustainability assessment method; it recognises and reflects the value in higher performing assets across the built environment lifecycle, from new construction to in-use and refurbishment. Trained and certified in all available BREEAM schemes, our licensed assessors provide practical, accurate and efficient BREEAM consultancy services.

Embodied Carbon Analysis

To meet our Net Zero Embodied Carbon targets, we can assess the impact of projects through detailed analysis and the consideration of: resource efficiency; the use of recycled and recyclable materials; and improved durability.

Sustainable Urban Drainage

Our skilled Landscape Architects create sustainable, biodiverse rainwater systems that provide rainwater harvesting, surface water run-off attenuation and which support natural aquatic habitats and human amenity.

Urban Green Factor Calculations

Our Landscape Architects can also provide urban green factor calculations, evaluating and quantifying the amount and quality of urban greening within new city developments.

Post Occupancy Evaluation

HLM_Impact, our bespoke Post-Occupancy Evaluation questionnaire, draws on a number of industry standards to create a rounded, easy-to-use feedback platform that considers qualitative and quantitative aspects of completed projects. We also carry out detailed process, function and technical evaluations of building's in use to monitor building performance and inform future projects.



Our Projects

We’re encouraged to see an increasing number of clients who want to deliver the highest performing buildings for their employees, students and customers, these early adopters are helping us to showcase the benefits of raising the bar.

One of the most northerly certified PassivHaus dwellings in the UK

Tigh na Croit
Scottish Highlands



At a glance

Client
Private Client

Location
Gorstan, Scotland

Services
Architecture

Value
£365k

Sustainability Facts

- Heating Demand 15 kWh/m2a
- Heating Load 13.4 W/m2
- Airtightness 0.6 ach
- Primary Energy 97 kWh/m2a

Brief Project Description

Set in the hamlet of Gorstan in the Scottish Highlands, Tigh na Croit, a fully certified PassivHaus, nestles quietly into an area of former crofting land to the north of Hillcrest Cottage and west of Hill Cottage.

The brief was simply to create a quality modern and low energy PassivHaus from which our clients could continue to enjoy their love of outdoor pursuits whilst living in an environmentally responsible, low impact home.

The house comprises generous living space, kitchen and dining room, 3 bedrooms, utility space, cinema room and storage space. The living areas face south making most of the views with a small terrace allowing the client to enjoy the beauty of the surrounding landscape. The bedrooms are orientated eastwards to capture morning sun.

Construction Methodologies

An off-site prefabricated closed panel system was utilised for wall, floor and roof elements. This was used along with high performance windows and quadruple rooflights to provide a super insulated air-tight building fabric.

Sustainable Design Strategies

Our intention was that the house should look towards the form of a traditional steading in creating an appropriate scale and form for the site. Through careful orientation, a compact simple form, high levels of airtightness and a super insulated building fabric the design significantly reduces energy consumption whilst ensuring excellent internal comfort conditions throughout the year. A balanced MVHR system was also employed as a key element of the strategy, reducing heating bills and providing clean and fresh excellent quality indoor air. Hot water is then provided from regenerative sources via an air source heat pump with provision for a future PV system. Glass features heavily, not only allowing the framing of particular views but maximising on the potential of passive solar gains as part of the PassivHaus design philosophy.

Tigh na Croit is a multi award winning scheme, including;

- Rural Category at the 2016 UK PassivHaus Trust Awards,
- Single Dwelling New Build Award at the 2016 Saltire Design Awards,
- The RIAS Special Category Award for RIAS/Zero Waste Scotland Resource Efficiency 2016,
- CIBSE Building Performance Award Residential Project of the Year 2017.

A world-leading Digital Innovation Centre

Keele University Innovation Centre 7 Keele University, Staffordshire



At a glance

Client
Keele University

Location
Keele, Staffordshire

Services
Lead Consultant, Architecture, Landscape, Interiors, BREEAM, Sustainability Consultant, Principal Designer

Value
£10.4m

- Sustainability Facts**
- BREEAM ‘Excellent’
 - Zero carbon, all-electric building connected to campus energy farm
 - Maximises natural daylight and ventilation
 - Air-tight, thermally efficient envelope

Brief Project Description

Underpinning the principles of the New Keele Deal, this project will create a world-leading Digital Innovation Centre that promotes Keele University as a regional hub supporting digital business, knowledge and innovation.

Occupying a prominent site on the Keele University Science and Innovation Park, the 4,500m² building will provide a home and a showcase for the University’s world-leading research and teaching on digital themes and technology, acting as a demonstrator for Smart Energy, Cities and Transport and promoting the campuses’ sustainability aspirations.

The project is currently at Stage 4 and due to start on site in January 2021 for completion Summer 2022.

Construction Methodologies

Detailed functional adaptability, designing for robustness and waste assessments have been undertaken as part of the BREEAM assessment. A Steel frame was chosen for its lower embodied carbon and ease of future disassembly and reuse. Where concrete is used for essential structural elements it is specified with a high level of cement substitute.

A carefully selected palette of robust, natural materials, such as locally sourced brick and terracotta, reflects the context of the site and is supported by a lightweight, pre-fabricated structural framing system to reduce waste.

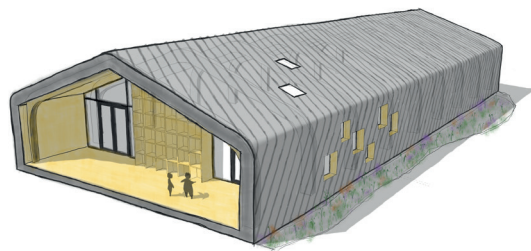
Sustainable Design Strategies

HLM carried out a Passive Design Analysis identifying how to reduce energy demand and carbon emissions through passive design measures such as orientation, thermal efficiency and natural ventilation. In addition, we undertook parametric modelling exploring how to optimise the façade design (percentages of glazing, amount of shading, etc) to further improve building performance and the quality of the internal environment. This has resulted in an 18% reduction in energy use purely through good, passive design measures.

The building will be fully electric and connected to the University’s own solar and wind energy farm, creating a building that is anticipated to be zero carbon in operation.

Encouraging children to explore their place in the world, while protecting it for their future

Zero Carbon Nursery Wales



At a glance

Client
Confidential

Location
South Wales

Services
Architecture, Interior Design, Landscape Architecture

Value
tbc

- Sustainability Facts**
- Target zero-carbon in construction and operation
 - Sustainable drainage systems utilising drainage swales
 - On site energy generation using roof mounted photovoltaic panels.

Brief Project Description

Working alongside a Local Authority in South Wales, we have been commissioned to deliver a zero-carbon nursery for three to four year old children. Initially the nursery is being designed for a single site in South Wales, however, it has the potential to become a template for multiple sites across the region and is being designed to cater for this possibility.

The project is set against a backdrop of recent Welsh Government guidance which aims to reduce the environmental impact of the construction industry. It is intended that this nursery will act as a pilot project for achieving these goals, with the design and research methods implemented on this project being rolled out on larger scale schemes in the future.

Construction Methodologies

Our design facilitates a modular method of construction allowing large parts of the building to be manufactured off-site, reducing transportation and labour costs whilst also fulfilling a brief requirement for the nursery design to be easily replicated on other sites across South Wales. A measured approach to such construction methods would also reduce construction waste, allowing the nursery to be constructed far more efficiently compared to more traditional building assembly methods.

Sustainable Design Strategies

As part of the goal to deliver a zero-carbon educational building, we have engaged in an in-depth, early stage study into how the design and construction process can maintain as small a carbon footprint as possible. This has involved exploring the availability of locally sourced materials in South Wales, particularly the possibilities of using locally grown timber as the nursery’s primary structural system and locally fabricated metal cladding for the external finish whilst also actively seeking to avoid the use of materials with a higher embodied energy content where possible.

The nursery has been designed with a pitching roof to encourage the use of photovoltaic panels to take maximum advantage of southern sunlight. Combined with the use of low energy appliances and well insulated walls, the life cycle costs of the nursery would be greatly reduced, creating a building which is both environmentally and financially sustainable for the client.

It is proposed that a series of management proposals will be put in place post-completion to ensure that building users will be able to operate the building at a zero-carbon level.

“The ambition is to create a ‘100% renewable climate neutral’ Glasgow Innovation District that integrates heat, power, transport, climate adaptation and well-being solutions that are socially inclusive.”

Glasgow City Innovation District vision/objective

TIC Zone
University of Strathclyde, Glasgow



At a glance

Client
University of Strathclyde

Location
Glasgow City Innovation District

Services
Architecture, Landscape, Interiors, Certified Passivhaus Designer

Value
£110m

- Sustainability Facts**
- Passivhaus Standard
 - BREEAM Outstanding target
 - WELL Certified Silver target

Brief Project Description

The TIC Zone Development comprises two new stand-alone buildings delivering a range of collaborative research facilities at the heart of Scotland’s first Innovation District. At a total of 30,000 sqm these buildings will occupy a key role in cultivating and nurturing Scotland’s innovation community, helping bring together researchers, academic administrators, entrepreneurs, public and private investors, and many other key stakeholders.

Each building occupies a key role in cultivating and nurturing Scotland’s innovation community and will become a hub for entrepreneurship, innovation, and collaboration, and will transform the way academia, business and industry collaborate to bring

Sustainable Design Strategies

The University’s overall objective for the TIC zone is to create a development that is climate neutral, climate resilient and socially inclusive and which acts as an exemplar of innovation and best practice. The brief to the design team is therefore to create an exemplar development that responds to climate emergency, to the University’s climate change and social responsibility target, policy and plan and which reflects innovative design and construction methods.

The design seeks to adopt the rigorous Passivhaus design standard in order to provide a low energy building that has a high level of occupant comfort and ‘closes the gap’ between predicted and actual performance in use. Utilising the key principles of compact form and fabric first, the scheme is designed to very low energy levels supplemented by renewable energy sources including building integrated PVs and Air Source Heat Pumps contributing towards the Energy Carbon Neutral Strategy aligning with the wider ‘Climate Neutral Districts’ vision.

The scheme also adopts climate change adaptation solutions such as rain gardens, SUDS, blue and green roofs and green infrastructure that encourages biodiversity and rainwater harvesting. Developing a pedestrian-first ethos to aid well-being and a sense of community is key to integrating the scheme int the wider city including the integration of sustainable transport options in particular cycling with the provision of extensive cycle storage and facilities.

These flexible and future adaptable buildings are targeting a BREEAM Outstanding and a WELL Certified Silver rating to ensure the development also has a clear focus on the health and wellbeing of its future occupants.

“It is intended that the NMIS project will create a building that is carbon neutral for energy, and which will demonstrate exemplary climate change and sustainability attributes.”

The University of Strathclyde

National Manufacturing Institute Scotland (NMIS)
University of Strathclyde, Glasgow



At a glance

Client
University of Strathclyde

Location
Advanced Manufacturing Innovation District (AMIDS)

Services
Architecture, Landscape Architecture, Interior Design

Value
£65m

- Sustainability Facts**
- Energy Carbon Neutral
 - BREEAM Outstanding
 - 100% renewable energy generated on site
 - No fossil fuel use
 - EPC ‘A’ Rating

Brief Project Description

The National Manufacturing Institute Scotland is an industry-led international centre of manufacturing expertise where research, industry and the public-sector work together to transform skills, productivity and innovation making Scotland a global leader in advanced manufacturing and a magnet for investment.

The new, energy carbon neutral facility based at the new Netherton Campus next to Glasgow Airport will include a skills academy, a fully digitalised factory of the future and collaboration hub for manufacturers of all sizes and from all sectors to work together with research partners and the public sector to innovate and grow their businesses. The campus will provide a high-quality environment that supports healthy working, fosters collaboration and promotes sustainability.

Sustainable Design Strategies

The NMIS project is set to be one of Scotland’s leading Institutes with a high public profile. The development is therefore designed to operate without the use of fossil fuels for its energy generation, instead it prioritises passive measures, low u-values and energy efficiency making use of 100% renewable energy generated on-site. Enabling infrastructure means that the building can connect with a larger, site-wide district heating network once realised which will supplement the extensive rooftop PV array, and network of Ground Source and Air Source Heat Pumps.

The development exemplifies the University’s vision and values and innovates in all that it does, its design delivers a range of climate mitigation and adaptation solutions such as rain gardens, rainwater harvesting, SUDS and a green roof to encourage biodiversity, and it aligns and positively influences the wider AMIDS site and beyond. The building seeks to create a high-quality healthy workplace with extensive natural daylight, an exposed timber glulam frame, internal tree planting and a bespoke internal green wall.

NMIS seeks to be innovative, ambitious and bold in creating a sustainable building using clean, low carbon infrastructure to meet the climate action ambitions of the University, Renfrewshire Council, Scottish Enterprise and the Scottish Government. The University has also committed to a BREEAM Outstanding target and an EPC ‘A’ rating for the new building.

Revitalising an underused space to become an integral part of the campus

The Concourse
University of Sheffield, Sheffield



At a glance

Client
University of Sheffield

Location
Sheffield

Services
Landscape
Architecture

Value
£1.9m

Sustainability Facts

- Paving contains upto 50% recycled materials
- 90% of the materials UK manufactured
- External waste recycling facilities

Brief Project Description

The Concourse is an important and significant space within the University of Sheffield’s campus. The scheme has brought the underused space back to life as a vibrant, social and meaningful space.

The Concourse has been transformed from an intimidating thoroughfare into a vibrant, active and inviting civic space at the centre of the campus. The design has given the space identity and provides legibility, gathering space and hosts events from graduation to music and food festivals.

Construction Methodologies

All products specified were obtained from sustainable suppliers and have been sourced from sustainable locations. Where possible, removed trees and plants have been recycled across campus.

Sustainable Design Strategies

The University’s high sustainability and waste management standards were an intrinsic part of the design. Materials specified including; weathering steel, timber, concrete seating and paving. The materials were selected for their recycled and renewable material content and measured against the environmental management life cycle assessment. The design retained existing concrete bases to minimise waste removal.

An external waste recycling scheme was introduced, and as a result of it’s success, has been rolled out across the campus. The planting choice is responsive to local climatic conditions, adds seasonal interest and carefully constructed to enhance biodiversity.

The concourse design includes;

- 3,600m2 of public realm
- Vibrant multifunctional civic space
- Responsive to surrounding context
- 52 new trees planted
- Bespoke street furniture and recycling facilities
- Sustainability driven material selection

The creative lighting scheme designed by Arup working alongside HLM promotes use of space, through the feeling of safety and security whilst providing a high time streetscape. The Concourse is the Winner of Outdoor Lighting Project of the Year, Lux Awards 2019.

A truly sustainable and inclusive community asset for Abu Dhabi

Al Karamah
Abu Dhabi



At a glance

Client
ADEK and Priory Education and Children’s Services

Location
Abu Dhabi

Services
Architecture, Interior Design and Landscape Architecture

Value
£8.5m

Sustainability Facts

- Improved extent and quality of natural daylight, lighting and glare control within interior spaces.
- Provides exterior planting and facilities kitchen garden.
- Enhanced indoor air quality, acoustics and holistic design resulting in noticeable improvements in behaviour from pupils.

Brief Project Description

The phase one of Al Karamah school which is operated by Priory Education and Children’s services has been carefully designed to cater to the needs of children up to the age of 16 with Autistic Spectrum Disorder and stands as the first ever SEN school within the UAE. The brief for the refurbishment of this originally standard school was to provide an environment for up to 260 Emirati children and young people that supports unprecedented levels of specialised teaching and expertise.

Our interior design strategy aimed to meet the needs of both pupils and staff in a cohesive manner thus creating an environment in which they are able to learn coherently. The interior design for this project takes a holistic approach to deliver a space that works in harmony with both the architecture and landscape design surrounding it, and endeavours to provide an intimate and engaging space that encourages learning and where pupils will feel safe and secure day surroundings.

Construction Methodologies

Within the classrooms, consideration has been given over the variation in noise levels and flexibility required from focussed learning to group interaction, resulting in carefully designed acoustic treatment, dimmable lighting, different floor finishes, and minimal fixed furniture and light weight yet durable loose furniture. The use of timber in the feature walls emphasize the scenes of nature inspiration, used for each theme and provide a direct association between the natural material and the simplified graphic illustration, aiming to achieve a closer indoor, outdoor relationship in hope that the pupil will be transported to a natural environment of tranquillity and peace.

Sustainable Design Strategies

The interior of the school focuses on the concept and application of spatial frequencies, based on the perceptual category and determined by the expected levels of activity in each space resulting in a holistic, functional and appropriate design.

The wayfinding strategy also plays a crucial role within this design, intrinsic to the interior fabric of the school. Breakout spaces between each classroom cluster in this building, contain a curved feature wall with timber slats forming a terrain covering calming pods which offer a quiet space for those needing some down time.

A focus on the wellbeing of varied users by creating nurturing yet vibrant spaces

Carnival Pool Wokingham Borough Council, Berkshire



At a glance

Client
Wokingham Borough Council

Location
Wokingham

Services
Architecture, Interior Design

Value
£33m

- Sustainability Facts**
- Maximising natural light and tactile experience during physical exercise reducing the need for artificial lighting and minimising running costs.
 - Calming colour palette, finishes and overall design aesthetics in order to be appealing for all ages.
 - Achieving BREEAM 'Excellent'
 - Targeting zero carbon (operation only)

Brief Project Description

The Carnival Pool, site is a regeneration scheme, the second phase of which comprises of a new leisure centre to replace the existing facility, a new residential block of 55 units and a substantial landscaping intervention, including new pedestrian promenade. Once completed the leisure Centre, which lies within the first element of this scheme, will transform the leisure offering within the town, significantly extending the facilities currently provided and increasing use across a variety of age ranges and those with limited mobility. In addition, the centre will act as a cultural hub with the sports hall being designed to create a flexible space that can be used for arts-based performances. The centre will also incorporate Wokingham's central library, offering a purpose-built space in contrast to its current location within a refurbished office building, enabling the library to increase its capacity for both traditional and digital forms of learning.

Construction Methodologies

Applying finishes with a soft and neutral base palette enables flexibility for operator and third-party branding, be it coffee shop operators, retail opportunities or event promotional material, without overpowering the interior scheme in the future whilst maintaining a cohesive internal environment. The interior configuration, colour palette and materiality maximise natural light throughout the building, creating light filled space, animated by changes in light and shadow throughout the day & connecting the interior with seasonal changes of the surrounding landscaping.

Sustainable Design Strategies

Alongside building a design that ensures a zero carbon (operation only) and BREEAM 'Excellent' certification, our approach to developing a design strategy for the interior design of the new Carnival Pool Leisure Centre is based around key themes of wellbeing, biophilic design and the different levels of intensity experienced during physical exercise. Our objective is to focus on the wellbeing of various users by creating nurturing yet vibrant spaces where everyone feels welcome and comfortable. This building needs to appeal to a wide demographic with varied needs, we want the design to not only accommodate everyone but celebrate each space individually based on the unique function each space will be providing to end users. The use of biophilic elements will provide a sense of harmony, wellbeing and belonging.

Building refurb creating an environmentally considered learning & teaching hub.

Boyd Orr Building University of Glasgow, West end of Glasgow



At a glance

Client
The University of Glasgow

Location
West End of Glasgow

Services
Architecture, Interior Design

Value
£50m

- Sustainability Facts**
- Local supply chains and locally sourced materials are promoted where possible
 - Achieving a BREEAM 'Very Good Rating' and above.
 - All materials used are to be Grade A rated as defined in the Green guide Specification in conjunction with the BREEAM Mat 1 calculator and consequently have a low environmental impact over their lifetime.

Brief Project Description

A notable example of Brutalist architecture with its large monolithic structure, the Boyd Orr building, built mostly for utilitarian teaching needs, originally housed lecture theatres, seminar rooms, study rooms, laboratories, ancillary rooms and also boasted of roof top glass houses. Remaining as one of the most heavily used buildings for Glasgow University, this 12 storey building built in 1972 is now in need of complete internal and external refurbishment. The aim of the interior refurbishment is to retain as much of the original building as possible, be sympathetic to the original design and existing features within the building. The scheme has also been outlined to achieve a BREEAM 'Very Good rating' and above all to deliver a highly efficient, environmentally considered, stimulating and aspirational, collaborative workspace, learning & teaching hub.

Construction Methodologies

Consideration has been given to the internal remodelling and use of space to allow for future flexibility and adaptability to minimise the need for further alterations and therefore potential product waste, preserving the longevity of the building. All products specified have been obtained from sustainable suppliers to ensure they have the correct BRE Green Guide to Specification and have been sourced from sustainable methods where possible.

Sustainable Design Strategies

The interior design strategy for this project focuses on opening up previously enclosed cores to natural daylight and promoting a shared Interior landscape layered over what was originally a utilitarian building to encourage user ownership. This happens through shared central meeting hubs and shared meeting spaces offering new ways of flexible working, flexible floor plates and the sense of community and shared facilities. Thoughtful consideration over providing a design which preserves original features and finishes such as tiling where possible is contrasted with modern elements looking to support new wellness and good health strategies making the building relevant today. A natural, raw and durable material palette of timber, glass ceramics and metal offer a climate friendly solutions with longevity that look to compliment rather than replicate, the Boyd Orr's brutalist form.

Summary

We have adopted the targets and approach set out by the RIBA in their 2030 Sustainable Outcomes Guide. We are determined to guide and influence our clients, as responsible advisors, to commission projects that achieve these targets and have set ourselves a bold and ambitious goal that all projects designed in our studios will be capable of meeting these targets by 2025.

Our aim is simple, to deliver the highest performing buildings which have a positive impact on the lives of those who use them and a positive impact on the world for future generations.

Simon Bell - Director
Simon.Bell@hlmarchitects.com



Let’s talk about making more sustainable places.

About Us

Delivering
World-class architecture with a social purpose

Employing over
170 people

Since
1964

We operate a
One team culture

Enabling us to
Collaborate across

Seven Sectors

- Asset & Workplace
- Defence
- Education
- Healthcare
- Hospitality, Leisure & Culture
- Justice & Emergency Services
- Living & Communities

Five Disciplines

- Architecture
- Interior Architecture
- Landscape Architecture
- Masterplanning
- Environmental Sustainability

Five Studios

- Belfast
- Cardiff
- Glasgow
- London
- Sheffield

Thoughtful design to make better places for people.