

Environmental planning. Our expertise.

HOARE LEA
2022



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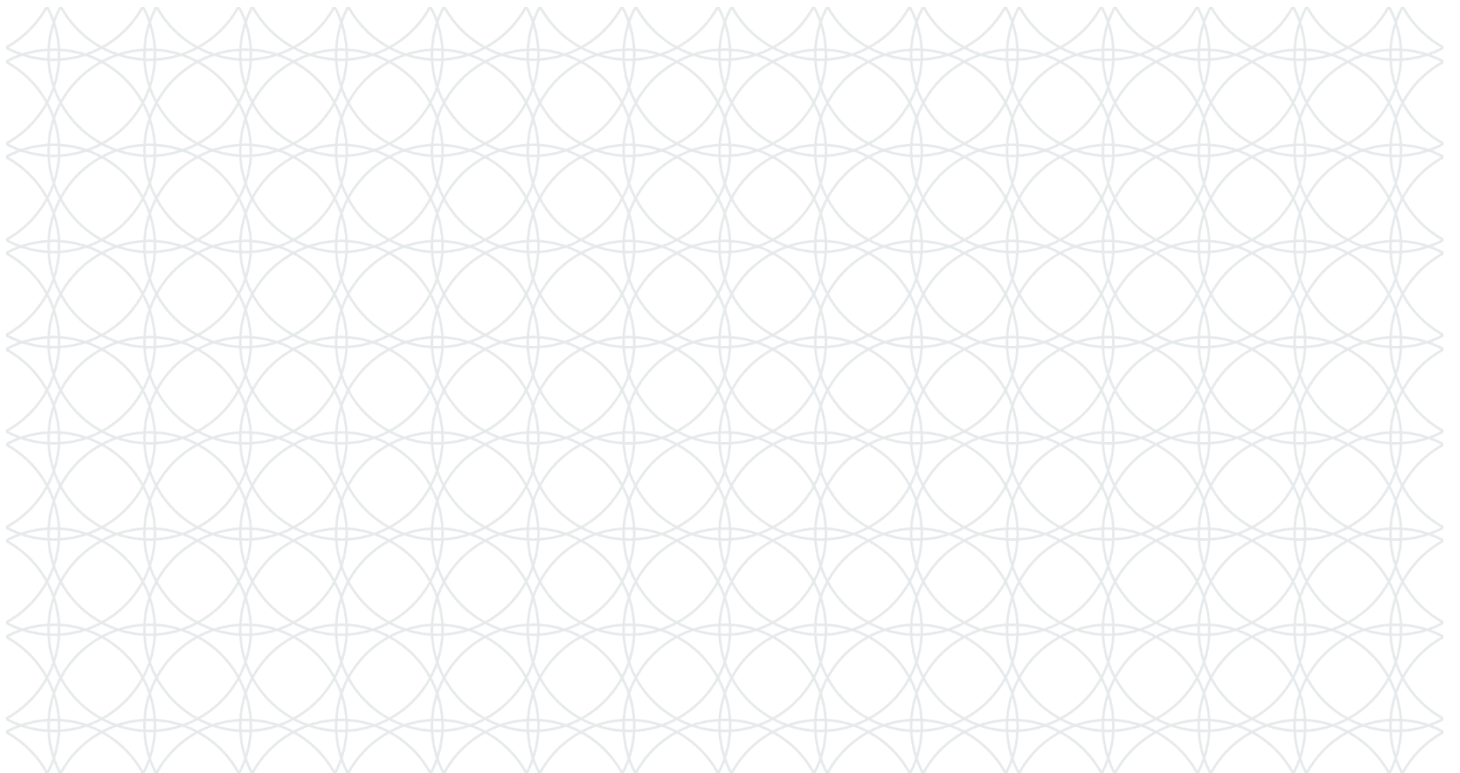
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Part A.

Our approach.



Our approach.



People and planet.

Our 160-year legacy is built on personal pride, technical expertise and dedication to delivering outstanding results. As a firm, we are driven by a common vision to deliver outcomes focussed solutions that transcend internal barriers between technical specialisms. We are guided by our north star – people and planet.

Human-centred and planet-conscious design.

Great design enhances the human experience. And the built environment holds the key to people living healthily, working productively, and connecting better with the natural world.

Designing places for people that are simultaneously people and planet friendly is at the very heart of what we do. Our work and our industry has so much to contribute – we can quite literally, design a better future.

We understand that sometimes human-centred design solutions aren't always the best choice for the planet; and sometimes that planet-conscious design decisions can result in dis-benefits for

people. Our strength is in balancing the tension and the conflicts.

21st century challenges.

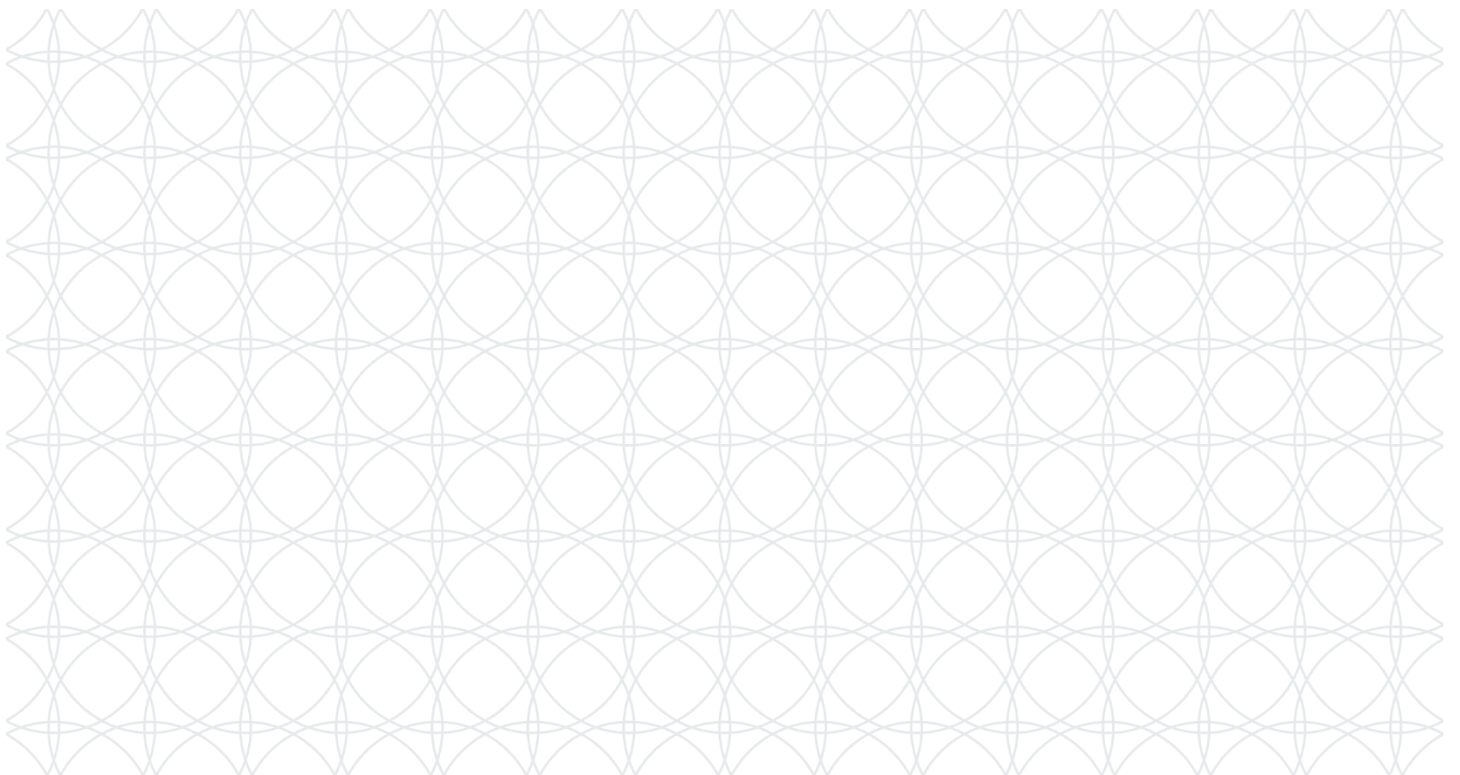
Balancing the tension and the conflicts is where we excel: it's where our problem solving 'challenge accepted' culture can shine. The work that we do is at the interface of this tension and we dissect it by helping to find real, applicable solutions.

Looking at the wider picture though, we understand that human-centric design is now inseparable from planet-conscious design: if we do not have a planet that's thriving, the quality of human life will lessen. It's therefore our responsibility to manage the requirements of both.

As design and engineering consultants working in the built environment sector, we advise on technical design solutions for people and planet. And with this expertise, we are perfectly placed to shape the value of architecture and planning in that regard, not to tick a box, but to play a vital part in addressing the 21st century challenges.

Part B.

Our expertise.



Our expertise.

Environmental planning. Specialist services.

New development proposals are subject to necessary environmental protection requirements, to safeguard the health & wellbeing of human beings and to protect the natural environment. However planning requirements are often seen as complex and a constraint. This misses the point that in the context of the requirements, a well designed development project can produce outcome focussed solutions for people and planet.

We see environmental consenting as an opportunity to add value. Our specialist environmental planning expertise is coordinated with our technical design expertise. This helps stakeholders to understand the development project in the context of the legislative and planning policy requirements. Our approach delivers the greatest value for people and planet, and smooths the path to obtaining planning consent.

Specialist planning expertise.

New development proposals require the input of a variety of environmental specialisms to undertake technical design and assessment, but also to make this information available for public participation in the planning processes.

Our firm has built a reputation as consulting engineers, with expertise in the operational design of buildings tailored to the needs of its users – human beings. From this expertise we have developed an industry leading understanding of the human health and environmental sustainability challenges to delivering new development projects.

Our environmental planning service includes every aspect of human centred and planet conscious design and assessment.

Our specialist planning expertise includes (further details overleaf):

- Air quality.
- Climate change & net zero carbon.
- Daylight, sunlight & overshadowing.
- Energy & carbon strategies.

- Fire safety.
- Lighting Impact & CGI.
- Health impact assessment.
- Noise & vibration.
- Operational waste.
- Security.
- Utilities & energy infrastructure.
- Wind & microclimate.
- Sustainability strategies.

Environmental Impact Assessment.

Environmental Impact Assessment 'EIA' is an iterative design and assessment process, which aims to achieve the best possible outcomes for both human beings and the natural environment.

The need for EIA is determined by the characteristics of the development and its location. While location is generally fixed, it is possible at the early stages to make technical design interventions to avoid significant environmental effects. This provides an opportunity to positively influence outcomes.

At Hoare Lea take an outcome focused approach. We are coordinated to maximise the value that our technical design expertise can bring. Our approach to EIA ensures a holistic and joined up design and assessment process, assurance of regulatory compliance and a robust planning application.

Our coordinated EIA service includes:

- Specialist technical inputs to EIA Screening & Scoping.
- Environmental Statement (ES) chapters.
- Detailed technical modelling and assessment.
- Baseline & construction site monitoring.
- Mitigation & management plans.

We also work closely with our partners at TetraTech Europe to ensure a complete and fully resourced EIA service, including: ecology, landscape, water & flood risk, archaeology & cultural heritage, ground conditions and traffic management.

Specialist planning services.

Air quality.

It's important to consider air quality right from the early planning stage. This is when we can help with detailed reviews during proposals and scope out the need for air quality assessments.

Experience has taught us that considering air quality as early as possible and integrating it within the design process demonstrates a commitment to high design standards. This ultimately improves planning, overall success, and the health & wellbeing of the individuals who live, work and play in and around our developments. As the increased demand for air quality grows, so does our team of specialists – from indoor and outdoor air, building emissions and odour, to road traffic and demolitions.



Climate change & net zero carbon.

Climate change is the most pressing environmental issue facing humanity. We recognise that new developments emit CO₂ and other greenhouse gases that contribute towards global climatic change. However, we also recognise that new development has the potential to become part of the solution through forward-thinking and holistic design.

Our approach to quantifying carbon emissions arising from all stages of development means we are able to provide an overall carbon footprint. This includes the carbon emissions embodied within construction materials, those that would arise from operation of the development, and alterations to the 'carbon sequestration' potential of soil and vegetation as a result of land use changes.



Daylight, sunlight & overshadowing.

Controlling the impact of a new building on the daylight and sunlight of surrounding buildings is paramount to the success of a development. This is critical early in the design process, to ensure that design proposals respond to the prevailing daylight and sunlight conditions of the site and its context.

We have expertise in evaluating the daylight and sunlight within a proposed building. We can assess the impact a proposed building will have on the daylight and sunlight of neighbouring plots.

Our early stage input includes identifying sensitive neighbouring buildings and conducting simple, initial tests to determine whether a full daylight and sunlight assessment is required.



Specialist planning services.

Energy & carbon strategies.

We take a whole-life approach to the energy and carbon performance of developments. This ensures we design for long-term sustainability. We understand the delicate balancing act between architectural vision, energy targets, commercial concerns and sustainable solutions.

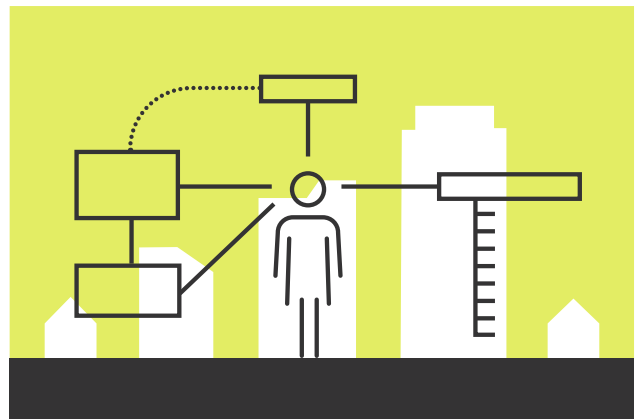
With expertise in both operational Energy Strategy Appraisals and Embodied Carbon Assessments, we can guide the design development process to help project teams determine the best fit solutions, for both construction and operation. We use data and performance modelling to effectively demonstrate all proposals in an easy-to-understand way.



Fire safety.

We are qualified fire safety engineers, qualified to complete planning gateway one fire statements to demonstrate that fire safety issues have been considered. However to provide the best solution we always provide planning inputs as part of an integrated design service.

Innovative fire design can even add benefits over and above fire safety: making cost savings, adding value through space and people-centred design, and increasing flexibility for architects. We pride ourselves on always finding the best possible solution; one that meets – and often exceeds – safety standards.



Lighting impact & CGI.

Our approach to mitigating obtrusive light is founded on our core understanding of how lighting at night needs to work for all affected. This extends from people and protected heritage sites, to sensitive wildlife (such as bats) and ecological systems. As a minimum, we are able to ensure compliance with the appropriate standards, but we also strive to craft solutions that are both functional and truly sustainable without losing a quality lit scene.

Our experience in daylight and lighting and its application in Computer Generated Imagery (CGI) means the photometric accuracy of our visuals gives a true impression of the designed effects of light from any given viewpoint. We can also generate Virtual Reality (VR) walkthroughs and interactive 360VR visualisations. Furthermore our Night Time Landscape Visual Impact Assessments support challenging developments in sensitive locations.

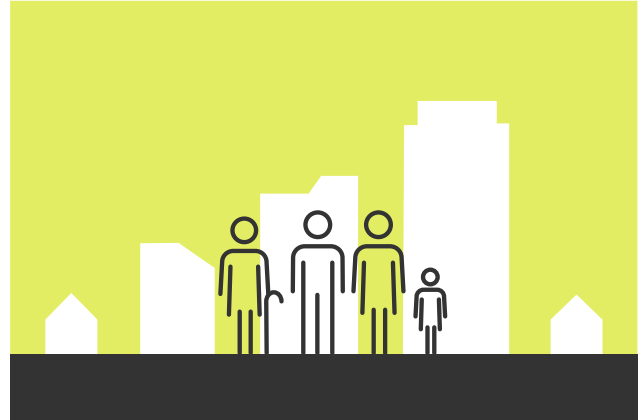


Specialist planning services.

Health impact assessment

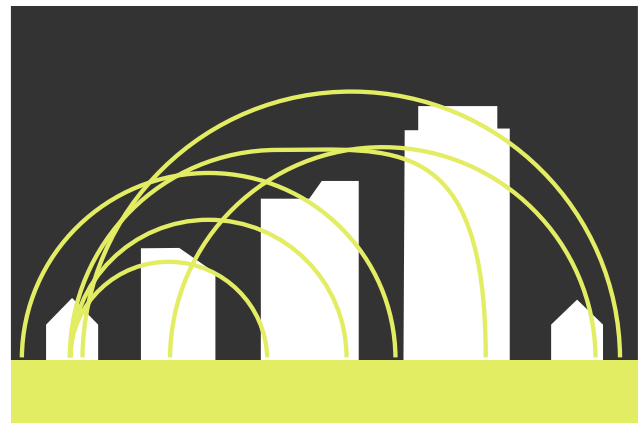
Human health concerns the state of physical, mental and social wellbeing of individuals or groups of people. Health impacts are often spread unevenly across different groups in a given population. These health inequalities often place a burden on public health services locally.

Health impact assessment seeks to understand the social needs of the local population, to ensure development projects do not create or exacerbate health inequalities. Positive and negative health impacts on the relevant local health determinants are assessed to determine the likely significant health outcomes. Through HIA often relatively small design refinements can be identified to optimise the health outcomes for all.



Noise & vibration.

We have one of the largest and longest established acoustics consultancies in the UK and were one of the first built-environment engineering firms to insist every single project is checked for acoustic standards. We look at buildings and beyond; considering the acoustics within a space, but also managing the sounds around it, including the noise a development might produce. This forward-thinking approach and our industry leading experience helps clients make significant savings as early as master planning stage. Our experts assess every design aspect that influences acoustics.



Operational waste.

The transition towards the Circular Economy is a key component of sustainable development. It aims to keep materials at their highest use and value, by minimising the need for new resources and energy. It's important that the principles of the Circular Economy are not only considered in the design of materials, but also for the development's intended operation. Operational waste assessment maximises opportunities to divert waste from landfill. Such opportunities can include waste segregation to maximise recycling, ergonomics of waste management facilities, and maximising waste collection efficiency. Coordination with design is essential to develop an effective operational waste management strategy.

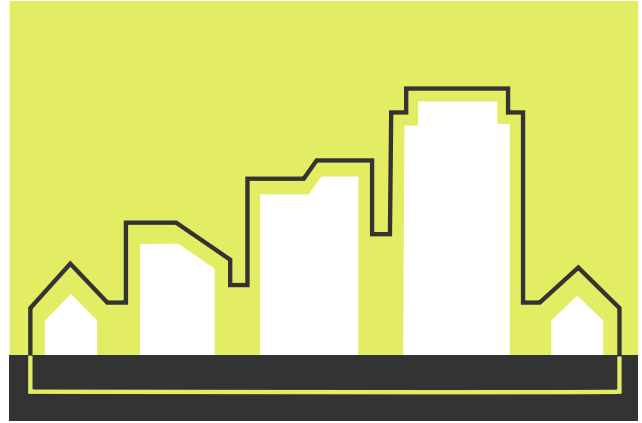


Specialist planning services.

Security.

We believe early consideration of security provides significant opportunities to a development's sustainability aspirations and therefore planning success. Fundamentally, security is a feeling of freedom from threat and, as such, it is a crucial component in creating a sense of wellbeing. But it goes further than this; the natural, physical, social and economic aspects of sustainability can all be positively influenced through early security planning.

Underpinned by a development-specific threat and risk assessment, we identify security requirements and opportunities for added value through the application of established principles such as Crime Prevention Through Environmental Design (CPTED).



Utilities & energy infrastructure.

Available as part of our holistic planning service, or as a standalone service, our Utilities & Energy Infrastructure team has a proven track record in managing even the most complex planning projects.

We start by looking at four key requirement areas: reinforcement, energy, waste, and diversions, covering all aspects of water, gas, electricity, telecoms, and energy services.

After producing a robust infrastructure procurement plan, we manage the entire bid process: market interrogation, design, and negotiation of competitive packages.



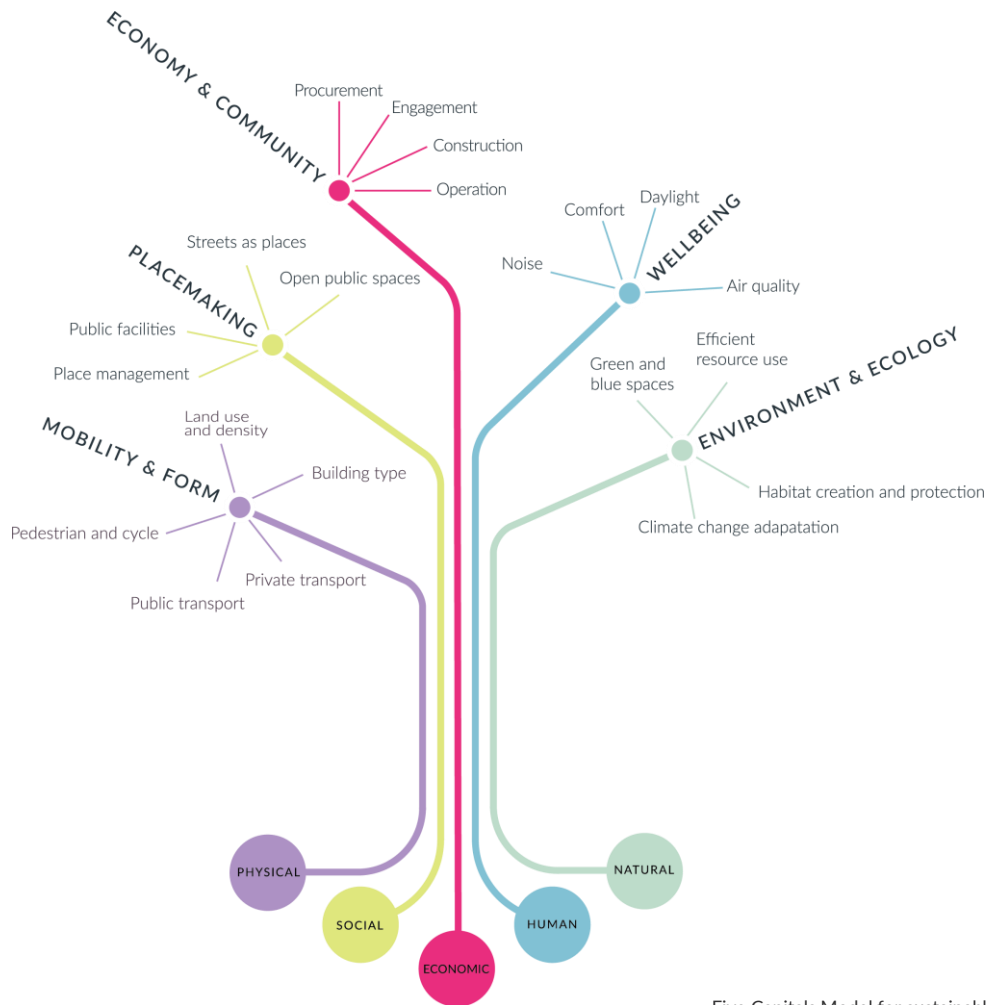
Wind & microclimate.

Excessive wind velocities and wind chill directly influence pedestrian comfort and safety. As a result, the implications for access, footfall and user experience throughout the public realm of a development require careful consideration at every stage of the design process.

We undertake high-level wind desktop evaluations, complex simulation analysis, and lead wind tunnel testing works for single building developments to large scale masterplans. Our performance-based approach means we focus on the best value solutions throughout the design process, drawing on our knowledge of the physics within the built environment and simulation capabilities.



Specialist planning services.



Five Capitals Model for sustainable development

Sustainability strategies.

No longer simply ticking boxes, today sustainability is about adding value. Increasingly, it has become the starting point and the heart of ambitious projects. On each and every project, we take an exciting journey together with clients and project teams to help shape a more sustainable world.

Experts who speak your language

It's important to find experts who truly understand the often-complex sustainability standards. It's a language that we speak; comfortably interpreting it into simple, clear aims.

A sustainability framework

Within the built environment, considering five defined factors and their value is key to a connected approach: the people, the building, the social networks, the natural environment, and the economic output. These form the basis of our sustainability framework which is tailored to the needs of each project.

Stakeholder engagement

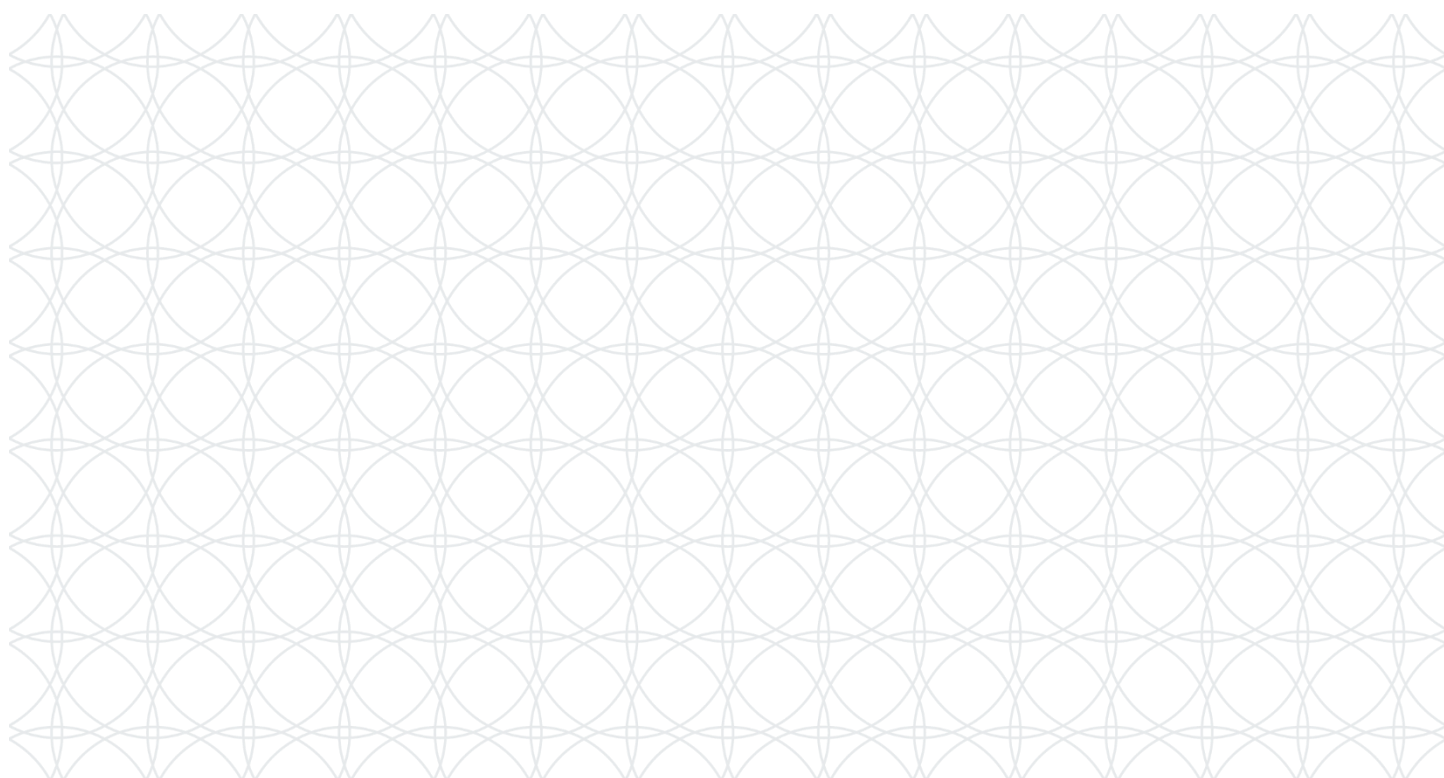
Working with the project team we actively engage with the planning authorities, local community groups and the general public throughout the planning process. We collaborate with the client and project team as well as key stakeholders to create informed innovative strategies. Each strategy responds to the five elements of our framework, and we make sure we articulate it in an accessible and engaging way, no matter the complexity.

Ahead of the industry

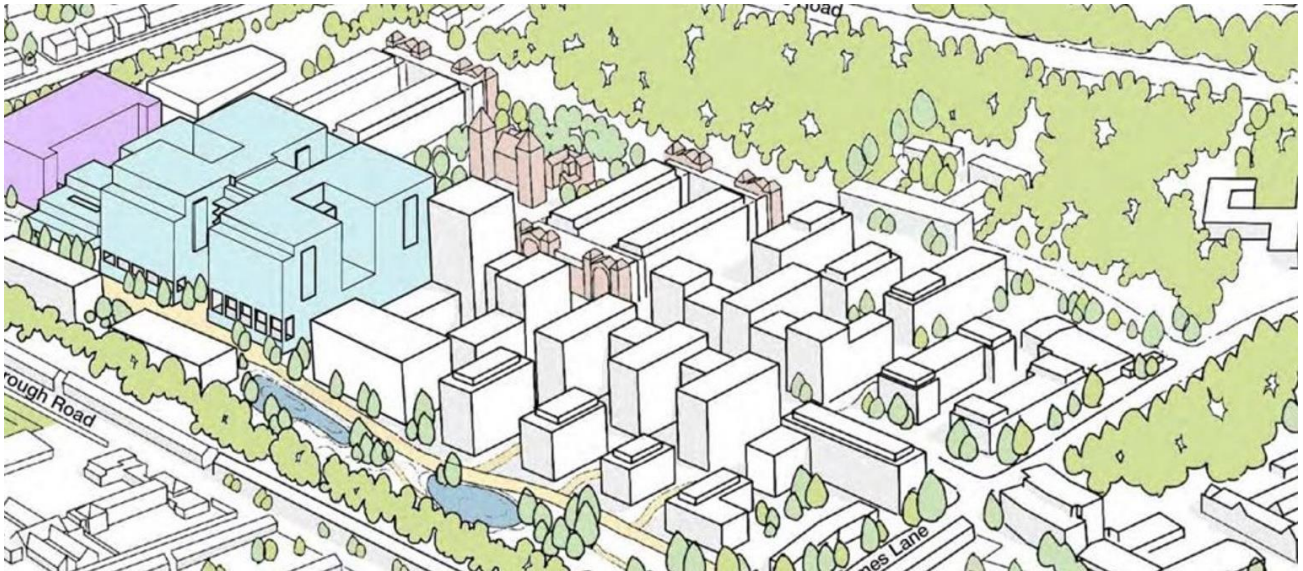
Our team is actively shaping the future of sustainable practices. We conduct in-depth research, author industry guidance, build close links with sector-wide organisations, and sit on influential committees. The result is an unrivalled ability to provide informed, strategic advice that stays ahead of industry changes and is pivotal to our successful input to planning.

Part C.

Our experience.



Project stories.



Whipps Cross Hospital, London.

Safe and sustainable clinical services.

The Whipps Cross regeneration will see the area transformed into an integrated health, social care and health & wellbeing campus.

Impact assessment

We supported a hybrid planning application, providing specialist Environmental Impact Assessment (EIA) noise and vibration, climate change, daylight sunlight and overshadowing (DSO), and wind microclimate inputs to the Environmental Statement.

Modern and future-proofed design

A new 500-bed hospital is to be constructed that will serve the whole community but focus on elderly patients and maternity. We are supporting the design, incorporating the very latest in net zero carbon thinking.

We are creating a sustainable space that is fit for future generations. Our designs include air and ground source heat pumps, Passivhaus levels of insulation and infiltration control, as well as low embodied carbon materials.

A community approach

Our design will bring together a collection of connected services, teams and supporting infrastructure. This includes housing, leisure and cultural spaces that will provide a holistic care and wellbeing to the local environment that has been designed around their needs.

Intelligent building design utilised to create a smart hospital of the future.

BREEAM Excellent with an aspiration for Outstanding.

Modern Methods of Construction will streamline and standardise the project.

Client:	Barth Health NHS Trust
Architect:	Ryder Architecture
Services:	Environmental Planning, DSO, Microclimate, MEP, Acoustics, BREEAM, ICT, Sustainability, Vertical Transportation
Value:	£380 million
Sector:	Healthcare
Status:	Planning Application and Outline Business Case

Project stories.



Sky Studios Elstree.

Home to the UK's next-gen creative talent.

Sky Studios Elstree is a significant new investment in the UK creative economy. It provides a new home for Britain's flourishing creative sector and much needed space for Europe's brightest talent. It provides the capacity for Sky Studios to produce more original content inhouse, while continuing to work with independent production companies. The new studio space will also play host to major film productions from Universal Pictures, Focus Features and Working Title, and television series from NBC Universal Content Studios.

Coordinated planning support

Owned by Legal and General, the underutilised greenfield site on the edge of Borehamwood was allocated for class B employment uses. Yet with a critical shortage of production space in London / the south-east, and the close proximity of Elstree Film Studios, the development plot presented an opportunity for much needed studio space.

In support of the EIA Development Planning Application, we undertook the impact assessment of noise and vibration, air quality, environmental light and climate change. We also provided the sustainability strategy and utility and energy infrastructure inputs to the planning application. Our internally coordinated approach to our planning stage inputs has meant that all of our deliverables were submitted ahead of programme.

Confidence and accuracy

Although the planning application was submitted early in the design process, prior to RIBA Stage 3, our specialists undertook front-end design in parallel with the impact assessment process. Not only does this improve confidence in the accuracy of the planning information submitted, but also provides efficiencies for evolving the detailed design as the project progresses, without the need for costly design iteration.

Complex interaction between planning and early design.

A challenging programme.

Large multidisciplinary project team involving input from six of our specialist teams.

Client: Legal and General

Architect: UMC

Services: Environmental Planning Services, Air Quality, Sustainability, Environmental Lighting, Acoustics, Vibration, Utilities & Energy Infrastructure

Sector: Arts & Culture

Status: Approved, under construction

Project stories.



Dunsfold Park.

Enabling growth with zero carbon.

Dunsfold Park is seeking to create a new village in the heart of the Surrey countryside. The site is the former Dunsfold Aerodrome and proposals include up to 3,000 new homes, a primary school, village centre, retail and the expansion of an existing business park to include commercial and industrial units.

Holistic support

The project is a great example of the value, breadth and depth of our specialist environmental planning services: our acoustics, lighting, utilities and energy infrastructure and sustainability experts all supported this challenging application.

In support of the EIA submission, we undertook the noise and vibration assessment, as well as the environmental light assessment. Our utility and energy infrastructure team were instrumental in overcoming the challenges of necessary power and water reinforcements as well as negotiating the implementation of a new sewage works with the environment agency.

Enabling zero carbon

We have also helped define the sustainability strategy for the masterplan, enabling innovations to come forward at reserved matters stages such as Passivhaus accreditation, low-carbon heat network powered by biogas-CHP, and an integrated water and waste strategy for the production of on-site biogas (to feed the CHP). These all contribute to the overarching aim of the masterplan achieving ‘zero carbon’.

A challenging and complex planning application.

Brownfield site redevelopment.

Two years of pre-planning work involving five of our different specialist teams.

Client:	Dunsfold Airport Ltd
Architect:	Pollard Thomas Edwards
Services:	Acoustics, Environmental Lighting Design, Sustainability, Utilities & Energy Infrastructure
Sector:	Mixed use, Residential
Status:	Approved

Project stories.



Bath Quays: phase 1 & 2.
Regeneration done right.

Bath Quays is the Council’s flagship regeneration project. Designed to create a new and vibrant commercial quarter for the flourishing businesses in the heart of the city’s Enterprise Zone, it aims to generate higher wage jobs and provide more opportunities for Bath residents.

Location location

The scheme will provide new offices alongside homes, cafes, restaurants and a high-quality public realm. Due to the nearby location of a busy main road, air quality and noise was a key consideration for planning approval. The Council also demanded the development wouldn’t cast light onto the river (due to the need to protect bats at night). To assess noise impacts, we carefully measured noise levels at key locations on the site, allowing us to identify different sources present and isolate those that would not be present in the future once the development had been built. Our lighting experts also ensured the river was protected from light at night through intelligent design and positioning of fittings.

Promoting communication

We contributed to the layout in order to maximise the quieter aspect of the development (overlooking the River Avon) and position less noise-sensitive uses in a way that meant they offered the more sensitive spaces protection against road noise. The most significant aspect of this project was the in-depth communication that we maintained throughout the process. Promoting an open dialogue up front meant that we could reduce the chance of the planning application being rejected or requiring revisions. The scheme achieved planning approval in April 2017 and is the most significant development in Central Bath for decades.

The site is located in the World Heritage Site of Bath City.

A sensitive conversion of the Grade II listed Newark Works Building, demolition of redundant buildings, and the introduction of three new buildings.

The most significant development in Central Bath for decades.

Client: Bath and North East Somerset Council

Architect: Allies & Morrison Architects (phase 1), Penoyre & Prasad (phase 2)

Services: Sustainability, Acoustics, Air Quality, Lighting Design, MEP, Utilities & Energy Infrastructure

Sector: Mixed use

Status: Complete

Project stories.



Elephant and Castle.

A brand new town centre.

The Elephant and Castle is one of central London’s largest regeneration projects. Incorporating 1,000 apartments, retail, restaurant and leisure facilities, along with a new cutting-edge campus for London College of Communication with exhibition and cultural spaces – it’s set to be a brand new town centre for the capital.

Excellent transportation links to the area are integral to its success. Two underground and one mainline rail station, 28 bus routes, excellent road connections and one of London’s first Cycle Superhighways will ensure the development is easily accessed. It also connects to another major redevelopment site: King’s Cross – which we have also been heavily involved in.

Capital constraints

This highly technical and challenging project involved working in a constrained site, with a major road, tube stations and tunnels, and train lines all in close proximity. Our client was keen that the development embraced the multi-cultural ethos of the area – bringing the already established community closer together by creating new a space for people to use.

In the mix

This was a fantastic project to utilise and bring together almost every aspect of our business. We drew on the design expertise of many of our sectors specialists – from retail and workplace to residential and leisure. We designed collaboratively across our specialist groups. Co-ordinating under one banner meant we could create holistic and complementary solutions that really delivered across the spatial and time constraints.

One of central London’s largest regeneration projects.

1,000 residential units on the site, which links with another key London redevelopment: King’s Cross.

The majority of our specialist groups contributed to the project.

Client: Delancey

Architect: Allies and Morrison

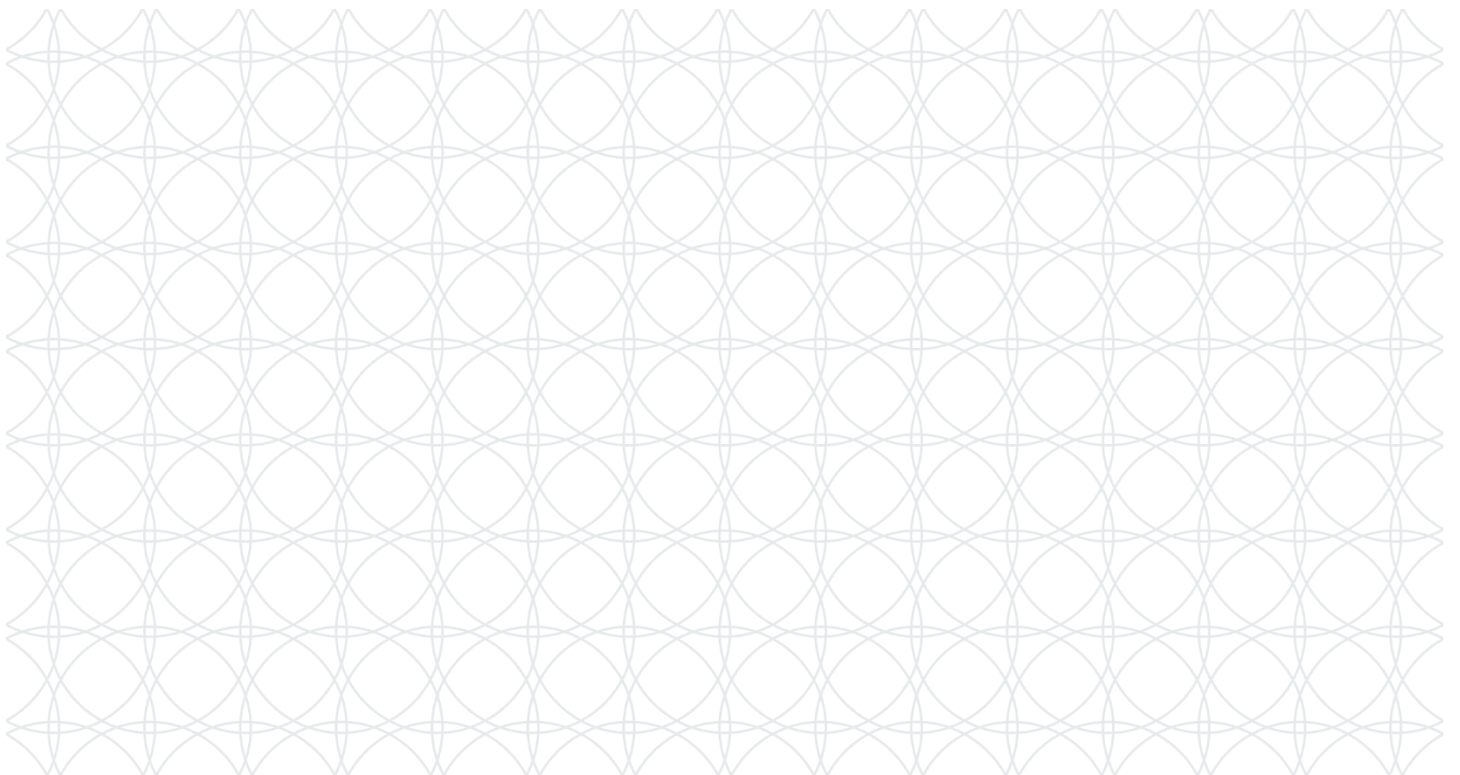
Services: MEP, Utilities & Energy Infrastructure, Vertical Transportation, Façade Access, Lighting Design, Acoustics, Vibration, Fire Engineering, Sustainability, Air Quality, Performance

Sector: Residential, Retail Higher Education Arts, Culture & Heritage

Status: Under construction

Part D.

About us.



The firm.



Hoare Lea. Forging a better future for people and planet.

Hoare Lea is an award-winning engineering consultancy with a creative team of engineers, designers and technical specialists. We provide innovative solutions to complex engineering and design challenges for buildings.

Irrespective of the scale, or complexity, of a project, we provide a full range of MEP, environmental and sustainability services, bringing buildings to life and ensuring that they perform in operation as well as they look.

Our commitment.

Whatever our client's vision, we exist to make it a celebrated reality. When we embark on a project journey, we are making a commitment to the client and to each other. We achieve the best possible results in relation to quality, programme and value, delivered through our innovative problem-solving approach and our unwavering personal commitment.

Our heritage.

Our 160-year legacy is built on personal pride, technical expertise and dedication to delivering outstanding results. We build meaningful relationships and protect our hard-earned reputation by rolling up our sleeves irrespective of a project's scale, or complexity. As industry leaders, we are committed to making every client's vision a reality, with forward-thinking and sustainable solutions that engineer a better future for all.

Our reach.

In 2021, we made an exciting new leap for the firm, joining Tetra Tech's High Performance Buildings Group. This global network of excellence brings together the expertise of talented engineers, commissioning agents, and energy analysts from around the world to solve the most important challenges of the 21st century.

By joining the High Performance Buildings Group, we are even more equipped to build upon our strong and successful history of delivering outstanding outcomes for our clients, as part of a global practice dedicated to the future of the built environment.

Our global network.



Leading with science. The High Performance Buildings Group.

As part of Tetra Tech’s High Performance Buildings Group, we contribute to global leadership in the evolution of our built environment.

The High Performance Buildings Group provides high-end consulting and engineering services to create sustainable designs for some of the world’s most iconic buildings. With an ethos of ‘Leading with Science’, we’re helping to deliver innovative solutions to minimise lifecycle costs and maximise value for clients. This global presence presents opportunities for experience and professional growth all over the world.

Better together - powered by innovation

Tetra Tech’s reputation rests on the technical expertise and dedication of more than 20,000 passionate people from around the world working together to provide innovative, sustainable solutions for challenging projects. High Performance Buildings Group projects make up some of the most iconic buildings of the 20th and 21st centuries around the world.

We help create sustainable, resilient buildings where people can thrive, using energy-efficient building technologies - from radiant heating and cooling to daylighting, rainwater harvesting, and renewable energy generation systems across our projects.

We are delighted to be part of a global network that is committed to making spaces work, supporting clients at the cutting edge of performance-based, sustainable design.

“We’re part of the global network of engineers, consultants, commissioning agents and energy analysts from around the world, working together to deliver iconic, resilient and innovative buildings through science-led sustainable design.”

The firm.

Our specialist expertise.

We are problem solvers who care how a space makes you feel when you step inside – who bring buildings to life.

Our comprehensive offering includes:

**MEP. Acoustics. Air Quality. Audiovisual.
Building Physics. Digital Engineering. Expert
Witness. Façade Access. Fire Engineering.
Intelligent Buildings. Lighting Design.
Operational Engineering. Performance. Property
Services. Research & Development. Security.
Sustainability. Utilities & Energy Infrastructure.
Vertical Transportation. Vibration.**

Our in-depth sector experience.

We take personal responsibility to achieve a shared vision, combining strong relationships with technical excellence.

Our dedicated sector expertise includes:

**Arts, Culture & Heritage. Courts. Data Centre &
Mission Critical. Defence. Distribution. Healthcare.
Higher Education. Hotels. Manufacturing &
Process. Prisons. Residential. Retail. Schools.
Science & Research. Sport. Transport. Workplace.**

Thank you.
hoarelea.com.

Locations

Abu Dhabi

Birmingham

Bournemouth

Bristol

Cambridge

Cardiff

Doha

Glasgow

Leeds

London

Manchester

Oxford

Plymouth

Madrid (associated office)

