

Our credentials in the **nuclear sector**



“It was zero stress for me to have you on the team. Your people are comfortable, relaxed and confident in front of anyone.”

*Project Manager, EDF Energy*

## Introducing Hydrock

450 STAFF IN TOTAL ACROSS 16 OFFICES

NUCLEAR-CENTRIC TEAMS BASED IN BRISTOL AND GLASGOW

OTHER KEY COMPANY LOCATIONS INCLUDE: LONDON, MANCHESTER, PLYMOUTH, GLOUCESTER, SOUTHAMPTON, CARDIFF AND BIRMINGHAM

CYBER ESSENTIALS PLUS CERTIFIED

KEY STAFF HAVE SECURITY CLEARANCE TO WORK ON CIVIL NUCLEAR FACILITIES AND DEFENCE SITES

FIVE CONSECUTIVE LISTINGS IN THE SUNDAY TIMES *100 BEST COMPANIES TO WORK FOR*

KEY CLIENTS INCLUDE: EDF NNB, RWM LTD, BABCOCK MARINE, EDF ENERGY GENERATION AND AWE

We are at the forefront of influencing and creating safety, environmental and engineering standards that are shaping the future of nuclear facilities in the UK and internationally.

We work with new build developers, nuclear site licensees on power generation and decommissioning sites, waste management service providers, the nuclear regulators and the defence sector.

We advise clients at all stages of the nuclear lifecycle – from new build to extending ongoing operations and through to decommissioning and the safe disposal of radioactive waste.

You'll find we approach challenges with a detailed and pragmatic eye. We have outstanding talent in our business, reflecting the importance we place on being a great place to work, and in a highly regulated sector we understand the importance of clarity, consistency and communication.



# NUCLEAR MANAGEMENT CONSULTANCY SERVICES

*Our consultancy services include guidance to the nuclear sector on policy changes, organisational capability, the oversight of nuclear safety case review teams, performing the role of an internal regulator and providing expert witness support to legal cases.*

## **Safety governance and regulatory interface support**

Our team has extensive experience of authoring regulatory guidance documents on the preparation of nuclear organisational baselines, as well as developing guidance to regulators on overseeing nuclear safety-related activities. Crucially, this encompasses development of strategies and training for the effective implementation of intelligent customer arrangements.

With that experience we are able to support clients with regulatory interface activities from an early stage of nuclear new build projects in particular, ensuring all regulatory and stakeholder expectations are met.

We are also able to help clients develop and maintain a robust nuclear safety culture and effective competency management system, enabling our clients to embed these principles across their organisation.



## **Organisational capability**

For prospective nuclear site licensees, we support the development of an appropriate and proportionate organisational capability to demonstrate compliance with legal and regulatory requirements.

Through production of the nuclear organisational baseline, management prospectus and an intelligent customer strategy, we help create a capable operator who understands their responsibility and accountability for the management of nuclear safety through each lifecycle phase of a nuclear development project.

Our approach embraces the supply-chain and is flexible to the changing needs of a project over time – for example, we also support organisations transitioning to the decommissioning phase to ensure their organisational capability remains appropriate and proportionate until the site end-state is reached.

# NUCLEAR MANAGEMENT CONSULTANCY SERVICES (cont.)

## ***Independent peer review***

Hydrock's highly experienced nuclear consultants are well-placed to deliver an independent and critical review of both technical and strategic documentation that is intended for submission to nuclear regulators.

We support clients by reviewing safety case submissions and modifications, best available technique (BAT) assessments and strategic decision-making papers.

Supported by a number of highly experienced sub-consultants, the depth and breadth of experience across a wide range of technical disciplines enables our team of nuclear consultants to provide pragmatic and constructive peer review support to nuclear site licensees, to ensure that regulatory expectations are satisfied.

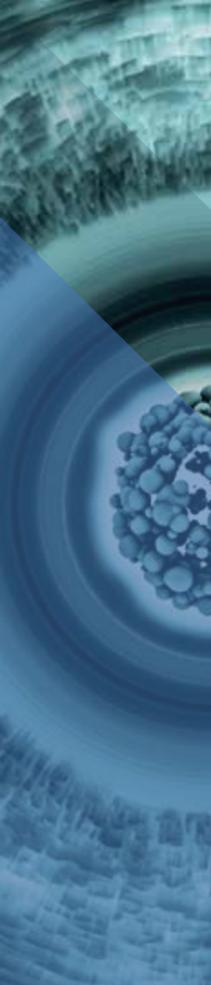
## ***Expert advice and challenge***

Senior members of our team hold positions as independent, external members of nuclear safety committees for a number of nuclear site licensees.

In these roles we are able to draw on all our technical and nuclear management consultancy experience to provide clear, impartial and sound advice on key issues relating to the management of nuclear safety and, in some instances, environmental and radioactive waste matters.

Our reputation is for challenging the status quo, developing innovative solutions to complex issues and supporting our clients to ensure the very highest standards of nuclear safety and environmental governance are maintained.

# NUCLEAR TECHNICAL SERVICES



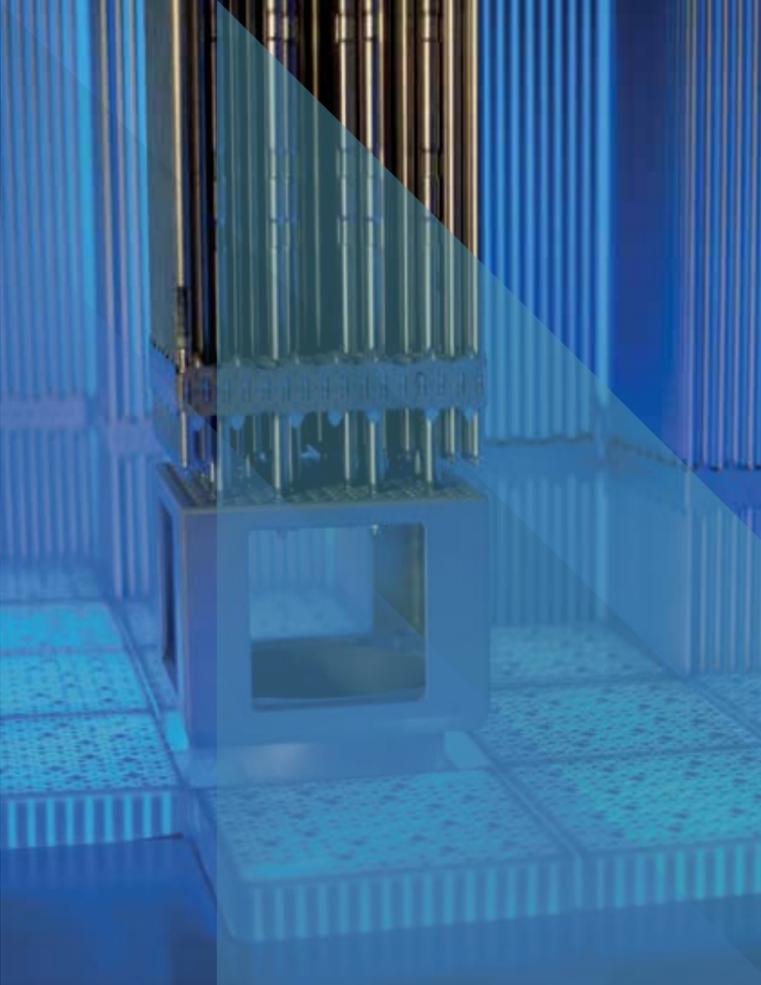
*Our technical consultancy services include the strategic and assessment aspects of nuclear safety and environmental management, BAT assessments, radioactive waste management and decommissioning strategy development, as well as many technical aspects of achieving nuclear regulatory compliance.*

## **Radioactive waste management and decommissioning strategy**

Hydrock works with clients to develop coherent, structured and readily implementable management arrangements that cover the entire waste lifecycle – from waste generation and storage through to packaging, transport and disposal.

The focus is on ensuring regulatory compliance, implementing BAT, supporting the development of accessible and appropriate waste package specifications and guidance documentation, preparation of corporate governance documentation and providing a step-wise process for radioactive waste management activities.

We have an in-depth understanding of best management practice for both lower activity and higher activity radioactive wastes, including the specifications and guidance against which waste producers generate compliant waste packages.



## **Disposability strategies and records management**

We support producers of radioactive waste with the development of their disposability strategies and letter of compliance submissions at all stages of the process. This takes into account key wastefrom, container and process specific factors during the development of submission documentation. We support technical interactions with the end user for the waste packages being produced, to minimise risks to timely and successful implementation of waste packaging campaigns.

Our nuclear consultants have supported development of records management strategies for waste producers, to ensure that both operational and disposability records are duly created, stored and managed in a manner conducive to the needs of future users. Our work has also included development of work instructions for disposability records approval and the consideration of records needs for packages containing spent nuclear fuels.

# NUCLEAR TECHNICAL SERVICES (cont.)

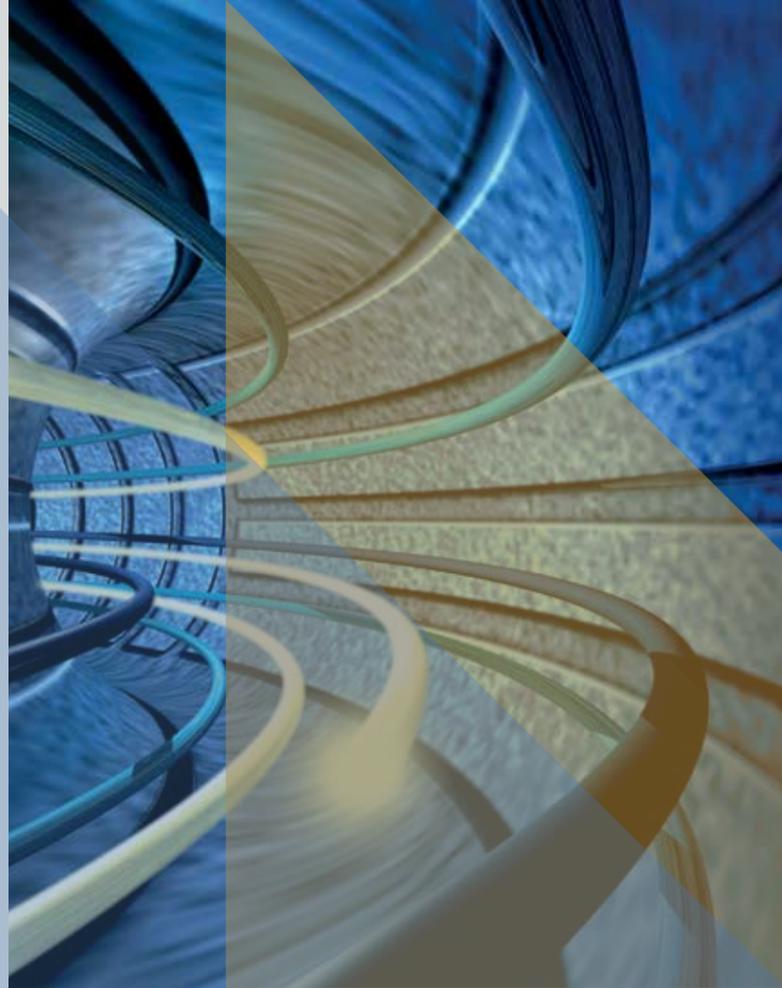


## ***Environmental management and assessment***

We help our clients to meet their regulatory and legal requirements, assessing the various ways that a nuclear site interacts with its environment through solid waste generation and disposal, aqueous discharge and gaseous emissions.

For new build clients, we support environmental permit applications, Article 37 and 41 submissions and Generic Design Assessment (GDA) findings resolutions.

For operating and decommissioning facilities, we undertake BAT assessments, support the assessment of radiological impacts to the environment and coordinate environmental impact assessments.



## ***Nuclear safety case management and development***

At Hydrock, we provide strategic oversight and management support to the delivery of key safety cases for new build operators, as well as preparing and reviewing safety cases for a range of nuclear sector clients.

Using the extensive experience of our professional team, we ensure that the safety case documentation required to support large-scale construction for nuclear new build sites is robust, comprehensive and meets regulatory expectations. We also advise clients as they are developing their safety case strategies or when they require independent oversight of safety case deliverables produced by others.

# MULTI-DISCIPLINARY ENGINEERING SERVICES

*With our fully integrated multi-disciplinary engineering capability, we are well-placed to deliver both the engineering design management and the engineering design required for the essential infrastructure that supports a nuclear facility. From on-site accommodation blocks, to office space, training facilities and the associated services, utilities and roads, we support from feasibility studies, through planning to construction and handover.*

## **Engineering design management**

We manage the process that ensures designs move smoothly through the phases to approval.

- Programme and project management
- Engineering design integration
- Design configuration control
- Design tender assessment
- Stakeholder management
- Requirements management and review

## **Building performance engineering**

We design services that are easy to use and deliver comfort and wellbeing.

- Mechanical and electrical engineering
- Acoustics, noise and vibration assessments
- Air quality assessments
- Fire safety engineering
- Utility management services
- Energy and sustainability assessments



## **Structural engineering**

We design high-functioning, resilient and productive buildings.

- Concept and scheme design
- Foundation and retaining structures
- Modular buildings
- Vibration sensitive buildings
- Seismic analysis
- Refurbishment and extension projects

## **Land quality**

Our site investigations inform geotechnical designs and remedial strategies.

- Phase 1 desk study
- Ground investigation
- Materials management plan
- Asbestos in soils management
- Geotechnical design
- Earthworks specification

# MULTI-DISCIPLINARY ENGINEERING SERVICES (cont.)

## **Infrastructure and civils**

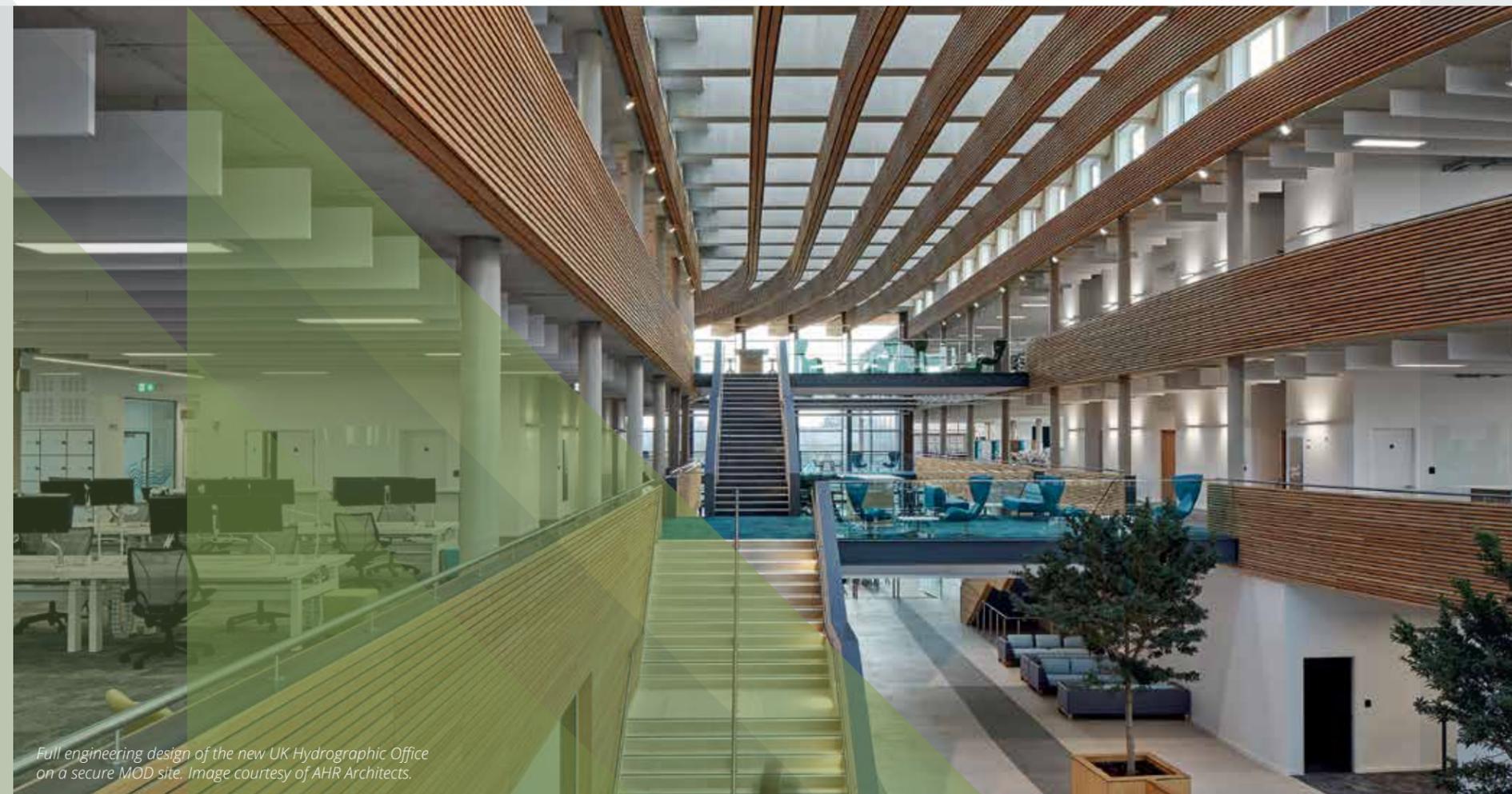
Our work informs site feasibility, planning and completes construction programmes.

- Drainage strategies
- Flood risk assessments and mitigation strategies
- Cut and fill analysis and strategies
- On and off-site highways design
- Junction alterations and highway improvement works
- Sewer requisitions and diversions

## **Transportation**

We analyse the strategic impacts of proposed development and the accessibility of sites.

- Transport assessments
- Travel plans
- Traffic modelling
- Access and junction design
- Car parking strategies
- Public consultations



*Full engineering design of the new UK Hydrographic Office on a secure MOD site. Image courtesy of AHR Architects.*

# OUR TRACK RECORD *IN THE NUCLEAR SECTOR*



## **HINKLEY POINT C** *PRE-CONSTRUCTION SAFETY REPORT*

We acted as the safety report lead and the quality lead for EDF NNB GENCO.

Hydrock brought together the third version of the site-specific pre-construction safety report for Hinkley Point C.

Key to our role and success was our ability to explain the UK regulatory context to non-UK safety documentation authors unfamiliar with the UK's approach. We managed the agreed scope, objectives, quality and timeliness of the documentation given the number of authors and reviewers.

We continue to support EDF NNB with the next set of safety documentation, centred around the pre-commissioning safety report, to enable upcoming stages of critical development to proceed.



## *THIRD PERIODIC SAFETY REVIEW (PSR)*

We have supported EDF Energy Generation to assess the radiological impacts from operating four UK nuclear power stations as part of the third Periodic Safety Review.

## *HIGHER ACTIVITY WASTE PROGRAMME*

We are working with Radioactive Waste Management (RWM) on a range of technical, programme management and strategic issues as part of the Higher Activity Waste programme.

## *PREPARATION FOR ARTICLE 37 SUBMISSION*

We helped Horizon Nuclear Power and a delegation from the UK Government to prepare for an oral hearing of the successful Article 37 Euratom submission to the European Commission for Wylfa Newydd on the Isle of Anglesey.

## *RADIOACTIVE WASTE MANAGEMENT SUPPORT*

For EDF Energy Generation we deliver ongoing radioactive waste management support to their existing nuclear operational fleet, including compliance against corporate governance, management of waste service contracts, preparation of BAT assessments and compilation of operational waste records.



# OUR TRACK RECORD *IN INFRASTRUCTURE AND CIVIL ENGINEERING*



## DUNLIN ALPHA *DECOMMISSIONING*

Hydrock formed and managed the Independent Review Group (IRG) for the decommissioning process of the Dunlin Alpha platform in the North Sea, as set out by regulatory guidance.

Originally operated by Shell, the platform has been operated by Fairfield Energy since 2008 and more recently they have developed their decommissioning programme for the platform.

Documenting and justifying that process and stating what will be removed and what will remain in situ is a critical element of the programme to meet regulatory requirements.

In forming the IRG, we provided project management to Fairfield and their supply chain and acted as technical secretariat. Hydrock has also been commissioned to deliver a similar IRG capability for another operator seeking to progress its platform decommissioning programme.



## *ASSOCIATED DEVELOPMENTS AT NUCLEAR FACILITIES*

At Hinkley Point C, Sizewell C and Wylfa we have acted in an engineering design management role, taking the designs of associated facilities on these nuclear sites through the design phases to approval, including the civils design, services and access requirements. This has required extensive stakeholder engagement.

## *BRISTOL AIRPORT*

Working in a live, operational environment, we are a long-term trusted advisor to Bristol Airport (pictured) supporting phased renovation and extension of the facilities from terminals to security, baggage handling, car parking and administrative buildings.

## *DYSON, HULLAVINGTON AIRFIELD*

Working at a highly secure facility, we have delivered end-to-end building services design on Hangar 86 at Dyson's Hullavington Campus, converting a traditional military hangar into a new centre for R&D for the technology giant.



## *HINCKLEY NATIONAL RAIL FREIGHT INTERCHANGE*

We are delivering full multi-disciplinary engineering services through the Development Consent Order planning process for db symmetry to deliver a multi-purpose cargo interchange and distribution facility in Leicestershire.



*Engineers. Designers. Consultants.*



For further information on our nuclear sector services and capabilities: [nuclear@hydrock.com](mailto:nuclear@hydrock.com)

