

Energy & Resources



Who we are

Stantec is a global leader in sustainable engineering, architecture, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what’s previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure.

We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what’s possible.

3,900
Total UK Staff

32 Locations
across the UK

450 Offices
across 6 continents

10
Top 10 global design firm

31,000
Employees Globally



Click to view information on each of Stantec’s services in the UK&I

What we've achieved

#1 Most Sustainable

Corporation among industry peers Corporate Knights Global 100 List 2024

Biodiversity Partner

Integrating nature-based solutions UN Decade on Ecosystem Restoration

\$3.9 Billion

Gross revenue attributed to UN SDGs 2023 Sustainability Report

Best Place to Work

Improving employee personal and professional wellbeing NCE Awards 2024

International Consulting Firm of the Year

Delivering innovation, quality and value NCE Awards 2024



Environmental Experts

Our specialists work closely alongside engineers and economists to integrate planning and environmental considerations into all stages of the design and development process.

We are one of the largest and most successful Infrastructure and Environmental Planning teams in the UK, currently advising on over 4.5GW of low carbon and renewable energy projects.

In-house Expertise

- Air Quality and odour Management
- Acoustics
- Archaeology and Cultural Heritage
- Biodiversity
- Climate Change Assessment and Management
- Construction Environmental management Plans
- Flood Risk and Drainage
- Health Impact Assessment
- Landscape and Visual Impact
- Ground Contamination Assessment
- Socio Economic Appraisal
- Construction and Operation Waste management
- Transport
- GIS & Environmental Analytics
- Stakeholder Engagement and Consultation
- Social Value



UK Advisory Services

Our Advisory Services Group has a significant track record of successful delivery across the UK&I and globally, providing consultancy and transformational services at the organisation, portfolio and asset level.

Sectors



Water



Energy



Infrastructure

Programme Management
& Commercial Services



Environment. Social,
Governance (ESG)



Business Improvement
& Transformation



Asset Management



Operations &
Maintenance Services



Regulatory Advice



Digital Services
& Innovation



Market Sectors

Key Contacts



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Stantec UK – Energy

The energy transition is changing the way we power, live on, and move about our planet.

To help clients navigate this landscape, we combine specialised industry experience with our understanding of urban planning, transport, water networks, infrastructure and the environment to deploy solutions that can save millions, cut waste, reduce

carbon, increase production, and improve safety. Whether designing energy storage, power distribution, microgrids, hydropower, waste management strategies or utility-scale renewables, we help clients succeed and thrive in a rapidly changing world.

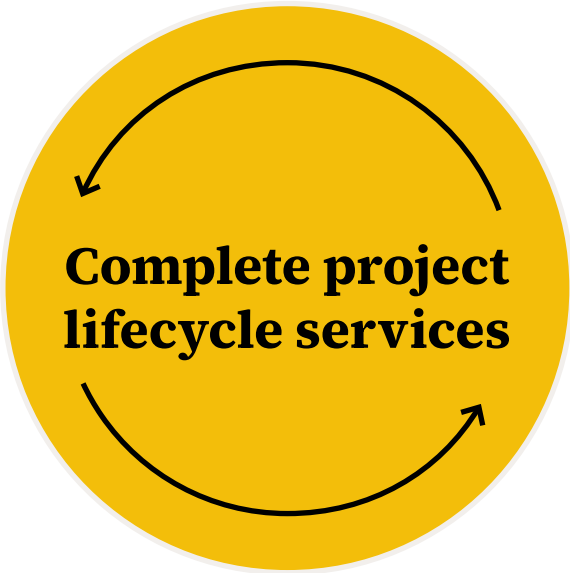


Click to jump
to each sector

Sectors

Service Lines

- Technical Design Services
- Environmental (all technical capability in-house)
- Technical Advisory & Owners Engineer
- Programme Management and Integration
- Asset Management
- EPCm
- Digital & Data
- Planning & Permitting
- Stakeholder Engagement & Social Value
- Business Consulting



Disciplines

- | | | |
|------------------|---------------|----------------------|
| Civil | Structural | Compliance |
| Mechanical | Land Quality | Project Management |
| Electrical & ICA | Data Analysis | Programme Management |
| Geotechnical | Planning | Buildings |
| Process | Environmental | HSSE |
| | | Social Value |

Transmission & Distribution

In a rapidly transforming transmission and distribution sector, we’re helping clients expand power networks and upgrade existing infrastructure. We combine local understanding with expertise from our global network to deliver sustainable, reliable solutions, whilst improving physical resilience and visual amenity.

Our outline and detailed design experience includes substations, cables, OHL connections, HVDC system design, and all associated design disciplines.

- **HV Engineering**
 - 33kV – 400kV Plant Engineering
 - Protection and Control
 - HV Cable Engineering
 - HV Overhead Line Design and Connections
- **HVDC Engineering**
 - Interconnectors
 - HVDC Cable Design
 - Windfarm Connections
- **LV Engineering**
- **Civil and Structural Engineering**
- **Geotechnical Engineering and Ground Solutions**
- **Flood Solution Design**
- **Fencing & Security Systems Design**
- **Buildings Design (including internals)**

Key clients include

- National Grid
- SSE
- Cadent Gas
- SPEN
- Clancy



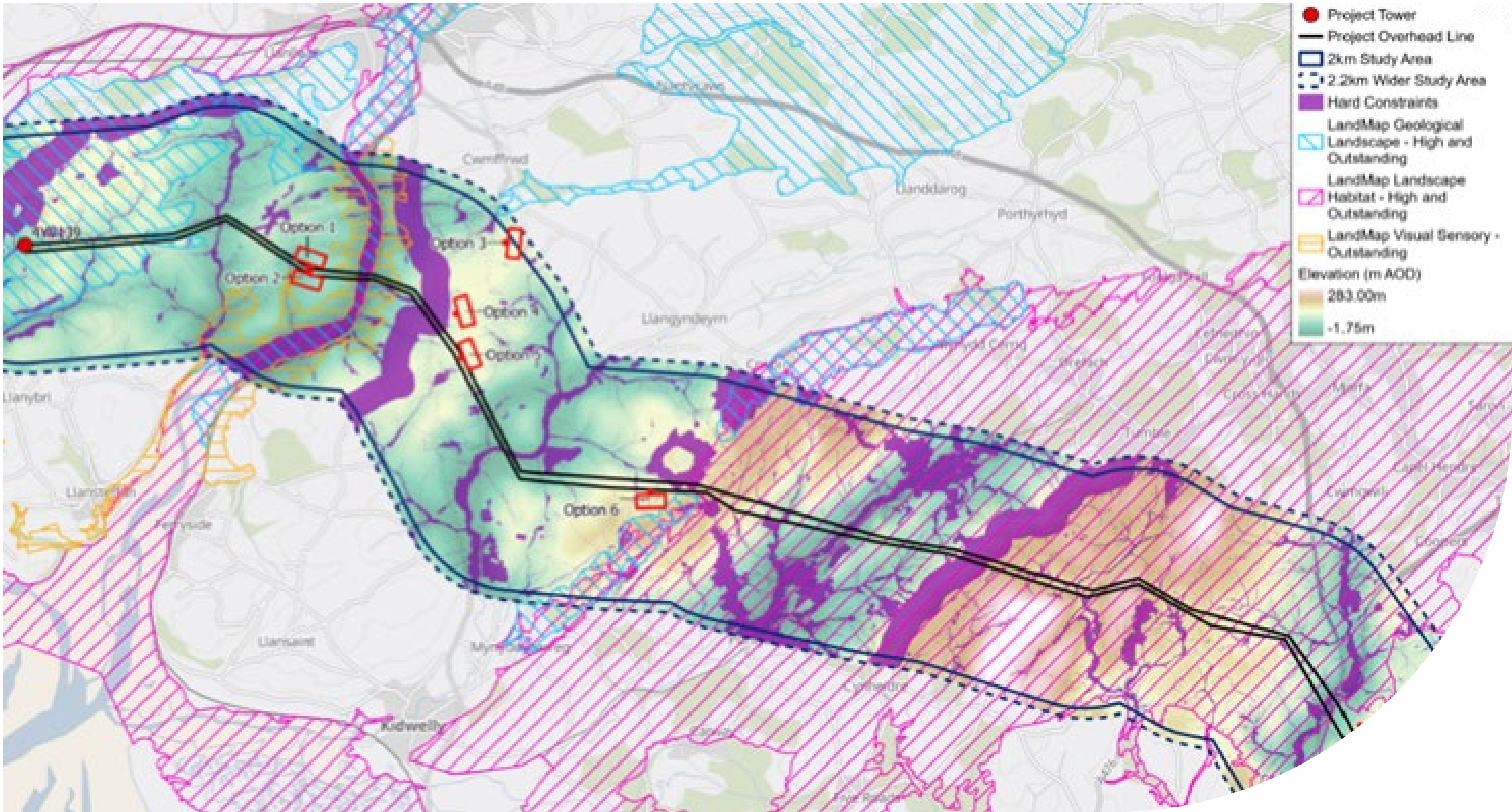
Transmission & Distribution Key Projects

New-Build Substation

Client: National Grid

Programme Title: New Pont Abraham 400kV and 132kV substation

Stantec Role: FEED design for substation, environmental siting and planning/consenting lead



HVDC Converter Station

Client: SSEN-Transmission

Programme Title: Berwick Bank Wind Farm converter station

Stantec Role: Optioneering design for the converter station, including outline design for the civils platform and access routes, flood risk assessments, ground investigation supervisor and technical advisor, HVDC and HV cable design (AC and DC). Provision of significant guidance to client, including developing project approach, key dates and milestones and reducing project risk



Waterpower & Dams

Stantec addresses all aspects of hydropower, dam, lock and navigation work—from pumped storage and the upgrade of existing projects, to feasibility studies, digital twins and new build. Drawing on over 100 years of experience, we work with clients to meet renewable energy goals and improve quality of life, always with the next generation in mind.

This proud legacy has fostered a culture of innovation and safety, and an industry leading team who are on-site around the world, delivering work.

We’ve developed large and small hydroelectric projects around the world and are global leaders in Pumped Storage, with recent work including tender level engineering for the winning EPC team for the 2,000 MW Snowy 2.0 hydroelectric pumped storage scheme in Australia, and 1,300 MW Coire Glas project in Scotland. In addition to new plants, we’re working on over 10,500 MW of pumped storage refurbishment.

Our dams and reservoir teams consistently lead the industry and have held the record for the design of the world’s highest rockfill dam on 3 separate occasions. Our experienced engineers are poised to provide support for all elements of project development.

Key clients include

- SSE
- First Hydro
- Drax



Waterpower & Dams Key Projects

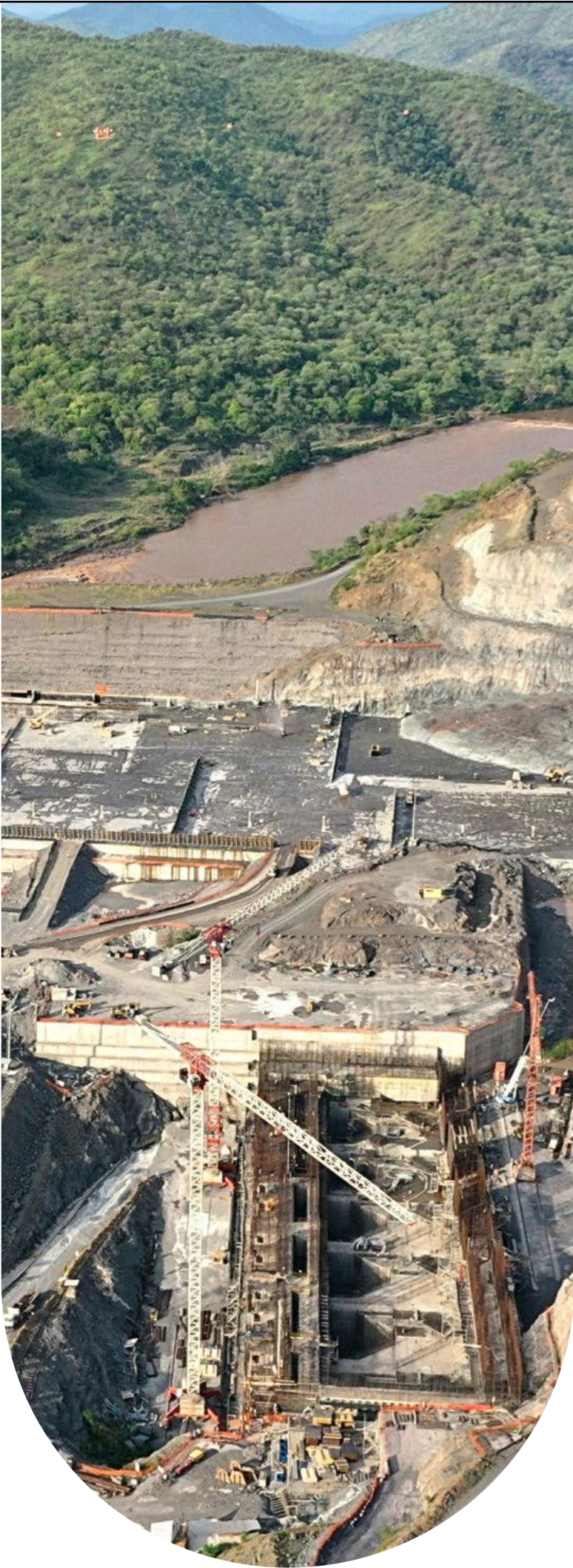


Pumped Storage Owners Engineer

Client: SSE Renewables

Project Title: Coire Glas Pumped Storage

Stantec Role: Owners Engineer on behalf of SSER for the 1500 MW capacity pumped hydropower project. Our team is providing reference designs for engineering, supporting procurement of the construction contractor. Scope includes the dam, set to be the largest in the United Kingdom, 16km of tunnels, three underground caverns, and all post Section 36 environmental permitting to enable construction.



Hydroelectric Owners Engineer

Client: Ethiopian Electric Power (EEP)

Programme Title: Koysha Hydroelectric Power Project

Stantec Role: Stantec is providing overall and complete Owner Engineer services to EEP in EPC Contract Administration during the construction and defects liability periods of the project, conforming with internationally accepted standards and procedures and state of the art technology.

Renewables

The Stantec renewable energy team brings together experts from across disciplines as a one-stop-shop to deliver renewable energy projects, from concept through to planning and design, commissioning, and start-up. We provide engineering, design, environmental and consenting services for renewable energy projects. Our team has extensive experience in the assessment, coordination and consenting of projects including onshore wind, offshore wind, solar, and battery storage.

Whether you require financial and technical analysis of an existing or proposed system, expansion and modernisation of an existing plant, or assistance with environmental and permitting issues, we have in-house experts offering:

- **Site & project feasibility studies and conceptual engineering**
- **TCPA and DCO planning and consenting services**
- **Environmental Impact Assessments and technical environmental assessments**
- **Utility and distributed solar power engineering and design**
- **Onshore & offshore wind power engineering and design**
- **Energy storage and grid modernisation**
- **Project construction management services**
- **Geotechnical**
- **Site management and remediation**
- **Asset management and risk assessments**

Key clients include

- RWE
- SSE
- Equinor
- Vattenfall



Renewables Key Projects



Solar Engineering & Consenting

Client: Orrön Energy

Project Title: Solar site

Stantec Role: Providing engineering and consenting services for the delivery of a large-scale solar project in the East of England. Key services include evaluating generating capacity, site feasibility, cable routing, planning and constraints review and supporting development of the business case.



Offshore Wind Extension

Client: SSE and RWE Renewables Joint Venture

Project Title: North Falls Offshore Wind Farm

Stantec Role: A proposed extension to the Greater Gabbard Offshore Wind Farm, North Falls will provide an additional 504MW of capacity. Stantec’s role comprises planning consultant, formal need case, initial consultation report and issuing programming updates. Stantec co-ordinated document sharing and lodged the DCO in summer 2024, this included the compliance matrix and close liaison with legal, environmental, engineering and land teams.



Onshore Wind Development

Client: Vattenfall

Project Title: Ourack Wind Farm

Stantec Role: Stantec managed the planning process, prepared the application and community development strategy, and coordinated the project’s Environmental Impact Assessment. Following extensive consultation and an iterative design process, Stantec helped to develop a project that can be built, run and decommissioned as sustainably as possible in a special landscape area just north of the Cairngorms National Park.

Generation

Using a customised, flexible approach, we help clients do more for less in generation, designing and building a portfolio of projects that distinguishes us from the pack.

Our teams have worked in every major segment of the market including combustion gas turbines, CHP, district energy systems, conventional fossil, carbon capture, anaerobic digestion, pumped storage, hydrogen, waste-to energy and advanced energy recovery.

We’re leading innovative design and consenting projects, including blue, green and turquoise hydrogen. Our team draw on Stantec’s global experience on some of the only operational carbon capture facilities in the world, including our work on Boundary Dam, the first power station to successfully use CCS technology.

Key clients include

- SSE
- RWE
- Drax
- ConocoPhilips
- Viridor
- Suez



Generation Key Projects



Decarbonising Distilleries with Hydrogen

Client: Multiple Confidential

Project Title: Undisclosed

Stantec Role: We recently delivered the feasibility study for a proposed hydrogen production facility in Scotland, including profiling with local breweries and distilleries to identify hydrogen demand. We are also lead consultant on a decarbonisation project moving from FEED stage into installation at one of Ireland’s largest distilleries, and have supported in the decarbonisation and production of renewable fuels at distilleries in Tennessee and Kentucky, USA.



Integrated ERF & Plastics Recovery

Client: Viridor

Project Title: Polymers2

Stantec Role: Stantec was the engineering partner acting as EPC-m contractor and Principal Designer on behalf of Viridor on the UK’s first and only integrated plastics recovery facility and ERF. We specified the pressurised hot water heating circuit, steam connection, heat exchanger and stand-by boiler, ventilation system and designed the steam pipework, drains and pumped condensate return loop, including pipe stress analysis.



Carbon Capture

Client: Encyclis

Project Title: Rookery Energy Recovery Facility with Carbon Capture

Stantec Role: We are acting as lead planning and EIA advisor for the development of a carbon capture facility to adjoin the existing Rookery ERF. As well as planning & EIA we are providing the full suite of environmental services and stakeholder consultation support.

Nuclear

Our specialist teams 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 developers, nuclear site licensees on power generation and decommissioning sites, waste management service providers, the nuclear regulators and the defence sector. Advising clients at all stages of the nuclear lifecycle – from new build and extending ongoing operations, through to decommissioning and safe disposal of radioactive waste.

We bring decades of experience in power generation, environmental permitting, multi-discipline engineering, and geological, environmental, and planning expertise to the nuclear and small modular reactor (SMR) market.

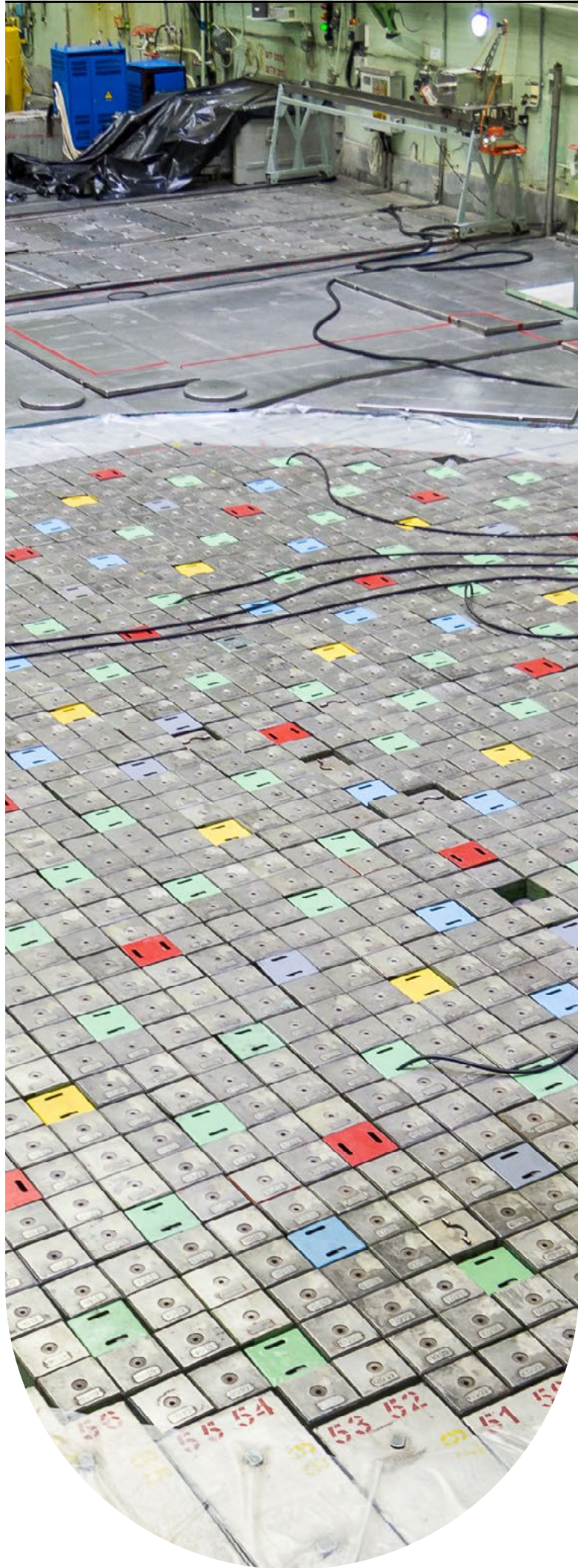
We understand that effective, safety driven, high quality engineering for these projects requires the ability to maintain nuclear quality standards, implement strong project delivery and control, and establish close working relationships with our partner organisation and clients.

Key clients include

- EDF
- NNB
- NWS Ltd
- Babcock Marine
- EDF Energy Generation
- AWE



Nuclear Key Projects



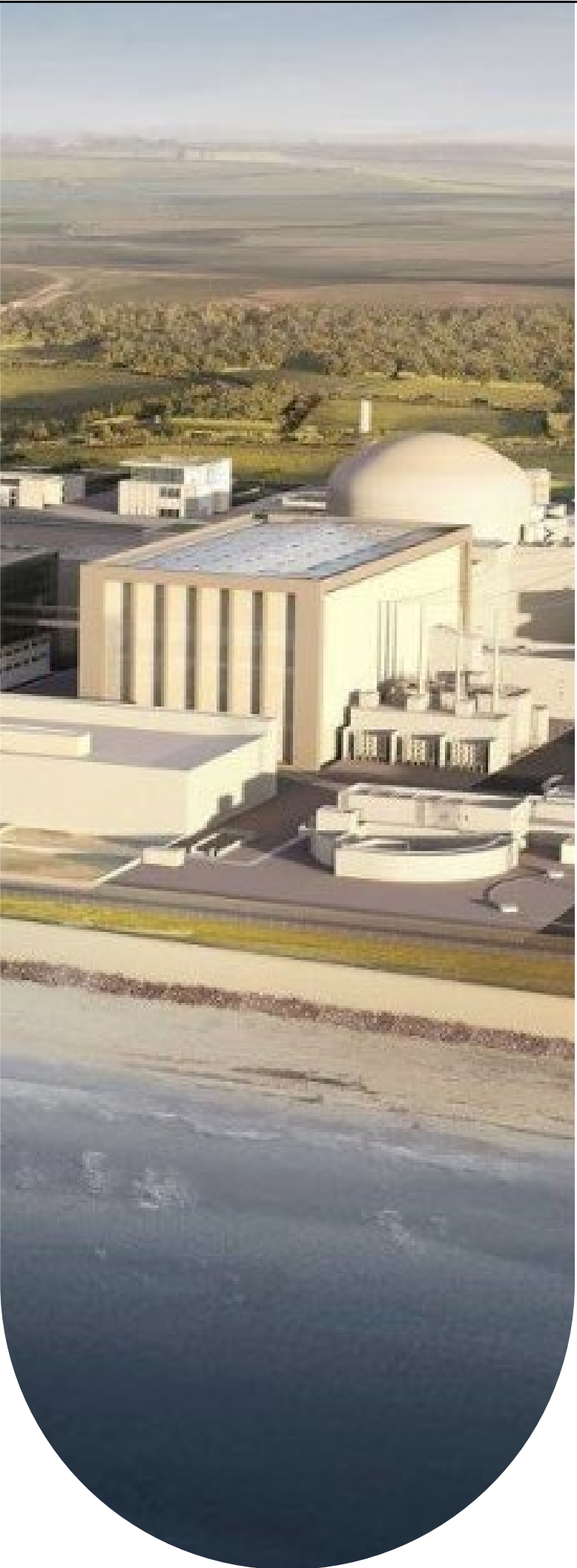
Optimising Nuclear Waste Management

Client: Nuclear Waste Services

Project Title: Integrated Waste Management Programme

Stantec Role: Our seconded staff worked as part of NWS’ management team setting up the IWMP. They developed and deployed prioritisation methodologies using multicriteria assessments, setting effective programme and project sequencing and optimising interdependences. We also led development of business cases for near surface disposal, multipurpose disposal containers and an asbestos denaturing facility.

Image: gov.uk



Pre-Construction Safety Report

Client: EDF NNB GENCO.

Project: Hinkley Point C

Stantec Role: We acted as the safety report lead and quality lead bringing 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 continue to support with the next set of safety documentation, centred around the pre-commissioning safety report, to enable upcoming stages of critical development to proceed.

Minerals & Resources

We are a global leader in the minerals and mining sectors, and in the UK are a particularly recognised leader in water management associated with mineral and mining developments.

We have a full development planning, Environmental Impact Assessment, and permitting capability, and can provide geological, geotechnical, engineering and site data management expertise for our minerals clients and in the classification and management of materials and waste.



Key clients include

- Cemex
- Tarmac
- Breedon Aggregates
- Grundon
- Aggregate Industries



Minerals & Resources Key Projects

Image: G-13114



Carbon Management Upgrades

Client: Cemex

Project Title: Rugby Cement Works

Stantec Role: Stantec has been supporting Cemex with planning, environmental and permitting services for its UK site portfolio for over 15 years. At its Rugby Cement Plant, the CO₂ Reduction Strategy required changes to the cement production processes to decarbonise and align with set climate action objectives and goals. We led the Environmental Impact Assessment and planning application for the upgrade.



Technical and Regulatory Support

Client: Tarmac

Programme Title: Regulatory Compliance – Multiple Sites

Stantec Role: We have been working for Tarmac on multiple sites over the last 10 years, providing support in relation to planning, Environmental Permitting and regulatory compliance. Specific technical work includes:

- **Abstraction licencing**
- **Discharge consents**
- **Hydrogeological impact & risk assessments**
- **Flood risk assessments**
- **Drainage strategies**
- **Site data management**

