

NEWS BULLETIN

July 2021

A regular update on DSA projects and people

Government seal of approval for DSA's third tranche

The Government has approved the continuation of the Design Services Alliance into its third five-year tranche from 2022-27.

The DSA was first set up in 2012 with Sellafield Ltd as an alliance partner alongside AXIOM (a four-entity joint venture comprising Assystem [one contract], Jacobs [two contracts] and Mott MacDonald [one contract]) and Progressive (Aecom and Cavendish Nuclear).

Since then, working with the broader supply chain, the DSA has delivered cashable, non-cashable and future benefits totalling more than £220m.

So, for every pound of the nearly £1bn spent so far through the DSA, Sellafield Ltd has received 22 pence back.

In addition, the DSA has helped to make Sellafield safer sooner by cutting 744 months from hazard reduction schedules.

Paul Adams, Head of the DSA, said: "This announcement is just reward for a lot of hard work by Sellafield Ltd and the alliance partners. It recognises our shared commitment to continuous improvement and our belief that we can deliver even better results between now and 2027.

"The DSA has transformed engineering design at Sellafield by challenging accepted ways of doing things, removing unnecessary scope, making procurement smarter, and reducing project costs with radical new technologies and lean techniques."

Last year an external review concluded that the

DSA was well placed to continue meeting Sellafield Ltd's ongoing need for engineering design and safety case services. It also urged greater integration with other delivery frameworks as part of a whole lifecycle approach to delivering optimum outcomes.

New ways of working are currently being developed and tested across the DSA, including early contractor input under the Alliance Designed Delivery pilot projects and joint incentivisation arrangements.

The aim is to develop these innovations into a standard part of the DSA's 'business as usual' toolkit in order to improve end-to-end delivery.

Ian Belger, Head of Design Engineering and Safety Case at Sellafield Ltd, said: "This is great news for the individuals and teams working in the DSA and a recognition of their contribution and effort.

"Our alliance with the DSA partners gives Sellafield Ltd access to a range of key capabilities and reach back into some of the world's largest and most capable nuclear industry contractors.

"This has enabled Sellafield Ltd's design engineering capability to deliver significant value over the past nine years.

"Our challenge now is to build on this by doing even better and delivering on our digital, sustainability and carbon targets.

"This latest sanction from Government will allow the alliance to continue providing benefits as it concludes its 15-year mission."

Financial update

At end of period 3

DSA spend during 2021/22	£25.2m
Cashable benefits	Not available
Non-cashable benefits	£1,100,000
Schedule benefits	12 months

Health and safety

Hours without a lost-time incident

AXIOM	7,317,707
Progressive	6,142,031
Total	13,459,738

TELL US YOUR NEWS

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The DSA now has a home on the NDA Hub. It can be found here: <https://ecosystem.org.uk/groups/dsa-hub-sl>, but to get access, please email janine.bell@sellafieldsites.com who will invite you. Lots of useful information will be uploaded in the next few weeks.

My Perspective – Dave Mason

AXIOM recently celebrated seven million hours without a lost-time incident. The form taken by the celebration reflected the never-ending vigilance needed to maintain any kind of health and safety record.

Staff were invited to attend a presentation and make a commitment to achieving eight million hours incident-free. As a reward for this, they could claim a 'sweet treat' from a high-end supplier of chocolate brownies.

This is an example of the consistent approach to health and safety which has enabled AXIOM to win the Royal Society for the Prevention of Accidents gold award.

Dave Mason, AXIOM Health and Safety Lead, says the knock-on effect of Covid-19 has been to increase risk in two areas: mental health and the balance between home life and work life, which are obviously inter-related for many people.

"The impact that we can have on people's mental health cannot be underestimated," says Dave.

"Returning to the office or site needs to be handled carefully because there are bound to be some people who think it's happening too quickly and others who think it's not happening quickly enough. Some are keen and some are hesitant.

"Working from home with some time in the office is still the preferred working methodology for all of the AXIOM partners."

Dave notes, however, that face-to-face meetings are still regarded as preferable, or even essential, for some meetings, notably safety and multi-disciplinary design reviews, HAZOPs and HAZANs. "If these reviews are done online, there is a danger that an element of check lists and box ticking creeps into our processes. There is a lot of value to be had from people picking up on each other's body language or facial expressions, perhaps after noticing a hesitant or uncertain response, and really checking things through. In these circumstances, face-to-face contact is necessary for people to read the situation correctly."

A new structure for HSE management is being rolled out across the DSA, with greater sharing of best practice and more consistent standards among all the partners and Sellafield Ltd. These changes are being driven by a Design and Safety Forum, chaired by Fran Worthington, Cavendish Nuclear's



Sellafield Business Unit Director.

The forum has already highlighted the need to measure the overall benefit of designer risk assessments, both in terms of reducing time at risk for operators and providing information to the contractor to take action and deal with risks that cannot be designed out

Dave says: "If we change a design and reduce the risk from very high to low or negligible, we have potentially reduced not only the risk to a worker on site or maintaining equipment during its use, we have also delivered a potential cost saving to the 'UK' and therefore our client."

An example of this was when the SCP project team implemented a design change whereby a series of cast-in couplers were placed in various walls to enable a series of structures such as stairwells to be bolted to them.

The design change negated the requirement for fixing, welding, inspecting, testing and painting at height. Instead, there was a simpler two-step operation at height, which involved surveying coupler locations and then bolting the plates to the wall. This reduced time at risk by at least 30 hours.

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Roadshows will raise awareness of Alliance Designed Delivery

A series of roadshows are being planned to raise awareness of Alliance Designed Delivery (ADD) and the improvements it is bringing to project planning and execution.

They will start in mid-September and are aimed at project and engineering managers in the Site Management Project Office (SMPRO).

The roadshows, each lasting 30 minutes, will focus on these topics:

- Purpose of ADD
- Project Delivery Models
- Pilot Projects in flight
- LFE from the pilot projects
- Commercial Contracts/Incentivised Outcomes
- Next steps for the ADD programme of work.

ADD is a DSA-led initiative which is actively building bridges between delivery frameworks. The aim is to involve constructors, commissioners and operators at a much earlier stage. By sharing information when projects are still in the study or planning stage, risks can be pinpointed and mitigated before the design is finalised, thus avoiding expensive rework during construction.

Several pilot studies are now under way to test the ADD concept and learning from these will be passed on at the roadshows.

Benefits identified so far include:

- Construction teams attending key meetings and reviews during the design stage;
- Hazard mitigation, such as re-routing pipework to avoid asbestos roof;
- Joint development of strip out and isolation methodologies;
- Known flaws avoided thanks to previous LFE at construction review;
- Asbestos reviews completed at design stage.

Project and engineering managers will be able to discover how the ADD principles can be used to drive their project outcomes by considering a whole lifecycle approach to project delivery.

It is the intention that the roadshows will be delivered on both Microsoft Teams and 'live' within Hinton House.

Invitations will follow shortly but in the meantime, more information is available from

Marcin.Bizinski@jacobs.com.

SAFE BY DESIGN – DSEAR REFRESHER

WHAT?

DSEAR stands for the **Dangerous Substances and Explosive Atmospheres Regulations**. DSEAR regulates the management of risk from hazardous substances. A good **hazard management strategy** is essential before thinking about area classification. Attention often turns to ignition source controls despite this being towards the bottom of the hierarchy of controls. This may form part of the hazard management strategy but should not be considered before management of the flammable substances themselves.

IT CAN HAPPEN HERE

A manufacturer of high-pressure gas cylinders was ordered to pay over £800k in damages after a worker was killed by shrapnel ejected from testing equipment. The worker was leak testing 1,500-litre cylinders when one exploded. HSE found that before the test, a corrosion inhibitor had been placed into the cylinders. This contaminated the leak test manifold during venting and was subjected to enough pressure inside the manifold to ignite. Although a DSEAR assessment had been completed, changes to the process were not captured.

Links

[Capability Guidance](#)

THE REGULATIONS

There are **16** DSEAR regulations in total. Applicable to designers are Regulations **5-11**:

- Risk Assessment (5)
- Elimination or reduction of risk from dangerous substances (6)
- Places where explosive atmospheres may occur (7)
- Accidents, incidents and emergencies (8)
- Information, instruction and training (9)
- Hazardous contents of containers and pipes (10)
- Duty of co-ordination (11)

WHAT CAN DESIGNERS DO?

Remember the hierarchy of controls

A hazard management strategy/basis of safety must be in place before considering zoning

Engage with SMEs and SQEP individuals

Most DSEAR knowledge is contained within individuals, start with process capability

Start the risk assessment early in a project

DSEAR should be considered from concept, not as an add-on

Look for LFE and best practice

Look for similar installations where assessments already exist

Key Contacts & Information

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Manifesto award recognises one-team approach at HAWTT

The Higher Activity Waste Thermal Treatment (HAWTT) team has won a Sellafield Manifesto Award.

Supported by the DSA, the HAWTT programme has been recognised for its 'one-team' approach to a game-changing opportunity.

Currently, highly active radioactive waste is mostly managed through encapsulation, which is tried and tested but adds to the volume of waste material going to storage.

The HAWTT team is tasked with making the case for and delivering a new way of treating higher activity waste, which would help reduce its volume. Three pilot plants are planned, and they could deliver multi-billion-pound lifetime savings across the NDA group.

The team has been set up and structured in such a way that it would be hard not to work as one unified entity. Key roles that would once have been held by Sellafield Ltd staff are held by members of the supply chain and crucially, any organisational gaps within the programme are filled with the best individual for the job, regardless of whether they work for the primary contractor for that area of work or not.

Team performance tanks higher than any personal agendas – decisions are made based on what is best for the programme and everyone has a voice. Sub-contractors who traditionally wouldn't have had much of a say, actively challenge the rest of the team when needed and are praised for doing so. Tony Brown, Employee Relations Director, and

Manifesto judge, said: "This is a great example of truly collaborative working across a range of stakeholders. It's great to see that the behavioural aspects involved in the 'We are one team' theme are linked, so clearly, to the performance of this programme and have put the programme on a good footing from the start."

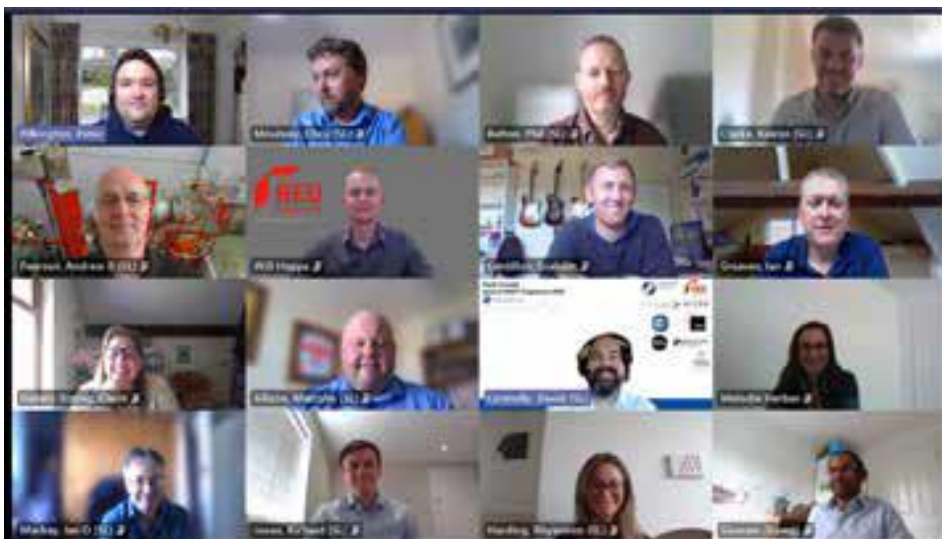
Head of the programme David Connolly said: "I wanted to nominate this team as acknowledgement of

the fantastic work they have done to date in displaying the "one team" ethos. Although still in its early days I can already see much to be proud of, and I just wanted to say thank you to everyone, whether directly involved or in supporting roles for their positive actions to date."

The first two tranches of HAWTT are being undertaken through Progressive, with a diverse supply chain that includes Cavendish Nuclear, RED Engineering, Alpha Consultancy, TUV SUD and others.

The programme is also making use of other frameworks to bring in National Nuclear Laboratory and NSG, while the thermal technology providers will be sourced through other Sellafield Ltd procurement routes, making this a truly collaborative process.

Congratulating the team on the award, Martin Chown, Sellafield Ltd Chief Executive, said: "It's a fairly new team but they've really stated to exemplify that one team structure. I wish you all the success for the future."



HAWTT team members learn of their Manifesto 'win' on a Teams call

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Pile 1 Chimney Demolition team honoured in NDA awards

The Pile 1 Chimney Demolition project team, which included significant input from the DSA, has won the Project Delivery Excellence category in the NDA Group Safety and Wellbeing Excellence Awards. The DSA led the planning for how the 110-metre tall pile was to be removed. Unusually in a location close to various nuclear facilities, a tower crane was attached to the side of the structure. A key aspect of the demolition was the cutting up and removal of the diffuser (pictured), a concrete box weighing about 1,400 tonnes which sits on top of the structure.

From radiological and civil engineering perspectives, the work entailed unique decommissioning challenges, with various constraints adding considerable complexity. The DSA team helped to refine the collar block cutting process, enabling a reduction in the number of blocks from 116 to 69 and accelerating hazard reduction. More recently, as work nears completion to remove the complicated collar section, DSA designers have been responding in near real time to unexpected conditions on site to enable the job to progress safely, smoothly and at pace, further demonstrating the value of the long term integrated team.

Staff members from DSA partner Aecom were kept on after the design stage to work closely with the Decommissioning Delivery Partnership on an

integrated solution for the ‘SPIDA’ used to demolish the cylindrical brick ‘barrel’ of the tower. Presenting the award, Alan Cumming, the NDA’s Director of Nuclear Operations, said: “This team really exemplified how safety can and should be recognised at the very beginning of a project and woven into its very fabric throughout. The one-team approach really shone out from this submission and the strategy should be taken as a case study for future projects.”

The Pile 1 Chimney Demolition team also made the shortlist for the Safety Team of the Year Award.



From the airport to AXIOM

Katie Wheeler has joined the AXIOM JV as a Senior Portfolio Manager working on the SIDE portfolio. In her previous role with Manchester Airport, she helped to deliver the newly opened T2 extension, working with Border Force on new customs and immigration areas and with major airlines on new accommodation and infrastructure. Katie also helped to deliver the new outbound control security area.

Katie is not a newcomer to the nuclear sector, however. She first joined the industry in 2008, delivering projects for a variety of clients including NuGen, EDF and Sellafield.

AXIOM said farewell recently to Resourcing Manager Mark Smith, who has retired after some years as a key member of the team.

How’s the DSA doing?

Work to supply chain	Work to SMEs
27%	9%
Hours in education	Customer feedback score
83	98%

(Figures at end of Period 3, 2021/22)

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