

## [Guidance: Heat networks: procuring finance](#)

This paper is designed to help local authorities which recognise the potential benefits of engaging with a non-public investor (NPI) to deliver a heat network, but want to better understand:

- at what stage the local authority can engage with the NPI
- what role the NPI could play in developing the heat network project
- the procurement law and state aid implications of involving the NPI
- the alternatives for delivering the project in a way which meets the local authority's objectives, complies with legal requirements and supports investment from non-public sources

Similarly, NPIs considering investment in a heat network project with a local authority may want to better understand the procurement law and state aid considerations which are relevant to the structuring of the project, and how these influence the local authority's approach.

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## [News story: New test for sepsis could improve survival rates thanks to Dstl scientists](#)

A new test for sepsis, which globally claims 6 million lives a year, could soon be available thanks to an innovation by scientists at the Defence Science and Technology Laboratory (Dstl).

The ground-breaking innovation will mean that patients with sepsis stand a much better chance of survival as diagnosis and treatment can take place before symptoms even appear.

For patients that have contracted sepsis, every treatment hour is crucial as survival rates can drop by up to 8% per hour, and if detected and treated early enough there is a significant increase in recovery and survival rates. However, the current bacterial diagnosis method needs the patient to show symptoms of having sepsis by which time the condition is already well advanced. It then additionally takes a number of hours and possibly days for test results to come back during which time the patient's condition will have deteriorated further.

The new Dstl innovation can detect sepsis before symptoms appear and provides fast and accurate results to give medical teams hours or even days of

critical extra time to treat this life-threatening condition.

Minister for Defence Procurement Stuart Andrew said:

This crucial breakthrough in sepsis treatment is an outstanding example of the pioneering research carried out by Dstl scientists and highlights how lessons learned on the battlefield can have a huge impact on improving the day-to-day lives of UK citizens.

We continue to see how strong investment in defence results in knock-on benefits across a huge range of areas from revolutionary medicine to advanced mechanics.

It uses 'biomarkers', or predictors, that sepsis is present and has been demonstrated to be 97% accurate, following a decade-long study of 4,385 surgery patients in Germany and the UK.

Dr Roman Lukaszewski, the lead Dstl scientist behind the innovation, said:

This breakthrough comes from many years of work in this area to help Service personnel survive injury and infection on the front line. By detecting sepsis earlier, the therapeutic window is extended, treatments are more effective, and survivability rates are potentially increased.

In order to make this innovation available, Dstl has turned to its commercialisation organisation, Ploughshare Innovations, which is currently looking for a licensee to turn the invention into a product.

Dr Mark Gostock, from Ploughshare Innovations and responsible for getting this innovation into industry commented:

This innovation is a step-change in the pre-determination of sepsis and could potentially help millions of people worldwide. We are keen to see it put to good use and are actively seeking partners to turn it into a product to allow earlier treatment of sepsis which in turn, improves survivability and reduces treatment costs.

Sepsis affects around 30 million people each year worldwide and is increasing at a rate of 8 – 13% each year. In the UK, it incurs costs of around £15 billion and is responsible for more deaths than bowel, breast and prostate cancer combined.

For more information on the licensing opportunities for this invention, [please visit the Ploughshare site.](#)

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## [News story: Divers complete ponds mission at Sizewell A](#)

The team of underwater experts explored new depths at the former nuclear power station, with the task of cutting up old fuel storage skips and other redundant equipment as part of work to dismantle the site.

The team tackled their first UK 'nuclear dive' at Magnox's Dungeness A Site in 2016. Bringing valuable learning from their work at Dungeness, the team arrived on site at Sizewell A in October 2017.

The divers, who wear full protective suits and are shielded from radiation by the water in the ponds, successfully cut up and 'size reduced' all 35 skips left in the ponds.

The team also cut up around 100 tonnes of other redundant equipment during the dives before removing all the radioactive sludge from the pond floor.

During the operational life of the power station, the ponds were used to store thousands of used nuclear fuel rods, held in metal skips, after they were discharged from the reactors. After the last fuel was transferred to Sellafield for reprocessing, the skips and a range of other waste items, including radioactive sludge, were left behind under the water.

Conventionally, pond clean-out is done using remotely operated equipment to lift the whole radioactive skips and other pond furniture clear of the water, exposing them to the air, where they are carefully cut up and decontaminated. This process is slow with potential radiation dose risks for workers.

Using this innovative underwater decommissioning technique, radiation levels for workers were around 20 times less than with conventional techniques. As well as reducing the overall radiation dose for workers, the diving technique has a lower environmental impact, is quicker and more efficient, resulting in greater value for the UK taxpayer.

### [Divers complete ponds mission at Sizewell A Site](#)

David Rushton, Programme Manager for the Nuclear Decommissioning Authority which owns Sizewell A and 16 other UK nuclear sites, said:

Using divers at Sizewell is a fantastic example of Magnox taking an innovative approach to decommissioning and hazard reduction.

The end of the work to remove radioactive waste from Sizewell's ponds will mark another successful step towards cleaning up the UK's earliest nuclear sites. We've learned valuable lessons and gained some useful experience in ponds decommissioning which could

help our work to reduce the hazards at the NDA's other nuclear sites.

The ponds are set to be completely emptied and drained by the end of 2019.

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## Speech: Defence Secretary at Atlantic Council

It's an enormous privilege to be here today

I must begin by thanking the Atlantic Council for hosting this event I'm always told Washington in August is always not at its best, so you must be the more hardened inhabitants of this city

The reputation of the Atlantic Council precedes it And the list of your famous alumni is a who's who of the Washington great and good: Dean Acheson, Brent Scowcroft, Colin Powell. A list that goes all the way back to the formation in 1961.

In fact, you couldn't have formed at a more timely moment – one year before the Cuban missile crisis. History doesn't record what role the Atlantic Council played at that time, but I've no doubt the wise counsel of some of your founder members was sought, and judging by the outcome it was clearly good advice.

Today, the insights of your experts are just as important as we seek to navigate the rapidly changing world. As we seek to adapt and harness change and work together to seize the opportunities which change brings, we need that type of dynamic, creative thinking. Because I know many people in this city are nervous about the rapidly changing politics, the rise of new powers and the moving tectonic plates of global politics.

People still worry about Brexit and what role Britain will play in the world. No one should worry. While Britain is leaving the European Union we are clear about our role and our place in the world. We will remain a nation that champions those fundamental values – of freedom, democracy and tolerance. We will remain a global trading nation and we will remain a global force for good, always committed to strengthening our international security and

prosperity

And Brexit is Britain's moment. Britain's moment to look up, be more ambitious, redefine our place in the world. In some ways the European Union limited our vision, discouraged us from looking to the horizon. Now we're being freed up to reach further and aim higher, the UK is determined to seize these new opportunities

My job, as Defence Secretary, is to make sure that we can develop, and if necessary deploy hard power which underpins the soft power of our global influence. We start from the strongest of foundations. Britain is a major global actor. We have always been a tier one military power and we always will be a tier one military power, possessing an independent nuclear deterrent, world class special forces and cyber capabilities, exceptional conventional forces able to deploy independently around the globe and take command of coalition forces to deliver joint outcomes.

But we also agree with the United States' National Defense Strategy that: "By working together with allies and partners we amass the greatest possible strength for the long-term advancement of our interests"

After all, we need international solutions to international problems. In the past few years we've seen global terror hit our streets on both sides of the Atlantic. At the same time we've witnessed increased competition between states: a terror-sponsoring Iran, a nuclear-armed North Korea, not forgetting to mention a rising China, and an increasingly aggressive Russia using every weapon at its disposal to advance its interests. A Russia whose use of covert operations and cyber warfare, political subversion and increased military posturing is part of a wider pattern of malign behaviour

Who would have thought a year ago we would have seen in the United Kingdom, in a sleepy town in the middle of the English countryside, the first use of chemical weapons in Europe since the Second World War? With states adopting the tactics of terrorists and terrorists increasingly armed with sophisticated weapons, including cyber capabilities, all blurring the line between peace and conflict

It's clear we're in a new age of intertwined dangers and it is getting ever more complex, so, it's even more important we stand together with our allies.

I'm not here to give you a history lesson, but some of you may be aware in the 1770s we were having some local difficulty in this area. In 1778, the last British governor of New York wrote to George Washington. It was the moment that we were about to vacate the city, and he wrote: "The recent hostilities have been regrettable, but as we withdraw, we do so in the hope that our two nations will build on a common heritage and act together to the betterment of the world."

All those years ago, those words are so very, very true. We have no stronger ally than the United States. And there's a reason so many have called our relationship 'Special'. For more than a hundred years our Armed Forces have fought in defence of our common values and interests. From the turmoil of the

Great War, through the dark days of World War II, from the heat of Korea, to the chill of the Cold War, from the mountains of Afghanistan, to the deserts of Iraq today.

We have developed the deepest, broadest and most advanced Defence relationship of any two nations The United States has never had nor will have a more reliable ally than Great Britain. Others may pretend, but you will find no greater ally than us.

And to those who prefer to dismiss what the UK can do, I have one message: We stand with you; ready, willing, and able to meet the challenges of the 21st Century. Our appetite, our desire, our will to be a force for change, a force for good, a force of light that stands as a beacon to the world that burns more brightly today than it has in the last 70 years. That is what Great Britain is.

Let me explain what I mean in more detail. First we are ready to respond to any situation at a moment's notice. We have forward deployed forces across the globe, we can draw on our overseas territories in Gibraltar, the Sovereign Base Areas in Cyprus, Ascension Island, the Falkland Islands and the British Indian Ocean Territory. These often provide key facilities not just for us, but also for the United States and we are extending our presence with our new naval base in Bahrain.

We also can bring in allies other than the US as and when required, such as our nine-nation Joint Expeditionary Force of like-minded Northern European nations, which can muster up to 10,000 personnel to respond to any type of operation from humanitarian assistance, through to high-end warfighting.

Above all, our readiness comes from having world class personnel. The embodiment of our Global Britain, our Great Britain. More than 14,000 personnel deployed on operations around the globe, with 19,000 preparing to deploy or at readiness to respond. Currently, they are in the North Atlantic commanding and directing anti-submarine operations and keeping an eye on the undersea cables that underpin our online systems

They are on the Eastern fringes of Europe too, supporting NATO's deterrence against a resurgent Russia, policing Black Sea, now Baltic and soon Icelandic skies and leading NATO's presence in Estonia

In March, I visited our troops close to the Estonian border with Russia. I was struck – but not surprised – by how many locals still saw Britain as the liberator and protector willing to stand up for their freedom as we have done in the past.

Our people are not just in Estonia. They are in Poland too, proudly operating side-by-side with a US battlegroup. It underlines the ever increasing integration of our forces who serve and train together regularly so they can fight together seamlessly. You see this integration between our armies from battle group, through brigade, division to corps. You see it between our air forces and our navies and you see it between your US Marines, who I'll have the privilege of seeing in action at their famous sunset parade later today,

and of course, as was mentioned earlier, our Royal Marine Commandos.

In recent months both the US Marines and our Royal Marines exercising alongside each other in the Baltic, in Guam developing new ways of operating in the information age and they will be working together as part of the Marine Expeditionary Force Headquarters on Ex Trident Juncture in Norway later on this year.

Being ready is only one thing, but the United Kingdom has that essential willingness to act, the willingness to use military force when other measures fail, the willingness to operate where others cannot or will not go. Look at the way UK pilots joined their US counterparts to strike Assad's chemical facilities after the appalling chemical attacks in Douma. Or look at our operations targeting ISIL in Iraq and Syria, conducting more than 1,700 strikes against terrorist targets, training more than 77,000 Iraqi Security Forces in Infantry skills, counter-IED, engineering, and medical expertise and providing the second most significant contribution to the military campaign, after the United States.

But the UK is not just in the Middle East. We're in Afghanistan training a new generation of officers to secure their fledgling democracy and by committing a second battalion to go to Kabul we've demonstrated a commitment to Afghanistan and the Afghan people. We're also in the Indo-Pacific where we led the way by deploying Royal Naval ships to be the first nation to enforce United Nations sanctions against North Korea and where we are maintaining an almost unbroken presence of Royal Navy surface combatants this year and next, increasing our presence around the world.

And when it comes to China we have our eyes wide open. We have a positive relationship with Beijing and wish to build on that. But we will not shrink from telling them when we feel that they do not respect the commonly accepted rules and norms of international behaviour, the laws and systems by which we all, China included, benefit and have a duty to protect.

In this respect, their militarisation of artificial features in the South China Sea is a backward step and puts them on the wrong side of the line of what people expect from great international nations. If you wish to be respected as a global power you have to respect the international norms and behaviours that bind the international community together.

And from the continent of Asia to Africa I've just returned from Mogadishu in Somalia, and also visited Ethiopia and Kenya— where I've seen first-hand the excellent work of UK forces training – stopping the terrorists and helping bring stability. In Mali we are providing our French allies with strategic lift and Chinooks and, let's be clear, we are the only power in Europe with the capacity and the capability to do that. And in South Sudan our people have built a United Nations hospital bringing vital aid in the midst of an awful humanitarian crisis

Whether the danger is near or far, whether we're acting unilaterally, bi-laterally or multi-laterally, the UK continues stepping up. I've already touched on our NATO efforts but since I'm at the Atlantic Council I hope

you'll permit to me to say a few more words in support of the Alliance. For it's worth remembering that European nations are not its sole beneficiaries. The only time that Article V has ever been invoked was after 9/11 when Great Britain and other NATO nations stood side-by-side with you after the atrocities that we saw.

Just as the United Kingdom helps the United States shoulder the burden of international security, so does NATO. It is providing a majority of forces for the Alliance's new Iraq mission, European Allies lead NATO's 40,000-strong Response force, they are responsible for 85 per cent of the Kosovo Mission in the Balkans and, at the most recent summit, Allies agreed a Readiness Initiative – within the next 18 months, to have 30 mechanised battalions, 30 combat vessels and 30 air squadrons ready to use in 30 days.

Alongside the US, the UK has also been pressing for the Alliance to do more to pay its way. We are now seeing the results. Last year saw NATO's biggest spending increase in 25 years. Since making the Defence Investment Pledge at the 2014 Wales Summit, Allies have spent \$87Bn more on defence. In just two years' time that number will increase to at least \$150bn. Four years ago only three allies spent 2 per cent of their GDP on defence, but by the end of this year eight will meet that target. And increasingly we're seeing more partners pull their weight realising they've got to spend more because of the increasing threats the world face.

They're investing in the capabilities essential and relevant to modern warfare, making sure they have the best equipment and the best technology.

So the UK is ready, we are willing, but what makes us reliable partners for the long-term is the fact we are able able to act now and in the far future thanks to our world class defence technology and industrial base. Some mistakenly believe that only America can develop cutting edge technologies or capabilities. That has never been, and will never be the case. The UK has always brought something special to the table, from the perilous days of the Second World War when an unassuming British scientist named Henry Tizard flew to the US taking with him a black box containing the secrets of airborne radar and the turbo jet.

And from then right up until today the UK is the biggest offshore supplier to the US military. With the skills to meet a host of your requirements, from avionics and vehicle communication, to military bridging and CBRN. That's why sixty years on from the signing of our Mutual Defence Agreement we continue to co-operate on nuclear technology. There can surely be no greater sign of trust than our willingness to work together on a common missile compartment for our Dreadnought submarines and your US Columbia class submarines.

And that's why the UK is a Tier One partner on F-35, one of the biggest equipment programmes of them all, with the UK producing 15 per cent of every aircraft built, bringing unique British-made capabilities into the development of that stealth fighter.

Next month, with the arrival of our new 65,000-tonne aircraft carrier HMS Queen Elizabeth to the East Coast we take another step towards that momentous

day in 2021 when US Marine Corps embark a squadron of F35B alongside our own and for the first time we watch a fifth-generation aircraft fly from the world's first fifth-generation Carrier.

In other words, a vibrant UK defence industry, spurring healthy competition, this is very much in our shared interests. Why reinvent the wheel when you can buy from a trusted partner? It's a two-way street; you invest in us and we invest in you.

Today we're procuring more than 50 types of defence equipment from the US, including: P8 maritime patrol aircraft to Apache attack helicopters to the Reaper drones, all the while UK industry is creating US jobs.

UK Defence companies employ more than 56,000 staff in the United States, with UK businesses employing more than 1,000,000 US employees. We are helping fund programmes collectively supporting the livelihoods of 160,000 Americans. Unsurprisingly, the UK is one of only a handful of trusted partners to be included within the National Technology and Industrial base initiative, which is looking at sharing ideas, achieving better value for money, and making global supply chains more resilient so we can sustain our military advantage in the future. We must take maximum advantage of this to create the jobs and prosperity that both the UK and US needs.

But the UK also combines world class capability with strategic long-term ambition. This year our world-famous RAF celebrates its 100th birthday. Far from dwelling on the glory years of the Spitfire fighter and Lancaster bomber, we've unveiled a new Combat Air Strategy to build the next generation of Tempest fighters. No wonder today our great nations together continue pushing the boundaries of innovation; working on insect-like UAVs, on robots that can brave the last mile of the battlefield, on offensive cyber tools to deter, disrupt and constrain malicious activity.

In May it was my privilege to host a meeting between US and UK innovation experts designed to strengthen our co-operation still further. We are now running a UK/US-funded competition seeking innovative technologies ...to destroy chemical and biological munitions, IEDs and bulk agents in challenging environments. And we are investigating new ways to transform the famously convoluted acquisition process, leaping the "valley of death" between research and procurement, rapidly developing novel technologies and state-of-the-art software and developing a cutting edge Chemical Weapons Defence Centre.

So the United Kingdom is ready, willing and able to act when necessary and our Modernising Defence Programme will make sure you can continue to rely on us far into the future. It sets out our vision for dealing with the complex challenges of the 21st century, it will give us a lethal fighting force matching the pace at which our adversaries can now move in every domain from nuclear and conventional to hybrid threats, while strengthening our resilience in an information age to achieve what we're calling 'information advantage'

It will make sure international co-operation is built into our DNA, deepening

our relationships across the globe and seeing how we can further rebalance our global posture to be ready and willing to fight in Mainland Europe, in the Middle or in the Far East.

And our programme will transform our defence business, speeding up our processes and bridging the gap between the emergence and adoption of new technologies. The next phase is all about the delivery, but we will continue seeking out the views of our close Pentagon colleagues and the brilliant brains in this room to shape and refine our plans.

So we may be entering a more unpredictable and uncertain age, but I am profoundly optimistic about our future. The UK remains a great power, a country with one of the world's biggest economies, a creative powerhouse, a force for good and we continue having one of the most credible Armed Forces anywhere on the planet. A force that will continue using its power – hard and soft – in concert with our greatest ally, the United States. We will always be the most natural of partners together.

Thirty years ago Ronald Reagan gave a great speech to the Annual Meeting of the Atlantic Council. He spoke of his hopes of a rapprochement between East and West. He spoke of being for freedom and democracy “without hesitation or apology”.

And he quotes the words of that great Anglo-American Winston Churchill: “Where we are able to stand together and work together for righteous causes, we shall always be thankful, and the world will always be free.”

So, let us seize this moment to strengthen our transatlantic ties. In the face of an ever greater unpredictability, let us show our certainty in being ready, willing, and able to act as that great bastion of international peace and prosperity. And let us do everything in our power to make sure those great Anglo-American values prevail, for our values of liberty, justice and democracy that underpin the Magna Carta and your constitution. They represent more than just the soul of our nations, they are the cornerstone of the Western world

But please never underestimate my nation, as we have changed the World time and time and time again and we will change the world in the future. For we are a nation when we realise it is in our interest or when it is right we as a nation always act.