



# NSG

legacy management

## Capability Profile



## Technical Facilities and Infrastructure

### Scientia House

Located in Chorley, Lancashire, Scientia House has 3,700m<sup>2</sup> of purpose-built workshop space, secure access design and engineering offices, and an analytical laboratory. The building is equipped with a number of conference and meeting rooms, a break out area called 'The Hub' which provides further meeting space and refreshment facilities, and welfare areas including changing and medical rooms. All meeting rooms are equipped with teleconferencing facilities, including video and audio systems, along with presentation capability. Access to the facilities is controlled via an electronic fob system, which provides authorised employees and external contractors access into specific areas of the building. All visitors must complete an induction prior to entry into the facility and will only be permitted access to the work areas appropriate to their visit.

Located to the rear of Scientia House is a space known as D1. This facility is equipped with 700m<sup>2</sup> of workshop and office space, meeting rooms, and a small refreshment area. In the past, this space has been used to host a small integrated team of personnel from both NSG and clients to aid the efficient delivery of projects being completed in the adjacent High Bay facility. When fully equipped, the largest conference room can be converted to a functional office space capable of housing up to 20 people, depending on configuration and space requirements.

### Workshop Facilities

NSG's workshop facilities are made up of 3,300m<sup>2</sup> of working area, split into Low Bay, High Bay and D1. The Low Bay is connected directly to the Scientia House offices and includes a 12.5-tonne overhead gantry crane, compressed air, water and electrical supplies. It has housed a number of R&D rigs and currently holds a large-scale sludge manufacturing plant, 250-litre grout plant, 500-litre scale in-drum mixing rig, 3m<sup>3</sup> large liner mixing rig, ionsiv cartridge filling rig, screeder, and a 33m<sup>3</sup> temperature and humidity controlled sample store. The Low Bay is an ideal facility for testing concepts at a smaller scale ready for scale up to full size.

Previously, the Low Bay has housed a number of small-scale test rigs used to confirm the operational



Scientia House

capability of processes such as those identified in the Sellafield Silos Direct Encapsulation (SDP) project. These small rigs have allowed for proof of concept testing and trials prior to development to full-scale testing within the High Bay facility. The turnaround time for testing has been of great benefit in the past in order to progress trials programmes with short time frames.

The High Bay was designed and built to house full-scale testing rigs for the SDP project. It is fully equipped with water, electrical and compressed air services, with reinforced ground pilings. The High Bay is capable of housing test rigs up to 15 metres in height that contain a variety of heavy duty equipment at a wide range of loads. Serviced by a 20-tonne overhead gantry crane, the High Bay is an ideal location for the construction of full-scale test beds from which underpinning works or integrated works testing can be conducted.

The facility is also home to a pair of bulk powder silos, GGBS and CEM1. These silos provide the facility with a ready supply of powders for use at short notice where grout formulation or production is required. This allows for a very quick response to client requests for both small and full-scale trials. The envelope within which NSG can accommodate testing equipment is unique in the nuclear industry.

The D1 facility is a self-contained unit connected to the High Bay and is home to a fully outfitted welding bay and mechanical workshop. This allows for small mechanical tasks to be carried out on site with a fast turnaround and is also used for minor repair and maintenance tasks for the entire site. Staffed by a team of experienced mechanical engineers and technicians, the use of this workshop allows for components to be removed from systems quickly for strip down and maintenance, fault diagnostics and repair. In addition, there is a small amount of workspace available which can be used to construct small-scale testing rigs if required beyond the Low Bay and High Bay space capability.



*High Bay during the SDP project*



*D1 housing small-scale test rigs*

## **Laboratory**

Fully equipped with modern equipment, NSG's analytical laboratory is available for project experimentation and laboratory-scale trials work. Staffed by a team of qualified consultants and technicians, the laboratory provides scientific testing and formulation underpinning in a controlled environment. The laboratory is furnished with testing equipment to measure shear strength, viscosity, pH, turbidity, particle size distribution, particle density and setting. This allows the laboratory team to provide conclusive and thorough testing of substances on site with accurate results. The laboratory is also access controlled and only approved staff are permitted entry into the facility; all others must be escorted by one of these staff members.

## **IT Infrastructure**

NSG's processes are accredited with Cyber Essentials Plus and controlled by an IASME qualified Group Security Controller and Systems Engineer. These procedures ensure NSG's systems are secured against external attacks and prevent the loss of data due to equipment malfunction. NSG's facilities are equipped with high-speed internet access in all office areas, along with an extensive server system with a tiered security approach which controls employee access. In order to access the file servers, a wired computer must be accessed with the appropriate credentials. The entire NSG facility is also securely Wi-Fi enabled, separate from the primary NSG network, providing access to the internet for both employees and visitors to the building. The D1 facility is also equipped with a secondary input line to its office spaces, which allows a link between partner company servers so that their employers can work directly on NSG's site without having to travel between their offices to obtain documentation.