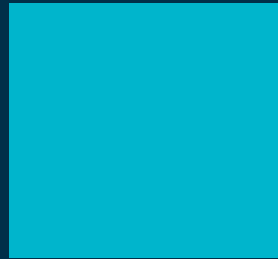
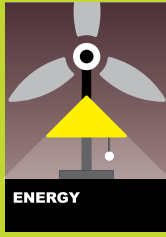


Mott MacDonald

Delivering sustainable and innovative solutions worldwide





About Mott MacDonald

Global management, engineering and development consultancy

Mott MacDonald is a global consultancy with a turnover of £1 billion and unrivalled diversity. We provide leading-edge solutions for public and private sector clients across 12 core business sectors. As one of the world's largest employee-owned companies with more than 14,000 staff, we have established offices in over 40 countries and projects in a further 100.

We use our worldwide resources and experience to:

- Plan, design, procure and deliver projects on any scale
- Provide management consultancy built on technical know-how
- Help shape and implement development policies and programmes
- Advance sustainability and promote the wellbeing of the planet



Our breadth of skills, sectors, services and global reach has enabled us to deliver some of the world's most iconic projects including the UK's Channel Tunnel and Wembley Stadium, Hong Kong's international airport and the Sea-to-Sky Highway in Canada – making us one of the world's leading providers of high quality management, engineering and development solutions.

WHERE Manchester, UK

WHAT Manchester Civil Justice Centre

OUR ROLE We carried out façade, fire, structural and building services engineering, tuning each element of the building to optimise performance and create environmental synergies. Design innovations help reduce CO₂ emissions by 505 tonnes per annum and cut annual energy consumption by 20%.

14k

Over 14,000 staff including world-expert practitioners

150

Our heritage extends over 150 years

1bn

£1bn consultancy with global experience and local insight



What we do

Across all market sectors we provide a comprehensive range of planning, design, project delivery and business advisory services covering all stages from concept to completion.

Our total service offering incorporates all aspects of project and programme management, management consultancy and construction economics. As a multisector professional services provider, our planning, advisory, technical and management activities also encompass the social and institutional dimensions of development, including health and education.

Adding to our capabilities in mainstream technical and management disciplines, we're skilled in specialist fields as diverse as low carbon technologies, aviation strategy, land use planning, coastal management, nuclear engineering and organisational reform. Our global resources and depth of experience also mean we're ideally equipped to meet the changing demands of public private partnerships and project finance.



Sustainable solutions

Mott MacDonald is committed to working with our customers and supply chains to incorporate sustainable solutions into our projects. We are experts in sustainable design, construction and management, including sustainability at the most critical conceptual, planning and feasibility stages of all our projects, addressing the whole-life costs and impacts from a truly multidisciplinary viewpoint.

WHERE Gansu and Liaoning Provinces, China

WHAT Water resources demand management assistance

OUR ROLE We're assessing water scarcity and drafting new local and national guidance on water management, bringing international best practices to bear.

Our people

Our principal differentiator is the quality of our staff. Our success is fuelled by their dedication, enthusiasm and ingenuity. Many of our engineers, environmentalists, planners, economists, cost consultants, project managers, safety experts, IT specialists, educationalists, healthcare advisors and management consultants are recognised as innovators or world authorities in their fields. Recognising that to work with the best we must be the best, we promote professional excellence and knowledge management, which is why continuous learning and skills improvement are ingrained in our company culture.

WHERE India

WHAT Karnataka urban development and coastal environment programme

OUR ROLE We are providing design and project management for over 100 contracts in five towns, tackling drinking water supply, sewage and solid waste disposal and management of stormwater run-off.



70+

Industry awards won by Mott MacDonald projects and people in 2009

140

Work in 140 countries

12

Leading-edge solutions across 12 core sectors

Tianjin Eco-City blazes sustainability trail

A test-bed for sustainable technologies, Tianjin will be a blueprint for future cities.



Population of

350,000

Water consumption limit of

120 litres

per person/day

The ¥100 billion (£9.8 billion) Tianjin Eco-City is no small-scale development. With 350,000 inhabitants and an area of 30km², it will be a full-blown metropolis, with a university, high tech industry and a strong focus on research and development. The city's buildings and inhabitants will all adhere to new standards of energy, carbon and water usage.

Mott MacDonald is reviewing and further developing the city's financial planning and overarching sustainability strategy, and will oversee its implementation over the coming 10 years. We are reviewing and developing the city's Green Building Evaluation Standard – equivalent to the UK's internationally respected Building Research Establishment Environmental Assessment Method – and leading the design of two demonstration projects. Mott MacDonald's role also involves green transportation planning. Client is the Sino Singapore Tianjin Eco-City Administrative Committee and Global Environment Facility.

Tianjin Eco-City has been sited on land of low current economic, agricultural or ecological value. Public transport connections, including extension of the Beijing-Tianjin High Speed Rail line, will provide close links with Tianjin city centre and Tianjin port, Beijing and Tangshan. The Eco-City will be at the centre of a major economic development and free trade zone. Review and development of the city's financial plans includes identifying strategies for attracting inward investment and ways to maximise the economic benefits of the city's research, development and academic base.

Tianjin Eco-City will be developed in three phases. The first will cover 4km², housing a projected population of 85,000. All three phases are planned for completion by 2020.

Buildings will be at least

65%

more energy and carbon efficient than current Chinese standards

50%

of water sourced through recycling and harvesting rainwater

90%

of journeys by foot, bicycle or public transport

20%

of energy from renewable sources

Area of

30km²

Waste generation limit of

0.8kg

per person/day

MASDAR CITY, ABU DHABI

Abu Dhabi client Masdar is forging ahead with design and construction of the world's first city embodying the principles of one planet living, that involves creating a sustainable local economy alongside sustainable resource management. Covering an area of some 600ha, Masdar City will be home to 50,000 people, mixing residential, hotel, retail, commercial and light industrial development. A special economic zone and world class university, Masdar Institute of Science & Technology, will also reside within the city walls. Mott MacDonald is leading infrastructure design across the entire project, helping predict needs for power, water, communications, cooling, transport and drainage.



LE MANS STADIUM, FRANCE

French contracting giant Vinci is designing and building the €100 million Le Mans Stadium under a public private partnership and will then operate and maintain it under a 35 year concession. Structurally the stadium is not difficult to build, but the concessionaire will be paid in line with revenue generated by events. This requires an extra level of expertise – events planning and financial forecasting in addition to the normal PPP skills of project finance, design, operation and maintenance. We have carried out an audit of the commercial model for Vinci's lenders and acted as lender's technical advisor. We are now supervising construction.



STORMWATER MANAGEMENT AND ROAD TUNNEL (SMART), KUALA LUMPUR

SMART represents an ingenious, world-first solution to the adverse economic and social impacts that flooding and congestion have inflicted on the central business district of Kuala Lumpur, Malaysia's capital city. A combined flood diversion and highway tunnel relieves both problems. 6.8km of the tunnel's 9.8km are dedicated to flood relief, with the central 3km fulfilling a dual role where traffic flows through a double deck road structure. Mott MacDonald was appointed as designer of the dual purpose section and as a specialist consultant for tunnelling overall.



DARWIN CENTRE, NATURAL HISTORY MUSEUM, UK

Low carbon specialist Fulcrum, now part of Mott MacDonald, provided building services, lighting and cladding design for the new Darwin Centre at London's Natural History Museum. Leading-edge energy and carbon performance was achieved by using the building's structural mass to stabilise its temperature. Temperature and humidity requirements are met using 'waste' heat and spare capacity from the museum's existing heating and cooling systems, as well as energy recovery systems. Lighting energy is minimised by using movement and daylight sensitive controls. The inner structure is insulated from external temperatures by an atrium.





MBOMBELA STADIUM, SOUTH AFRICA

Mbombela Stadium is one of five new sports venues being built in readiness for the 2010 Football World Cup in South Africa. Faced with a tight and immovable delivery deadline, soaring material prices and stiff competition for the services of skilled construction contractors, Mott MacDonald responded by designing a stadium roof that sets international standards for weight and cost efficiency, and that has been simple and safe to build. At the same time, the roof – the visually dominant element of the stadium – is iconic and appropriate to the stadium's setting on the edge of world famous Kruger National Park: its structural masts are evocative of giraffes.



HAGUE WASTEWATER TREATMENT PLANT, NETHERLANDS

Mott MacDonald is lenders' technical advisor on the Netherlands' first public private partnership (PPP) in the water sector. We have been involved since the project's inception in 2002, seeing it through financial close, design and construction to operation in 2008, with our role continuing for the remainder of the 30 year concession. The plant meets stringent European Union standards for removing nitrogen and phosphorous before the effluent is discharged to the North Sea.

GREENING GOVERNMENT PROCUREMENT, HONG KONG

Mott MacDonald is developing sustainability guidelines for the Government of Hong Kong that will set new standards for infrastructure projects. The guidelines address energy, water and materials consumption, waste, occupational health and safety, carbon emissions, land take, impacts on drainage and ground water, ecosystem damage, air and waterborne pollution and their health impacts in the wider community.



WIND ENERGY, WORLDWIDE

Mott MacDonald is Europe's leading technical advisor for offshore wind farms. We also design and manage offshore and onshore wind turbine arrays and electrical systems, with projects in North America and Europe. We are helping customers, lenders, suppliers and contractors address technical issues of buildability, resilience, reliability and transmission efficiency, and are trusted in the project finance sector, helping bring projects to fruition. Projects include the world's biggest wind farm to date, Shepherds Flat in the US, and Bligh Bank the largest offshore wind farm to be financed on a non-recourse basis, located off the Belgian coast near Zeebrugge.

Integrated design and sustainability: INDUS

Mott MacDonald is working with customers to improve the whole-life financial, environmental and social performance of the projects we work on and in doing so we are helping drive forward the sustainability agenda. We have developed a method, INDUS, that integrates sustainability into design, making it part of the decision making process alongside technical, financial and statutory planning, safety and regulatory considerations. INDUS addresses the gap that can exist between the aspirations embodied in a customer's policies and the performance of their projects.

INDUS is supported by a portfolio of tools which are customised to suit the individual needs and objectives of each project and the different stages of project development. Our tools enable rigorous comparison of different design options and help with the challenging of assumptions. They examine and score whole-life performance as well as initial costs and impacts, enabling a long-term view of sustainability to be taken and highlighting potential cost, environmental or social benefits. Decision making tools also assist with the selection of materials and methods of construction.

- We set objectives for each project taking account of economic, social and environmental sustainability over the whole-life of the project
- The importance of each objective is weighted at the outset
- This provides a reference framework and scoring system for decision making. As many or as few criteria as necessary can be established to gauge and guide project performance
- Key stages are identified over the course of project development at which major decisions are to be taken and scored
- Definition and weighting of objectives is achieved through consensus with our customers and project stakeholders
- At any stage of project development, pursuing sustainability can improve performance. But we encourage our customers to set objectives at the outset to achieve the maximum possible benefit.

Industry-first, whole-life carbon tool

Complementing Mott MacDonald's decision making tools, the company has developed an industry-first cost and carbon modelling tool, LifeCYCLE. By looking at all elements making up a building or piece of infrastructure, LifeCYCLE enables us to quantify initial construction costs and embodied carbon. Our customers can make strategic decisions based on the financial and environmental performance of components throughout an asset's life.

Carbon cost books

We have launched the first ever price book to also contain estimated values for CO₂ emissions of construction activities, enabling the environmental impacts of building decisions to be quantified with greater ease.

