

# Press release: Helping fish and eels along their journey

The Environment Agency project was aimed to help fish and eels navigate safely over the weir structure on the River Colne while ensuring that the flood risk and water resources data collected by the Earls Colne gauging station was unaffected.

However given the unusual shape of the gauging weir, it was a complicated fish pass to design, with the added issue of having to dry a section of the river out for the work to be completed.

Despite a setback during the construction, where some vital tools and a JCB was stolen, the design was still successfully completed in just four weeks.

Contractors carried out the work, which involved fixing low cost baffles (a structure to redirect the flow of water) and eel tiles to the weir. However to ensure this was done accurately and safely, the work area had to be dried out for the duration of the work.

A dam was constructed upstream and downstream and large pumps were used to bypass the structure. As the water levels were slowly lowered while the work area was being dried out, the contractor safely relocated the fish and eels that remained by the weir.

An Environment Agency spokesperson said:

Two eels were found downstream of the structure while the contractors were drying out the work area. This is really encouraging as it demonstrates that they can get as far as Earls Colne. The new eel pass should now help them further up the catchment.

We are excited to have completed the project and we are looking forward to the next step where we will be monitoring the flow data and surveying the fish populations to see if it can be rolled out elsewhere.

This weir is one of 22 Essex Profile weirs, which means it has a particularly unusual shape. The fish pass was specifically designed to fit this shape and if it proves to be successful, it can be replicated on other structures. Man-made structures can obstruct fish from moving freely around the river system. If fish cannot reach their spawning or feeding habitat, then they cannot build their populations and numbers decline. Where it is not possible to remove an obstruction, a fish pass is a favourable option.

The European eel is a well-known example of a declining species. Numbers have fallen 95% over the last 30 years and by adding eel tiles to the fish pass,

this will help this protected species to continue its fascinating life cycle.

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A specially designed fish pass could be rolled out across Essex to allow fish to travel more easily through rivers.

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## [Speech: Leadership within the NHS](#)

70 years ago, a visionary leader took on one of the mightiest empires the world has ever seen.

He didn't have an army. He didn't fire a single bullet. He won independence for his people through advocating non-violence, and by his personal example of self-restraint and sacrifice.

Now, I'm not saying Gandhi would have been any good at negotiating NHS procurement contracts – they really are tough.

But what it does show, is the difference visionary leaders like Gandhi can make.

The difference between achieving a target and transformative change. The difference between a manager with a plan, and a leader with a vision.

Now, I was going to come here today and talk about the difference between managers and leaders, and how we need to see more leaders in the NHS, but I've been thinking about what you do and that doesn't do it justice.

It isn't the full picture.

What you do isn't just the difference between success and failure, it's the difference between life and death.

Outside of the military, outside of a warzone, being a leader in the NHS is one of the few roles that mean dealing with life and death decisions every day.

And I think that's hard for people to grasp outside of the NHS. The stress and responsibility that comes with the job. It's not a missed sales target –

it's a child dying.

So as important as it is to talk about improving performance, spread best practice, and import the best ideas from outside, I think we also need to have an honest and frank conversation about how we need to get much better at learning from our successes and from our failures.

Because, despite our best efforts, error is unavoidable, and what matters is how we respond to it, and how we learn from it.

And only a culture that, not just welcomes, but requires open learning can deliver that.

So that's the first thing I want to talk about: the NHS needs a leadership culture change.

I have spoken face-to-face with many of you in this room about this, because – and it may come as a surprise to hear this from a Secretary of State – I know I don't have all the answers.

I know I always have to keep learning. And what I've learnt, the thing I've heard again and again is: we must learn not blame from error.

We all make errors – I think it was Alexander Pope who put it a bit more eloquently.

“To err is human; to forgive divine.”

You can be a great surgeon and make a mistake, that doesn't make you a terrible surgeon. We're all fallible.

Any surgeon who says they've never made an error isn't telling the truth. And the truth is more important than any one error.

What matters is how you respond: open, honest, talking about errors and complaints and what needs to change to stop them happening again.

Now, this is where it relates to leadership, because the other thing I've heard again and again is that: leaders create the culture.

Good leaders create a culture where staff can challenge without fear. Good leaders create a culture where complaints are an opportunity to improve, not a need for cover-up and denial. Good leadership is about encouraging whistleblowing, listening to patients, and shared learning through training in teams.

Because great leaders aren't afraid to give away a little bit of their power to empower others. Great leaders take risks and encourage their staff to take risks so they can keep on improving.

They don't settle for the status quo because of a fear of failure. They don't penalise staff who speak up about mistakes or problems because great leaders know that speaking up takes courage.

Great leaders are honest about the challenges they face and what they need to do to meet them. And, I'm going to let you into a little secret here:

If something goes seriously wrong, and you happen to find yourself in my office having to answer for it: don't tell me everything's fine because we did it by the book. Do tell me this is what went wrong, and this is what we're doing to learn from it.

If you can have the courage to do that, then we'll create the culture across the NHS we all want to see. Everyone makes errors. Making mistakes is acceptable. But bad behaviour is not acceptable.

I want to see the highest standards of behaviour that underpin empathetic leadership: integrity, honesty, transparency.

And what you can expect from me is this:

You won't find me beating up on NHS managers and leaders for the sake of the TV cameras or a good headline.

I don't believe less management and fewer leaders is the answer to our problems in the NHS. I think we need to celebrate leaders and leadership, and do much more to nurture and support.

What's important, is that it's the right leadership. Because the right leadership determines performance: operationally, financially, motivationally.

The right leadership is the difference between life and death, and I want you all to succeed. I want to cut the turnover rate at the top. I want to remove the Sword of Damocles hanging over the boss's desk.

Because we can't expect a chief exec to empower and set free their staff, if they're too afraid of losing, or don't have enough time, in their job.

So, you need to have the right support, training and development, which is the second thing I want to talk about.

Now, there are some fantastic leaders within the NHS at all levels – some fantastic leaders within this room. As good as any in the public services or the private sector.

I've seen it myself on visits, on night shifts, out with the ambulance service, and every time I visit my local hospital in West Suffolk.

But I want them better supported and more inspirational leadership. We need more talented people, who possess the qualities of great leaders, rising to the top. More from clinical backgrounds and more from outside the NHS.

Today, I'm publishing the [review of the Faculty of Medical Leadership and Management](#) into removing obstacles to clinicians becoming managers.

And I want to reduce barriers for people who can serve our NHS who have

experience outside. We now know what some of those obstacles are:

The need for more porous borders and more support for people bringing their experience into the NHS from outside.

The insecurity and challenges of operational leadership, compared to the tenure and recognition that comes with clinical roles.

But what struck me most in the findings, what is perhaps the biggest obstacle is the perception that being a leader, and being a clinician are “incompatible”.

The view that if you step out of clinical practice, there is no return. It's nonsense. Some of the best leadership I've seen comes from nurses turned managers or doctors leading organisations.

In some parts of the NHS, there is a “them and us” culture between clinicians and managers, when the only culture should be “we”.

Because only together can we build an NHS that is there for everyone in their hour of need. Only together can we build a sustainable NHS fit for the future, one that delivers for patients and staff.

That's how the best trusts operate and that's how all trusts must operate.

So that culture must change. Because it doesn't make sense.

One clinician working on their own may be able to help, 10, 20, even 50 people in a day. But that's only possible because of the team, the resources, the system around you. It's only because of the right leadership. And we know the importance of the right leadership, because we all notice it, when it is absent.

So the “them and us” culture must change. The perception that leadership doesn't matter, isn't as important as what clinicians do, must change. It's not helping 10, 20, 50 people, it's helping 10, 20, 50,000 people.

Combining your frontline clinical knowledge and experience with leadership skills and vision to benefit the whole team, benefit the NHS, and benefit the nation.

So, we need to see more clinicians at the top. But not exclusively so. Because outsiders bring something that is very important, and something that is often lacking: diversity. And to borrow a phrase from Idris Elba I like: diversity of thought.

Now, one of the most obvious form of diversity is what people look like. And if we look at racial equality, our leadership within the NHS looks spectacularly un-diverse, uniform in fact.

40% of hospital doctors and 20% of nurses in the NHS are from a black or ethnic minority background. Yet, BME representation on NHS trust boards is only 7%.

More than half of all NHS trusts in England have no black or ethnic minority staff at the Very Senior Manager (VSM) level.

Over 75% of the NHS workforce are women, yet at board level that figure is just 40%. We need 500 more women on boards to make them gender balanced.

Change is happening. And I know that is down to the leadership in this room.

Because it's not just a question of fairness and justice. Diversity of leadership is a diversity of experience, a diversity of perspectives.

Different ways of thinking. Fresh ideas, new solutions to old and seemingly insurmountable problems.

Diversity of thought is essential to the future of the NHS. It is essential to make the best, and most intelligent use, of the £20 billion a year extra we're putting into the NHS.

And this applies to outsiders coming in, as much as it does to insiders moving up. Because, at the moment, we don't have enough leaders.

At the moment, nearly 1 in 10 chief executive positions in the NHS aren't permanently filled. That can't continue. We need stability. We need to be able to plan for the future with confidence.

We need to find 20 more people right now with the skills, grit and ambition to be an NHS CEO, and 30 more people to be a Chief Operating Officer, just for us to stand still. So, we must embrace more clinicians and more outsiders at the top.

And here I want to draw on the inspirational leadership of someone with a very different dress sense to Gandhi: Gareth Southgate. Because the next generation of leaders coming through is very exciting.

The first group of doctors, nurses and Allied Health Professionals on the Clinical Executive Fast Track scheme are about to graduate.

There's been a huge increase in the hugely successful Graduate Management Training Scheme – up to 500 a year from 2019.

And with the Leadership Academy moving to NHS Improvement, we will be able to better match our funding and resources to developing leaders in the areas where we most need them.

Outside the system, charities like The Staff College are taking the best of what the military, business and education do on developing leaders and adapting that training for the NHS.

I want to learn from The Staff College and embed it much more in how we develop our leaders.

And then there's people like Professor Stefan Scholtes at Cambridge University's Judge Business School, running a hugely popular MBA programme

taking mid-career clinicians and turning them into top tier leaders – other business schools are available.

Learning from trailblazing companies, like this little known tech firm, that was on the verge of bankruptcy before a visionary leader turned things around and made it the world's most successful – that's Apple by the way.

So, we need a diversity of training just as we need a diversity of leaders.

And we need to keep training, and keep learning, throughout our careers. Whether you're a consultant, or a clinical director, or a secretary of state.

We have a duty to ensure our skillset is up to date. That if we don't understand, we find out. Not least because there's a tech revolution coming and the speed of change is only getting faster.

Which brings me to my third point: why we need more leaders in the NHS.

Because the NHS is changing. Society is changing.

We're putting in the single, largest cash injection to the NHS in its history, and we're creating a long-term plan to take us into the next decade.

The health and social care system of the future is going to more joined up, and better integrated.

It's going to be less command and control. Less top down. Less hierarchy.

More autonomy. More about relationships and building a transformative culture. More about us, than me.

So, what we really need in the NHS are leaders who feel comfortable with more autonomy, and I mean at all levels.

When Kennedy visited NASA as president after setting them their mission of reaching the moon, he stopped to talk to a janitor. And he said: "Thank you, you're helping to put a man on the moon."

Leadership in the NHS means valuing everyone at every level, as part of the team that saves lives every day. To do that we need leaders who feel comfortable with empowering their team and taking risks to improve things.

Leaders with the ability to articulate a vision whether it's on a ward, a surgery or a whole hospital.

This is where we are. This is where we're going. And this is how we're going to get there.

Inspiring. Communicating. Delegating. Empowering. Empathetic leadership. Not afraid of change. Embracing change. Driving change.

That's what we need from good leaders at all levels.

Grit. Determination. Sticking it out when things get really tough.

And let's not forget it took Gandhi more than a quarter of a century to realise his vision.

So, let me ask all of you, every one of you, my question, my challenge, is what are you going to do to change the culture of the NHS for the better? To empower, not direct? To learn, not blame?

To build the health service of the future?

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## [Press release: Dstl AI tracks global radar systems](#)

Thousands of radars exist globally, many of which are being used by hostile nations to track and potentially threaten UK military operations. Getting accurate, real-time information on these radars is extremely problematic, time-consuming and costly, in addition to the risk of leaving our Armed Forces operating with limited information.

Dstl's Moonlight system uses machine-learning algorithms to gather vital data. It is the only system of its kind which automatically updates the position of more than 10,000 radars every day using machine learning thereby saving 32,000 hours of manual analytical effort each month. The data gathered is now helping to improve planning and post event analysis of UK supported joint maritime, land and air missions.

Dstl's Alasdair Gilchrist, said:

A key part of our role at Dstl is making sure we protect our people and the platforms they work within. This novel software improves the MOD's knowledge of radar threats, making sure we have safer operations for all of our Armed Forces. It significantly enhances operational effectiveness saves the user time and money.

Dstl has worked with industry partners 3SDL Ltd to tackle the problem. The new and novel machine-learning software has been developed to automate the process, which allows much greater accuracy on the location and identifies radars in near real time.

Jamie Thomas, a Warrant Officer with the Royal Navy, said:

Moonlight provides a mission critical input into the UK's maritime operational picture at the Maritime Operations Centre. Moonlight data is fused with other sources to provide situational awareness as well indications and warnings to deployed frontline units. This



is critical to support the decision-making process and is key to providing success on operations on a daily basis.

The United States, Canada, Australia and New Zealand have all expressed an interest in using Moonlight. Dstl is now designing a version for NATO, which will greatly improve the Alliance's ability to identify and locate threat radars.

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Using Artificial Intelligence (AI), scientists at the Defence Science and Technology Laboratory (Dstl) are shining a light on enemy radars by using a world-leading radar tracking system to help protect UK military personnel and their equipment during operations around the world.