

A photograph of a hospital hallway. In the foreground, a nurse in a white uniform is pushing a gurney with a patient lying on it. The patient is covered with a blue blanket. Another nurse in a blue uniform is standing behind the gurney, looking down at the patient. The hallway has large windows on the right side, letting in bright light. The overall atmosphere is professional and clean.

Healthcare

Consulting Engineers and Environmental Scientists

Waterman Group is a leading engineering and environmental consultancy providing specialist services to our clients across the property, infrastructure, environment and energy markets.

We employ over a thousand engineers and scientists across the UK, Europe and Australia. The close collaboration between our teams gives our people the opportunity to work on some of the world's most exciting projects, and allows them to grow their specialism by working with our leading experts within the Group across a wide variety of sectors.

Our expertise covers civil, structural, transportation, mechanical and electrical engineering as well as specialist secondment consultancy services. We take great pride in our longstanding relationships with government agencies, local authorities and private sector clients. We strive to provide innovative, sustainable and economic solutions that convert our clients' vision into reality on every project we undertake, no matter how large or small the challenge. Our work covers the complete lifecycle of a project, from initial surveys and concept planning, through to design, delivery, project management, supervision and ongoing maintenance.

Waterman Group is part of CTI Engineering, a leading Japanese engineering consultancy. CTI provides professional consulting services related to civil engineering and construction works, including planning, research, design, and project management.



Healthcare

With an active presence in the UK since 1952, we have established a strong foot hold across all sectors of the built and natural environment. The Healthcare sector is a core part of our business and this brochure presents a selection from our portfolio of projects. Our engineers and scientists have a wealth of experience that enables us to provide specialist consultancy services to clients across multiple sectors and disciplines such as; aviation, commercial, comms & technology, conservation/historic, education, energy, flood management, government, healthcare, highways, hotels, industrial, marine, rail residential, retail, sports & leisure, transportation, urban regeneration and waste.

Creating spaces for a healthy future

Waterman's portfolio has been built up over 50 years and comprises some of the most advanced healthcare facilities across the UK and Australia. We are extremely proud to have played an important part in incorporating innovative technology and design strategies as part of the continued advancement of the medical sector.

Our knowledge and experience covers all types of healthcare facilities: specialist children's hospitals, advanced operating theatres, GP and therapy clinics, medical training facilities, mother and baby units, cancer treatment facilities, transitional care, elderly care homes and more.

Our clients benefit from our global healthcare experience which draws on our portfolio of projects including some of the world's most advanced facilities ranging from complex new-build schemes through to challenging remodelling and extension projects where facilities are kept fully operational throughout the work.

The multidiscipline approach taken by our team – covering all elements of Building Services, Structural, Civil and Environmental design – ensures that we can efficiently meet all project engineering demands.

Facilities that promote wellness as part of patients rehabilitation and recovery process is becoming increasingly important, and our teams are proud to have been part of initiating innovative ways to shape these special spaces.

Whatever the scheme, our design advice helps deliver exceptional outcomes for all stakeholders. We pride ourselves in being able to successfully support the planning and implementation processes that are an integral part of complex stakeholder management aligning people, processes and assets.

We challenge and innovate to drive value through all design stages from pre-planning through to construction and operation. Future proofing our buildings is an essential part of a holistic approach to sustainability and our design solutions must allow our developments to adapt to technological advancements.

We understand the need for resiliency and reliability in our engineering solutions whilst continually challenging our design strategies to reduce energy use and carbon footprint and as such, we are continuously focussing on a cost-in-use through close collaboration with estate managers.



Ballymena Healthcare Centre

Client: Northern Ireland Health Trust | **Architect:** Keppie Design/Hoskins Architects

The award-winning healthcare centre in Northern Ireland was built to improve the provision and delivery of health and social care services to the people of Ballymena and Northern Health and Social Care Trust area. The two and part three-storey development includes six GP practises, pharmacy, selected acute outpatient and diagnostic services as well as a large number of allied healthcare professionals, such as Physiotherapists, dentists, x-ray and children's services.

We were appointed to provide the civil and structural engineering design within a full BIM environment, working collaboratively with the Architects and building services engineers.



Regional Finalist
Civic Trust Awards 2017



Winner - RSUA Award
RIBA Regional Awards 2017



Winner - 'Best Primary Care Development in the UK'
Building Better Healthcare Awards 2016



William Keown Trust
Prestige Access Awards 2016



Winner - 'Healthcare Winner'
GIA Awards 2016



Winner - 'Best Healthcare Building' in Northern Ireland 2016'
Construction Excellence Awards 2016

South Lakes Birth Centre

Client: IHP | Architect: DAY Architectural Ltd

The new 2,553 m² world-centre extension to the live Furness General Hospital in Barrow comprises 14-ensuite birthing suites with facilities for partners to stay over, two dedicated operating theatres, a special-care baby unit, maternity assessment area, transitional care facility and a bereavement suite.

Additional features include an interactive classroom fitted with a highly sophisticated training simulator which can re-enact complicated birthing situations to allow staff to keep their clinical and decision-making skills up to date.

We provided mechanical, electrical, acoustic engineering and BREEAM consultancy services for this collaborative initiative between the local communities and staff from University Hospitals of Morecambe Bay NHS Foundation Trust.



Royal College of Pathologists HQ

Client: The Royal College of Pathologists | **Architect:** Bennetts Associates

As home to medical research professionals for over 50 years, the stunning new premises in Aldgate, Central London, has been designed as a fitting place from which to administer, train, teach and manage the College and its members for the future.

The eight-storey building features a double-height entrance atrium, two roof terraces and a suite of state-of-the-art facilities for the College's members and trainees. There is also a multi-purpose 210-person conference theatre, meeting rooms, office space and examination rooms from which to expand the College's programme of academic activities.

Designed with sustainability at its heart, our structures team were appointed to incorporate pioneering concrete techniques into the design, including an exposed board-marked concrete and brick finish internally, with underfloor ventilation and exposed trough slab soffits.



All Images © Peter Cook



Shortlisted - 'Project of the Year'
Building Magazine 2019



Winner - 'Education'
New London Architecture Awards 2019



Winner - 'Architecture + Learning'
Architizer A+Awards 2019

The Royal Oldham Hospital

Client: IHP (Joint Venture between Vinci Construction/Sir Robert McAlpine) | **Architect:** IBI Taylor Young Ltd

The Royal Oldham Hospital is situated in the Coldhurst area of Oldham, Greater Manchester, and is managed by Pennine Acute Hospitals NHS Trust. The former workhouse infirmary was established around 1870 and became part of the National Health Service in 1948.

The extensive site covers multiple healthcare services and has undergone a £32.8 million refurbishment, making it the new home of a full accident and emergency department as well as one of three specialist neonatal centres in the UK. Waterman has been involved in three major projects at the Royal Oldham Hospital; the Christie Radiotherapy Centre, the Mother and Baby Unit and the Lucy Pugh building.



Healthcare | New Build

The Christie Radiotherapy Centre (Part of The Royal Oldham Hospital)

The new three-storey Christie radiotherapy centre allows patients to receive a first-class level of care much closer to home, covering their surgery, chemotherapy, haemato-oncology and radiotherapy.

As the first of a network of Christie radiotherapy centres to be opened, the unit houses the out-patient clinics as well as two state-of-the-art Elekta linear accelerators and Philips CT scanner which deliver highly complex radiotherapy treatments to up to 120 patients a day.

We provided structural, building services, environmental, infrastructure and specialist secondment services within the P21 framework, which aims to integrate skills into the teaching of core academic subjects.

The Mother & Baby Unit (Part of The Royal Oldham Hospital)

The new 7,300 m² mother and baby unit provides a modern healthcare department that is one of three regional neonatal centres to provide the highest standard of extensive care for the smallest and most vulnerable babies.

The key facilities are situated across four storeys and includes: a paediatric theatre, 37-cot NICU, two obstetric theatres, delivery suites, postnatal wards, gynaecology assessment unit, paediatric day case and wards, accident and emergency observation unit, surgical triage, and a 30-bed assessment unit. Several of the existing wards above the operational emergency department were also refurbished.

Our building services team were appointed to design all mechanical and electrical services installations, ensuring the scheme achieved a BREEAM 'Excellent' rating.



The Lucy Pugh Unit (Part of The Royal Oldham Hospital)

The project comprised of the refurbishment and reconfiguration of the existing three-storey Lucy Pugh building on the peripheral of the main hospital site, creating new purpose-designed outpatient department with general consulting areas, examination rooms, support service facilities, general administration offices and staff areas.

We were appointed as the mechanical and electrical services design consultant, providing solutions to accommodate the reconfiguration of the internal spaces and incorporating the general and specialist services systems, all of which required careful coordination and planning within the existing building's restricted site. Additional works included the incorporation of energy saving measures to further reduce the main hospital's carbon emissions.

Coventry Hospitals

Client: Project Co / hcp

Ongoing works are being carried out over the whole of the extensive hospital site, ranging from building extensions, theatre and room reconfigurations, to equipment replacements and the construction of a multi-storey car park.

The hospital complex incorporates an acute building with four connected blocks, an energy centre, secure mental health unit, additional clinical and research facilities as well as extensive road facilities and helicopter pad.

Our team were appointed as CDM/ health & safety advisors on over 50 projects across the site over the past six years, including: assessing the suitability and extent of preconstruction information for each project, reviewing the construction phase plan to determine whether the principal contractor has taken all the constraints and requirements into account and advise accordingly, attending project meetings and working closely with the project stakeholders to understand the purpose and requirements of the works to ensure an effective consultation.



All Images Courtesy of Sonnemann Toon Architects

Healthcare | New Build

Walsgrave Hospital

Client: Skanska Technology / for Coventry and Rugby Hospital Company | **Architect:** Nightingale Associates

As part of University Hospitals Coventry and Warwickshire NHS Trust's £440 m refurbishment of Walsgrave Hospital in Coventry, three new buildings were constructed on this multi-phased project following the extensive demolition and removal of asbestos from the existing hospital.

Our health & safety team were appointed to act as planning supervisor for the complete redevelopment of the acute hospital, clinical sciences building and mental health unit, together with numerous smaller buildings for support facilities.

The design and construction methods were significantly affected by the need to maintain continuous operation of the site. One of the existing buildings was refurbished as the facilities maintenance building, access roads and infrastructure were completely remodelled and landscaped.

Royal Lancaster Infirmary Therapies Building

Client: University Hospitals of Morecambe Bay NHS Foundation Trust | **Architect:** DAY Architectural Ltd

The £1.2 m refurbishment of the existing therapies building in Lancaster offers a variety of therapy out-patient services, including physiotherapy, dietetics, orthotics, occupational therapy and wheelchair clinics.

With the capacity to accommodate up to 21 clinics at any one time, the new department provides eight private treatment rooms, multipurpose gym, patient assessment kitchen and 13 treatment cubicles.

Our building services team were appointed for the full refurbishment and replacement of the MEP services, carried out in phased operations to suite the continued operation and occupation of the building.



Healthcare | New Build

Newbury Place Health Centre

Client: Level Healthcare Ltd with Salford NHS Trust | **Architect:** Ainsley Common Architects

The £4.75 m primary care facility in Manchester provides a wide range of state-of-the-art health services for one of the largest long-standing Orthodox Jewish Communities within the UK.

The new high-profile health centre brings together four local GP practices to meet the growing health and social care needs of the local community as well as providing pharmacy, optician, community services and a retail food outlet.

Our building services team were appointed to provide mechanical and electrical engineering services for the healthcare centre and retail units, providing a low energy, cost effective and flexible design solution that met the requirements for carbon reduction as well as meeting the client and local NHS Trust's aspirations. Low energy design measures included natural ventilation with passive thermal mass, LED lighting, air source heat pump technologies, photovoltaic cells and low water consumption appliances, all of which contributed to the building's BREEAM assessment requirements.



Scottish Community Hospitals

Client: hub North Scotland Limited for NHS Highland | **Architect:** Oberlanders & Rural Design

Located in Scotland, the two new Community Hospitals are driven by NHS Highland to combine multiple healthcare facilities under a new Community Hospital initiative that will re-shape health and social care services across the country.

Our team in Scotland are carrying out civil and structural engineering services as well as pre-planning support through specialist services in transportation, geo-environmental assessment, acoustics, archaeology, ecology and hydrology.

Badenoch & Strathspey Community Hospital

The new community hospital in Aviemore replaces several existing local facilities - Ian Charles in Granttown-on-Spey, St Vincent's in Kingussie, and the Aviemore Health Centre and 'Scottish Ambulance Service Base' - to create a modern facility including an in-patient ward, GP practice, out-patient services, dental clinic, x-ray facilities, out of hours service and a minor injuries unit.

The structure was designed to suit the specific requirements of the clinical facilities, including supporting x-rays and the dental practice. Our team designed a structure that is flexible for future expansion, strategically placing steel frame elements to permit extensions and internal re-arrangements as required. Our ecology team worked with the Cairngorms National Park Authority (CNPA), providing ecological support throughout the planning and construction phases and addressing concerns for reptiles and protected invertebrates.



Healthcare | New Build



Skye, Lochalsh & South West Ross Community Hospital

The Isle of Skye's new community hospital will deliver an integrated health and social care 'hub' in Broadford, replacing existing facilities to offer an in-patient ward, A&E department, radiology services, infusion suite, out-patient treatment and maternity services in one place.

To suit the site's sloping topography, our team defined an earthworks strategy including large volumes of earthwork moving, retention structures and regrading of slopes. We carried out an extensive floor plate analysis for the first floor in-patient ward to increase the floor slab thickness with secondary support beams to conform with the Scottish Health Technical Memorandum's vibration performance criterion. With the in-patient and out-patient facilities on separate floors, a number of structural trusses were included to allow clear span areas over large spaces such as the renal suite and x-ray department.

Doune Health Centre

Client: hub East Central on behalf of NHS Forth Valley | **Architect:** Anderson Bell Christie

Due to the recent development of new homes in Doune, Scotland, a significant increase in the population resulted in the need for a larger state-of-the-art facility to accommodate 850 additional patients.

As well as providing an improved service, the new medical practice will offer a range of health and social care amenities to the local community, including: physiotherapy, podiatry, adult mental health, dermatology, counselling and support of people with long term conditions such as diabetes, in addition to dementia link and old age psychiatry services through doctor and community psychiatric nurse clinics.

We were appointed for civil and structural engineering consultancy services including detailed site modelling and a flood and drainage strategy.

To allow for further flexibility, the structure of the building has been designed to accommodate future expansion. This adaptability is important as the local population is expected to continue to rise due to subsequent housing schemes planned in the nearby Deanston in the forthcoming years.



Image Courtesy of Anderson Bell + Christie Architects



Healthcare | New Build

St. Patrick's Hospital

Client: St Patrick's Hospital Board of Governors | **Architect:** Costello Murray Beaumont

The 200-year-old psychiatric hospital in Dublin, underwent extensive improvement works to include a new single-storey wing for the high-security ward.

Original roof trusses and timber beams were recovered from a section of the old hospital to be used within the new structural frame as a key design feature. To maximise natural light penetration into all areas of the building, a complex multi pitch roof was installed and permits the use of extensive glazed panels and curtain walls. A steel frame was adopted to provide the flexibility required to create the roof.

Our team in Ireland were commissioned to provide full civil and structural engineering services on the extension and improvement works.

Victorian Comprehensive Cancer Centre

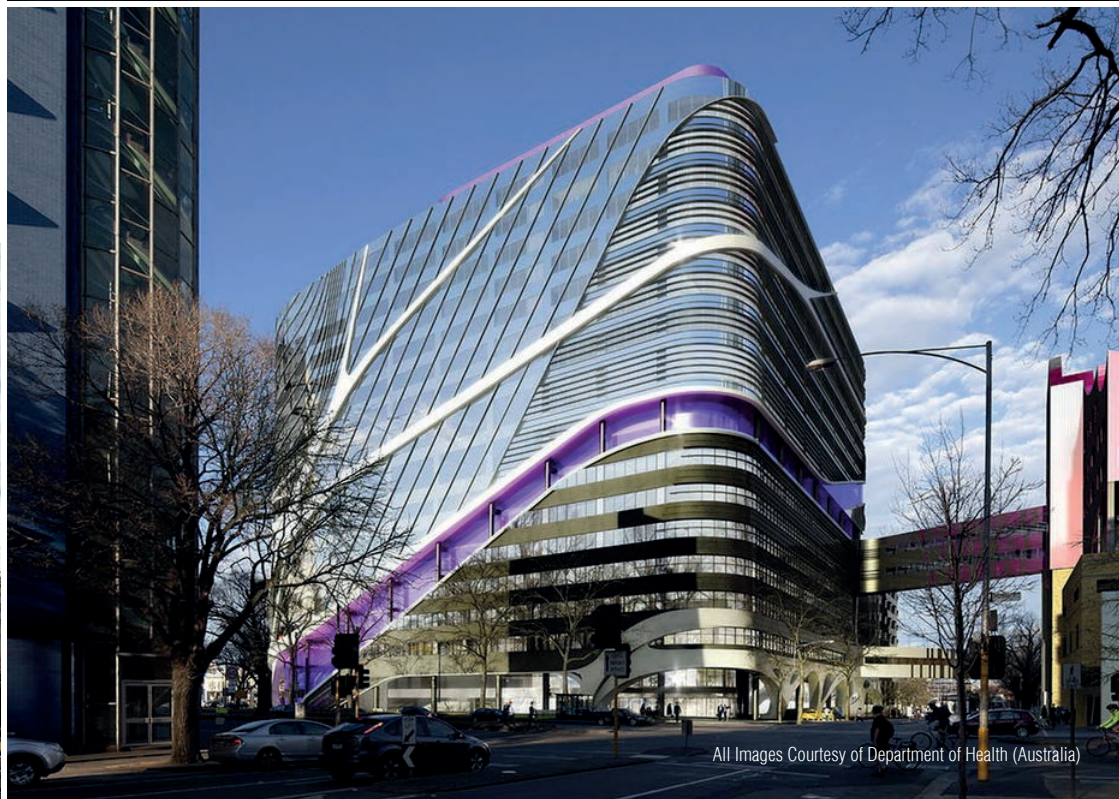
Client: Department of Health and Human Services, Victoria

Architect: Silver Thomas Hanley / DesignInc / McBride Charles Ryan

The new 100,000 m² purpose-built clinical and cancer research centre is the largest specialist branch in Melbourne, Australia, and involves the collaboration of six partner organisations: Peter MacCallum Cancer Centre, the University of Melbourne, Melbourne Health (which includes the Royal Melbourne Hospital), Ludwig Institute for Cancer Research, the Royal Women's Hospital and the Walter and Eliza Hall Institute of Medical Research.

The \$1 bn (AUD) world-class comprehensive centre was built as part of the development of additional facilities on the former Royal Dental Hospital and Royal Melbourne Hospital City Campus sites and can accommodate 250 patients and 1,200 researchers. State-of-the-art clinical facilities are situated across 13-storeys, including 160 in-patient beds, 110 same-day beds, eight operating theatres, two procedure room and eight radiation therapy bunkers.

As part of the architect's mission to provide a tranquil environment for patients to meet their family and friends, the seventh floor provides a 1,400 m² garden sanctuary that is home to more than 100 native plants and is one of the largest public rooftop gardens in Australia. Our team in Melbourne undertook the technical advisory role which included brief preparation, bid evaluation, comprehensive design review, design compliance checking, commissioning strategy proposals and final on-site witness testing of commissioning as verification and acceptance on behalf of the State.



Royal Children's Hospital

Client: Department of Health and Human Services, Victoria
Architect: Billard Leece Partnership / Bates Smart Architects

As one of the leading paediatric hospitals in Melbourne, Australia, the new \$1 bn (AUD) world-class comprehensive centre is the largest hospital redevelopment by the State Government. With a capacity to treat an additional 35,000 patients each year, the new hospital continues to meet growing demand through an increase in acute paediatric beds and emergency department services.

Constructed on a 4.1 hectare-site, the scheme comprises 150,000 m² general hospital and clinical amenities, 353 patient beds, medical research facilities, underground car parking and hotel and retail facilities.

Our structures, civils and building services teams undertook the technical advisory role for the state Government, including brief preparation, bid evaluation, comprehensive design review, design compliance checking, commissioning strategy proposals and final on-site witness testing of commissioning as verification and acceptance on behalf of the State.



Contact us

London (HQ)

Pickfords Wharf
Clink Street
London SE1 9DG
t: +44 (0)207 928 7888

You can find further details of all
our office locations on our website.



@Waterman_group



Waterman Group

www.watermangroup.com