

How do you enable
the delivery of 22,000
jobs and 10,000 homes
around a Grade 1 listed
city centre station?

Project

Bristol Temple Quarter

Client

Bristol City Council, Network Rail,
Homes England, The West of
England Combined Authority

Expertise

Architecture, urban design and
masterplanning, civil engineering,
transport planning, geotechnical
engineering, town planning

Shaping a place of many places.

Cities must work for **everyone**, not just a few.

Communities and people thrive when they can access good housing, job opportunities, green spaces, reliable transport and other vital services.

By rethinking how we build, manage and deliver resilient urban infrastructure we can turn established cities into places where everyone wants to live, work, study and play – and no-one is left behind.

Bristol is one such place, a perfect example of what is possible with a bold vision and a deliverable masterplan.

More than 460,000 people now live in Bristol and the population is expected to reach half a million by 2031. It is the largest city in the south-west and one of the 10 'Core Cities' in Great Britain. There is a strong sense of community spirit and Bristol is home to flourishing independent businesses, a vibrant creative arts and theatre scene, and two expanding universities. It is also a popular tourist destination.

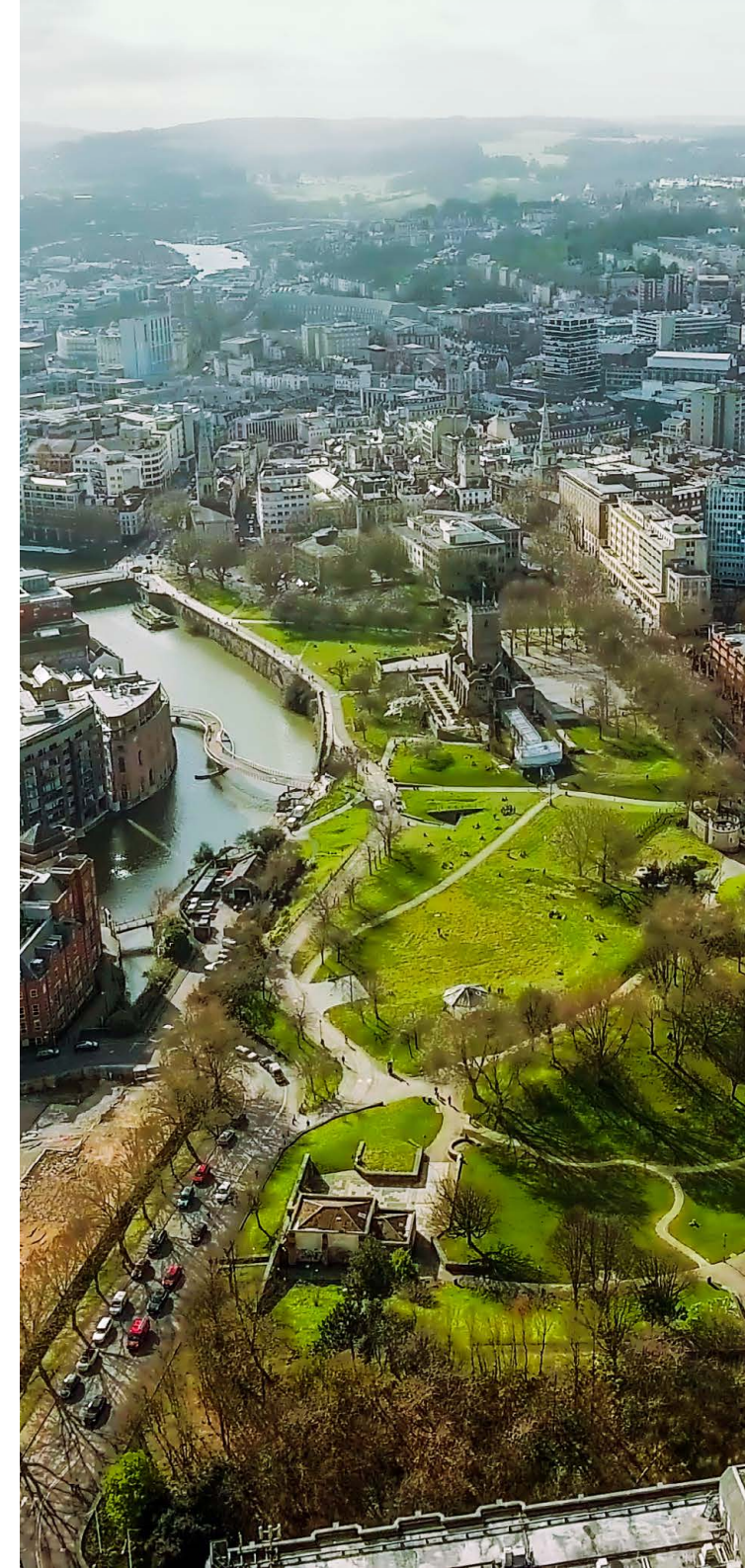
Yet, like many cities of its size, there are significant socio-economic disparities between neighbourhoods. Some have inadequate infrastructure and many previously industrial areas contain vacant or under-used sites, and unappealing or unsafe public spaces.

Network Rail's proposal to transform Bristol Temple Meads railway station, the main rail gateway to the south-west, provided a once in a generation opportunity to create a paradigm shift at the heart of the city and change the lives of many Bristolians. It will also support Bristol's ambitions for cleaner air and carbon neutrality, and encourage more sustainable patterns of travel.

The modernisation of Temple Meads has become the catalyst for a huge regeneration project that stretches beyond the station, to include the surrounding public realm and key development sites. It will help to unlock the regeneration of St Philip's Marsh, a poorly connected industrial area to the east.

Bringing the vision for Temple Quarter and St Philip's Marsh to life – as envisioned by Bristol City Council, Homes England, Network Rail and the West of England Combined Authority - requires ingenuity, careful planning, collaboration and widespread engagement, as well as a range of technical and placemaking skills. That's what our team of experts brought to the project and it is their masterplan that will help deliver a flourishing new quarter in the heart of Bristol.

Along with our partners, we're making it a reality.



A paradigm shift

Our vision for Bristol Temple Meads is to deliver a modern, safe and efficient passenger experience and a multimodal interchange, while celebrating the station's unique history and heritage.

Station improvements include the introduction of an intuitive, easily navigated passenger circulation system, new platforms, toilets and waiting rooms, and increasing the capacity for the number of trains using the station. There will also be alterations to both track and signals, as well as enhancements to the existing subways.

The ambition is to make the station fully accessible and inclusive for all passengers and visitors – particularly for mobility impaired users and parents pushing buggies – and future proofing it to accommodate anticipated growth.

A new public open space will provide a real sense of arrival at the commencement of the Brunel Mile – a key pedestrian link across the city. This area would be largely car-free, including green infrastructure to create a pleasant refuge in an otherwise busy urban environment, set against the backdrop of the historic Passenger Shed.

To better understand the needs of different stakeholders we engaged representatives of people with physical and hidden disabilities, and women's groups, for example, as well as the local council. We also looked at crime and anti-social behaviour to ensure the planned changes also improve safety. Our diversity and inclusion strategy is a key element of the station's masterplan.



We are currently the only major UK city without a modern railway station. At long last, that is about to change – thanks to the energy and commitment of the partnership we have brought together. A transformed station will finally give us a railway station fit for the 21st century, acting as a gateway to the West of England.

Marvin Rees
Mayor of Bristol

Bristol Temple Quarter





Bristol Temple Meads

At the heart of the redevelopment area sits Bristol Temple Meads railway station, a busy transport hub in an iconic, Grade 1 listed building dating back to the 1840s and designed by the British engineer Isambard Kingdom Brunel.

Approximately 11M passengers pass through the station each year, making it a major transit hub for the city and for England's south-west region. By 2035, passenger numbers are forecast to double, to 22M.

The station marks the transition between the city's modern commercial heart and its industrial past. However, it is currently out of step with the expectations of modern rail passengers.

Nestled between the River Avon and the Floating Harbour, and with tracks running north and south over viaducts and bridges across the two watercourses, the station is effectively cut off from the rest of Bristol. This poor connectivity results in a poor experience for passengers continuing their journey on foot, by bike or bus.

Inside, demand has outgrown station capacity. There is frequent congestion, particularly during peak hours, presenting a significant risk to safety and limiting accessibility for those with reduced mobility, other disabilities, and encumbered passengers.

It is a situation that will continue to deteriorate without intervention.

The north entrance to the station will be enhanced to provide a grand architectural opening and a more welcoming area, where people can stop and breathe, and prepare for their onward journey. A new concourse will complete the transformation of the northern gateway, with improved retail, ticketing and passenger facilities, while a new integrated transport hub outside will make onward sustainable travel easier – on foot, by bike or bus.

Renewal of the north entrance will create a modern gateway to Bristol and cement the relationship between the station, the Temple Quarter area and the city centre.

The reworked northern entrance will transform people's mental maps of this part of the city, bring transformational change in accessibility and interchange, and a dramatic boost in development.

Historically, St Phillip's Marsh, to the east of the station, has been home to some of the city's most deprived communities. Like many older rail stations, Temple Meads cuts through the local area, causing severance, and in this case effectively isolates St Philip's Marsh. A new eastern gateway, fashioned from an existing passenger subway, is a way of solving this long-standing challenge, and

will play an important role in reorienting the station towards the south-east as well as act as a catalyst for future development.

The station will also have a dedicated entrance to the new Temple Quarter Enterprise Campus being developed on a 2.8ha brownfield site to the east of the station by the University of Bristol. It will be mix of flexible research and teaching facilities, student accommodation and commercial outlets.

Creating a new southern gateway will improve access for residents of Totterdown and other areas in south Bristol, and will incorporate cycle storage, disabled access, Blue Badge parking and taxi ranks. Consolidating car parking in this location will help to release space from vehicles in other locations around the station. Together with the new eastern gateway, it will mark the first time in its history that Bristol Temple Meads can be accessed from these directions.

We are supporting the Bristol City Council with its Capital Strategic Partnership, which will develop the northern entrance and the southern gateway transport hub. The collective effort of all parties will be key to delivering an integrated design, underpinned by forward thinking, technical expertise and local intelligence.

North, south,
east and the
whole city





Gateway to a growing city

As a result, the public realm is mostly hurried through and the historic station is underappreciated.

By better integrating the different spaces with each other, we will create a distinctive sense of place. We know that inaccessible and poorly designed public infrastructure is a significant factor in social exclusion, dissuading people from choosing to travel by train.

A truly accessible station helps everyone to travel safely, enabling them to access all the things we make journeys for in the first place – job opportunities, healthcare, education, social and recreational activities, and visiting family and friends.

A rail station is more than just the station building, barriers, platforms, tracks and ticket office. In the passenger's mind, the 'station' includes every part of the travel experience: the bus stops, taxi ranks, cycle racks, the car parking drop-off and the walking route to get there, and back again. To the passengers, the station must be synonymous with accessibility, comfort and ease.

In Bristol, the Temple Meads area is a gateway to the city, the interface between the station and the city. The public areas inside and outside the station are what passengers see on their arrival or departure. First impressions count: is it somewhere you want to be, or do you want to leave as quickly as possible?

Now, the environment outside the station is dominated by traffic, with noisy vehicles close by and few places to dwell and make decisions any longer than a momentary pause.





Part of the fabric of Bristol

Our plan will bring life back to the many vacant and underused sites around the station, contributing to a vibrant new setting that maintains the historic character of Brunel's station.

This will amplify the station's 'destination' status; a place with a cultural and educational dimension, and where people enjoy spending their time, rather than being viewed only as a transport hub.

Redevelopment of Temple Meads affects the local community, not just passengers, and our client was keen to understand how considerations around accessibility, diversity and inclusion, equality, crime and disorder would all come together and deliver a new reliable and modern station that can be enjoyed by all.

Our design ensures the station dovetails with improvements in public transport aimed at reducing road congestion and making it easier to travel to, and around the city. They also align with wider network aspirations to provide rail access to poorly served communities, such as lines to Portishead and Henbury on the western outskirts of Bristol, as well as further south and into Wales.

Encouraging active transport around the station and in the newly created surrounding neighbourhoods is another priority. Measures include improving the capacity and quality of pedestrian and cycle routes, and minimising the use of private vehicles.

This shift towards sustainable travel will bring economic, social, health and environmental benefits for individuals, and the city as a whole.



A resilient 15-minute neighbourhood

For many people who live and work in the city, St Philip's Marsh is somewhere they rarely visit. Stretching from Temple Meads to Netham Weir and flanked on all sides by waterways, with rail lines to the north, it is a mostly hidden part of Bristol.

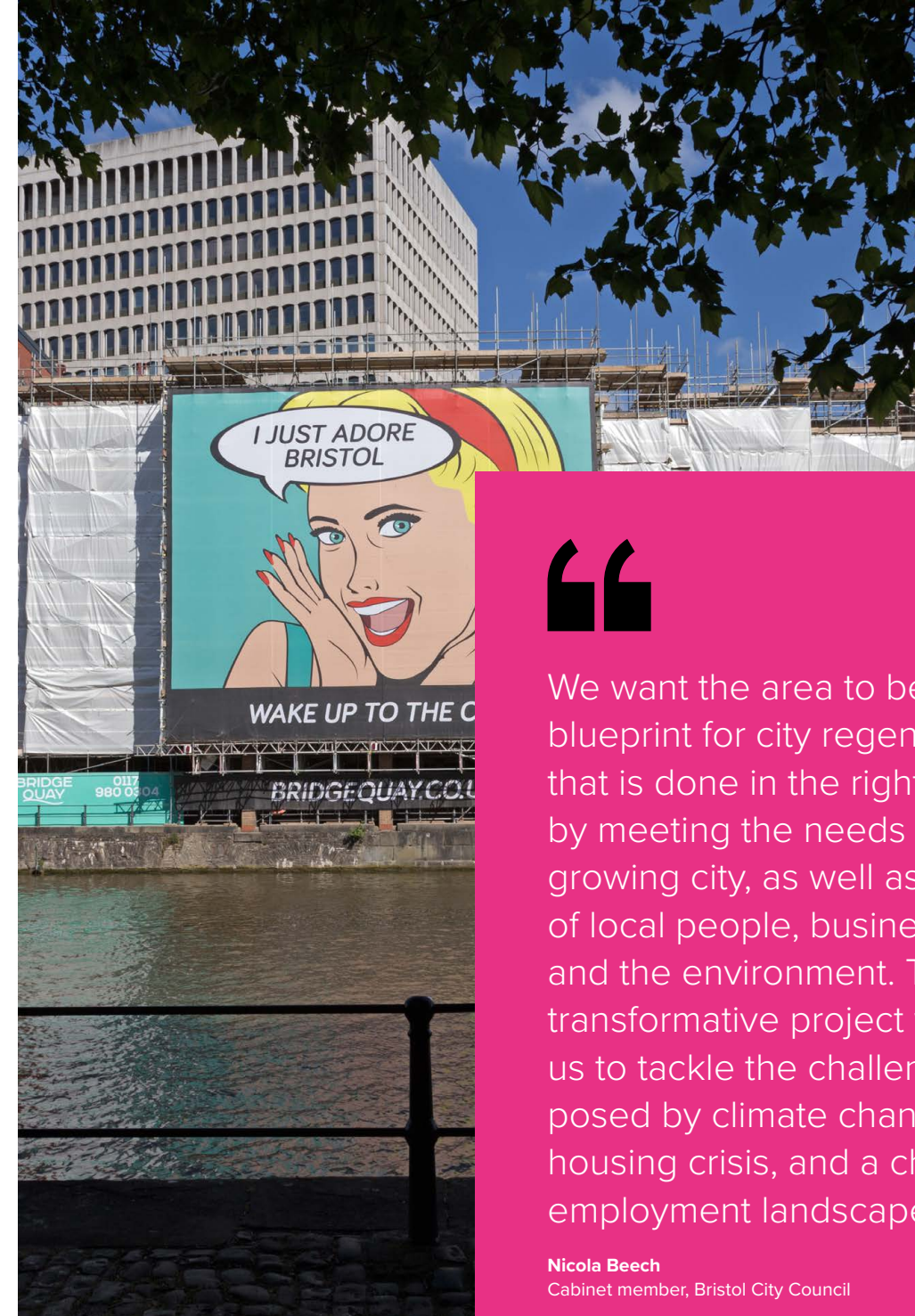
New apartment blocks are now appearing, but St Philip's Marsh remains largely a mix of industrial and manufacturing businesses, storage yards and retail warehouses, railway and electricity supply infrastructure and brownfield land covering about 84ha.

Lying to the north of the River Avon, much of the area is subject to significant risk of tidal and fluvial flooding, which will be exacerbated by the impacts of climate change. Low-lying areas would potentially be inundated by flood water during periods of heavy rain, while an extreme event could result in most of the area being under water.

We recognised that the Temple Quarter redevelopment is as an opportunity to transform St Philip's Marsh into an exemplar mixed-use, sustainable, healthy, climate-adapted neighbourhood that is closely integrated with surrounding communities, and is protected from flooding.

Our vision is to turn St Philip's Marsh into a '15-minute neighbourhood', a largely self-sufficient place where residents can easily access a wide range of amenities and services, including local education, healthcare, retail, and cultural and community activities within a short walk or bike ride away.

The aim is to reconnect those living in east Bristol with the rest of the city, while providing them with access to new community facilities and open spaces, including a new riverside park. The long-term regeneration of the area will be based on the guiding principles of creativity and high-tech innovation, sustainable neighbourhoods, and green infrastructure, with inbuilt flood defences along the Avon Greenway and Feeder Canal.



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We want the area to become a blueprint for city regeneration that is done in the right way, by meeting the needs of our growing city, as well as those of local people, businesses and the environment. This transformative project will help us to tackle the challenges posed by climate change, the housing crisis, and a changing employment landscape head-on.”

Nicola Beech
Cabinet member, Bristol City Council



A mixed-use space for all

Developments in dense urban centres often do not appeal to people of all ages, delivering homes aimed at younger demographics rather than families and older people. We want St Philip's Marsh to be inclusive and to foster cohesive communities in which neighbours know and support each other.

Plans include a Central Innovation District with accommodation for start-ups, established small- and medium-size enterprises, and larger businesses focused on science and technology, nano engineering, advanced manufacturing, the green economy and creative and digital industries.

This will be supported by the new University of Bristol Enterprise Campus, which is currently under construction, and aims to establish an entrepreneurial, cultural ecosystem of smaller businesses clustered in the Temple Meads area.

Like many other rapidly growing cities across the UK, Bristol's housing supply is under strain. Its reputation as a cultural, educational and business hub has driven property prices up and led to gentrification, displacing many residents from developing neighbourhoods.

Our plan is to provide truly affordable homes to new and future generations of Bristolians. We envision at least 4000 new homes within Bristol Temple Quarter and St Philip's Marsh by 2036, with a high proportion of these accessible to first-time buyers and lower income households.

Transformative resilience



Resilience to future flood events is a core part of the development concept for St Philip's Marsh. Recent modelling for the effects of climate change indicates that comprehensive infrastructure is required to provide safe access to and from the area in the event of an extreme flood risk event, providing connections to roads outside the flood zone.

Our clients and stakeholders pledged from the start to place climate change at the forefront of the regeneration. We saw an opening to promote a model of a climate-adapted neighbourhood and deliver a complete step-change in the way Bristol approaches large-scale urban regeneration.

Our team was responsible for devising a strategy for a two-tiered flood defence, installing a raised flood defence at the edge of the River Avon, and plans to evacuate people in extreme events.

This resulted in the concept of the Resilient Access Network (RAN): essentially a network of streets and highways raised 2m above existing ground level that would enable people to escape from the area if there is a risk of extreme flooding.

The RAN represents an opportunity to accommodate new utilities for the neighbourhood in an integrated manner. Electricity distribution, digital communications, district heating, water supplies and drainage can all be included in

a combined trench. It's a more cost-effective and efficient way to install and maintain these services than conventional methods, and far less disruptive to local communities and businesses.

Although water courses form a major part of the overall character of the area, they are currently unutilised. We want to bring these back to life, as they have the potential to become significant attractions for the city and tourists.

Our flood defence strategy incorporates habitat enhancement, landscaped public realm, walkways and cycle paths along the riverbanks, ensuring the sense of connection between the city and the water is not lost.

Widespread use of sustainable drainage features – swales, attenuation channels and rain gardens, for example – will deliver a more resilient water management system and reduce the need for hard infrastructure that can be expensive to build and maintain.

Green roofs and walls, extensive street vegetation and communal gardens and green spaces will support resilience by providing natural flood management. Trees and plants will also enhance biodiversity and improve air quality.

Building consensus

The vision for the regeneration was developed by a multi-disciplinary consultancy team led by Mott MacDonald and included Weston Williamson + Partners, Deloitte, AWW, Alan Baxter Partnership, GVA, Turley, TLT and Pragma.

Creating the overall Bristol Temple Quarter masterplan for such a constrained space and for four client organisations with subtly different organisational remits was challenging.

None of the four organisations owns sufficient land on their own to develop comprehensive masterplan solutions, initially making it difficult to test the feasibility of different components of the new City Gateway. As lead consultant, we provided our clients with data on land and development values, and used our early meetings with them to better understand where each organisation was coming from, so we could begin to see some common touch points. This enabled us to build a consensus among stakeholders on land ownership conflicts and commercial contractual positions. We then carried out development capacity testing,

supporting detailed development value assessments based on a range of land use scenarios.

Our comprehensive delivery strategy sets out the costs and benefits of the overall programme, potential delivery models, and routes to assembling land, as well as a compelling economic case for progressing the masterplan. We managed to balance and combine the very best of the public sector, such as the city council's land holdings in the area and its powers as a planning authority, with access to private capital.

Finance for property development comes mostly from the private sector, but to unlock it, several public sector enabling works must be completed, including upgrading the public realm and highways, construction of new entrances to the station, and provision of transport interchange around Temple Meads. Our business case work helped secure a £95M investment from the government, needed to kickstart the regeneration programme.

We provided:

- Spatial masterplanning and urban design for key areas, including concepts for new mixed-use neighborhoods
- Market context advice setting out potential demand for new development across a range of uses and typologies
- Capacity testing supporting detailed development value assessment based on a range of land use scenarios
- Infrastructure design and costing, including complex flood resilience and access requirements
- Residual land value assessment to identify viability challenges and potential gaps in funding
- Outline business case for submitting to the government's Housing Infrastructure Funding programme
- Engagement with Homes England and potential development sector partners
- Comprehensive delivery plan, setting out potential delivery models, routes to assembling land, and creation of a planning strategy



Our business case covered approximately £100M of upfront enabling public sector works, essential to unlocking many billions of private sector investment.

Simon Power
Planning director, Mott MacDonald

Regenerating the city and the region

The regeneration of Bristol Temple Meads station and surrounding areas is a project of local and national importance. Its success is directly linked to the social, economic and environmental wellbeing of Bristol and the wider south-west region.

Our vision for Bristol is to grow a sustainable, inclusive economy where everyone can share in the city's success.

By recognising and meeting the diverse needs of all residents, embedding good practice in inclusive design, and prioritising accessibility and healthy lifestyles, the Bristol Temple Quarter redevelopment will deliver so much for Bristol and its communities: new businesses and innovation, thousands of jobs, affordable homes, and green and welcoming streets in connected, sustainable neighbourhoods.

Crucially, it aims to create a space worthy of a modern, thriving Bristol – a place where people can live, work, study, shop, socialise and enjoy for generations to come.

10,000

homes

22M


passengers passing each year through
a world-class rail interchange

22,000

jobs

£1.6bn

annual uplift to the city economy



Opening opportunities with connected thinking.

Talk to us. simon.power@mottmac.com

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