

Stuart Lyle: international knowledge exchange on urban warfare

The Defence Science and Technology Laboratory (Dstl) has world-renowned expertise in our specialist areas of defence science and technology. Our staff travel abroad to learn from allies such as the United States, and to share our research on an international stage.

In July 2022 Stuart Lyle, principal analyst, travelled to Los Angeles to attend and help deliver the world's only urban operations planners course, as a guest of the U.S. National Guard.

It's 0800 and in front of me is a room full of military personnel from across six nations and ranks ranging from Sergeant to Brigadier General. I had flown for nearly 12 hours, across eight time zones the day before. To add a final kicker, I was still recovering from a bout of COVID-19... Not the ideal context for presenting to an international military audience, both in the room and virtual, but that's where I was, so... best to make the best of it.

The HQ building of the 40th Infantry Division at Los Alamitos, Los Angeles. (Photo credit: Stuart Lyle)

I found myself in Los Angeles in early July as a guest of the U.S. Army's 40th Infantry Division (ID), an element of the U.S. National Guard. The 40th ID is blazing a trail to establish the U.S. Army's (and the world's) only Urban Operations Planners Course to prepare divisional-level staff for the complexity of planning and coordinating urban warfare, specifically in large-scale combat operations, or LSCO (pronounced Lis-Co in U.S. military parlance). There was a proof-of-concept course in 2021, but this was the first established course.

In December 2021 I helped run a NATO Urban training course and, in the audience was Brigadier General Rob Wooldridge, Deputy Commanding General of the 40th ID and the driving force behind the creation of this course. Following the NATO event he invited me to come out and be part of the teaching team for their course and I leapt at the chance to be a part of it.

The course was seven consecutive days long with roughly ten hours of instruction each day. While this could easily have been the proverbial "death-by-PowerPoint" that we've all experienced before, the schedule of instruction and calibre of presenters (myself

included, I hope) ensured this was not the case.

The course was broken down into two distinct phases, best described as; 1. Admiring the Problem and 2. Overcoming the Problem.

Admiring the problem" focused on providing the context for why urban operations are so different from operations in other environments, and exploring why they can be so complicated. This is where I came in. My subject was the global trends within urbanisation and their likely impact on military operations. This covered the physical environment, demographic shifts, alternative governance and others. It was a condensed version of the [Future Cities study](#) that I led, with the intent to set the scene for why military planners should invest more time into thinking about and preparing for urban operations.

Other topics included subterranean operations, protection of civilians, Civil Affairs operations and employment and coordination of Joint Fires into urban terrain. These were highly complex subjects in their own right, but the instructors did a superb job keeping them accessible and reinforcing the relevancy for higher-formation planners. There were also multiple historical case studies explored throughout to provide tangible context for the lessons being taught. Another fascinating area was the exploration of how different nations approach the same challenges. We had presentations on NATO urban doctrine (past and present), individual nations' urban doctrine and urban operations from our adversaries' perspectives too.

The highlight of the course was, undoubtedly, the third day. It was going to be the longest, the hottest and, hands down, the most fun. We were going to visit the U.S. Army's largest urban training site, known as the City of Razish, out in the Mojave Desert. A complex of over 700 buildings of varying sizes and home to a dedicated opposing force (OPFOR) whose job is to test visiting formations to their limits. But the day wasn't going to be as simple as just a visit.

We arrived at the base at 0600 to receive final briefings for the rest of the day before making our way to the Flight Operations area. There we were divided into our pre-arranged Chalks (groups) and introduced to our transportation methods and crews. I had never been in a UH60 Blackhawk helicopter before, but this was going to be more than just a familiarisation flight or a simple air movement. As a Chalk Lead, I was tasked with running an Urban Terrain Zone appreciation lessons while flying out over LA towards the desert further inland.

Just after take-off and about to begin my UTZ training serial. Definitely the most unusual presentation/teaching experience I've had so far. (Photo credit:

Stuart Lyle)

Cities are divided into general urban terrain zones (UTZs) which are familiar to us all, e.g. low-density residential, business centre, light industrial, etc. Each of these have different characteristics in terms of their physical construction, population, diurnal trends and other things which may influence military operations in various ways. The Blackhawks flew us out of LA on a route that overflowed as many different UTZs as possible and it was my job to impart as much pertinent information as I could and lead discussions throughout the flight.

Not my usual commute. Transport inbound for the return flight. (Photo credit: Stuart Lyle)

When we got to Razish the temperature was already approaching 40°C with the landscape around Razish looking like a moonscape. We were ushered into "the Embassy" where we met the 1* commander who discussed his personal experience of urban combat as a tank company commander in Iraq and how that shaped his understanding of urban operations at higher formations. We were then given a guided tour around the training facility, getting to meet many of the specialist teams who make up the OPFOR and finding out about their experiences employing specialist areas like Engineering, drone/counter-drone capabilities and Fires in the urban environment to really push the visiting formations.

On completion, we climbed back aboard our Blackhawks and flew back over LA, following a different route to continue the UTZ lessons. This flight was particularly interesting as we flew over some of the critical infrastructure which has not only local, but international significance as economic and transportation hubs; Los Angeles International Airport (LAX) and the port of Los Angeles. We were able to see the network of connecting infrastructure that only a bird's eye view can provide and also see how some of the topics discussed so far on the course manifest themselves in reality.

Flying over the Port of LA, the busiest container port in North America and one of the 10 busiest globally. Over 9 million containers are processed each year into and out of the US through this node. (Photo credit: Stuart Lyle)

Observing the low-level sprawl of wider LA. The city is one of only two megacities (population over 10 million) in the entire United States. (Photo credit: Stuart Lyle)

As an avid student of urban operations, I have lost count of the amount of times I have watched the movie Blackhawk Down, so getting to fly over the rooftops and roadways of the city was as thrilling as it was intellectually fascinating.

The course continued for several more days and I delivered a session on the use of operational and historical analysis techniques to support better understanding of urban operations. I took some of the key lessons drawn from Dstl research and applied them to case studies for context. This was a great discussion (and debate) about some of the misconceptions surrounding urban combat. It also got the students to think more about the role data can play as well as the need to interrogate data to understand where and how best to apply it, something we strive to do here at Dstl.

Staff Sergeant vs. Brigadier General during the urban wargame. (Photo credit: Stuart Lyle)

The course culminated in style with the students getting to play a bespoke divisional-level urban wargame designed by wargame designer Brian Train specifically for this course. The students broke into multiple competing teams and got to put their newly acquired knowledge to the test against one another. I got to assist with introducing the game and facilitating the games, which was a very rewarding experience. We use wargames extensively to support our analytical work at Dstl, with educating the military players being a side benefit. It was great to see it being used solely for education and seeing the students not only put their lessons to good use, but also enjoy the process.

The 40th ID's Urban Operations Planners Course is a unique course, not just in the U.S. military, but anywhere. There is no equivalent course in the British military and there were a great many lessons that I took away from it, even having studied this particular subject for over seven years. This is partly due to the scale and scope of urban operations as well as the unique challenges they pose for military activities, hence the need for the course. However, it was also due to the calibre of the leadership and staff of the 40th ID as well as the incredible instructors they managed to gather to support it.

I got to spend time with long-time urban operations friends and colleagues, like Col. John Spencer of the Modern War Institute and Maj. Jayson Geroux of the Canadian Armed Forces. I also got to make and know some new ones like BG Rob Wooldridge, Sahr Muhammedally from the Center for Civilians in Conflict (CIVIC) and Dr Jacob Stoil of the School of Advanced Military Studies. It was an honour to be counted amongst them.

The Urban Operations Planners Course, 2022 (Photo credit: 40th Infantry Division)

The course was a huge success and the dates are already set for next year's with the aim being to make this a permanent course available to U.S. and international soldiers to attend. I am grateful for having been offered the opportunity to not only attend, but contribute to this endeavour and represent Dstl and our work.

More information on this unique course:

[Government announces Energy Price Guarantee for families and businesses while urgently taking action to reform broken energy market](#)

Energy Price Guarantee

From 1st October, a new 'Energy Price Guarantee' will mean a typical UK household will now pay up to an average £2,500 a year on their energy bill for the next two years. This is automatic and applies to all households.

This will save the average household at least £1,000 a year based on current energy prices from October and is in addition to the £400 energy bills discount for all households.

This applies to all households in Great Britain, with the same level of support made available to households in Northern Ireland.

See what [Help for Households is available](#)

- Typical household will save an average of £1,000 a year on their energy bills, under a new two-year Energy Price Guarantee
- Businesses and public sector organisations will see equivalent support over the winter
- New plans will tackle the root causes of problems in the energy market by boosting domestic energy supply
- Package will boost growth and curb inflation rises

Prime Minister Liz Truss sets out decisive action to support people and

businesses with their energy bills and tackle the root causes of the issues in the UK energy market through increased supply – ensuring the country is not left in the same position again.

Under new plans, a typical UK household will pay no more than £2,500 a year on their energy bill for the next two years from 1st October, through a new 'Energy Price Guarantee' which limits the price suppliers can charge customers for units of gas. This takes account of temporarily removing green levies, worth around £150, from household bills. The guarantee will supersede the existing energy price cap.

This will save the average household £1,000 a year based on current energy prices from October. It comes in addition to the announced £400 energy bills discount for all households and together they will bring costs close to where the energy price cap stands today.

The new guarantee will apply to households in Great Britain, with the same level of support made available to households in Northern Ireland.

Those households who do not pay direct for mains gas and electricity – such as those living in park homes or on heat networks – will be no worse off and receive support through a new fund.

Today's action will deliver substantial benefits to the economy – boosting growth and curbing inflation by 4-5 points, reducing the cost of servicing the national debt.

The historic intervention comes after a failure to invest in home-grown energy and drive reform in the energy market. Putin's weaponisation of energy supply has exposed the UK's vulnerability to the volatility of global markets, coupled with a regulatory framework which is no longer fit for purpose, which is driving up bills and holding back economic growth.

Prime Minister Liz Truss said:

Decades of short-term thinking on energy has failed to focus enough on securing supply – with Russia's war in Ukraine exposing the flaws in our energy security and driving bills higher. I'm ending this once and for all.

I'm acting immediately so people and businesses are supported over the next two years, with a new Energy Price Guarantee, and tackling the root cause of the issues by boosting domestic energy supply.

Extraordinary challenges call for extraordinary measures, ensuring that the United Kingdom is never in this situation again.

As businesses have not benefited from an energy price cap and are not always able to fix their energy price through fixed deals, many are reporting projected increases in energy costs of more than 500%.

A new six-month scheme for businesses and other non-domestic energy users (including charities and public sector organisations like schools) will offer equivalent support as is being provided for consumers. This will protect them from soaring energy costs and provide them with the certainty they need to plan their business.

After this initial six-month scheme, the Government will provide ongoing, focused support for vulnerable industries. There will be a review in 3 months' time to consider where this should be targeted to make sure those most in need get support.

The Government will provide energy suppliers with the difference between this new lower price, and what energy retailers would charge their customers were this not in place. Schemes previously funded by green levies will also continue to be funded by the Government during this two year period to ensure the UK's investment in home-grown, secure renewable technologies continues.

Whilst the intervention will be funded by the Government, action is being taken to significantly reduce the cost over time, including:

- A new Energy Supply Taskforce – led by Madelaine McTernan who headed up the UK's successful Vaccine Taskforce – has begun negotiations with domestic and international suppliers to agree long-term contracts that reduce the price they charge for energy and increase the security of its supply. The Taskforce and Department for Business, Energy and Industrial Strategy will negotiate with renewable producers to reduce the prices they charge as well.
- HM Treasury are announcing a joint scheme, working with the Bank of England, to address the extraordinary liquidity requirements faced by energy firms operating in UK wholesale gas and electricity markets. The Energy Markets Financing Scheme will enable stability to both energy and financial markets, and the economy, and reduce the eventual cost for businesses and consumers. The scheme will provide short term financial support and will be designed to be used as a last resort.

Learning from the mistakes of the past, the Government is taking action to accelerate domestic energy supply, increase our energy resilience and achieve our ambition to make the UK an energy exporter by 2040:

- Launch a new oil and gas licensing round as early as next week, expected to lead to over 100 new licences.
- Lift the moratorium on UK shale gas production. This will enable developers to seek planning permission where there is local support, which could get gas flowing in as soon as six months.
- Drive forward the acceleration of new sources of energy supply from North Sea oil and gas to clean energy like nuclear, wind and solar.
- Continue progressing up to 24GW of nuclear by 2050, with Great British Nuclear helping to set direction of getting new nuclear projects online in the UK.
- Undertake fundamental reforms to the structure and regulation of energy market through recommendations from a new review of the UK Energy Regulation.

- Launch a review to ensure we are meeting our Net Zero 2050 target in an economically-efficient way, given the altered economic landscape. Chaired by Chris Skidmore MP and reporting by the end of this year, it will ensure delivering the target is not placing undue burdens on businesses or consumers.

Chancellor Kwasi Kwarteng said:

Millions of families and businesses across the country can now breathe a massive sigh of relief, safe in the knowledge that the government is standing behind them this winter and the next.

The price of inaction would have been far greater than the cost of this intervention. Not only can we provide urgent support now, but the beauty of our scheme is that it will also bring down inflation, helping tackle wider cost of living pressures.

Business and Energy Secretary Jacob Rees-Mogg said:

The global headwinds caused by Russia's war in Ukraine, Putin's weaponisation of energy and the aftermath of Covid, have exposed the need to strengthen Britain's energy security for the good of the nation and the millions of households and businesses who will struggle to meet the cost of bills this winter.

The action we are taking today will reduce that worrying burden in the short term and will invigorate the long term reforms we need to complete, to resolve the underlying problems in the energy market and ensure the British people enjoy affordable and plentiful energy in future.

[Global conference set to tackle urgent challenges facing LGBT people around the world](#)

- UK and Argentina will co-chair the 2022 Equal Rights Coalition conference from Buenos Aires today
- 42 member states and more than 140 civil society organisations will discuss the need to uphold human rights for LGBT persons
- pre-conference report highlights the growing global "backlash" against LGBT rights and freedoms

The Equal Rights Coalition (ERC) will meet in Buenos Aires today (Thursday 8 September) to discuss joint action on urgent issues that LGBT people face globally.

The gathering comes at a pivotal moment as ERC member states have identified a growing global threat to the freedoms and human rights of LGBT persons. It will also provide the opportunity for governments and NGOs to share best practice.

The current ERC co-chairs, Argentina and the UK, will also present a report tracking progress of the [ERC's Strategy](#) and [Five-Year Implementation Plan](#), published in July 2021.

Germany and Mexico will take up their roles as new ERC co-chairs during the closing ceremony of the conference on Friday 9 September. The ERC will commit to strengthening engagement from ERC members and empowering greater representation from the Global South. Germany and Mexico will also be joined by civil society co-chairs and supported by a new Administrative Unit, funded by member states.

UK Prime Minister's [Special Envoy for LGBT Rights, Nick Herbert](#) (Lord Herbert of South Downs) said:

The UK stands for freedom – and that means freedom for all. We're proud of the Equal Rights Coalition's work to defend these freedoms but more needs to be done, in every part of the world, to achieve our aims.

We look forward to supporting Germany and Mexico in their role as the next ERC co-chairs. Together we can send the clear message that LGBT rights are human rights.

Argentina's Special Representative Sexual Orientation and Gender Identity, Alba Rueda said:

Argentina is a strong country in human rights and diversity. This is the result of the social and political movement of lesbians, gays, travestis, transgender people, non-binaries, and all activisms that break away from the patriarchal and binary system.

We value the ERC in this same way: as a space in which social organisations can express themselves so that states can listen to them and commit to turning their demands into public policies.

This year's ERC Conference follows previous convenings in Montevideo in 2016, Vancouver in 2018, and a virtual event in 2021. Due to the COVID-19 Pandemic, the UK and Argentina have held an extended tenure as co-chairs since 2019.

The conference will focus on 4 key areas, including:

- developing inclusive national laws and policies
- advancing the [Sustainable Development Goals](#)
- supporting civil society responses to the global anti-gender movement
- mapping the progress towards decriminalisation around the world

Civil society organisations play a vital role in the Equal Rights Coalition. The current civil society co-chairs – Asociación Familias Diversas Argentina, Kaleidoscope Trust, and Stonewall – support more than 140 groups from across the world. The UK, Argentina, Mexico, the USA, Canada, The Netherlands and Belgium have funded some of the in-person participation at this year’s conference for civil society organisations and human rights defenders from the Global South.

In July 2021, the ERC agreed a [Strategic Plan](#) and [Five-Year Implementation Plan](#) to help guide and energise the group’s work and ensure the organisation can live up to its huge potential. The pre-conference report highlighted this prioritisation process as a “major achievement” of Argentina and the UK’s tenure as co-chairs.

- the ERC will meet in Buenos Aires from 8 to 9 September
- for delegates unable to attend in person, participants will also be able to engage virtually through a hybrid meeting
- journalists wishing to cover elements of the conference either in person or virtually, can [apply for accreditation](#)

[Catch! Portsmouth fisherman netted without licence](#)

An angler from Portsmouth who fished illegally has been ordered by a court to pay out nearly 100 times the amount of money than if he’d just bought a rod licence.

Dawid Rudzki was caught fishing without the licence in May last year at Sinah Lake, on Hayling Island.

A bailiff carrying out licence checks for Portsmouth and District Angling Society, which uses the lake, saw society member Rudzki didn’t have permission to fish with a rod. The bailiff reported the matter to the Environment Agency, which successfully pursued Rudzki through the courts.

Rudzki denied the charge, but the 47-year-old was fined £250 by magistrates. He could have bought a single-day rod licence to fish for just £6. Instead, his bill for not doing so, including costs, was almost £600.

Kye Jerrom, a senior enforcement officer with the Environment Agency, said:

The eagle-eyed bailiff at Sinah Lake was instrumental in bringing this case to court. Making sure anglers followed club rules ended with Rudzki's conviction. An excellent example of a fishing club official making sure members pay their way, vital to helping the Environment Agency protect fisheries.

Around £25 million is raised annually through fishing licences, paying for stocking waters with half-a-million fish, and improving rivers and fisheries for anglers and the wider environment. It's quick, easy and cheap to get a licence: online, by phone and at the Post Office – search 'fishing licence' on gov.uk.

Our fisheries enforcement officers carry out regular checks on private lakes, rivers, ponds and canals – anywhere that can be fished. Information on suspected illegal fishing can be called into our incident hotline: 0800 80 70 60.

Anglers aged 13 or over, fishing on a river, canal or still water need a licence. An annual licence starts at £30. Concessions are available, and junior licences are free for 13-to-16-year-olds.

The Environment Agency carries out enforcement work all-year-round, supported by police forces and the Angling Trust, as well as fishing clubs and societies.

Dawid Rudzki, of Gladys Road, in Portsmouth, pleaded not guilty to fishing without a rod licence at Sinah Lake, on Hayling Island, on 18 May 2021, contrary to section 27 (1) (a) of the Salmon and Freshwater Fisheries Act 1975.

He was convicted in absentia at Portsmouth magistrates' court on 12 July 2022, fined £250, and ordered to pay costs of £300 and a victim surcharge of £34.

[HM Treasury and Bank of England to Launch the Energy Markets Financing Scheme \(EMFS\)](#)

News story

HM Treasury, working with the Bank of England, will launch the Energy Markets Financing Scheme (EMFS).



HM Treasury are today announcing a joint scheme, working with the Bank of England, to address the extraordinary liquidity requirements faced by energy firms operating in UK wholesale gas and/or electricity markets. This will provide resilience to both energy and financial markets, and the economy, and reduce the eventual cost for businesses and consumers.

Prices have recently been high and volatile. As a result, large amounts of collateral are required to enter into contracts firms use to effectively insure themselves from price fluctuations, or otherwise firms must accept large credit exposures to their counterparties.

The EMFS will enable short term financial support to wholesale firms. Further details of the scheme will be announced in due course. The scheme will be designed to be used as a last resort and will be structured and priced accordingly. It will be open to firms that can prove that they are otherwise in sound financial health, have a UK presence, and play a significant role in UK electricity or gas markets.

There will be a rigorous assessment process, and firms will also have to agree to a wider set of conditions before accessing the scheme. The opening date will be published by the end of October or sooner

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