

Birmingham Life Sciences Park

Summer 2019

Key points

- + Plans are underway to develop a £300 million Birmingham Life Sciences Park (BLSP), transforming what is currently a derelict site into a leading economic hub for life sciences generating over £180 million GVA and 3,600 jobs over 10 years – with the potential to catalyse a further 10,000 jobs and £400 million GVA across the West Midlands.
- + The project will be delivered by Birmingham Health Partners (BHP) – a strategic alliance between the University of Birmingham and two co-located NHS Foundation Trusts – University Hospitals Birmingham and Birmingham Women’s and Children’s. BHP collaborates closely with other regional bodies including the West Midlands Academic Health Sciences Network (WMAHSN), bringing together academic and NHS leadership with industry and patients.
- + The park will encourage closer collaboration between industry, clinicians and academics. Patients will benefit from early access to healthcare innovations, which will also generate commercial opportunities for UK businesses.

Vision

By 2026, we will transform 4ha (10 acres) of the derelict former Birmingham Battery and Metal Company site in Selly Oak into a vibrant, innovation-focused life sciences park. It will drive collaboration between academics, clinicians, patients and business; strengthen our position as leaders in health innovation and translational medicine; and act as a catalyst for a Birmingham and West Midlands life sciences cluster.

The park will build on BHP’s nationally recognised strengths (see page 3) in:

- + healthcare data and informatics
- + genomics medicine and diagnostics
- + medical technologies
- + clinical trials

Our aim is to deliver cutting-edge innovation facilities and a bespoke physical home for businesses to co-locate at the heart of our collaborative, connected, translational ecosystem.

Timeline

Following site remediation undertaken by Birmingham City Council and supported by funding from the Local Growth Fund, the University purchased the site to develop a life sciences park. Following significant consultation with local and regional stakeholders, and working in partnership with the City Council, Greater Birmingham & Solihull Local Enterprise Partnership and the West Midlands Combined Authority, a strategy and investment proposition for the Park was developed and the market approached for an investor-developer partner.

Summer 2019: conclude procurement of an investor-developer partner who will work with the University to develop the Park

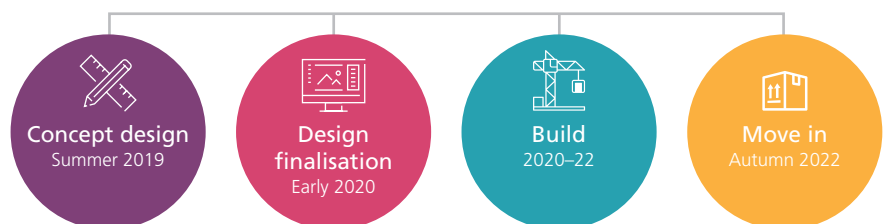
By end 2019: masterplan for the site developed and design of the Phase 1 facilities on the park – the Precision Health Technologies Accelerator (PHTA – see page 4) – completed

Mid-2020: break ground on the PHTA, the first innovation building on site

Autumn 2022: completion of PHTA building

Principal objectives for the park

- + Create a differentiated, innovation-focused and financially sustainable life sciences park, providing broader academic and clinical benefit, strengthening our position as leaders in health innovation and translational medicine and acting as a catalyst for a Birmingham and West Midlands life sciences cluster
- + Deliver a best-in-class development providing high quality innovation facilities, flexible laboratory and office space for relevant, innovative businesses seeking to locate at the heart of the BHP campus – from start-ups to scale-ups
- + Provide an enabling environment, facilities and expertise that will support the acceleration of innovations based on research emerging from BHP and beyond
- + Enable the commercialisation of innovation and its translation to the clinic, delivering social, health and economic impact to our city and region
- + For Birmingham Life Sciences Park to become the entry point for businesses to access Birmingham Health Partners and wider West Midlands life sciences ecosystem, and the easiest place in the UK to accelerate new innovation into the clinic



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Why Birmingham?

Birmingham Life Sciences Park sits within an established, collaborative and innovative ecosystem led by BHP, which brings together academic and NHS leadership in Birmingham and across the region through the WMAHSN, enabling access to a stable and diverse population of nearly six million citizens. The West Midlands is increasingly favoured as a testbed for the rapid development and deployment of medical innovations.

Crucially, the offer and expertise available in Birmingham and the wider region are complementary and distinctive to other UK clusters in providing:

- + A co-located translational environment with access to a diverse population through 17 regional NHS Trusts, the West Midlands Genomic Medicine Centre and connected data systems, with the ability to scale to in excess of 20 million through our national clinical trials programmes, and data and genomics collaborations
- + The ability to offer a real-world and diverse environment for testing healthcare innovations with world-leading regulatory and clinical trials support – ensuring wider relevance and the ability to scale to national and international markets
- + A comprehensive source of the technical leadership and entrepreneurial skills needed to deliver innovations into clinic – enabled through BHP's prestigious NHS and academic institutions working with industry and other partners
- + Access to the world-class research base, facilities and key academic/clinical opinion leaders from across our BHP campus

The Park's infrastructure will be designed for sustainable business growth, enabling residents to develop, deploy and commercialise new precision therapies, diagnostics and devices. This will support delivery of key elements of the Government's Life Sciences Industrial Strategy including the mission to 'transform the prevention, early diagnosis and treatment of diseases like cancer, diabetes, heart disease and dementia by 2030'.

By collaborating with BHP and locating on the park, businesses will benefit from access to our world-class, integrated academic and clinical partnerships, including:

- + World-leading clinical trials design and delivery, including national leadership for paediatric clinical trials and one of the largest active surgical trials portfolios in the world
- + Track record of pioneering healthcare technology advancements
- + Access to teams delivering national and international policy changes and regulatory and clinical improvements
- + World-leading centre for patient reported outcomes
- + Leading innovation in the use of new molecular diagnostics and 'omics technologies
- + Internationally-recognised expertise in varied, specialist fields – including cancer immunology, inflammation and rare diseases
- + World-leading hospital informatics systems and data platforms

What will this mean for Birmingham and the region?

Building a life sciences cluster: attracting business

The majority of life sciences businesses in Birmingham operate in the medical technologies sector. However, the opportunities enabled through BHP, key physical infrastructures, and the associated expertise in developing commercial opportunities will allow Birmingham to develop a powerful life sciences cluster. This will help attract companies in the wider life sciences and related sub-sectors, notably:

- + Biotech: advanced therapies
- + Medtech: regenerative technologies, devices and diagnostics
- + Digital: 'omics, (health) informatics and analytics

It will also provide a distinctive partnership offer to the pharmaceutical industry for the acceleration of trials on new precision therapies through an integrated clinical trials, data and 'omics offering.

Economic impact:

Birmingham Life Sciences Park is set to deliver sustainable economic growth through creating both high-value jobs and inward investment. It will also enable the development of new opportunities in health for new and existing businesses. It is estimated that the Park will generate >£180 million GVA and 3,600 jobs over 10 years, with the potential to catalyse a further 10,000 jobs and £400 million GVA across the region. (Figures from City-REDI).

Social impact:

Through our partnership with local and regional NHS Trusts, we can reach nearly six million people in our region, focussing on delivering innovative solutions to challenges relevant to our population. Through our leading trials and clinical studies capabilities we will deliver benefits to patients through early access to healthcare innovations and through the creation of new care pathways for the NHS.

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BHP exemplars

We are already harnessing the power of our expertise in healthcare data and informatics; genomics medicine and diagnostics; medical technologies; and clinical trials, across BHP. As a result, the Park will offer the ability to speed up and de-risk translation through strong partnerships between business, universities and our NHS, with the capacity to support the rapid adoption of new innovations. Included in this appendix are brief exemplars of our ongoing work:



Combining genomics medicine and informatics excellence to deliver precision care

Building on UHB's excellence in digital healthcare systems innovation, our Genomics Networked Information Exchange (GeNIE) platform and Regional Image Sharing Platform (RISP) provide shared digital infrastructure across our 17 regional NHS Trusts – increasing operational efficiency, supporting clinical decision making and personalised care across the region's population. These systems not only support our West Midlands Genomics Medicine Centre, the largest recruiter of patients to the 100,000 Genomes Project, but have been rolled out to other NHS Trusts nationally to accelerate their capabilities.



Developing and nurturing business success

Founded by researchers at the University of Birmingham, the Binding Site is one of the UK's largest diagnostic companies. Its immunodiagnostic test sales exceed 25 million in over 100 countries, contributing to its £130 million turnover and the employment of 700 people in Birmingham and a further 300 worldwide. The company continues to expand and innovate, benefiting from a close relationship with the University on research, training and recruitment.



TAP – Accelerating drug trials and benefits to patients

Designed, developed and delivered by BHP, our national leukaemia and lymphoma Trials Acceleration Programme (TAP) operates through 13 blood cancer units across the UK creating a catchment region of over 20 million patients in order to ensure rapid trial recruitment. The model of delivery has transformed clinical trials, reducing set-up times for industry partners by 50%, recruiting over 950 patients to 19 clinical trials over 5 years, compared with just 5 patients recruited to similar trials in 2000–5. Industry partners have responded by contributing upwards of £150 million of potentially life-saving novel treatments to patients. New TAP models in Arthritis (A-TAP in partnership with Oxford) and Stem Cell Transplant (IMPACT trials national partnership) are now underway.



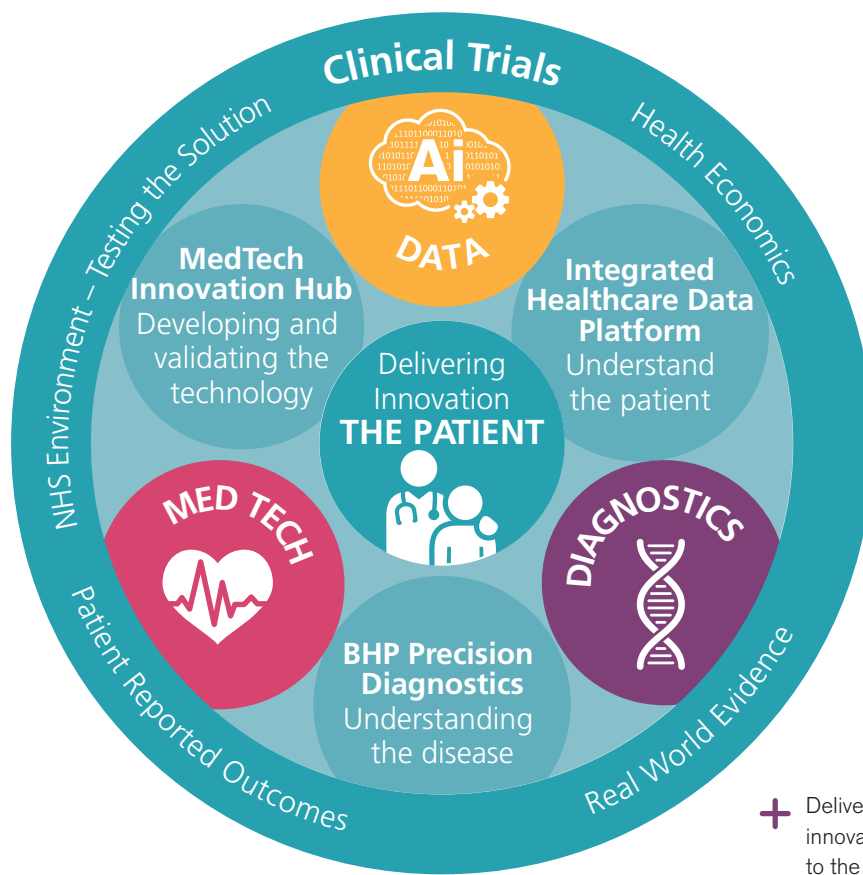
A uniquely co-located partnership with the military, NHS and industry to accelerate innovation

Birmingham's role as the national host for the Royal Centre for Defence Medicine and a Major Trauma Centre (the primary UK destination for all wounded military personnel) has driven pioneering medical technology advancements through a unique clinical-academic partnership with the military. Our NIHR Surgical Reconstruction and Microbiology Research Centre, MedTech Cooperative and Medical Devices Testing and Evaluation Centre translate leading research to develop new products through collaboration with industry. These include a portfolio of innovative scar-reducing wound care products, the world's first point-of-care intravenous anaesthetic agent analyser, and a point-of-care system to assess concussion and brain injury.



Ensuring more patients benefit from a new generation of breakthrough therapies

With a longstanding track record in cell therapy innovation and translation, BHP founder members UHB and the University of Birmingham formed a consortium with NHS Wales to successfully bid for £7 million of Innovate UK funding to develop an advanced therapy treatment centre. The new centre is working to accelerate creation of advanced therapy medicinal products (ATMPs) – medicines designed to treat diseases or injuries, which are based on genes, cells and tissue engineering. ATMPs could, it is estimated, generate £10 billion in revenue for the UK – as well as creating 18,000 jobs – by 2035. Regionally, 175 high-value jobs could open in industry and the NHS over the next five years as new therapies, products and services are developed and deployed.



Delivering innovation

Phase 1 of BLSP development – the Precision Health Technologies Accelerator

This signature facility will provide up to 18,000sqm of innovation, co-creation and incubation space and creates the 'front door' for business to access the integrated assets of BHP and the wider region.

Underpinned by a connected healthcare data infrastructure with new molecular diagnostic laboratories and technology platforms, the facility will enable stratification of patients and their treatments which, in turn, will drive new health innovation. The facility will co-locate, and provide seamless access to:

- + integrated healthcare data
- + medical technologies development and evaluation
- + BHP Precision Diagnostics molecular diagnostic platform
- + novel clinical trials design and delivery

To achieve this, our partnership will build upon four key, complimentary anchor capabilities:

Data: connecting the patient context

Delivering safe and secure access to, and detailed analysis of, integrated, well-curated, real-world healthcare data from across – and where appropriate beyond – our region, enabling a detailed understanding at patient and population level.

Diagnostics: understanding the disease

Bringing together leading regional genomics and immunodiagnostic research and services to deliver precision medicine, validation of new therapies and development of sophisticated diagnostics for faster and more accurate diagnosis.

Healthcare technologies: developing the solutions

Rapidly develop, test and adopt new technologies and tools, providing facilities and expertise to undertake early stage research, product development and validation, and prototype manufacture, alongside pre-clinical and clinical evaluation.

Clinical trials and implementation: deploying real-world innovation

Recognised leadership in novel clinical trials design and delivery together with leading expertise in patient reported outcomes measures, health economics and whole-systems thinking across and beyond supply chains to help partners deliver accelerated trials and demonstrate value.

By putting the patient at the heart of all our activity, we will focus on the innovations that address prevalent health burdens in our region's population – with the ultimate aim of scaling these solutions to the rest of the UK and potentially wider world.

Funding for the building is being sought through the Local Growth Fund and through a current bid to the national Strength in Places Fund programme operated by UKRI. Once complete, the buildings will be the focus for innovation and will also provide collaboration space for entrepreneurial health technology innovators; incubation space for new healthcare technology start-ups; and spaces for public engagement, meetings and training.