International Environmental Impact Assessment
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Why Atkins?

Atkins is one of the world’s leading engineering and design consultancies. We have the depth and breadth of expertise to respond to the most technically challenging and time-critical infrastructure projects, as well as the urgent transition to a low carbon economy. Our people bring significant value to our clients, harnessing an unrivalled breadth of skills and deep technical expertise to produce outstanding solutions to the most challenging problems. We have experience across the full development lifecycle, from inception through masterplanning and development planning to construction, operation, decommissioning and demolition.

Our experience in undertaking Environmental Impact Assessments (EIA), Health, Safety and Environmental Impact Assessment (HSEIA), and Environmental & Social Impact Assessments (ESIA) is extensive. We work with our clients to develop sustainable solutions to the environmental challenges they face and add value to our clients’ businesses by delivering excellence and innovation. We focus on improving environmental management performance, risk and liability management and competitiveness. We seek to deliver savings and efficiencies in time, cost and resources. What our clients really value is how we work – we seek outcomes that are transformational.

Our environmental consultants understand both how things work and how things are built, and are excellent at integrating the environmental sciences on engineering projects. We are also experienced in providing feedback from EIA into project design.

We seek to deliver solutions that are pragmatic, innovative and cost effective. We have senior EIA Practitioners on the register of the UK Institute for Environmental Management and Assessment, and our EIA managers can call on a vast range of technical specialists, project managers and engineers to support any EIA project.
MANGROVE BOARDWALK
Drivers for EIA

Environmental Impact Assessment is used to identify and understand the significant environmental consequences of a new development. It is an iterative process that identifies the potential impacts of a project, adopts design changes and measures to reduce or remove any negative effects, and then re-evaluates the remaining effects. The potential impacts identified through EIA can then be weighed in the balance when a decision is made as to whether the development should proceed. The outcome of the EIA is reported in an Environmental Statement.

As a rigorous test of environmental sustainability, the basic process is now required in the consenting systems of most developed countries around the world and can bring huge benefits in terms of understanding and dealing with environmental issues in relation to major developments. Although most EIAs derive from legislative requirements, some developers of projects that may not actually require a formal EIA recognise the benefits of the process and the demonstration of environmental responsibility that comes with it.

With the world’s leading economies on the fast track to a low carbon future, it is our role to help our clients understand and prepare for the crucial responsibility of delivering infrastructure in a carbon conscious world. EIA can play a major part in this by promoting environmentally sound and sustainable development through the identification of appropriate enhancement and mitigation measures within the chosen project option.
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How we can help

At Atkins we have the experts to deliver all stages of the EIA process, whether that be undertaking the entire EIA, or assisting at one or more of the key stages. We provide screening advice to determine whether a formal EIA is required under the relevant regulations, and a scoping analysis to determine which issues are significant for the project at the proposed site, enabling a fully focused EIA. We carry out baseline studies to describe the existing situation at the site, and to identify environmental receptors that may be sensitive to the proposals. The EIA itself will determine which effects are likely to be significant and need to be reported in the Environmental Statement. Finally, we prepare Environmental Statements which are compact and succinct and are suited to a client’s house style. We provide all the artwork to illustrate the Environmental Statement and produce a non-technical summary when this is required.

We support the EIA with specialists from all of the relevant environmental topic areas such as noise, air quality, water, ecology, landscape, heritage and carbon balance as well as with technical experts experienced in all of the major infrastructure and developments sectors, such as development and regeneration, energy, waste, water and transport. In addition we undertake related assessments including health impact and equalities impact. Central to all of our EIA work is consultation with stakeholders including statutory bodies and interest groups. In fact this is a pre-requisite for EIAs and related assessments undertaken in accordance with many regulatory regimes.

We also provide pre-submission audit and review of Environmental Statements produced by others, due diligence and review services for the determining authority, and expert witnesses for planning appeal and major infrastructure inquiries.
EIA of the London 2012 Olympic, Paralympic and Legacy Facilities, UK

Client: Olympic Delivery Authority
The London 2012 Olympic and Paralympic Games is one of the largest high-profile infrastructure projects ever undertaken in the UK. In addition to the provision of the four permanent and five temporary sporting venues and the Olympic Park in which they are set, it included the demolition of 220 buildings, cleaning up of 8 km of rivers, construction of a combined heat and power plant and distribution centre, construction of over 30 new bridges, modifications to rail and road infrastructure and implementation of one of the largest soil remediation programmes ever undertaken. Atkins has had a significant role in the development and delivery of this programme.

We were commissioned by the Olympic Delivery Authority to coordinate the EIA of the London 2012 Olympic, Paralympic and Legacy facilities located in the Lower Lea Valley. The EIA was in support of two planning applications: a site preparation application and the Olympic, Paralympic and Legacy Facilities Transformation application, which set out the intentions for the scheme and its construction. The 246-hectare site has been the focus of heavy industry for over a century, and includes waste and recycling uses, railway lines, waterways, an area of housing and pockets of green space and wildlife habitat. The EIA therefore covered all of the usual environmental topics, along with electromagnetic interference, microclimate, energy and CO₂ emissions; the extensive socio-economic assessment section also included retail, open space and leisure.
**Durrat Al Bahrain resort, Bahrain**

**Client: Durrat Khaleej Al Bahrain**
We prepared a number of EIAs and related studies for the Durrat Resort, a coastal development at the southern end of Bahrain Island. The resort is intended to offer facilities for all market sectors – permanent residences, holiday homes, short stay and day visitors – and have a population of over 50,000.

The first EIA assessed the impacts of dredging and reclamation and led to the development of an environmental compensation plan. This was followed by an EIA for the masterplan/land development and infrastructure. Supplementary EIAs for the utilities were undertaken, investigating in particular the combination of outfalls from the district cooling, wastewater treatment and desalination plants. Environmental Monitoring Programmes and Environmental Management Plans were prepared and implemented on site during the construction of the resort.

The EIAs were undertaken in accordance with the requirements of the Environmental Assessment and Planning Directorate (EAPD) of the Public Commission for the Protection of Marine Resources, Environment and Wildlife.
Sohar aluminium smelter, Oman

Client: Alcan/Oman Oil
Atkins’ economics team undertook the Social Impact Assessment (SIA) for a new aluminium smelter proposed for the Al Batinah Region of Oman on behalf of Alcan Inc. The SIA evaluated the effects of the project on the communities living in the area of influence of the project and considered the socio-economic impacts on standard of living and quality of life of individuals in their day-to-day activities, perceptions and values. Interviews with key personnel at the concerned Ministries in Oman, collation of published data and material on the area and current planning systems, field visits and interviews with local officials and local communities were all undertaken.

Following start-up of the construction of the aluminium smelter, Atkins was recommissioned to provide a socio-economic impact appraisal of the operation of the smelter. The appraisal focussed particularly on the economic impacts of the smelter and benchmarked them against other heavy industry projects in operation and planned for Oman.
Nimba iron ore development, Liberia

Client: ArcelorMittal
We undertook strategic Environmental and Social Impact Assessment (ESIA) followed by detailed EIAs and SIAs for a programme of mining development extending from exploration through to post closure, as well as associated rail port and community infrastructure. Inputs ranged from developing corporate in-country environmental and social policies, liaison with ministries and key national and international stakeholders to develop national standards, through design and implementation of communication strategies, detailed desk studies and survey programmes, international, national, local stakeholder workshops to achieve buy-in, assessment of impacts and formulation and implementation of mitigation and management plans for economic resettlement and implementation of community communication strategies ensuring disclosure, and participation. The work was undertaken in accordance with international standards relating to ESIA and those of the extractive industries, including the International Finance Corporation (IFC) and the International Council on Mining and Metals, and ArcelorMittal.
Greenwich Peninsula masterplan, UK

**Client:** New Millennium Experience Company Ltd/English Partnerships

We were instrumental in obtaining planning permission for the Millennium Dome and played a major role in developing and obtaining permission for the masterplan for the entire peninsula, comprising 5,000 homes and 200,000 m² of commercial development. The work included the preparation of an EIA for the original scheme and detailed design, procurement of contracts, supervision on site and installation from scratch of all drainage, water supply, utilities and roads, including major improvements to the A102(M) trunk road access.

Atkins was also involved in the assessment and evaluation of proposals for the future development of the Greenwich Peninsula following the closure of the Millennium Experience.

Atkins undertook an EIA for the Dome Legacy Project which considered two alternative development options for the wider area around the Dome and provided an assessment of the impact and sustainability of different mixes of residential, employment, leisure and town centre uses and alternative development densities.
Antea cement plant, Albania

Client: Titan Group
Atkins prepared a full Environmental and Social Impact Assessment on behalf of the European Bank for Reconstruction and Development (EBRD) and IFC for a new cement production facility near Tirana, in Albania. The development is being undertaken by Antea Cement, part of the Greek owned Titan Group, and will involve production of a 78% cement blend from a 3,300 tonnes per day clinker line. The ESIA incorporated assessment, proposal of mitigation measures and development of a management programme for all related environmental and social aspects of the project. The scope of the project included the main production facility, two feed quarries, as well as related infrastructure development.

We successfully managed the input of several groups of key participants including many representatives from the investment institutions, Antea/Titan, local regulatory authorities, non-governmental organisations and several hundred vulnerable local stakeholders, culminating in the resolution of complex problems to the satisfaction of those involved.
Qatalum project, Qatar

Client: Hydro Aluminium AS & Qatar Petroleum
We prepared an Environmental Impact Assessment and Social Impact Assessment for an aluminium plant, dedicated power plant, utilities and port area which was being constructed in the Mesaieed Industrial City (MIC) in Qatar.

The project included environmental monitoring and surveying - air quality monitoring, soil and groundwater sampling, marine surveying, terrestrial ecology surveying - Best Available Techniques (BAT) assessment, and air and marine dispersion modelling.

The social assessment work was undertaken in line with IFC/World Bank requirements, Equator Principles, and the corporate social responsibility procedures of the project partners.
Candlestick Park-Hunters Point Shipyard Phase II
EIR, San Francisco, USA

Client: Lennar Urban/San Francisco Redevelopment Agency

We prepared an Environmental Impact Report (EIR) to assess the impacts that would occur with redevelopment of Candlestick Point-Hunters Point Shipyard in the City/County of San Francisco. The area is renowned for Candlestick Park, home of the San Francisco 49ers football team, and for the Hunters Point Shipyard site, one of the largest Superfund sites in the US.

The overarching goal for redevelopment of the 285ha area was to revitalise the Bayview Hunters Point community by maximizing reuse of the naval shipyard, financing improvement of the state parkland, maintaining and enhancing an historic African-American neighbourhood and providing housing options and an integrated transportation plan. The comprehensive plans of the San Francisco Redevelopment Agency, Mayor’s Office of Economic Development, and Lennar Urban included: more than 10,000 residential units; research and development uses; retail and community services; and a potential new football stadium for the San Francisco 49ers. The award winning EIR helped secure approval to the redevelopment plans for the area.
Alchevsk iron and steel works, Ukraine

Client: EBRD
Alchevsk Iron & Steel Works (AMK) was carrying out an intensive refurbishment programme of its steelworks to increase its competitiveness within the national and international markets and reduce its environmental impact on the city of Alchevsk. As part of the modernisation program AMK planned to construct a Combined Cycle Gas Turbine (CCGT) electricity generation facility, using coke oven, blast furnace and basic oxygen converter gases as fuel. The EBRD was approached to provide a loan to finance the CCGT development and in turn it approached Atkins to undertake an Environmental and Social Impact Assessment of the project in accordance with the bank’s policies and procedures.
New combined direct reduction iron (DRI) / hot briquetted iron plant, Qatar

Client: Qatar Steel (QASCO)
QASCO is a widely recognised leader in steel production, especially within the Middle East region. Midrex – the leading DRI technology vendor – employed us to conduct an EIA of QASCO’s production expansion programme. The expansion programme comprised the installation of an additional DRI plant to both satisfy existing steel plant demand and to generate hot briquetted iron for sale on the merchant market. Technical assessment focused on the DRI process and associated utilities covering dust emissions, atmospheric emissions, seawater cooling discharges and waste generation. We also undertook baseline marine ecological survey and hydrodynamic surveys in order to put the findings into context, make appropriate recommendations and confirm compliance with the regulatory framework.
HOSCO DRI plant and slab steel mill, Iran

Client: Fortis Bank
We were commissioned by Fortis Bank to undertake detailed environmental assessment in order to supplement the EIA which had been prepared for Hormozgan Steel’s proposed direct reduction iron (DRI) plant and Steel Slab Mill. The purpose of the work was to bring the EIA in line with the funding requirements of the World Bank and IFC. This was developed within the Mines and Metals Special Economic Zone in Bandar Abbas, Hormozgan Province, Iran.

The supplementary EIA was scoped to cover those areas that had not been examined to World Bank Standards when the project was given consent under Iranian law. These comprised air quality modelling, detailed modelling of outfall discharges and the modelling of noise impacts. The results of these additional studies, plus the findings of the original EIA were used to develop an Environmental and Social Management Plan which was subsequently used as the basis for the management of the scheme during construction, a process that Atkins was also retained to supervise.
BAT Assessment of ferrous and non-ferrous metals facilities, Kazakhstan

Client: ENRC
We were commissioned to undertake Best Available Techniques (BAT) Assessments and benchmark reviews of an alumina plant, a primary aluminium smelter, two ferro-alloy (smelters one of which included a coke plant), two coal-fired combine heat and power (CHP) plants, and two gas-fired CHP plants. The facilities were located in Pavlodar, Aksu, Aktyubinsk and Khromtau in Kazakhstan. The assessment was undertaken with reference to EU BRef notes on Non Ferrous Metals Industries and Large Combustion Plant.
Light rail depot, Dubai

**Client: Road Transport Authority (RTA)**

Atkins was commissioned by the Dubai Rapid Link Consortium (DURL) to assess the environmental impacts associated with the construction and operation of the Dubai Metro Rashidiya Maintenance Depot and Jebel Ali Auxiliary Depot. The Depots included siding and cleaning tracks, test tracks, low-rise offices, workshops, car park, access roads and several other low-rise facilities. Environmental impacts was assessed with respect to noise and vibration, ecology, archaeology and heritage, air quality, visual impact, soils and geology, waste management, water quality and resources, and socio-economic aspects. The Rashidiya and Jebel Ali Depot Environmental Impact Summaries were both successfully approved by Dubai Municipality.
Al Khor Aerodrome project, Qatar

Client: Gulf Helicopters

Atkins was commissioned by Gulf Helicopters to undertake an Environmental Scoping Study (ESS) for the Al Khor Aerodrome project. The aim of the ESS was to define the contents, scope and methodology for a full Environmental Impact Assessment which would be required in support of statutory permitting.

The project was intended to expand airstrip facilities at Al Khor which at the time supported flying school operations. An area of approximately 340 ha of previously undeveloped land to the north side of the existing airstrip had been allocated to the project. Approximately 25% of this area was allocated to the development of the new facilities which included taxiways, aircraft parking aprons, hangers, maintenance facilities, administration buildings, car parking, passenger terminals, an access road and utilities. Key environmental issues for the project were identified as the effective environmental management of construction activities, and operational aircraft noise.
Retrofitting of noise barriers, China

Client: Highways Department, Hong Kong SAR

Atkins was commissioned to develop cost-effective noise mitigation schemes for 13 packages of works in the New Territories, Kowloon, Tsuen Kwan O and Hong Kong Island.

The project involved a review of previous feasibility studies and the identification of changes in the numbers and locations of noise sensitive receivers, prevailing traffic flows, cost effectiveness, land requirements and environmental impact considerations. Noise mitigation measures were appraised and material prepared for consultation with the public and district councils. Ultimately cost estimates were developed and an implementation programme prepared.
Khalifa, Rayyan and Al Bustan road scheme, Qatar

Client: Public Works Authority
We were commissioned to undertake the concept design and EIA studies for improvements to Khalifa, Rayyan and Al Bustan Roads in Doha, Qatar. Initially a scoping study was prepared to identify potential environmental limitations and opportunities associated with the project, applicable environmental regulations, sensitive receptors, and project-specific environmental issues. Recommendations for relevant enhancement measures and further investigations were developed.

Subsequently we undertook a series of baseline studies as part of the EIA. These included landscape and visual impact, soil contamination, surface water, groundwater quality and hydrogeology, noise and vibration, air quality, ecology, social and community issues and archaeology and built heritage.
Telford railfreight terminal, UK

Client: Telford and Wrekin Borough Council
We carried out an EIA for a new railfreight terminal and the opening up of an old railway line as part of a Transport and Works Act application. The project included an assessment of a Ministry of Defence site which is to be used for employment purposes but had previously been used for operational purposes. The employment uses are intended to support the justification of the rail line. The need for the line was predicated on the sub-regional need to develop sustainable links to the Trunk Rail network.
Heathrow Terminal 5 surface access, UK

Client: Highways Agency/BAA plc
We were commissioned to design access proposals for Terminal 5 at Heathrow Airport. The proposals comprised motorway access on the adjacent M25 and associated widening of the M4 between junctions 3 and 4B. Our role included production of preliminary highway design details and public consultation material; preparation of environmental statements (out setting the findings of an EIA); taking the schemes through public inquiry; and providing expert witnesses on traffic, engineering and environmental matters.

The EIA covered a broad spectrum of environmental issues including ecology, noise, air quality, agriculture/land use, landscape and visual impact and socio-economic effects. The impact of construction traffic was one of the major issues addressed.
Bujagali hydropower project, Uganda

Client: AES Nile Power
AES Nile Power proposed the construction of a 25m high dam and hydropower facility at Bujagali Falls on the Upper Nile near Jinja, with funding from IFC and Overseas Private Investment Corporation. Eight kilometres below the Owen Falls Dam, it is the next downstream site suitable for developing hydro-electric power generation.

Atkins was commissioned to study the environmental impact of the proposals which included an assessment of the impacts of the associated power line route from Bujagali to Kampala. Population displacement was found to be the principal impact of the dam. We undertook a detailed socio-economic survey of 5,700 people, who were likely to be displaced or affected by the project. A public consultation and disclosure plan was produced to ensure that all stakeholders were fully involved in the project planning process. This was followed by a re-settlement and compensation plan that provided full details, including institutional arrangements, for dealing with the displaced people.
Central Reclamation Phase III, China

Client: Civil Engineering and Development Department, Hong Kong SAR
Atkins was appointed by the Hong Kong Government to undertake the design and management of the Central Reclamation Project. This is a major development comprising 18 hectares of reclamation, construction of one kilometre of wave absorbing seawalls, new ferry and public piers and berth for the People’s Liberation Army Forces in Hong Kong, construction of major cooling water pumping stations and tunnelling. The ultimate design will create a waterfront that complements Hong Kong’s famous skyline.

As part of the project we undertook a comprehensive Environmental Impact Assessment of the works, and developed a programme for the management of environmental aspects during construction. Atkins established a resident environmental team which was responsible for environmental management, data interpretation and reporting on environmental performance to government.
Industrial Water Supply, Uganda

Client: Confidential

We were commissioned to investigate options for an industrial water supply in Uganda and identify the preferred option, considering water availability and technical feasibility, potential environmental and social impacts and cost of development and operation. The study included:

- Hydrological and hydrogeological analysis to assess potential surface water and groundwater supplies
- Water quality investigations
- Engineering feasibility
- Cost analysis
- Environmental and social impact assessment.

The environmental and social impact assessment was critical to the selection of the preferred option as the development is close to internationally important water-dependent ecosystems. The source with minimum impact on the environment and local communities was identified and baseline ecological surveys were carried out at the water intake and at pipeline and infrastructure locations. Design measures were proposed to mitigate potential local impacts of the water supply system.
Kainji and Jebba Dams Rehabilitation Projects, Nigeria

Client: Power Holding Company of Nigeria (PHCN)
As the first step in exploring opportunities to increase the capacity of the Kainji and Jebba Dams PHCN commissioned Atkins to update the Environmental and Social Management Plan (ESMP) and to provide advice on the early warning system and on dam safety. Updating the ESMP entailed an assessment of the environmental and social impacts of the projects and the identification of mitigation measures to address adverse impacts. The key output from this assessment was a plan to enhance the capacity of the proposed Environmental, Resettlement and Social Unit (ESRU).
OGD-III & AGD-II project, Abu Dhabi

Client: International Bechtel Co. Ltd

Abu Dhabi Gas Industries Ltd (GASCO) – the Abu Dhabi National Oil Company (ADNOC) responsible for processing onshore natural gas and associated gas from onshore oil production – appointed Bechtel to undertake the front end engineering design of the OGD-III & AGD-II project. The project comprised five separate developments, namely two new gas plants at Habshan and Asab, a new natural gas liquid (NGL) fractionation plant at Ruwais, the extension of a gas gathering and re-injection system and new condensate storage facilities at Ruwais.

An essential component of the ADNOC project licensing process involves the preparation of a Health, Safety and Environmental Impact Assessment (HSEIA) which must be approved before a project can move to its next phase.

Bechtel retained Atkins to prepare HSEIAs for each of the five OGD-III & AGD-II sub-projects. The work involved environmental surveying of the terrestrial and marine environments in Abu Dhabi, air monitoring, hydrodynamic and air dispersion modelling, and a review of environmental, occupational health and process safety hazards and risks. The study was completed successfully against the background of a changing regulatory environment.
Longannet life extension project, UK

Client: ScottishPower Generation

ScottishPower is investing in extending the lifespan of Longannet Power Station, one of the largest coal-fired power stations in Europe, to modern environmental standards, including retrofitting Selective Catalytic Reduction technology to three existing boilers. Atkins was appointed to undertake the EIA and to produce the Environmental Statement.

Elements of the project were initially opposed by local communities and complicated by the proximity of designated nature conservation sites. The Environmental Statement helped to shape a less contentious design and demonstrated that the work could be undertaken and managed with no significant detrimental effects to the environment.
Grangemouth biodiesel plant, UK

Client: INEOS Enterprises Ltd
The Grangemouth biodiesel plant near Falkirk in Scotland uses vegetable oils to create a sustainable source of liquid fuel. INEOS appointed Atkins to produce the Environmental Statement to support the planning application for the plant, which was to be the largest, and one of the first of its kind in the UK.

The Environmental Statement demonstrated that the construction and operation of the biodiesel plant could be managed without significant detriment to the environment, and reassured stakeholders about a range of issues including flood risk and nearby designated nature conservation sites. INEOS was subsequently successful in obtaining planning permission for the plant.
Environmental baseline survey of Awali field, Bahrain

Client: TATWEER Petroleum

Atkins was commissioned by TATWEER to undertake an Initial Environmental Baseline Survey of the Bahrain oil and gas field. The survey involved in-field data collection and analysis, intrusive investigation, review of existing published information, and consultations with relevant government ministries in order to establish the Bahrain field environmental baseline with respect to geology and geomorphology; soil contamination; groundwater characteristics/hydrogeology; hydrology; terrestrial ecology; climate and meteorology; air quality; noise; land use, culture and heritage (archaeological resources); and socio-economic environment.

The purpose of recording these data was to support environmental and social management plans which will be developed for the field, provide environmental data for any subsequent and separate impact assessments, establish an environmental and social baseline against which any future changes resulting from TATWEER’s development of the field, can be measured, and identify prevailing environmental, health and safety impacts, in particular those associated with historic operating practices.
Kasamene oil field development, Uganda

Client: Confidential

Atkins undertook the Environmental and Social Impact Assessment for oil field and gas pipeline developments in Northwest Uganda. These comprised construction, operation and decommissioning of production and injection wells, water abstraction from international waterways, processing facilities, transmission and outward transport routes in areas of high biodiversity and social tension. The study involved a legal review, development of customised methods to comply with Ugandan and international standards, including those of IFC and Equator Principles, design and implementation of baseline studies including fieldwork, and assessment and development of mitigation measures.

Key issues identified related to the high biodiversity values, waste management and complex social issues, notably those associated with land tenure, access to physical economic and cultural assets and resettlement. In addition to the preparation of the ESIA, tasks included, development and implementation of a stakeholder mapping and communication strategy from national down to community level and identification mitigation, compensation and offset measures.
Preliminary environmental survey of Shah and Bab, Abu Dhabi

Client: BP Exploration
We undertook a preliminary environmental survey of the Bab and Shah regions of Abu Dhabi in the United Arab Emirates to identify Valued Ecosystem Components, environmental sensitivities and risks associated with these locations which could have been significant in the context of proposed future oil and gas projects within the area, in particular a proposed sour gas development. The Shah area is characterised by massive dunes which in places reach heights of up to 150 m above the adjacent plains. The area is thus considered to have high scenic value. The negative environmental impact on the dramatic dune landscape of project activities was therefore a key consideration.
Karawan Block 54 development, Oman

Client: Occidental Oman L.L.C.

Occidental (OXY) has a concession to carry out oil exploration in Oman’s Block 54, an area of considerable environmental sensitivity which is located immediately adjacent to the former Arabian Oryx Sanctuary World Heritage Site. OXY appointed us to undertake an Environmental and Social Impact Assessment of their proposed seismic and drilling exploration programme. The main emphasis of our work was to establish baseline social and ecological conditions across the 5,500 km² concession area.

This particular part of central Oman is a fragile “fog desert” with atmospheric moisture helping to support some interesting vegetation that in turn nourishes not just the iconic oryx, but gazelle, hares, small mammals and an array of reptiles.

It was not practical to survey every part of the very large concession area, so satellite imagery was used to delineate sensitive areas to be avoided during the exploration programme. Interpretation of imagery data was verified using a series of ‘ground-truthing’ surveys aimed at representing the range of habitat types present.
We undertook an assessment of Best Available Techniques (BAT) for the control of environmental releases from the Gimboa Floating Production Storage and Offloading vessel (FPSO). The vessel was being converted by Saipem from an oil tanker into an FPSO with a storage capacity of 1,800,000 barrels and a production capacity of 60,000 barrels of oil per day. It was due to be leased to Angola Deepwater Consortium for the development of the Gimboa field, located about 85 km off the coast of Angola, in Block 4/05, at a water depth of 700 m. The FPSO was designed to allow at least 15 years of continuous offshore operation without the requirement for dry-docking in a shipyard.
Rayong refinery fugitive emissions survey, Thailand

Client: Rayong Refinery
We were commissioned to evaluate the performance of Rayong Refinery’s fugitive control measures when compared with best practice and industry norms. The study was undertaken in conjunction with the Thai Department of Industrial Works and involved a fugitive emissions survey, an evaluation of the impact on the local community of the fugitive releases in terms of health effects and odour nuisance, and a review of the process plant control measures incorporated in the refinery’s design, with particular emphasis on the Effluent Treatment Plant.
Mukhaizna Block 53 Development, Oman

Client: Occidental Mukhaizna L.L.C. (Oxy)
We undertook an Environmental and Social Impact Assessment study of Oxy’s steam-enhanced oil recovery project. Key issues included the evaluation of hydrological impacts of winning and disposing of the significant volumes of water required for the steam injection process. Baseline studies included evaluation of noise, air quality and groundwater. Being located close to the former Arabian Oryx Sanctuary World Heritage Site, ecological issues were a prime concern. The study also included a comprehensive Social Impact Assessment involving consultation with indigenous Bedu and various institutional project stakeholders.
Flare handling and emissions reduction project, Abu Dhabi

Client: Fluor Ltd
We prepared a Phase I (front end engineering design stage) HSEIA for the flare handling and emissions reduction project located on Das Island in the Arabian Gulf. The HSEIA involved the preparation of a HAZID/ENVID report, and Environmental Impact Statement (including pollution prevention & control report), a Hazards & Effects Register, a Quantitative Risk Assessment for construction and commissioning activities, an Emergency Response Plan, an Occupational Health Risk Assessment, a COMAH report and the main HSEIA report itself. The HSEIA was conducted in compliance with the ADNOC HSE Codes of Practice and was subject to independent third party verification.
Client: Whessoe Oil and Gas /Volker Stevin

We undertook an assessment of Best Available Techniques (BAT) for the control of environmental releases from the Dragon LNG import, storage and regasification terminal situated on the Milford Haven Waterway, Pembrokeshire, South West Wales. The facility has a start up capacity of six billion cubic metres of gas per annum to supply the UK’s National Transmission System, as and when required, to meet peak demand. Our assessment encompassed all of the terminal’s operations from offloading to export from the site. In the absence of a prescribed BAT from official sources for the design and operation of this type of facility, our expert team first had to derive BAT for the facility design and management operations and gain agreement from the Regulator. The finished BAT assessment was successfully accepted by the UK regulatory authorities and was a key deliverable to ensure compliance with the environmental permitting requirements of the facility.
Habshan gas complex expansion (HGCE) project, Abu Dhabi

Client: Fluor Ltd
Fluor appointed us to conduct a Phase II (engineering, procurement and construction-stage) HSEIA study of the HGCE project on behalf of GASCO. The HGCE project was intended to expand the capacity of what was already one of the world’s largest gas processing facilities.

It was essential that the HSEIA was conducted in full compliance with ADNOC HSE codes of practice. The EIA component provided an integrated assessment of the impacts associated with the construction and operation of the project and also formed the basis of the environmental management system implemented during the construction phase.
Dolovo windfarm, Serbia

Client: Continental Wind Power
Atkins undertook a full Environmental and Social Impact Assessment of a proposed 160 MW windfarm site in Vojvodina province, Serbia. The proposed development covers an area of 40 km² and lies at the south of the Pannonian Plain of central Europe. The development site comprises mainly flat agricultural land, but it is situated adjacent to a sensitive ecological area, the Dolovo Sands. Relict fragments of the steppe grasslands which would have once covered much of this area are still present around the margins of the site.

Study elements included socio-economic impact assessment and the preparation of a Stakeholder Engagement Plan and a Resettlement Plan, landscape and visual impact assessment, and habitat surveying. We identified and mapped habitats present within the site, and assessed the potential for legally protected or notable species. We used the internationally recognised British technique of Phase 1 habitat mapping developed by the Joint Nature Conservation Committee, along with the EUNIS (European Union Nature Information System) system of European habitat classification developed by the European Environment Agency.

A terrestrial ecologist from Atkins worked alongside a local ecological specialist from Belgrade University.
Guangdong LNG terminal and trunkline project, China

Client: BP CNOOC
We were commissioned to undertake the Environmental and Social Impact Assessment of the first combined Liquefied Natural Gas (LNG) terminal and trunkline delivery project in the People’s Republic of China (PRC). The project involved the construction of marine approach channels, berthing facilities, LNG process plant, storage and send-out facilities along with over 310 km of pipeline which ran through both rural and heavily urbanised areas from Shenzhen to Guangzhou.

The ESIA was conducted to international standards and PRC regulatory requirements. Atkins was responsible for supervising the local PRC EIA contractor and undertaking supporting studies and surveys. These included ENVID studies, hydrographic and marine ecology surveys, pipeline alignment surveys and routing optimisation, terrestrial baseline surveys, public consultation, 3D hydrodynamic modelling, preparation of a project Environmental Management Plan, development of a project database of baseline information and GIS system and preparation of public disclosure documentation.
Ningbo Huadong Liquified Petroleum Gas terminal facility, China

Client: BP Amoco
We were appointed by BP to undertake the ESIA for the construction and operation of two 250,000 m³ underground rock caverns designed for the storage of propane and butane, a 5,000 ton wharf and a 50,000 ton wharf to be used for incoming vessels. The ESIA assessed environmental implications of the construction and operation of the project and was undertaken in accordance with BP’s corporate policy. A Social Impact Assessment was also conducted to determine the likely impacts that the project may have over the socio-economic situation of the project area.

Public consultation was undertaken with the relevant government authorities and local villages at the early stages of the project to identify impacts and concerns. We provided training workshops on environmental management at the beginning of the construction phase to facilitate ISO 14001 Certification.
Chang Bei natural gas field, China

Client: Shell-PetroChina JV

Atkins received the top award - 1st Class - from the China National Association of Engineering Consulting (CNAEC) for our Environmental and Social Impact Assessment (ESIA) for the development of the Chang Bei natural gas field in Shaanxi Province, China. This was the first time this prestigious award was given to an ESIA project.

The project was designed to deliver three billion cubic metres of natural gas per annum, and involved the design and development of a 1,600 km² concession area, installation of 60 wells and several hundred kilometres of pipeline and new roads.

The ESIA was notable in several ways. It was the first to fully integrate Chinese and international approaches to ESIA, delivering a single document to gain all approvals – in China and at Corporate level – and a single set of guidelines for future management of the project. The study also adopted cutting-edge survey techniques and GIS applications, using remote sensing to overcome many of the problems caused by the remote and inaccessible desert site.
Pre-ISO 14001 certification audits, Oman

Client: Petroleum Development Oman (PDO)
We undertook pre-ISO 14001 certification audits of PDO Interior exploration and production assets at Yibal, Fahud and Qarn Alam.

The project aim was to identify the significant environmental aspects associated with drilling and seismic activities within defined asset areas, operation of oil and gas gathering stations, NGL plant, power stations and crude stabilisation plant. The project addressed a wide range of environmental issues associated with atmospheric emissions, waste disposal, liquid effluent treatment and disposal, groundwater resource depletion, noise, ecological and cultural impacts and NORM handling and disposal.
Ruwais refinery expansion project, Abu Dhabi

Client: International Bechtel Company Ltd

We prepared the HSEIA for the front end engineering design phase of the Ruwais refinery expansion (RRE) project. The project involved the design of a new refinery at Ruwais, Abu Dhabi, to produce high value polymer grade propylene and traditional ‘fuels’ products from Murban blend crude oil feedstock. The HSEIA involved the preparation of an Environmental Impact Assessment and a range of safety studies.

A key component of the EIA was a three dimensional mathematical, hydrodynamic and dispersion modelling study of the Ruwais area which was used to evaluate the variation in sea water temperature at the sub-sea inlet to the RRE Sea Water System, and the temperature and pH dispersion characteristics resulting from the discharge of the return cooling water to the Ruwais near-shore environment via the RRE cooling water outfall.
Mina Al Fahal odour survey, Oman

Client: Petroleum Development Oman
Acting on behalf of a consortium of operators situated within the Mina Al Fahal Industrial and Port areas, we undertook an investigation into the causes of odour nuisance affecting the Muscat and Ruwi areas. The work was carried out over two periods of six weeks to assess the variation in odour nuisance between winter and summer conditions and involved the identification of significant odour sources within an 85,000 barrels per day refinery, a crude oil storage and handling terminal and various petroleum product distribution depots, the quantification of the odorous releases, and the formulation of an improvement programme. The programme focused chiefly on tanker loading operations and the operation of the effluent treatment plant.
Sellafield Piles 1 and 2 decommissioning, UK

Client: United Kingdom Atomic Energy Agency (UKAEA)
In support of the UKAEA decommissioning of Windscale (now Sellafield) Piles 1 and 2, we completed the EIA to cover a number of regulatory requirements (Town & Country Planning, EIAD Regs, Euratom Article 37 etc). We were contracted to undertake a preliminary EIA to identify both project and environmental baseline requirements. The project involved the full range of environmental specialists and was completed within a tight timescale to meet client milestones. This is one of a number of complex EIAs that Atkins has successfully coordinated and managed on nuclear licensed sites.
Post-hurricane assessment of Flower Garden Banks vicinity, Gulf of Mexico, USA

Client: Department of Interior (DOI), Bureau of Ocean Energy Management, Regulation and Enforcement

The 2005 hurricane season was the most active on record with 11 tropical cyclones entering the Gulf of Mexico. Hurricanes Katrina and Rita passed close to several shallow, sensitive habitats in the vicinity of the Flower Garden Banks National Marine Sanctuary (FGB). The U.S. Department of Interior’s Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) was thus concerned that the storms may have left bank caps exposed and feared potential catastrophic implications for benthic community structure.

Atkins was commissioned to assess and document possible damage to the banks. Four banks – Sonnier, McGrail, Geyer, and Bright – were surveyed by diver and remotely operated vehicle in order to establish a benthic habitat baseline and assess possible hurricane damage at multiple depth ranges.
Port Mesaieed industrial city, Qatar

Client: Dragomar S.p.A / QASCO / MIDREX / HYDRO

Atkins was commissioned to undertake four EIA projects within the MIC in eastern Qatar. These projects involved baseline marine environmental surveys of the dredging and disposal areas of the outer approach and inner channels of Port Mesaieed. The surveys included sediment and water quality sampling and dive surveys to study marine flora and fauna.

The scope of works included identifying relevant national and international legislation within which the proposed development would proceed, describing the proposed dredging operations, describing the physical, chemical, biological and socio-economic environment of the region, assessing and evaluating the potential environmental impacts associated with the dredging operations, recommending mitigation and management for the dredging operations, and recommending monitoring during and after dredging operations.
Flower Garden Banks national marine sanctuary long-term monitoring, USA

Client: DOI, Bureau of Ocean Energy Management, Regulation and Enforcement

Flower Garden Banks National Marine Sanctuary (FGB) off the Texas coast is a national treasure and home to the most sensitive biological habitat in the federal waters of the Gulf of Mexico. Atkins teamed with other coral reef experts on an eight year long-term coral reef monitoring project for the U.S. Department of Interior’s Bureau of Ocean Energy Management, Regulation and Enforcement. Our goals were to monitor coral populations to detect changes that may be caused by oil and gas activities, and address concerns related to both gradual and punctuated degradation of this unique offshore ecosystem.

Members of the Atkins Scientific Dive Team recorded benthic, fishery, and water quality data to address the regulatory issues confronting BOEMRE and the National Oceanic and Atmospheric Administration. Throughout the eight-year contract period, we maintained a consistent project team with FGB experience, which allowed for continuous collection of substantial quantities of data, often with limited time frames for field work because of unfavourable weather conditions in the Gulf of Mexico.
Pak Sha Wan Yacht Club expansion, China

Client: Hebe Haven Yacht Club Ltd, Hong Kong SAR

We developed and implemented the Environmental Monitoring and Audit programme for the construction phase of the Hebe Haven Yacht Club. The project included development of a boat storage and repair site and a 46 berth pontoon marina facility, and involved land reclamation and dredging in a scenic area made ecologically sensitive due to its mangroves and fisheries.

A comprehensive water quality monitoring programme was undertaken to assess impacts associated with dredging and reclamation activities. Site inspections were regularly carried out to ensure that impacts did not occur either to the facilities or the surrounding waters.
Palm Beach Harbour navigation feasibility and environmental resources studies, USA

Client: Ardaman & Associates Inc.
We undertook a marine ecological survey of Palm Beach Harbour in Florida in order to document all of the biological resources in and around the harbour area. Among the resources included in the scientific diving survey were seagrasses, colonised hardbottom, manatee habitat and popular diving and snorkelling areas. Information collected from the survey, coupled with previously collected data, enabled an assessment to be made of impacts arising from port dredging, expansion, modifications and associated mitigation.

All of the work undertaken complied with the National Environmental Policy Act (NEPA), Endangered Species Act, Fish and Wildlife Coordination Act, Clean Water Act, Magnuson-Stevens Fishery Conservation and Management Act and similar laws.