

Connected thinking for successful cities

Holistic solutions for
future-assured communities



A successful city is connected

More than half the world's population live in cities and urbanisation is advancing rapidly.

Providing opportunity

Successful cities provide opportunity and amenity – from which stem innovation and entrepreneurship, jobs and economic vitality, learning, recreation, social care, artistic creativity and cultural richness.

Integrating systems

These benefits are enabled by social and physical infrastructure systems that are closely integrated and interdependent – a joined-up system of systems.

Making connections

Achieving ever-better social, economic and environmental outcomes requires in-depth knowledge of each system – and also of the connections between them all.

Creating value

Because it is only through insight and understanding that synergies can be achieved, efficiencies realised, performance optimised, wellbeing advanced and new value created.

Transformation and improvement

By partnering with clients and engaging with communities, Mott MacDonald achieves transformative results to improve people's lives.

We do this by encouraging innovation and supporting the aspirations of those we work with. Thanks to our uniquely multisector, multiskilled makeup, we see things holistically, identifying potential risks, opportunities and synergies.

We believe that cities should be:

1.

Diverse

Culturally, socially and economically because that's what makes cities stimulating, rewarding and sustainable.

2.

The product of their environment

Meeting local needs while respecting local issues such as climatic conditions, availability of resources and environmental and social impacts.

3.

For people

Promoting wellbeing through social inclusion, creation of economic opportunity and providing access to essential services.

4.

Flexible and responsive

Capable of accommodating unexpected changes required by social, environmental, economic or technological factors.

5.

User-friendly and convenient

Providing employment and amenity 'on the doorstep'.

6.

Intelligent

Meeting new needs and addressing old ones in new ways, seizing the potential of emerging technologies and testing the validity of conventional solutions.

7.

Efficient

Providing convenient, affordable, high-quality service while satisfying growing social and environmental standards.

8.

Durable, adaptable and resilient

Built to last, accommodating expansions and renewals when required, and designed to withstand or recover swiftly from events associated with climate change.

9.

Joined-up

Realising synergies between linked systems and cycles so that everything works better.



Four ideas for sustainable cities

Sustainability makes you more innovative, efficient, resilient and competitive

To realise the gains, you need to challenge the status quo and show strong leadership. Convincing people to embed sustainability is hard but the rewards are worth it: smarter, more resilient infrastructure; better services and amenities; reduced consumption, emissions and costs; and happier, healthier, more-engaged citizens.



1.

Cut carbon, cut cost

Through research, we've established that cost savings of up to 25% can be achieved with capital carbon reductions of up to 40%. We've also devised a new standard for managing capital and operational carbon in infrastructure and produced guidance explaining how to use and benefit from it.

Our Carbon Portal tool is the first carbon calculator to measure the lifetime capital and operational carbon footprints of BIM-designed assets. We've designed thousands of BIM components over the years, and these have been brought together in our digital component catalogue. This repository of BIM objects allows us to view and share existing assets. The carbon footprints of BIM models developed using these assets can be determined within 30 seconds when imported into Carbon Portal, providing our engineers with the opportunity to innovate in order to cut carbon and cost.

2.

Protect against climate change to gain a resilience dividend

Increasingly severe and frequent climate events are causing long-term harm to assets and service provision. Investing to build climate resilience will enable losses to be minimised and assets and service provision to rebound swiftly following climate events, benefiting end users. Cities that make this investment will outperform poorly adapted and less-prepared cities.



3.

Make better decisions faster and cheaper with smart infrastructure

Finding better ways to do things is where we excel, and our experts have developed bespoke digital tools to help them deliver better outcomes, including:

- Apollo and GiGi – UK-first cloud-based data storage and retrieval systems that combine GIS and big data processes.
- H2knOw-how – real-time analysis, sense-making and decision-support tool that enables faster, better-targeted incident response and more-effectively planned ongoing maintenance for water sector assets.
- Merlin – supports tactical and strategic command during crises by providing a common operational picture that enables multi-agency collaboration, information sharing, informed decision making, and rapid response and recovery.
- Osprey – supports transport management and operations by enabling integration of intelligent transport systems (ITS), allowing users to assess the impact that changes in traffic management and ITS improvements have on a network and the environment.



4.

Maximise your social contribution

Our Transparent Economic Assessment Model (TEAM) highlights positive economic impacts that may not show up on a traditional cost-benefit analysis, enabling clients to make a stronger business case to investors. TEAM calculations have helped make the business case for several UK and international projects by highlighting jobs created and enhanced accessed to education and healthcare.



Master planning

Global population growth demands innovative use of land and resources. Master plans – whether for greenfield sites or regeneration schemes – must be responsive and adaptable to sustainably address present and future social, economic and environmental challenges, taking into account a wide range of complex, interconnected factors.



Masdar, Abu Dhabi

Our role

Infrastructure design, co-ordination and management, and sustainability modelling and analysis. We achieved synergies between several disciplines, providing highly integrated solutions covering energy, transport, heating, cooling, waste management, water, wastewater, surface water drainage, geotechnical infrastructure, communications and building façade design.

Client

Masdar City

Masdar City was designed to be one of the world's most sustainable cities and an exemplar of low-carbon urban development. Goals included energy self-sufficiency using photovoltaic cells, solar thermal and geothermal energy. An innovative integrated passenger rapid transport system was designed to limit use of cars and create pedestrian-friendly streets.

Power, clean and grey water, wastewater, communications and waste collection services stem from a single services artery. This innovative shared-services solution is also used to store rainwater run-off, supplementing the grey water supply.

We showed that:

- The majority of solid waste could be recovered and recycled
- Water saving and reuse would reduce consumption of fresh water
- State-of-the-art communication could be used to fine tune energy efficiency city wide

60%

efficiency gains using cooling technologies instead of air conditioning



Tianjin Eco-City, China

Our role
Sustainably planned to accommodate 350,000 people. Mott MacDonald reviewed and developed the city-wide sustainability strategy and guided its implementation, producing guidelines for green buildings and transportation. We are leading design of two demonstration buildings – a school and a residential complex.

Client
Sino-Singapore Tianjin Eco-City Administrative Committee/Global Environment Facility

Public transport and pedestrian-friendly urban design limits use of private vehicles to less than 10% of journeys. A wetland treats and recycles wastewater. Organic waste is used to produce heat and power. Management of power and water consumption, combined with renewable electricity generation, limits energy use and carbon emissions. Buildings are 65% more energy efficient than current standards require, while the demonstration buildings are 85% more efficient.

West Kowloon Cultural District, Hong Kong

Our role
We initially provided development plans and environmental impact assessment, and are now providing infrastructure services including detailed design, procurement support and construction supervision for the development of one of the world's largest cultural hubs.

Client
West Kowloon Cultural District Authority

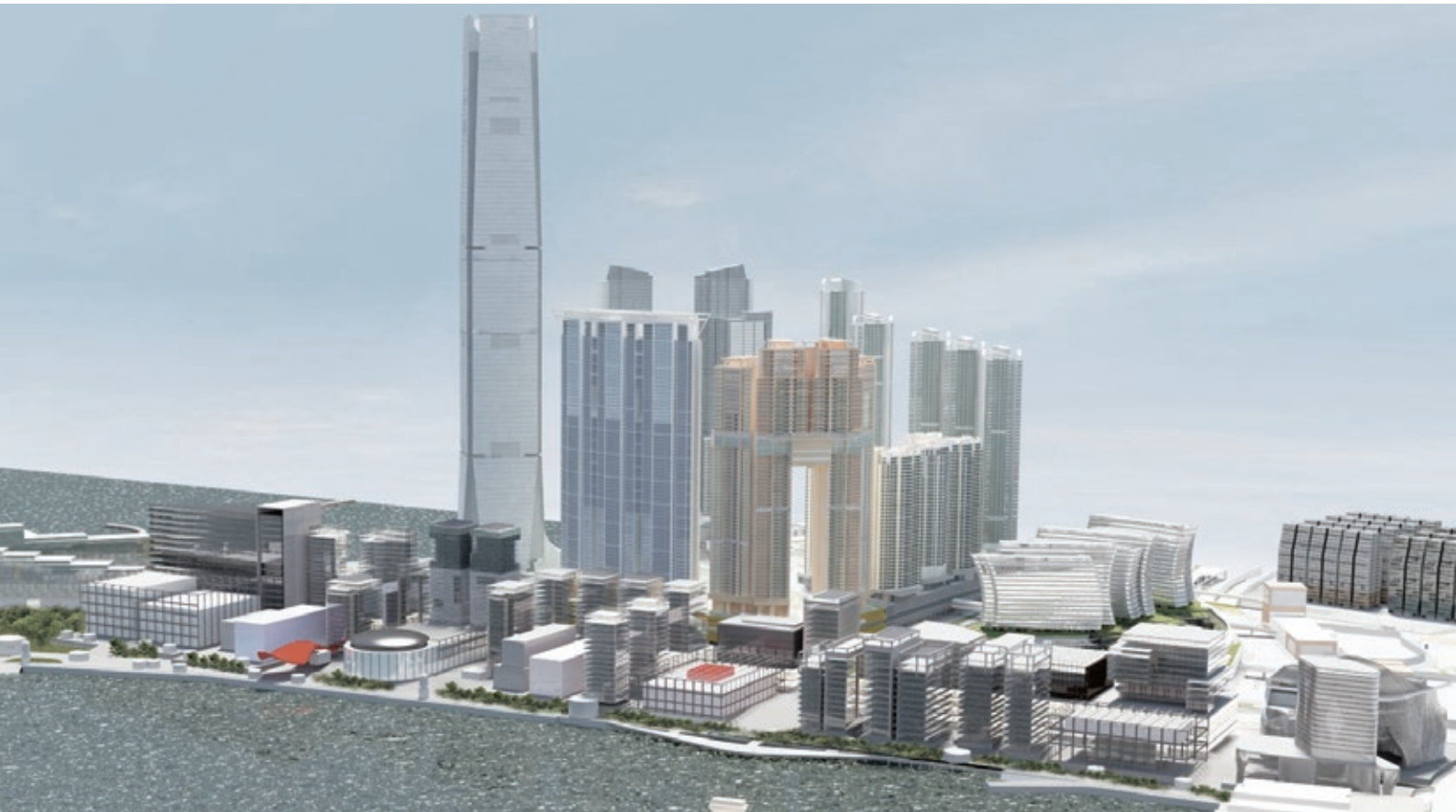
Our design diverted all traffic underground, creating a traffic-free environment above ground that is safe and pleasant for pedestrians and cyclists. When complete, this 40ha project will create a vibrant cultural quarter combining art and educational facilities with public space.

Minto renewal, Australia

Our role
We have been master planning and project managing the infrastructure and servicing for the rehabilitation of Minto in south-west Sydney. The renewal programme involves redeveloping approximately 1200 homes, remodelling public spaces and providing new community amenities.

Client
UrbanGrowth NSW

The redevelopment is geared towards improving the social and financial sustainability of Minto. This is being achieved by remodelling streets and public areas to improve safety and reduce crime. Social diversity is promoted through sustainable community programmes, creating recreational facilities and a community centre, conservation plans for indigenous and non-indigenous heritage and providing affordable housing.



Buildings

More than 50% of carbon emissions come from buildings. Innovative use of materials and alignment between building design and management strategies can deliver major savings in embodied and operational energy. Design for manufacture and assembly (DfMA) cuts waste, accelerates construction and makes maintenance and upgrades fast, easy and cost-effective.



Department of Environmental Affairs Head Office, South Africa

Our role
Mott MacDonald provided multidisciplinary services for the development of this national government office.

Client
South African National Government

21%
annual electrical power generation from onsite renewables

83%
recycling of construction waste

44%
reduction in potable water consumption

This was South Africa's first government building to achieve the top Six Green Stars rating under the country's sustainable performance awards system. We worked with the contractor to develop local skills and used BIM to integrate the entire design team, optimising solutions for construction and operation. Use of thermal storage and natural ventilation and lighting minimises energy consumption.

Burntwood School, UK

Our advanced environmental control solutions achieved ambitious energy and carbon performance targets set by the school. Our strategy combined passive cooling and daylight control, hybrid natural and mechanical ventilation, and solar water heating. A district heat and power network is fuelled by biomass. All of these elements were seamlessly integrated with the architect’s vision.

Our role
We provided building services, specialist acoustics, security and sustainability advice, including detailed environmental modelling and BREEAM guidance for this school, which won the 2015 Royal Institute of British Architects (RIBA) Stirling Prize – the UK’s most prestigious architecture award.

Client
Wandsworth
Borough Council



Royal Victoria Hospital Building, UK

Our role
We provided civil and structural engineering design for one of the UK’s first factory-made buildings.

Client
Laing O’Rourke for NHS Lothian

Requiring a quarter fewer workers and delivered 20 weeks faster than possible using traditional construction techniques, this healthcare facility in Edinburgh was one of the first UK buildings to have been designed for manufacture and assembly. By value, 55% of the building was made offsite under factory conditions. As well as saving time, DfMA resolved challenges presented by the operational hospital site and enabled outstanding safety performance, the project achieving a zero reportable accident frequency rate (AFR).

Power

Monitoring and control of diverse generating sources enables integration of renewables with conventional thermal and nuclear power, reducing the carbon intensity of electricity at an affordable cost. Energy storage can convert surplus supply to forms of energy that can be released back into the grid to meet surges in demand.



Setouchi solar plant, Japan

Our role
After acting as owner’s engineer during the development phase, Mott MacDonald supervised construction of Japan’s largest solar photovoltaic power installation.

Client
Kuni-Umi Asset Management

The £714M, 230MW plant is part of Japan’s strategy to diversify its power generation capabilities. We helped establish project bankability through the study of satellite data to evaluate local solar resource levels. We also harmonised standard international performance tests and performance guarantee structures with local Japanese business practice.



Block Island offshore wind farm, USA

Our role
We were the lender's technical advisor and provided construction monitoring services for the first offshore wind farm to reach financial close and be built in the US

Client
Deepwater Wind

This 30MW facility off the New England coast will be in commercial operation from the end of 2016. The site is capable of powering 17,000 homes, but is just a demonstrator project. Its success has set in motion the development of a further 300MW of offshore wind capacity off Rhode Island, with the potential for substantially more GWs of US offshore wind projects.

17,000
homes renewably powered

Demand side management, UAE

Our role
We developed a communication and control system that cuts building chiller power use at peak times and could generate both financial and environmental benefits for utility companies and consumers.

Client
UAE Government

40%
reduction in energy demand

Cooling plant output is reduced when consumption starts to exceed supply, while smart controls monitor and maintain air temperature and quality. Ensuring there is enough – but not too much – fresh, cool air could reduce building energy demand by up to 40% at peak times. The controls deactivate if comfort thresholds are exceeded. The project is being piloted across five buildings in Abu Dhabi before being rolled out city-wide.

Digital infrastructure

A digital infrastructure 'nervous system' allows communication and data-sharing between people, organisations and things. Monitoring of infrastructure systems allied with powerful data analytics and automated decision-making allow real-time performance optimisation and enhanced strategic asset management.



eThekwini Smart City, South Africa

Our role
We provided the feasibility study to enable broadband infrastructure in eThekwini municipality to be extended.

Client
Development Bank of South Africa

Smart cities benefit from increased jobs and a rise in GDP. Extending broadband infrastructure in eThekwini will expand internet access and allow SMEs to tap into the digital economy while paving the way for smart city applications in public service delivery, including transport, logistics, utilities and e-government.

City of tomorrow, India

Our role
We provided stakeholder engagement and urban master planning

Client
Jaipur Nagar Nigam

With one of the world’s fastest growing economies, and populations, Indian premier Narendra Modi has set the goal of developing 100 ‘smart cities’ – socially inclusive, high tech, environmentally sustainable and economically prosperous. Mr Modi launched a national competition to find the best smart city proposal and qualify for the first tranche of development funding – a competition with a 100 day deadline. With the clock ticking, historic Jaipur called on us in partnership with EY to develop a plan. It was created in close consultation with the citizens of the Pink City, and with outstanding results: Jaipur came in ahead of 97 rival cities and is lined up for transformation into a smart city for the next generation of Indians.



H2knOw-how, New Zealand

Our role
H₂knOw-how flow monitoring, modelling and prediction

Client
Auckland City Council

A smart infrastructure system which visualises the performance of water assets, enabling optimisation and focused maintenance. This solution has brought cost savings of over 20% through efficiency gains, and has minimised the need for external project management, bringing extra transparency to the work of Auckland City Council and giving residents confidence that their money is being spent effectively.





Teacher Development Programme (TDP), Nigeria

Our role
Teacher Development Programme (TDP)

Client
UK Department for International Development

TDP is piloting the use of mobile phones and tablet computers ‘trainer in the pocket’ to support teacher training and better classroom practice - including videos and audio stories to make lessons more interesting. Teachers also learn how to conduct simple but effective lessons using ‘no cost, low cost’ materials such as stones to teach maths. With new skills, teachers can manage a classroom more effectively and think creatively to deliver interactive and inspiring lessons in English, mathematics, science and technology. By 2019, TDP will have improved the skills of 62,000 teachers, 816 instructors and 4000 student teachers, enhancing the life chances of 2M young Nigerians every year.

eHealth, South Africa

Our role
Strengthening South Africa’s Revitalised Response to AIDS and Health (SARRAH)

Client
UK Department for International Development

The MomConnect initiative aims to improve maternal health and reduce child mortality in South Africa by registering expectant girls and women on a national database and sending regular text messages to their mobile phones to help them during their pregnancy and look after their baby’s health. It was launched after research commissioned through Mott MacDonald revealed that, with 95% of pregnant women and mothers having access to a mobile phone, it was a more effective channel for communicating public health advice than radio or television. MomConnect was supported by the UK aid-funded SARRAH programme, which included a portfolio of mHealth initiatives.



Water and wastewater

Drinking water can be supplied affordably without depleting finite resources. Treatment innovations can provide potable water. Landscape features, vegetation and permeable surfaces can be used to retain and slow high-volume run-off. Combined drainage and storage solutions can regulate flow and convey excess water safely past areas of dense population and high economic value.

Our role
We are providing programme management and engineering design to assist a utility provider in enhancing the resilience of its assets in the US capital.

Client
District of Columbia Water and Sewer Authority

Our management of Washington DC's water distribution investment programme is improving the efficiency and performance of its infrastructure by hardening assets, diversifying facilities, creating emergency plans and making cost-effective 'capex light' investments. The programme forms part of the capital's drive to become the healthiest, greenest and most sustainable city in the USA.

Washington DC water distribution system, USA

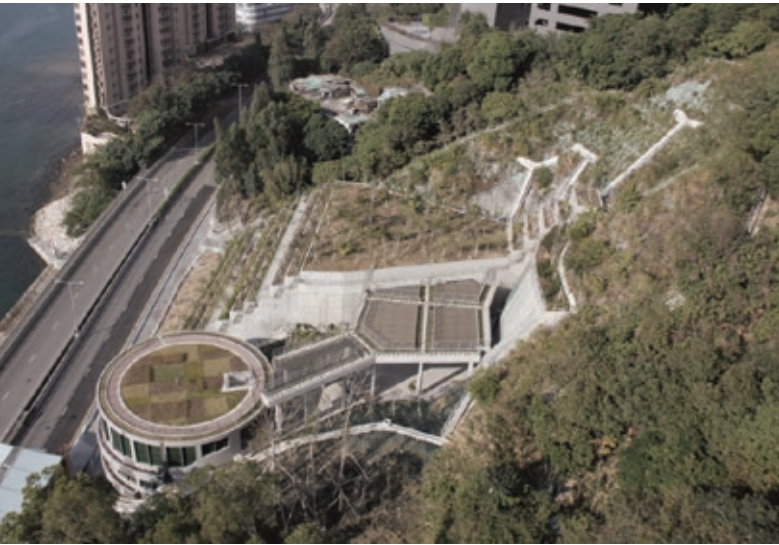


Tsuen Wan New Town stormwater tunnels, Hong Kong

Our role
We engineered a HK\$1bn flood interception system to protect communities from the effects of devastating rain storms.

Client
Hong Kong Drainage Services Department

Dense urbanisation made upgrading surface drainage difficult. We designed a solution that uses a 5.1km tunnel to intercept surface water run-off and discharge it into the sea.



Newtown Creek green infrastructure, USA

Our role
We used green infrastructure to reduce rainwater run-off by designing more than 550 right-of-way bioswales.

Client
New York City Economic Development Corporation

Natural drainage was used to prevent urban flooding and improve water quality in Newtown Creek, Brooklyn. Bioswales are created by replacing impervious surfaces with permeable substrate, organic topsoil and vegetation to capture stormwater run-off. By designing this green infrastructure, we helped to avoid the need for more costly 'grey' infrastructure. Our work improved biodiversity, with wildlife and wetland plants beginning to flourish in the previously heavily polluted creek.

Mumbai IV water supply and sewerage systems, India

Our role
We designed wastewater collection and treatment for India's largest-ever water transmission and treatment system.

Client
Brihanmumbai Municipal Corporation

We increased the diameter of some water supply tunnels, doubling the capacity of the water treatment works and achieving 30% higher water provision. We reduced the diameter of other water supply tunnels to save cost on equipment procurement and reduce geotechnical risk. We designed the main sewerage collector drain as a bored tunnel to eliminate the need for intermediate pumping, substantially reducing future operational costs while enhancing reliability.

75%
(9.2M) of Mumbai's unconnected population will benefit

Waste management

Using enhanced digestion technologies to treat the solid content of wastewater can create enough combustible biogas to make the entire treatment process self-sufficient in renewable electricity while exporting any surplus to the local power grid. The high potential energy of non-recyclable biomass can be converted into electricity and heat by local power plants.

Vantone Great City, China

Our role

We were infrastructure consultant for the city master plan.

Client

Adrian Smith + Gordon Gill Architecture

This low-energy, low-carbon, self-sustaining, environmentally sensitive development includes an eco-park that will integrate wastewater treatment, solid waste treatment and power generation. The city will be home to 30,000 families.



Integrated strategic waste management master plan, Dubai

Our role

We developed the master plan.

Client

Dubai Municipality

The client's core vision involves, "creating an excellent city that provides the essence of success and comfort of sustainable living." This vision is underpinned by 11 strategic directives, one of which is ensuring a clean and sustainable environment. This is guided by two specific objectives: integrated waste management and maintaining cleanliness in all areas. The master plan provides methods required to manage waste until 2030 as part of Dubai's sustainable development strategy.

Sludge treatment plant, Hong Kong

Our role

We're independent consultant for Hong Kong's first sludge incinerator, which is also the world's largest.

Client

Government of Hong Kong Environmental Protection Department/Veolia

The plant will process up to 2000t of sludge per day. After evaporation of water content and incineration of remaining solids, residue weighing just 10% of the original matter will be disposed of as landfill. Heat from the incineration process will be used to generate and export power to the regional electricity grid. The plant is housed in a distinctive structure that includes an environmental educational centre, lecture theatres and coffee shops.

Poznan waste-to-energy plant, Poland

Our role

We are local government advisor on Poland's first waste-to-energy plant to be procured through public private partnership (PPP) – the first hybrid PPP project of this scale. We will act as technical advisor until the end of construction and throughout commissioning.

Client

City of Poznan

Our consultancy resulted in the plant being the first Polish PPP project to reach financial close outside the transport sector. It was voted European Waste Deal of the Year by Project Finance magazine and is set to become a template for similar projects in Poland's waste sector.

Transport

Safe, smart, well-integrated transport enables convenient movement, cuts congestion and brings employment, education, healthcare and recreation within easy reach. Planning encourages walking and cycling, bringing health, noise and air quality benefits. Rail terminals and mass rapid transit stations can drive economic growth and urban regeneration.

Crenshaw/LAX LRT corridor, USA

Our role
We provided evacuation modelling and ventilation analysis to assist our client in finding sustainable, cost-effective passenger safety solutions.

Client
Los Angeles County Metropolitan Transportation Authority

Fire safety in underground metro systems is all the more challenging because of the enclosed nature of tunnel environments. For LA Metro we used sophisticated computer modelling tools to design an onboard fire suppression system for train carriages that will protect passengers and achieve significant cost savings.



Delhi Metro, India

Our role
We have provided comprehensive engineering design services for 20 underground and 21 elevated stations with connecting tunnels and viaducts.

Client
Delhi Metro Rail Corporation

The stations have been designed to handle between 600,000 and 850,000 passengers per day by 2021. The system has vastly improved access to all parts of the city as well as relieving congestion on the roads, helping the city to grow as an economic hub.

Nairobi urban mobility study, Kenya

Our role

We studied future transport options to support Nairobi in the pursuit of economic development under its Vision 2030 plan.

Client

Delegation of the European Union to Kenya

Following detailed analysis, we developed a proposal for the phased implementation of a bus rapid transit (BRT) system – unprecedented in Kenya – and advised on stakeholder issues, institutional arrangements and co-ordination of donors' programmes. We are now assisting the government in implementing the BRT network, which will make a critical contribution to the city's development.

Glasgow 2014 Commonwealth Games, UK

Our role

We led a consortium of five consultants appointed to develop and deliver a travel demand management programme that used communication to influence travel behaviour and limit congestion.

Client

Glasgow Commonwealth Games Organising Committee

We tailored our in-house Merlin technology with information from multiple organisations and map data to support the Transport Co-ordination Centre. This contributed to 1.1M people travelling by train – the biggest public transport operation Scotland has ever seen. Increased use of active transport modes saw 27% of visitors walking or cycling.



Northern Line extension, UK

Our role

Civil, structural and mechanical and electrical design for 3.5km of tunnels, two shafts and two stations at Nine Elms and Battersea.

Client

London Underground

Good transport links are crucial to successful regeneration. We are using all the benefits of Level 2 BIM to enhance collaboration and to maximise offsite construction techniques – bringing time, cost and material efficiencies to this major extension of the London Underground network.





Toronto Waterfront, Canada

356
hectares sustainably redeveloped

Our role
We are providing sustainability, low-carbon, smart infrastructure and climate resilience advisory services.

Client
Canadian Urban Institute

The redevelopment of 356 hectares of land at the heart of Toronto will boost jobs and economic growth in Canada’s biggest city. But it’s also an opportunity to ensure sustainability is built in from the outset. Our advice will help to make the new district low carbon and climate resilient.



Urban realm

The spaces between buildings are fundamental to the success of any development. Creating public spaces that are aesthetically pleasing, functional and safe promotes community cohesion and contributes to health and wellbeing while supporting economic vitality. Formal and naturalistic parkland can provide ‘green chains’ through cities, cleansing the air and combating the urban ‘heat island’ effect.

Nottingham Express Tram Net2, UK

Our role
The Nottingham tram system was extended with two new lines. We designed all civils works, including a 104m bridge that carries trams above Nottingham’s historic railway station – a 100-year-old building with protected heritage status – and a further 30 bridges and culverts.

Client
Taylor Woodrow

We added value through the design of scrapes and new wetland areas as part of the surface water drainage, and incorporated extensive wildflower grassland areas providing significant cost savings to the long-term maintenance of soft landscaped areas along the tram route.

Infrastructure finance

Extensive experience in and knowledge of infrastructure finance means we provide practical, clear advice, innovative, cost-effective solutions, mitigation of long-term risk and robust business cases. Our ability to develop strategies, find and secure funding, and keep projects on track – all while improving the efficiency of delivery and reassuring investors that their money is being wisely spent – is why we’re ranked number one global technical advisor by Infrastructure Journal magazine.



Hospitals public private partnership (PPP) programme, Turkey

Our role
We are managing this facility, which provides support to the government, to improve maternal, newborn and child health by building capacity in areas including policy and strategy, service delivery and procurement.

Client
UK Department for International Development for the Government of Pakistan

To achieve long-term, sustainable benefits, we are promoting local responsibility through building capacity, and strengthening government systems to procure and manage technical assistance. We retain national staff throughout the life of the project wherever possible, which helps to build trust and reduce any security risks associated with high staff turnover.

Nice Eco Stadium, France

Our role
Lenders’ technical advisor for an innovative PPP deal, delivering a multisport and entertainment venue that will set standards for sustainability. We’re also supervising construction.

Client
Vinci Concessions

Our technical and commercial risk assessment reassured lenders that this project – combining environment-friendly engineering solutions and a multifaceted business model – meets all the criteria for commercial success and economic sustainability.



Derby waste, UK

Our role
We were lenders’ technical advisor for a waste project procured via PPP to treat and dispose of a local authority’s residual waste.

Client
Derby City and Derbyshire County Council

The project will enable a reduction of 49,000 tonnes CO²e/a of greenhouse gas emissions by diverting 140,000 tonnes of waste from landfill and extracting 36,000 tonnes of material for recycling per annum. Facility emissions are offset by 64,000MWh/a being exported to the grid.

Environment

Climate events are becoming more severe so adaptation should be integral to all new assets, enabling operation to be maintained through resilience, safeguarding public service and safety, and minimising economic losses. Promoting long-term sustainability means the environmental value of fauna, flora, air, land and water must be quantified and optimised, and effective mitigation measures put into practice.

Cedar Bayou restoration, USA

Our role
We provided coastal engineering analysis and design to restore the connection between Cedar Bayou and the sea, closed off following an oil spill in 1979.

Client
Aransas County

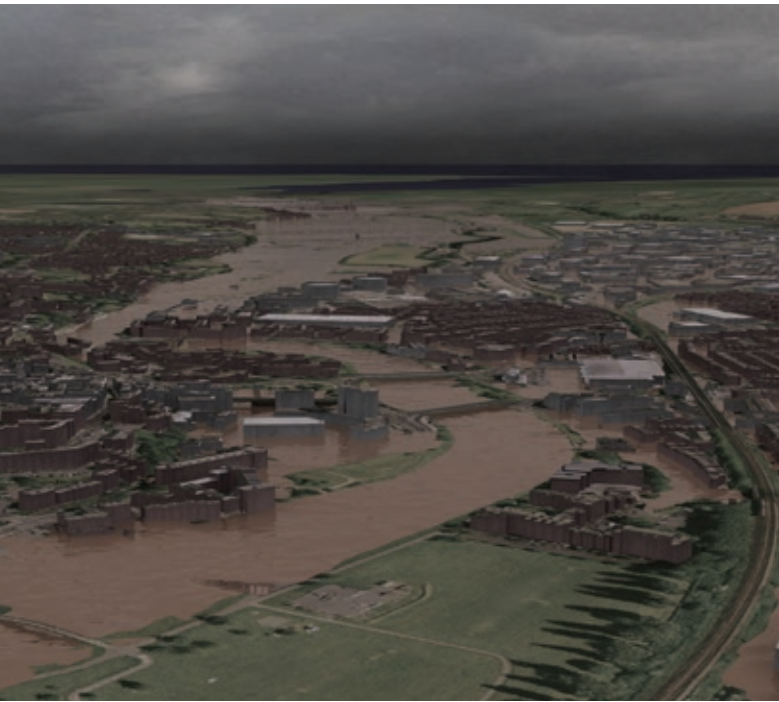
Reconnecting Texas’ Cedar Bayou with the sea has restored life to a once rich marsh and estuarine ecosystem. Within months, fish and crustacean populations were soaring beyond expectations. It now harbours the world’s largest flock of endangered whooping cranes and people are travelling from afar to enjoy the bayou’s spectacular comeback. The whole local economy has gained, with more visitors bringing plenty of new trade to the area. The environmental improvements mean local people are also enjoying enhanced leisure activities, such as fishing and birdwatching.

Communicating flood risk, UK

Our role
We used 3D flood animation and images to show Exeter’s residents the extent of potential devastation if flood defences were overtopped.

Client
Environment Agency

The models were designed to encourage those at risk to take personal responsibility and plan accordingly. 3D animated graphics enabled people to understand the extent and severity of flooding, improving their ability to prepare and protect homes and businesses, so maintaining personal safety as well as livelihoods.



Ulaanbaatar air quality, Mongolia

Our role
We advised the Mongolian government on a programme to reduce dangerous air pollution which could save 1000 lives a year in the country’s capital city.

Client
Ministry of Environment & Green Development/EBRD

Much of the pollution is caused by burning raw coal and rubbish. We helped the government plan how to provide cleaner fuels in order to give people access to more-efficient, less-polluting heaters while also reducing cost to the end user and the government. This has resulted in 90,000 heaters being distributed to date, a saving of US\$1M for the government and US\$10M of international financing to enable a mining operator to produce cleaner coal.





Education, health and social care

Locally focused teacher training and mentoring, supported by student assessment, raises attainment across the education spectrum providing the skills needed to fuel economic growth. Preventative and clinical health initiatives allied with progressive social care practices reduce communicable diseases and substance addiction, contributing to improved wellbeing and prosperity.

Education quality improvement programme, Tanzania

Our role
Mott MacDonald is managing this programme to produce a better quality of primary education for more than 2M girls and boys across 47 districts.

Client
UK Department for International Development for the Government of Tanzania

We are adopting a whole-system approach to improving education quality. The eventual goal is to replicate successful interventions nationwide. One of our initiatives is providing 5000 head teachers, ward education co-ordinators and district education officers with tablets so that all levels can monitor performance, sending data directly to

a dashboard so we can see how schools are performing in real time and share data, allowing for targeted interventions. These tablets place high-quality teacher development and learning resources right in the hands of schools to help them provide low-cost, in-service teacher training.

Government capacity development support, South Africa

Our role
Over five years, we're providing technical assistance to strengthen the Department of Social Development's (DSD) capacity to respond effectively to the needs of orphans and vulnerable children across a range of health and welfare issues.

Client
USAID for South Africa DSD

We're acting as a partner rather than a service provider, building capacity to ensure outcomes outlast changes of staff or leadership. We're taking a whole-system approach, tackling weaknesses at the individual, organisational and system levels in order to transform child welfare systems for sustainable outcomes. The project comprises work streams to address monitoring and evaluation, policy and practice relating to child protection, and the effectiveness of DSD's workforce.

Technical Resource Facility, Pakistan

Our role
We are managing this facility, which provides support to the government, to improve maternal, newborn and child health by building capacity in areas including policy and strategy, service delivery and procurement.

Client
UK Department for International Development for the Government of Pakistan

To achieve long-term, sustainable benefits, we are promoting local responsibility through building capacity, and strengthening government systems to procure and manage technical assistance. We retain national staff throughout the life of the project wherever possible, which helps to build trust and reduce any security risks associated with high staff turnover.

Islington schools, UK

Our role
We raised educational standards through management of this London borough's primary and secondary schools, including school improvement, governance, finance, capital works and maintenance programmes, school admissions, pupil welfare and teachers' professional development.

Client
London Borough of Islington

The average level of educational attainment was raised from substantially below the national average to national average or above. For the client, we improved the efficiency of education spending and turned a failing education authority into an outstanding one, as judged by schools inspectorate Ofsted.



Opening opportunities with connected thinking.