

Health Care Capability

Civil, Structural, Transportation, Environmental and Geotechnical Engineering Consultancy Services





Health Care Capability

Over the past few years, the healthcare sector has undergone significant transformations driven by key government initiatives, such as Agenda for Change and the transition from Primary Care Trusts (PCTs) to Clinical Commissioning Groups (CCGs). We have also navigated major shifts in procurement strategies, including the implementation of Procure 22/23 in NHS acute hospital trusts, the NHS/SBS framework, and 3PD models for delivering health and medical centres in primary care.

A deep understanding of Health Technical Memorandum (HTM) standards is essential for successful project delivery in the healthcare sector. Additionally, the HAPPI report and the Care Quality Commission (CQC) have set new benchmarks for enhancing patient care and operational efficiency. With over 25 years of experience in the healthcare sector, we have successfully delivered a wide range of projects, including medical centres, dementia care homes, public and private hospitals. As the built environments within healthcare continues to evolve, we collaborate closely with our clients and professional services partners to optimize asset value, whether through land development or the enhancement of existing facilities.

“

We were very impressed with the new hospital which from our perspective showed a super patient environment, good flow to the layout and well thought out space.

Devon Partnership NHS Trust

”



Cygnets Hospital, Coventry

Case study: Health Care

Project details

Cygnets Hospital Coventry is a new 56-bed mental health hospital. The hospital offers specialist inpatient services for women across three wards, with step down facilities also forming part of the care pathway. The hospital marks Cygnets's first service within the West Midlands. Engineers at BSP Consulting have undertaken the full structural design for the £9.8 million scheme.

Situated at the old St Mary's School site on Landsdowne Street in Coventry, the health facility comprises of three principal wards, plus eight individual step-down flats together with therapeutic, clinical and recreational facilities, and ancillary/support accommodation. These have been set within a building floor plan totalling 4,427 square metres and constructed over three levels.

Lee Hammon, Cygnets Health Care's commercial director, said: "We are most excited about bringing a new hospital to the West Midlands' region. It is an area where we have held strong and positive NHS relations for many years, and we are delighted to be able to offer these important NHS customers a more local service, to meet their commissioning needs."

Key challenges and engineering solutions

The large steel-framed building with composite decks and a mix of masonry and cladding outer leaf has been designed by BSP in Revit – linking the architect's Revit files with BSP files.

"We have exported our models to the fabricator in IFC format for them to fabricate from," said BSP BIM manager Dan Hinchley. It is the latest in a number of healthcare projects that BSP has been involved in, which have included primary care centres across the UK.

"Cygnets Hospital Coventry is an excellent example of how BSP is using expertise in Revit to make the design and construction processes more streamlined and efficient."

Key facts



Value
£9.8m



Client
Cygnets Health Care



Completion
2017



Architect
Tangram



BSP's role
Structural Engineering



Contractor
Clegg Construction



Cygnets Hospital, Maidstone

Case study: Health Care

Project details

Cygnets Hospital is a state-of-the-art, 63 bed mental health facility for adults situated in the Kent Medical Campus in Maidstone.

Cygnets Hospital Maidstone is purpose built to meet the latest national specifications for improving mental health within a therapeutic environment. The hospital provides an important and much-needed service for local patients from Kent.

The hospital is split into four distinct wards, each offering specialist mental health services:

Roseacre Ward – Highly Specialised Personality Disorder service for women

Kingswood Ward – High Dependency Rehabilitation service for men

Bearsted Ward – Specialist PICU Service for Men

Saltwood Ward – Male low secure ward

The hospital's services have been requested and agreed by local and regional NHS bodies to meet the urgent demand for specialist mental health services within Kent.

The hospital has generous facilities for therapeutic and recreational activities, training and administration. In total, the building provides an average of 86 square metres of total floor space per service user, the highest of any Cygnets development so far.

Key challenges and engineering solutions

A split level site dealt with by providing a concrete earth retaining structure through the middle of the building. Passage of M&E services in ceiling zones of limited depth provided by designing the frame in a way such that the main circulation areas were kept free of steelwork.

A braced steel-frame primary structure on a 2/3 storey split-level site, dealt with by providing a concrete earth retaining structure through the middle of the building, frame was designed to keep main circulation areas free of steelwork.

Key facts



Value
£8m



Client
Cygnets Health Care



Completion
2017



Architect
Tangram



BSP's role
Civil and Structural Engineering



Contractor
Metnor Construction



Todmorden Health Centre, Yorkshire

Case study: Health Care

Project details

Todmorden Health Centre Yorkshire is a new healthcare facility that replaced a 20-year-old health Centre and provided the opportunity to create a new modern building which is equipped for the 21st Century.

The new three-storey facility was designed to provide more integrated services within a primary care setting in the Todmorden locality. Offering space for a range of medical services, the Centre includes a full X-ray unit and audiology suite.

The Replacement Health Centre is for 8GPs, together with enhanced PCT services, Dentistry, Pharmacy and Acute Trust Outpatient services.

The Floor Area covers: (GIA):GMS; 1416 sqm; PCT; 1842 sqm; Dental; 220 sqm; Pharmacy; 187 sqm; Acute Trust; 500 sqm; Expansion; 67 sqm; Parking; 80 spaces.

During the construction phase there was a request for additional space from the PCT for a further new practice and from the Acute Trust. The expansion space on the 2nd floor enabled these requirements to be met without impacting on the original accommodation. The Acute Trust space includes a full x-ray unit and audiology suite.

Key challenges and engineering solutions

The town of Todmorden is at high risk of flooding from the River Calder. The health Centre site was also at risk of flooding from the adjacent Rochdale Canal. The ground floor level was raised to reduce the risk of flooding with ramping and steps added to provide accessibility for patients and staff. The structural solution needed to accommodate the changes in level due to flood risk and the forces imposed by the adjacent canal bank. The solutions were developed in close cooperation with the Environment Agency and the Canal and River Trust.

A unique profiled roof linking with the façade and support of physiotherapy equipment over a sensitive medical facility required detailed vibration calculations and steelwork design.

Key facts



Value
£10.3m



Client
LSP Developments Ltd



Completion
2009



Architect
West Hart Partnership Ltd



BSP's role
Civill and Structural
Engineering



Contractor
Multibuild Ltd



Castle Healthcare Practice, Nottingham

Case study: Health Care

Project details

A new three-storey new build medical centre in the Nottingham suburb of West Bridgford serving almost 30,000 patients from five existing GP surgeries.

The building has three levels comprising of the undercroft, ground floor & first floor.

The overall development area extends to 2576sqm.

The main elements of the construction are piled foundations, structural steel framework, in-situ concrete floors brick and render cladding.

The internal fit out provides GP consulting rooms, treatment rooms, administration, toilets, ancillary rooms.

In addition there is a demise area provided for a Pharmacy (area 148.7sqm & Dental Facility (area 100.1sqm).

Key challenges and engineering solutions

The location presented a number of challenges which the BSP Consulting team overcame before planning permission was granted. These included transportation and drainage issues.

The three-storey medical centre is built on stilts to lift it above potential flood risk, with a car park underneath and a SuDS drainage scheme to protect the local water environment.

A number of transport measures have been put in place to help patients travel to the site, including the provision of an additional direct bus service from West Bridgford town centre and the surrounding area, an additional crossing facility on Wilford Lane, and signal controller amendments at the Loughborough Road/Wilford Lane junction to improve traffic capacity.



Key facts



Value
£8m



Client Embankment Primary Care Ltd



Completion
2014



Architect
BRP



BSP's role
Civil, Structural and Transportation Engineering



Contractor
GF Tomlinson

Woodseats Medical Centre, Sheffield

Case study: Health Care

Project details

Woodseats Medical Centre has been developed on the site of a former library on Chesterfield Road, which was in a poor condition and no longer economical to repair.

This vibrant busy 5 star rated medical practice in the suburbs of Sheffield, services a large population in a multi-cultural neighbourhood.

In 2015 the practice decided to build a bespoke medical Centre, with sufficient space to include, uniquely, a local library and a Lloyds Pharmacy.

The new Centre provides the local community with a truly comprehensive facility, where they can spend quality time whilst caring for their health and meeting other residents.



Key challenges and engineering solutions

The site drainage required close liaison with the LLFA (Lead Local Flood Authorities).

BSP Consulting's engineers worked on complex control drainage designs which saved the client over £10,000 in attenuation costs.

The site was very tight and had a large sewer that ran across it. To fit the floor space on the site, the upper floors had to be cantilevered.

There were also retaining walls against the boundaries that were very tight to get at.

BSP Consulting provided a design to put the retaining walls adjacent the boundary, rather than as part of the building to avoid an expensive tanking detail.



Key facts



Value
£2.5m



Client Woodseats Medical Practice



Completion
2015



Architect
P+HS



BSP's role
Civil, Structural & Transportation Engineering



Contractor
Wildgoose Construction



Church Hill Centre, Worcestershire

Case study: Health Care

Project details

A regeneration project in partnership with Redditch Borough Council and Bellway Homes. A new health Centre for 5-GP practices, plus pharmacy, dentist, convenience store and retail units.

The Council appointed LSP in conjunction with Bellway Homes to reprovide the Church Hill District Centre, the existing Centre being first generation and of poor quality to serve what is the largest ward in Redditch.

The scheme comprises 51 affordable houses built by Bellway and 6 retail units anchored by McColl's convenience store, in conjunction with a range of local retailers to include hairdresser, dentist, pharmacy and take-aways.

To aid the viability of the development, LSP separately secured the reprovision of the Maple View Medical Practice which is situated at first floor level, reprovinding an existing local surgery.

The project took approximately 2 years to bring to fruition but was testament to the partnership formed between the many stakeholders, not least Redditch Borough Council and Worcestershire County Council.

BSP Consulting provided structural engineering services, West Hart Partnership Ltd provided architectural services.

Key challenges and engineering solutions

Works involved the removal of walls and the incorporation of an infill area above an open atrium.



Key facts



Value
£4m



Client LSP Developments & Assura Properties



Completion
2013



Architect
West Hart Partnership



BSP's role
Civil & Structural Engineering



Contractor
GF Tomlinson

Matt Hampson Rehabilitation Centre

Case study: Social Value

Project details

BSP Consulting were part of the team that provided community engagement and helped the Matt Hampson Foundation build a rehabilitation day care centre in Leicestershire for those who have suffered catastrophic injury through sport.

We provided, civil, structural and geotechnical engineering consultancy services on a voluntary basis for the £1m Get Busy Living Centre. The specialist centre helps those who have suffered catastrophic sporting injuries, offering services such as physical rehabilitation to the injured athletes and their families.

The Foundation was launched by Matt Hampson who, during an England Under 21 rugby training session in 2005, was paralysed from the neck down. It provides support for anyone suffering serious injury or disability, in particular from participation in sport or physical education or recreation.

The project has been delivered by a number of local partners, many of whom offered their time, services, materials and expertise for free, including construction company Willmott Dixon, professional services MDA Consulting, architects Corporate Architecture, engineering consultants CouchPerryWilkes and BSP Consulting, PR and Marketing agency Cartwright Communications and suppliers GRS Roadstone Limited, Salus and Multifab Engineering Ltd.

Matt Hampson said: "The centre was initially a dream of mine, a place for our beneficiaries to come along to and receive physical rehabilitation. Since then, our plans for this new facility have evolved and become a reality, with the centre giving us the opportunity to offer not only physical support, but, more crucially, mental support too.

As an East Midlands-based company, BSP Consulting is proud to offer our skills to provide civil and structural engineering services for this development, working alongside other businesses.

The Get Busy Living Centre was winner of the RICS Awards – East Midlands Project of the Year 2018.

For more information on the centre, visit <http://matthampsonfoundation.org/>

Key facts



Value
£1m



Client
Matt Hampson



Completion
2018



Architect
Corporate Architecture



BSP's role
Civil, Structural, Geotechnical
Engineering Consultancy Svs



Contractor
Willmott Dixon



Newbury Place Health Centre, Salford

Case study: Primary Care

Project details

Newbury Place Health Centre provides a new state-of-the-art Primary Care facility offering a wide range of health services for the Higher Broughton Community, an area which has one of the largest long-standing Orthodox Jewish Communities within the UK.

The new health centre brings together four local GP practices whose existing premises are inadequate and lacking in scope to expand to meet the growing local health and social care needs.

The new purpose designed health centre has been conceived to be culturally sensitive to meet the particular needs of the local community while also providing services that are widely accessible to all of the Higher Broughton community.

The new health centre also provides pharmacy, optician, community services and a retail food outlet.

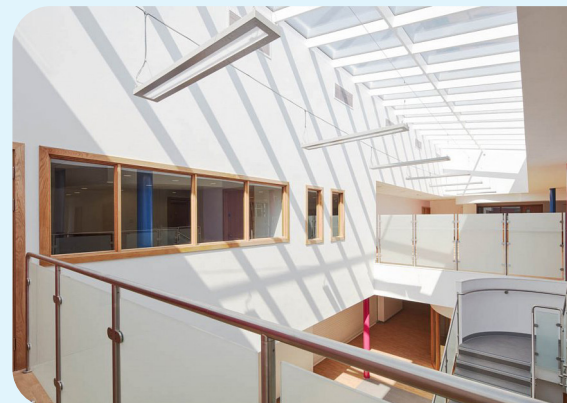
By choosing a modern palette of materials and promoting a contemporary design, the practice has met Urban Vision's development brief for this important high profile site on Bury New Road.

Quadrant provided project management services.

BSP was the civil and structural engineer on the BIM level 2 project.

Key challenges and engineering solutions

Designed specifically with the predominately orthodox Jewish communities needs in mind the building had a unique layout. The building was positioned on a formally sloping site that had been levelled following bombing during WW2. The backfilling had been haphazard leaving large masonry panels and voids. The construction involved difficult piling solutions through obstructions to create a fully suspended substructure.



Key facts



Value
£8m



Client Level Healthcare Ltd
with Salford NHS Trust



Completion
2015



Architect
Ainsley Gommon Architects



BSP's role
Civil & Structural Engineering



Contractor
Thomas Barnes Construction

Kings Mill Hospital, Nottinghamshire

Case study: Health Care

Project details

BSP Consulting carried out a civil and structural engineering role in improvements at the King's Mill Hospital project, near Sutton-in-Ashfield, Nottinghamshire.

Sherwood Forest Hospitals NHS Foundation Trust has been awarded £2m capital funding to boost the accident and emergency services at the hospital.

It was part of the Trust's long term plans expand and improve the capacity of their Emergency Department. The work involved upgrading facilities to increase capacity, support patient flow and reduce crowding. It also helped to cut the risk of Covid-19 infections.

A fast start on site for the decant enabling works enabled the primary area of expansion to be vacated, followed by internal alterations and refurbishment to create a new Ambulatory Emergency Care Unit (AECU) in two phases. Following completion of this work and the vacation of the existing AECU facilities the project then focussed on the delivery of an expansion to the Resus facilities through the provision of 5 new Enhanced Care Beds, whilst maintaining operation of the existing Resus bays and staff facilities right at the core of the Emergency Department.

BSP Consulting was employed by TAD Architects under the NHS Shared Business Services Framework to provide structural and civil engineering advice on the project.

BSP chartered structural engineer Monika Anszperger said: "BSP is proud to have played a supporting role in helping to improve the facilities at one of Nottinghamshire's hospitals. This has come at a time when we value our NHS more than ever."

Key challenges and engineering solutions

BSP provided drainage advice, which included modifications to below-ground drainage running under the building, including advice on load-bearing walls and modifications to below-ground drainage on a live site. BSP also provided professional structural engineering input, with advice on load-bearing walls.

Key facts



Value
£2.6m



Completion
2020



BSP's role
Civil & Structural Engineering



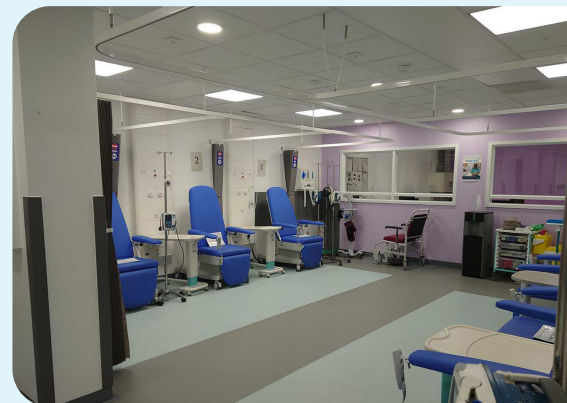
Client Sherwood Forest Hospitals NHS Foundation Trust



Architect
T.A.D.



Contractor
Interclass



Harplands Hospital, Stoke-on-Trent

Case study: Health Care

Project details

BSP Consulting are involved in a refurbishment at Harplands Hospital, Stoke-on-Trent. An Inpatient Reconfiguration Project for Staffordshire Combined Healthcare NHS Trust.

The project has two principal streams of work. Workstream 1 focuses on the removal of multi-bed dormitories from the acute inpatient wards through the provision of new ensuite bedrooms throughout each of the four wards.

To enable this to happen, the Trust converted an administrative area of the building to form a 'decant ward' to enable each ward to be vacated in turn to allow the work to happen, whilst maintaining patients privacy, dignity and comfort.

Workstream 2 looks to create a new Learning Disabilities service within the main Harplands Hospital, this will be a new inpatient facility for patients with acquired or degenerative brain injuries.

The scheme includes a number of new extensions to the building and extension re-modelling and refurbishment of all parts of a Ward to form this new Service provision. In addition new external areas will be created to support the care provision.

Work onsite is being completed in phases will take two years to finalise BSP are both civil and structural engineer on the Harplands Hospital Refurbishment Staffordshire.

Key challenges and engineering solutions

BSP associate director Monika Anszperger said: "BSP Consulting has extensive experience of working in the healthcare sector and we are very pleased to have been appointed as the civil and structural engineer on this refurbishment at Harplands Hospital in Stoke-on-Trent.

"It is a live site, and clearly a sensitive site, and we feel proud to have been appointed to improve patient facilities at this hospital."

Key facts



Value
£11m



Client Staffordshire Combined Healthcare NHS Trust



Completion
2023



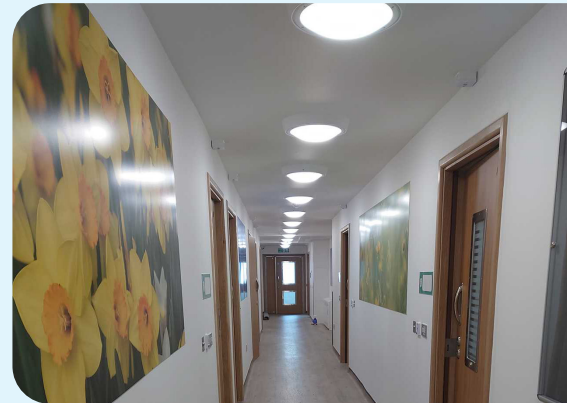
Architect
T.A.D.



BSP's role
Civil & Structural Engineering



Contractor
Interclass





Nottingham
12 Oxford Street
Nottingham
NG1 5BG

0345 413 4000

Derby
5 Pride Point Drive
Pride Park
Derby
DE24 8BX

0345 413 4000

Leicester
Floor 4
24 De Montfort St
Leicester
LE1 7GB

0345 413 4000

Sheffield
Smithy Wood House
Smithy Wood Cres
Sheffield
S8 0NU

0345 413 4000

www.bsp-consulting.co.uk



equality accredited
customer service
bronze level

