

News story: Snake slithers through to tackle Dragon

The long, flexible – a type of robotic arm – was passed through a narrow hole in the 3-metre thick concrete around the core, then sliced through a 400mm diameter vessel attached to the Dragon reactor core.

Contractors OC Robotics were called in by the Magnox team decommissioning Dragon when it became clear that removing the vessel, known as the Purge Gas Pre-Cooler (PGPC), would be a challenging task: one end was joined to the core in the high-radiation area behind the concrete shielding and several steel plates, while the other end extended outside the shielding.

[title of video](#)

The LaserSnake technology, developed by OC Robotics and TWI with R&D funding from the NDA, seemed perfect. Controlled from a distance by specialist operators, LaserSnake can squeeze through a small access hole, manoeuvre easily inside a very confined space and cut multiple layers with its high-powered laser. This allowed the work to be carried out inside the existing radiation shielding of the reactor.

In action at the Dragon reactor

Although LaserSnake had previously been deployed at Sellafield, the thick pipework, complex PGPC layout and limited access meant it was necessary to prepare 2 mock-ups which allowed comprehensive testing and rehearsals to take place before making the cuts for real.

In the end, less than 3 hours of actual cutting time were needed to free the PGPC from the reactor core.

NDA Head of Technology Melanie Brownridge said:

This is an excellent example of how early NDA R&D funding support enabled the technology to grow from an exploration of whether laser-cutting could actually be adapted for nuclear into a system that, with further funding and collaborative working, is now mature and being successfully deployed on a number of our sites.

Magnox Senior Project Manager Andy Philps added:

We believe this is the first time that laser-cutting technology has been deployed directly on the core of a nuclear reactor. The ability of the LaserSnake to carry out 'keyhole surgery' on the reactor core meant that the work could be carried out using existing protective shielding.

This has saved at least £200,000 and the radiation dose that would have accompanied building additional infrastructure, and saved four weeks on the programme's critical path. It has also enabled us to remove this component earlier than originally planned.

Adam Mallion, from OC Robotics, said:

The difficult environment of the external core of the Dragon reactor was an ideal challenge to show the full capabilities of laser-cutting technology and snake-arm robots. Cutting something as thick as the 400mm PGPC with its complex internal geometry had never been attempted before.

The deployment showed once again that the OCR LaserSnake system could be set up and deployed quickly and efficiently to contribute towards safer, cheaper and faster decommissioning of the plant.

LaserSnake and its housing are lifted into place at the Dragon reactor

Dragon, a prototype high-temperature reactor cooled by helium, was developed in the 1960s as a joint European project involving 13 countries. After opening in 1964, it operated until 1975 when it was closed and defueled before being put into a passive 'care and maintenance' regime.

In 2011, decommissioning began in earnest. All that now remains is the reactor core contained in a pressure vessel surrounded by the concrete biological shield, 7 steel containment plates and an outer containment building.

Under the current programme, it is expected that the reactor core will be removed by 2021 and the facility demolished to ground level by 2022.

Read [more about LaserSnake's development](#)

[News story: VMD survey: The Disposal of Controlled Drugs](#)

The VMD is carrying out a survey on the disposal of controlled drugs. Our aim is to understand the extent of the problem vets face when getting controlled drugs witnessed for disposal.

At present vets must destroy schedule 2 controlled drugs in the presence of and directed by any of the following:

- an inspector appointed under the Veterinary Medicines Regulations
- a vet, independent of the practice where the destruction takes place
- a person legally authorised to witness the destruction of CD such as a Police CD Liaison Officer (CDLO)

We note that there is a shortage of Police CDLOs, alongside inspectors not being in the area and no independent vets within close proximity, therefore have commissioned this survey.

By answering the survey, you will help the VMD establish the extent of this problem around the UK and inform any future possible policy development.

The survey is open until 6 June 2018, is voluntary and open to all UK registered vets. It should not take any longer than 15 minutes to complete. Please note no personal data is being collected, however all data will be treated in accordance with the Data Protection Act. Published data will be anonymised and aggregated.

The VMD legislation team is responsible for conducting this survey and can be contacted on 01932 338316 or controlleddrugssurvey@vmd.defra.gsi.gov.uk

The VMD would like to thank you for taking the time to complete this survey, further guidance on [controlled drugs](#) is available.

[Press release: Government launches microplastics research to protect oceans](#)

A new research project analysing the impact of tyres and clothing on the marine environment has been launched today by the Government.

Environment Minister Thérèse Coffey has pledged £200,000 for scientists at the University of Plymouth to explore how tiny plastic particles from tyres, synthetic materials like polyester, and fishing gear – such as nets, ropes and lines – enter our waterways and oceans, and the impact they have on marine life.

Following the government's ban on microbeads, which is one of the toughest in the world, this comprehensive research will be used to improve our scientific understanding of how microplastics from other sources enter the oceans – whether through fibres released into waste water during a washing cycle, or car tyre friction on roads creating a dust of particles that make their way into the seas through sewers.

The 11 month project will build on the research already underway – with some

scientists estimating tyres contribute 270,000 tonnes of plastics per year while a single wash load of acrylic clothing could release over 700,000 microfibrils into the ocean.

Environment Minister Thérèse Coffey said:

The impact of plastic pollution on our oceans is one of the greatest environmental challenges of our generation. The UK is already leading the way in this area, but we want to go further – and faster.

Robust scientific evidence should support our policy proposals, and through this exciting project we will build on work underway to better understand how microplastics end up in marine environment and what we can do to tackle this in the future.

The project is being led by Professor Richard Thompson OBE, who oversaw Defra's first research project on microplastics and their impact on the marine environment, which led to the UK's pioneering ban on microbeads in rinse-off cosmetics and personal care products coming into force this year.

The International Marine Litter Research Unit at the University of Plymouth is at the global forefront of research into the causes and effects of marine litter and recently conducted research into the effectiveness of fibre-trapping bags in washing machines.

Professor Richard Thompson OBE, Head of the International Marine Litter Research Unit, said:

The types of microplastics entering the marine environment are incredibly diverse, but recent estimates in Norway and Sweden have suggested that particles of tyre and debris from the road surface could be a substantial source.

With very limited real data available to confirm the impact from these sources, there is a genuine and pressing need to establish the true scale of this issue. By combining this with an assessment of the quantities of microplastic from synthetic textiles, we can develop a more complete picture on the relative importance of various sources.

We will be able to use our findings to work with the Government, scientists and industry to try to prevent these particles entering the marine environment in the future.

This project will build on the substantial research already underway on marine plastic pollution and the impact of human activities on the marine environment. It will be used to guide future policy priorities as the Government continues in its fight against the scourge of plastics.

This includes the 5p plastic bag charge – which has led to 9 billion fewer bags distributed – and last month’s pledge to introduce a deposit return scheme for single use drinks containers, subject to consultation, and recent plans to end the sale of plastic straws, stirrers and plastic-stemmed cotton buds.

It sits alongside the 25 Year Environment Plan commitment to eliminate avoidable plastic waste and the Treasury’s call for evidence on how charges and changes to the tax system could be used to reduce single use plastics.

Just last month the health of the oceans was on the agenda at the Commonwealth Heads of Government Meeting, where the Prime Minister called for collective global action in the fight against plastic pollution through the Commonwealth Clean Oceans Alliance.

Press release: Government launches microplastics research to protect oceans

A new research project analysing the impact of tyres and clothing on the marine environment has been launched today by the Government.

Environment Minister Thérèse Coffey has pledged £200,000 for scientists at the University of Plymouth to explore how tiny plastic particles from tyres, synthetic materials like polyester, and fishing gear – such as nets, ropes and lines – enter our waterways and oceans, and the impact they have on marine life.

Following the government’s ban on microbeads, which is one of the toughest in the world, this comprehensive research will be used to improve our scientific understanding of how microplastics from other sources enter the oceans – whether through fibres released into waste water during a washing cycle, or car tyre friction on roads creating a dust of particles that make their way into the seas through sewers.

The 11 month project will build on the research already underway – with some scientists estimating tyres contribute 270,000 tonnes of plastics per year while a single wash load of acrylic clothing could release over 700,000 microfibrils into the ocean.

Environment Minister Thérèse Coffey said:

The impact of plastic pollution on our oceans is one of the greatest environmental challenges of our generation. The UK is

already leading the way in this area, but we want to go further – and faster.

Robust scientific evidence should support our policy proposals, and through this exciting project we will build on work underway to better understand how microplastics end up in marine environment and what we can do to tackle this in the future.

The project is being led by Professor Richard Thompson OBE, who oversaw Defra's first research project on microplastics and their impact on the marine environment, which led to the UK's pioneering ban on microbeads in rinse-off cosmetics and personal care products coming into force this year.

The International Marine Litter Research Unit at the University of Plymouth is at the global forefront of research into the causes and effects of marine litter and recently conducted research into the effectiveness of fibre-trapping bags in washing machines.

Professor Richard Thompson OBE, Head of the International Marine Litter Research Unit, said:

The types of microplastics entering the marine environment are incredibly diverse, but recent estimates in Norway and Sweden have suggested that particles of tyre and debris from the road surface could be a substantial source.

With very limited real data available to confirm the impact from these sources, there is a genuine and pressing need to establish the true scale of this issue. By combining this with an assessment of the quantities of microplastic from synthetic textiles, we can develop a more complete picture on the relative importance of various sources.

We will be able to use our findings to work with the Government, scientists and industry to try to prevent these particles entering the marine environment in the future.

This project will build on the substantial research already underway on marine plastic pollution and the impact of human activities on the marine environment. It will be used to guide future policy priorities as the Government continues in its fight against the scourge of plastics.

This includes the 5p plastic bag charge – which has led to 9 billion fewer bags distributed – and last month's pledge to introduce a deposit return scheme for single use drinks containers, subject to consultation, and recent plans to end the sale of plastic straws, stirrers and plastic-stemmed cotton buds.

It sits alongside the 25 Year Environment Plan commitment to eliminate avoidable plastic waste and the Treasury's call for evidence on how charges

and changes to the tax system could be used to reduce single use plastics.

Just last month the health of the oceans was on the agenda at the Commonwealth Heads of Government Meeting, where the Prime Minister called for collective global action in the fight against plastic pollution through the Commonwealth Clean Oceans Alliance.

News story: Education Secretary to set out vision for “clearer” school system

Education Secretary Damian Hinds will clearly set out how the Government will “trust school leaders to get on with the job” by clarifying who schools are accountable to and boosting development opportunities for new teachers.

In an address to more than 350 school leaders at the National Association of Head Teachers’ (NAHT) annual conference in Liverpool on Friday (4 May), the Secretary of State will set out plans for a clearer system of accountability that will let good schools get on with their job, free from the “spectre” of multiple inspections by making it clear that “the only people who should go to schools for inspections are Ofsted”.

Mr Hinds will announce a consultation to replace the “confusing” system of having both floor and coasting standards to measure school performance, with a single measure to trigger support for schools. This will be backed by a clear statement on when schools convert to academy status to drive improvement.

In a pledge to the profession, published today, the Secretary of State will underline his commitment to give school leaders the confidence to raise standards in their schools and free up teachers to focus on what really matters in the classroom.

The Education Secretary is expected to say:

Accountability is vital. Children only get one shot at an education and we owe them the best...where they are being let down we need to take action quickly – so no one ends up left behind.

But what I’ve found from speaking to many of you these last few months is that there is also real confusion within the sector... I believe school leaders need complete clarity on how the accountability system will operate.

I’m clear that Ofsted is the body that can provide an independent, rounded judgement of a school’s performance.

This means we will not be forcibly turning schools into academies unless Ofsted has judged it to be Inadequate.

I believe strongly that becoming an academy can bring enormous benefits to schools. Hundreds of schools every year voluntarily choose to become academies and I want this to be a positive choice for more and more schools as we move forward.

We must also have a system that does more than just deal with failure... But we will do so in the right way, and there will be a single, transparent data trigger for schools to be offered support – which we will consult on.

I intend this to replace the current confusing system of having both below the floor and coasting standards for performance...

I have a clear message to schools and their leaders: I trust you to get on with the job.

There are a record number of teachers working in our schools – 15,500 more than in 2010 – and increasing numbers are returning to the profession. Thanks to the efforts of this talented generation of teachers, alongside the government's bold reforms, there are now 1.9 million more children in good or outstanding schools than in 2010.

To build on this, the Education Secretary will set out plans to improve early career support and development.

Working with school leaders, new high-quality training opportunities will be developed to boost career progression and support the record number of teachers in our schools to become leaders in their field, including:

- Extending on-the-job training and support for trainee and new teachers to two years, so they get the best possible start to their career;
- Creating early career development opportunities for teachers through a new framework that schools will follow, developed in partnership with teachers, school leaders and education experts; and
- Introducing more flexible working practices that will put the profession on a par with other industries, with a £5 million fund to help experienced teachers take a sabbatical.

The Secretary of State will continue:

All of us have a shared goal of making sure teaching remains an attractive, fulfilling profession.

We will take an unflinching look at the things that discourage people from going into teaching or make them consider leaving... and we will also look at how we support teachers to get better at what they do and hone their expertise and career progression.

We will be introducing an enhanced offer of support for new teachers – including extending the induction period to two years – and we will work with the profession to develop a new early career content framework that will set out all the training and mentoring a teacher is entitled to in those first years.

I want teachers to be able to develop and progress through clearer career pathways, including for those who want to stay in the classroom ... and I want schools to be attractive 21st Century workplaces.

Today's announcements will be backed by the NAHT, as the Education Secretary's address marks the beginning of two days of speeches and debates on the development and improvement of the teaching profession.

General Secretary of the NAHT, Paul Whiteman, said:

The announcements the Secretary of State is making today will be widely welcomed by NAHT's members. Accountability is an essential part of our publicly funded education system but it is also one of the main drivers of workload; a big reason why many talented people leave, and often a limiting factor on the ambitions of schools.

It's absolutely right that there should only be one agency with the remit to inspect schools. Clarity about the standards that are expected is just what we've been calling for.

Removing the coasting and floor standards will do much to address the confusion felt by many school leaders. It will be important that the new support standard is set at the right level and helps direct rapid, high-quality, funded support to the schools that need it most.

We have a track record of working with the government on improvements to the system and we look forward to working with them to help define the detail behind these new proposals and to make sure that these joint ambitions are realised.

The pledges made today follow on from the [Secretary of State's speech in March](#), during which he made clear that his top priority is to ensure teaching remains an attractive and fulfilling profession, underpinned by a commitment to tackle unnecessary workload. A myth buster video on school inspections featuring the Secretary of State and the Chief Inspector for Schools, Amanda Spielman – launched at the ASCL conference – has had more than 75,000 views to date.

Today's announcements build on measures already supporting teachers' development and efforts to attract the best and brightest recruits into the profession, including a Flexible Working Summit with business and education leaders to explore how the profession can be more flexible – including

through part time roles – which resulted in a number of pledges.

In full, the Education Secretary will announce:

- The department's initial response to the consultation on Qualified Teacher Status;
- A £5 million fund to support more teachers to take a sabbatical – such as a year working in industry relevant to their field – and a research project to introduce more flexible hours in the profession;
- More detail on the recruitment and retention strategy announced at the Association of School and College Leaders' conference in March;
- More support, offered proactively, for schools that are in danger of failing; and
- The launch of an external advisory group and working group with teaching unions to help develop the department's strategy.