



# PRO PATRIA

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**Launch of Defence UK  
- The Strategic Backdrop**

**Winston Churchill's  
Living Sense of History**

**'Phasors to Stun':  
Dazzle, Blind or Destroy**

**What is the Army Industrial  
Engagement Framework?**

**A Tri-Service Approach to  
UK Maritime/Air Strategy**





**Defence UK** was formed in 2007 as the United Kingdom National Defence Association (UKNDA) to make the case for increased investment in defence, at a time when the UK's armed forces – then engaged in two major conflicts – were chronically underfunded and overstretched. Led by Founder-CEO Cdr John Muxworthy RN, a veteran of the 1982 Falklands conflict, and founder-President Winston S. Churchill, grandson of Britain's wartime leader, the UKNDA set about building a nationwide association to provide an effective and independent voice for the nation's military, veterans and the wider defence community. By holding conferences and public events, publishing a series of reports and commentaries, lobbying MPs, writing articles and broadcasting, the UKNDA has kept up a constant pressure on those in power, opposing defence cuts and highlighting threats to national security.

Now, in 2019, the UK's forces are no longer committed to extended military operations in Afghanistan and Iraq, but there are still numerous threats to national and international security, from a range of terrorist networks and rogue states, leaving our borders, shipping, energy supply and trade routes all at risk. Despite the growing threats, there are glaring holes in our nation's military capabilities, and our armed services are seriously depleted by ill-conceived cuts to the defence budget, by successive governments, leaving the UK increasingly vulnerable in a dangerous world. Defence funding has been a victim of political short-termism and the austerity agenda. There is an urgent need to bring renewed pressure to bear on the UK government and parliament, to significantly boost resourcing for the Royal Navy, Army and Royal Air Force. In particular, we argue for an increase in the defence budget to *at least* 3% of UK GDP.

Our association, under its new name **Defence UK**, will continue to campaign vigorously on behalf of Britain's armed forces, providing serving and retired military personnel with an effective voice and seeking to make the case for strong national defence and a properly-resourced military. Our new journal, *PRO PATRIA*, has been established to stimulate debate and discussion on all matters of UK defence and security.

**Andrew Smith** FCIJ, **Editor** *PRO PATRIA*

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Front Cover Image: Demonstration trial of MBDA’s Land Ceptor air defence system for the British Army.

## Launch of Defence UK – The Strategic Backdrop

### By Admiral Lord West of Spithead



The world is more chaotic today than it has been for decades and every indication is that this chaos will get worse. The global consensus and agreed world order set up primarily by the English-speaking nations in the aftermath of World War 2 has served the world well for some 70 years but is now under attack and being undermined. We seem surrounded by autocratic leaders – Putin, Xi Jinping, Kim Jong-un and others. They are admired in some quarters and are putting global stability at risk.

The collapse of the Soviet Union and the end of the Cold War have not marked ‘the end of history’. The general view that the risk of state-on-state war had gone is clearly premature. The reality is that there is a rise in the likelihood of state-on-state conflict and significantly the sub threshold and grey zone activity is becoming the norm. Indeed, are we at peace with Russia?

Looking at the Euro-Atlantic zone, Putin has behaved with dangerous unpredictability. Scarred by the collapse of the Soviet Union and seeming humiliation of Russia, he is a revisionist and believes in spheres of influence and hard power. His nation, a superpower in nuclear terms, is massively investing in military capability, yet with minimal financial clout that depends on oil, gas and raw materials. Russia’s economy is on a war footing and at some stage something has to give. Putin’s actions in Syria are in part because he wants Russia to be seen as a global power. His actions in Crimea, which were wrong if understandable, have been made far worse by his actions in the Eastern Ukraine. He seems to care little for international norms, issuing threats against the Baltic states and cyber-attacks against NATO nations. There are tensions over the Arctic seabed and polar shipping routes, aggressive intrusion into NATO air space and near misses.

Russian nuclear submarines are threatening our SSBNs. Operating at higher levels than the end of the Cold War. Russia has interfered in democratic elections in a number of NATO countries, but the most extraordinary action was his poisoning of civilians with nerve agents on the streets of our country. Be in no doubt, it was Russian agents who did it and Putin knew. His loose talk of the use of nuclear weapons is a particular concern. I believe we are closer to the use of a nuclear weapon by miscalculation than we have been at any time for decades, and the collapse of the network nuclear arms limitation treaties is extremely worrying. Putin understands hard power, we must stand up to him but can only do that with clear military capability.

On the other side of the world, China is of particular concern. The US and the West are schizophrenic about this giant nation. Is it a wonderful trading opportunity and engine for growth or more malign than we have assessed? There is no doubt that the regime is unpleasant and practices human rights abuse on a massive scale.

China is beginning to flex its muscles and believes it will inevitably become the world's pre-eminent power. Their leadership thinks strategically and has set goals in technology, financial and geographic terms. Having stolen IP from the west on an industrial scale for decades they have now caught up and overtaken us in some areas. Chinese firms have invested heavily in the West, Huawei being a case in point. They are building our civil nuclear reactors and heavily involved in other sensitive areas. They are filling our universities with their students particularly on courses dealing with AI, quantum engineering and other cutting-edge technologies.

The Chinese 'one belt one road' initiative is exploiting a number of countries and is clearly not solely economic; it has a strategic intent.

When one takes into account its vast increase in military spending, its threats to freedom of navigation in the South China Sea, so important for our trade, the Senkaku Islands stand-off with Japan and the re-emergence of the Taiwan issue, there is cause for concern. Why is China building a naval base on Vanuatu?

In Korea, Kim Jong-Un has developed a functioning ballistic nuclear-tipped missile and more recently a shorter-range tactical weapon – although the meetings with Trump have eased tension.

Afghanistan: no one can win militarily. The Americans clearly wish to disengage and were on the edge of an agreement. The Taliban is growing in strength but are not Al Qaeda. They are nasty but within their own borders. We must make it clear to them that allowing extremists to have safe haven and to train there before carrying out attacks around the world will bring retribution. Stability in nuclear-armed Pakistan is also still a cause for concern. Indian actions in Kashmir have led to a huge increase in tension. Nuclear armed, the result of a war would be a regional and global catastrophe.

Trump's abrogation of JCPOA – the nuclear deal with Iran, to pause Iran's efforts to build a nuclear weapon in exchange for a lifting of sanctions – has caused a dramatic rise in tension in the region. The Iranians want other signatories (UK, France, Germany, Russia and China) to get the US to agree some sort of compromise. The US sanctions are really having an impact and, there too, something is going to have to give. Actions in the straits of Hormuz by Iran are designed to put more pressure on the international community.

Iran is a supporter of terrorism in the region, a sworn enemy of Israel and is fighting proxy wars in Syria and Yemen. Some people in Israel and the USA believe that Iran is such a threat to the region that a war led by the US is needed to lance the boil. Such action would be catastrophic.

Russian involvement in Syria has ensured Assad's survival and inevitable victory. Having said that, Assad has effectively destroyed vast swathes of his own country. And the flood of refugees into Lebanon and Jordan is putting huge pressures on those countries too. There is a considerable risk of them imploding. Turkey has also had to accommodate a large number of refugees but is rather more robust, notwithstanding the issue over the Kurds. Tensions between Turkey, Russia and the US are extremely worrying and have implications for NATO.

The instability, lack of opportunities and poverty in Sub-Saharan Africa, exacerbated by the turmoil and lack of government in Libya, has led to the flood of migrants across

the Mediterranean with consequent threat to stability and security of Europe at large. The massive flow of desperate people whether from war in the Middle East or escaping poverty is a real problem for Europe.

And, of course, there is all-pervasive cyber threat. This has already become a critical part of warfare and its importance will grow.

So, what does all this mean for the defence of the United Kingdom?

We are a permanent member of the UN Security Council, we have a global footprint, have 14 dependencies worldwide, run global shipping from London, are part of a number of key alliances that aid global security and are the fifth richest nation in the world.

The nuclear risk of Putin's action and other nuclear armed states make the maintenance and continuance of CASD essential. Consequently, we must ensure the security of the North Atlantic and need to invest in our ASW capability, SSNs, MPA, surface ships, helicopters and upgraded sonars. Plus remembering we are in an era of rapid technological change which our adversaries are exploiting. We need to embrace, match and utilise this pace of change whether UAVs, UUVs, space and new ISTAR techniques. The Global economy is increasingly shifting towards the East, and the UK needs military global reach whatever the outcome of Brexit. This points to the significance of delivering Carrier Strike – which requires delivery of the requisite number of F35s, Fleet Solid Support Ships and an increase in the number of Frigates.

In addition, by definition any military action taken at range from the UK is expeditionary and often necessitates an amphibious element. We need Royal Marines deployed forward and ready to respond: whether to deliver humanitarian support, link with our security partners across government or in their more traditional war-fighting role as the door-openers for heavier US and UK forces coming in behind.

As regards the Army, notwithstanding the immense value of Special Forces, special Reconnaissance regiment and the like in this era of sub threshold and grey zone activity, we need a fully manned and equipped deployable division rather than today's pretence. The shortage of army manpower needs to be resolved. In equipment terms, whilst ISTAR, cyber, drones, etc, are crucially important the provision of world beating tanks, heavy and light artillery and replacement of obsolete tracked and wheeled vehicles is critical.

The Royal Air Force has a shortage of fast jets and it is necessary to purchase sufficient F35s in a timely manner. Important ISTAR assets need to be purchased and rationalised. The build up of UAVs needs to continue. There remain concerns about the air transport and tanking fleet.

This is quite a large shopping list, but successive governments of all hues have squeezed defence, piling risk on risk for the security of our nation and people.

In the dangerous and chaotic world I have identified there is an urgent need to increase defence spending.

The relaunch of the UKNDA as 'Defence UK' – and the publication of this journal – will provide a forum to explain that need to the nation.

## Winston Churchill's Living Sense of History

By Professor Andrew Roberts



Winston Churchill's long and lonely campaign for British rearmament in the 1930s, especially after Adolf Hitler had come to power in Germany in January 1933, sprung in part from his certainty that history provided certain immutable lessons for the present, and that foremost among them was the importance of strong defences if one wants to preserve peace.

Beside my desk in my study at home hangs a framed letter from Aldous Huxley written from Deronda Drive in Los Angeles in November 1959, which states, 'That men do not learn very much from the lessons of history is the most important of the lessons that history has to teach us.' Churchill believed that it was not only possible to learn from the lessons of history but was urgently necessary.

More than anything except perhaps a soldier-statesman, Churchill thought of himself as an historian – moreover, he saw the roles of statesman and soldier as being highly dependent on having a deep knowledge of the past. He constantly saw his own life and career through the prism of history, and was all the greater statesman and person for it. As Enoch Powell said of Churchill, 'It was not so much the triumph of distant deductive reasoning as the long vista of historical and personal memory which, while others were still blind, revealed to him the nature and inevitable outcome of the resurgent German empire. He was a man who thought with his memory.'<sup>1</sup>

'I think it is extremely difficult for anyone not born into Churchill's world or time,' Sir Jack Plumb wrote in *The Dominion of the Past*, 'to realize what a dominance the past had over all of his thinking and action.'<sup>2</sup> Difficult, perhaps, but let us try. In Churchill's very first formal public speech, near Bath in 1897, he made reference to history, saying, 'There are not wanting those who say that in this Jubilee year our Empire has reached the height of its glory and power, and that now we shall begin to decline, as Babylon, Carthage, Rome declined. Do not believe these croakers but give the lie to their dismal croaking by showing by our actions that the vigour and vitality of our race is unimpaired.'

Churchill liked to compare the British Empire to that of Rome: it gave historical context to what he hoped Britons could achieve and induced pride in his audiences.

From his Bath speech onwards, references to History were a mainstay of his writing, thought and speeches, and to give a flavour of this I would like to throw a few buckets into the ocean that is Churchill's eight thousand pages of speeches and 5.2 million published words, and examine what we find about this ever-present phenomenon in his life and thought.

For Churchill did not just use history in his perorations like other politicians, in order to stiffen the sinews and summon up the blood, instead he employed it in body of his

argument, for he truly believed that his generation had a duty to continue Britain's work, which he saw in the classically Whiggish way of being at the forefront of human progress. Much of the pugnacity that served Britain so well in 1940 stemmed directly from this belief that the British Empire had an historical duty to fulfil, and his contemporaries would be betraying their forefathers if they stepped back from it. When the Chinese Government demanded the port of Wei-hei-wei to be returned to them in the early 1920s, for example, he asked the Cabinet rhetorically, 'Why should we melt down our moral capital collected by our forefathers to please a lot of pacifists? I would send a telegram beginning 'Nothing for nothing and precious little for twopence.'<sup>3</sup>

The school songs Churchill had learned at Harrow taught him that the essentials in history did not change, and he must strive like his predecessors had if he wanted greatness. In December 1906, thanking a Mr J.H. Anderson for sending him an account of Sir John Moore's campaign in the Iberian peninsula of 1808, he wrote of warfare, 'It is all one story in spite of every change in weapons; from the sheep under whose bellies Ulysses escaped from the cave of the Cyclops, to the oxen with which De Wet broke the blockhouse line in the Orange Free State.'<sup>4</sup> (The latter was a reference to the ambush at Waterval Drift during the Boer War.)

He was perfectly willing to extend glorious historical references to the British Empire's enemies too. In August 1909 the Indian revolutionary Madan Lal Dhingra was hanged at Pentonville Prison in London for the assassination of the British civil servant Sir Curzon Wylie. 'The only lesson required in India at present is to learn how to die,' were Dhingra's last words, 'and the only way to teach it is by dying ourselves. Therefore I die, and glory in my martyrdom.'<sup>5</sup> Churchill told the diarist Wilfrid Scawen Blunt that Dhingra would be remembered in two thousand years' time, 'as we remember Regulus and Caractacus and Plutarch's heroes', and he quoted Dhingra's last words as 'the finest ever made in the name of patriotism.'<sup>6</sup> The problem today, of course, is that because they are not taught in schools, we ourselves do not remember Regulus and Caractacus and Plutarch's heroes, as illustrated by the recent survey in which 30% of British schoolchildren people polled believed that the American War of Independence had been won by Denzel Washington.

Churchill's famous row with King George V over the naming of battleships that dragged on from 1911 to 1913 was essentially about history. Although the King claimed not to have wanted Oliver Cromwell's name immortalized because his brutal repression of Catholic Ireland in the mid-seventeenth century might inflame nationalism there, in fact it was probably Cromwell's chopping off of a king's head to which he really took exception. Yet Churchill admired Cromwell as the founder of the powers of parliament, a friend of the Jews, and the rebuilder of the British Navy. Even Churchill's promotion of the name of William Pitt for a battleship in August 1913 prompted the King to complain that 'Pitt' was 'neither euphonious nor dignified ... There is moreover always the danger of the men giving the ship nicknames of ill-conditioned words rhyming with it.'<sup>7</sup> His Majesty had been a sailor and wasn't above the odd scatological reference. He had what one might call a Hanoverian sense of humour. He further feared HMS *Ark Royal* might get nicknamed Noah's Ark.

Churchill argued that *Pitt* and *Ark Royal* had fine precedents ‘around which historical associations of the greatest moment are gathered.’ Churchill returned to the name Pitt, which ‘recalls the two famous statesmen under whom the most martial exploits of our race have been achieved’<sup>8</sup> and said ‘The *Ark Royal* ... was the flagship at the defeat of the Armada, revives the glories of the Elizabethan period as the *Warspite* did in the programme of 1912-13.’ *Ark Royal* was launched in 1914; *Pitt* never was, and Cromwell had to wait until 1944 when a tank was named after him.



When in March 1911 Churchill sought to head off the full rigours of Irish Home Rule, and presented the Cabinet with a plan for the federal devolution of Britain into seven regions, he delved into history to describe it as the ‘Heptarchy’, the name originally given to the seven kingdoms of Anglo-Saxon England from the 5th to the 9th centuries. It never came about, but the point about Churchill’s instinctive reach towards history to justify present policy was not that he was right or that it always worked – it often didn’t – but that that was where he looked first, feeling himself on much stronger ground than his contemporaries who made use of arguments based on economics, culture, religion and so on.

On the day that World War One broke out, Tuesday, 4 August 1914, Churchill exclaimed to the prime minister’s wife Margot Asquith, ‘My God! This, this is living History. Everything we are doing and saying is thrilling – it will be read by a thousand generations, think of that!’ The War gave Churchill many opportunities for calling history in aid, as on 23 May 1916 when he said in a speech in support of compulsory conscription, ‘If the Germans are to be beaten decisively, they will be beaten like Napoleon was beaten and like the Confederates were beaten – that is to say, by being opposed by superior numbers along fronts so extensive that they cannot maintain them or replace the losses incurred along them.’<sup>9</sup> It took more than two years of slaughter before his analogy was proved correct.

During the hard-fought discussions over intervention in the Russian Civil War, Churchill similarly had frequent recourse to historical parallels, as on 29 July 1919 when, in the face of David Lloyd George’s demands that all British forces in Russia be evacuated, he said, ‘The whole episode was a very painful one, and, to go back into history, reminded him of our operations at Toulon and our desertion of the Catalans.’<sup>10</sup> The latter was a reference to a botched effort in 1813 to open a second front in eastern Spain during the Napoleonic Wars, but it is instructive that the knowledge of history was so deep in the Cabinet of a century ago that Churchill could reasonably assume that they would not only pick up the reference, but find it a telling one. If one mentioned the siege of Toulon or ‘our desertion of the Catalans’ to today’s Cabinet, there are literally only two members who would know what on earth you were talking about.

That same year – 1919 – at a lunch at the Savoy Hotel for John Alcock and Arthur Brown who had flown over the Atlantic for the first time, Churchill equated the two heroes to Christopher Columbus, saying, ‘We are in the presence of another event of something

like the same order as that stupendous event which revealed to Europe and Asia the boundless glories and possibilities of the new world across the Atlantic Ocean.’ The following year, in February 1920, during a defence debate, he tried to find an historical equivalent to the British Empire’s ability to maintain its authority over more than one-fifth of the world’s population with fewer than a quarter of a million British soldiers, many of whom were stationed in Aldershot rather than Bangalore. ‘To find a parallel’, he said, ‘you have to go back to the greatest period of the Roman Empire, to the age of the Antonines ... for so great and so wide a peace being sustained upon so slender an armed force.’<sup>11</sup>

The Empire could not but be a tremendous source of pride to Churchill and his generation, however much today we are told that it ought to have been a source of shame. Mongolians are allowed to feel pride in the exploits of Kubla and Genghis Khan; Zulus can legitimately glory in the name of Shaka Zulu; the Portuguese put up statues to Henry the Navigator, the French admire Napoleon, and the centre of the Italian capital is consecrated to the splendour of the Forum and Senate of Ancient Rome. Only one people on earth are taught from birth to despise and feel ashamed of their imperial moment in the sun, and they are the modern-day British.

Because, of course, today we know that the British Empire in India was evil and wrong, because we are taught that constantly in our schools and universities and on the BBC, but poor Winston Churchill, in his ignorance, could not know that Britain was viciously exploiting India and giving absolutely nothing back to her. Well, except I suppose for internal peace for the first time in Indian history, as well as railways, irrigation projects that increased land under cultivation by eight times, the political unity of the entire sub-continent for the first and only time in its history, mass education, newspapers, unprecedented amounts of international trade protected from piracy by the Royal Navy, standardized units of measurement and exchange, its first universities, well-funded roads, aqueducts, bridges, docks and other huge infrastructure projects, the abolition of *suttee* (the revolting practice of burning widows on funeral pyres) and of *thuggee* (the ritualized murder of travelers), instituting the only incorrupt Civil Service in the history of the sub-continent, the promotion of industrial development, unprecedented projects to fight disease, the English language as the first national tongue (allowing Indians to conduct a national conversation for the first time), telegraphic communications, and two centuries of protection from the Russians, French, Afghan, Afridi, Talib and other foreign threats, including later from Imperial Japan that killed 17% of the Philippines’ population during the Second World War. But apart from those – and more than doubling Indian life expectancy – what did the British Empire ever do for India?

‘How strange it is that the past is so little understood and so quickly forgotten,’ Churchill wrote to Katherine Asquith about his recently published book *The Aftermath* in April 1929. ‘We live in the most thoughtless of ages. Every day headlines and short views. I have tried to drag history up a little nearer to our own times in case it should be helpful as a guide in present difficulties.’<sup>12</sup> His Wilderness Years in the 1930s were largely spent writing history. ‘He had a passion for old traditions, a great sense of history,’ Harold Macmillan said in his panegyric in the Other Club when Churchill died. ‘I think perhaps his ten years out of office, when he was writing the life of his great ancestor, Marlborough, laid the basis for his greatness.’<sup>13</sup>

Once he had finished *Marlborough*, Churchill started work on another history book, his *History of the English-Speaking Peoples*. He was not writing these books merely for the pleasure of academic research – fun though that was – it was always with the motive that history would be, as he put it, ‘helpful as a guide in present difficulties’.

Days after Anthony Eden resigned as Foreign Secretary in February 1938, Churchill wrote to his friend Eddie Marsh sending him the proofs of the fourth volume of *Marlborough*, saying: ‘I hope will bring home to modern readers the life and drama of that great age. How like their forerunners the modern Tories are!’<sup>14</sup> Even though Churchill didn’t necessarily believe in the immortal soul, he did care greatly about what the future would make of the present. In his great anti-appeasement speech of 24 March 1938 he said: ‘Look back upon the last five years – since, that is to say, Germany began to rearm in earnest and openly to seek revenge. If we study the history of Rome and Carthage, we can understand what happened and why. It is not difficult to form an intelligent view about the three Punic Wars; but if mortal catastrophe should overtake the British Nation and the British Empire, historians a thousand years hence will still be baffled by the mystery of our affairs.’

During the Second World War, Churchill put his knowledge of the importance of the personal relations between Marlborough and Prince Eugen of Savoy to good use in his own relations with President Roosevelt. ‘Without this new fact at the allied headquarters,’ he had written of Marlborough’s great friendship with Eugen, ‘the extraordinary operations which these chapters describe, so intricate, so prolonged, and contrary on so many occasions to the accepted principles of war, could never have been achieved.’<sup>15</sup> He wrote that in 1934, seven years *before* he met FDR at Newfoundland.

In the peroration of his speech attacking the Munich Settlement, on 5 October 1938, Churchill said ‘Do not suppose that this is the end. This is only the beginning of the reckoning. This is only the first sip, the first foretaste of a bitter cup which will be proffered to us year by year unless by a supreme recovery of moral health and martial vigour, we arise again and take our stand for freedom as in the olden time.’ That knowledge, suffused in him after a lifetime of reading and writing history, that Britain was not as morally healthy as she had been ‘in the olden time’, tormented him, yet by articulating it he was able to taunt the British people into slowly becoming as brave and as morally vigorous and martially healthy as he.

It is not too much to say that without his lively historical imagination, Churchill could not have warned Britain and the world of what he was to call – in another powerful historical analogy – ‘a new Dark Age’. Once again that analogy would also fall flat were any politician unwise enough to try to employ it today: the Dark Ages are largely untaught today in British schools.

During the Munich speech, Churchill told the Commons, ‘In my holiday I thought it was a chance to study the reign of King Ethelred the Unready. The House will remember that that was a period of great misfortune, in which, from the strong position which we had gained under the descendants of King Alfred, we fell very swiftly into the chaos. It was period of Danegeld and of foreign pressure.’ His reading of history thus directly affected his outlook on appeasement, and in a wholly positive way.

As the war clouds gathered, Churchill took more refuge in British history rather than less, especially in those periods where the nation had survived similar perils. Thus, on 3 April 1939, he reminded the British people: 'We read how, when Napoleon's army lay at Boulogne 140 years ago, the threat of invasion hung over this country from day to day, dependent upon the shift of the wind, our ancestors showed qualities of doggedness and phlegm deemed remarkable by all who observed it. But that is nothing to the ordeal which the British nation is today facing with complete composure. Nothing with which Napoleon threatened England is half as intimate or direct as the destruction and ordeal which would fall upon this country should we be involved in a modern war.' After that war had started, Churchill invited the victorious crews of H.M.S. *Exeter* and *Ajax* who had been involved in the scuttling of the German battleship the *Graf Spee* to a celebratory dinner at the Guildhall where he told them, 'The warrior heroes of the past may look down, as Nelson's monument looks down upon us now, without any feeling that the island race has lost its daring or that the examples they set in bygone centuries have faded as the generations have succeeded one another.'<sup>16</sup> This placing of their heroism in the precise historical context of similar threats to Britain in the past was an integral part of his wartime morale-boosting speeches.

In late April 1940, while the Norwegian campaign was being fought, he was somehow able, at 11 o'clock at night, to discuss with his research assistant Bill Deakin and his godson Freddie Birkenhead the strategic position facing King Harold of Wessex during the Norman Conquest. Deakin recalled how, despite naval signals being brought in by admirals as the battle progressed, 'talk ranged round the spreading shadows of the Norman invasion and the figure of Edward the Confessor who, as Churchill wrote, 'comes down to us faint, misty, frail'. I can still see the map on the wall, with the dispositions of the British fleet off Norway, and the voice of the First Lord as he grasped with his usual insight the strategic position in 1066. But this was no lack of attention to current business. It was the measure of the man with the supreme historical eye. The distant episodes were as close and real as the mighty events on hand.'<sup>17</sup>

Once Churchill became prime minister a few days later, his historian's use of the past as a tool for working out where Britain was in the present became if anything even more pronounced. A recent article in a Polish historical journal has estimated that as much as 10% of Churchill's most important speeches of this period were taken up with history. Montgomery recalled how in July 1940 Churchill asked General Sir Alan Brooke whether England had been in such straits since the Spanish Armada, 'yet', as Monty wrote, 'he showed no outward signs of anxiety in public'.<sup>18</sup> In a discussion at Chequers on 9 August 1940, Churchill observed of the stand of the 30th Motor Brigade and the 3rd Royal Tank Regiment that May that 'The men of Calais were the bit of grit that saved us by stopping them, as Sidney Smith stopped Napoleon at Acre.'<sup>19</sup>

Grit was needed in May 1940 to prevent Lord Halifax undertaking peace negotiations with Hitler, and once again Churchill called history to his aid. 'Nations which went down fighting rose again,' he told the War Cabinet during one of the most tense discussions, 'but those which tamely surrendered were finished.' He did not say which nations he believed were in either category, but he was probably speaking of nations like Holland and Poland in the first - which had been invaded many times but were always

resuscitated – and perhaps the experience of Spain after her defeat in the War of 1898 in the second.

The references to the Napoleonic Wars, in speeches, letters, conversations, the movies he watched and books he read during the war, undoubtedly profoundly influenced the grand strategy that Britain adopted. From 1793 till 1812, Britain had avoided major continental commitments of troops until her antagonist had first blunted and then broken his army in the wastes of Russia. William Pitt and then Lord Liverpool had played a waiting game, trusting Napoleon to over-extend himself and in the meantime confining themselves with peripheral attacks in the Iberian peninsula and elsewhere that harassed and frustrated their enemy, but only finally crossing the Channel in 1815 to deliver the crushing blow when they judged that Napoleon was ready to meet his Waterloo. Churchill largely copied that strategy, and persuaded the Americans to adopt it too.

'We have crossed the mysterious boundary which separates the present from the past,' Churchill wrote in his article 'Old Battlefields of Virginia' in 1929. 'We have entered the domain of history.' And when America's entry into the Second World War took place in December 1941, Churchill was to cross that mysterious boundary several times more to fortify his listeners with the understanding that sometimes only history can give. 'Some said Americans were soft,' he said of the period immediately after Pear Harbor, 'they would never stand bloodletting. But I had studied the Civil War, fought to the last desperate inch.' By total contrast, Hitler told Molotov in 1940 that the Americans were too decadent to make a difference on any European battlefield until the year 1970.

Because of Churchill's projectionist's notebook, we know every movie that he watched at Chequers between March 1942 and April 1943.<sup>20</sup> There were no fewer than eighty-six of them, at least one and usually two for every night he stayed there. The most watched was *That Hamilton Woman*, in which Laurence Olivier played Admiral Nelson, but other historical dramas included *Cardinal Richelieu*, *The Young Mr Pitt*, *Mr Lincoln*, *Stanley and Livingstone*, and *Peter the Great*. Immersing himself in history in this way helped Churchill rivet the Allies' wartime roles into the rich panoply of the past.

'We must regard the next week or so as a very important period in our history,' Churchill told the world on 11 September 1940, as the Battle of Britain reached its height. 'It ranks with the days when the Spanish Armada was approaching the Channel, and Drake was finishing his game of bowls; or when Nelson stood between us and Napoleon's Grand Army at Boulogne. We have read all about this in the history books; but what is happening now is on a far greater scale and of far more consequence to the life and future of the world and its civilization than these brave old days of the past.' As the Canadian diplomat Charles Ritchie wrote in his diary of the effect of that speech on Britons, 'He makes them feel they are living their history.'<sup>21</sup> To borrow from Ed Murrow, Churchill did not just send the English language into battle, he sent English history into battle too. The effect of telling people that they had the eye of History upon them had the tangible effect of encouraging them to behave in a better, braver, more noble way, to carry themselves in such a way that for the rest of their lives they would deserve his soubriquet for them, of 'their finest hour'.

In January 1941, FDR's envoy Harry Hopkins noted how often Churchill pondered history, writing of how he 'was involved not only in the battles of the current war but of the whole past from Cannae to Gallipoli.'<sup>22</sup> That March, when Churchill's son-in-law Duncan Sandys wanted to destroy the Germans' cities and factories 'so that for years the German people might be occupied in reconstruction', Churchill cited an incident in Ancient Greece when the Athenians spared a city which had massacred some of its citizens, not because its inhabitants were men, but 'because of the nature of man.'<sup>23</sup> When someone equated Britain's position to that of Ancient Carthage, 'Churchill joked that 'the Almighty had given Carthage a raw deal last time and might alter the outcome on this occasion.'<sup>24</sup>

Even before Hitler invaded the Soviet Union, Churchill gave his family and Jock Colville 'a short lecture on the various invaders of Russia, especially Charles XII.'<sup>25</sup> In his speech at Bristol University in April 1941, the day after a heavy bombardment, he commended the inhabitants' 'mark of fortitude and phlegm, of a courage and detachment from material affairs worthy of all that we have learned to believe of ancient Rome or of modern Greece.' A few days later he told Britain's Air Raid Precaution wardens, Home Guard and craftsmen and women, 'This is indeed the grand heroic period of our history, and the light of glory shines on all.'<sup>26</sup> He allowed them to see themselves as part of a great continuum of history.

In the confidence debate of 7 May 1941, Churchill was careful not to equate Napoleon - his hero and that of his ally the Free French - with Hitler, saying 'It must be remembered, however, that Napoleon's armies carried with them the fierce, liberating and equalitarian winds of the French Revolution, whereas Hitler's Empire has nothing behind it but racial self-assertion, espionage, pillage, corruption, and the Prussian boot. Yet Napoleon's Empire, with all its faults, and all its glories, fell, and flashed away like snow at Easter till nothing remained but His Majesty's Ship *Bellerophon*, which awaited its suppliant refugee.' Two months later he told an old friend and comrade that 'he should like to see Mussolini, the bogus mimic of Ancient Rome, strangled like Vercingetorix in old Roman fashion.'<sup>27</sup>

On his way to meet President Roosevelt in Newfoundland in August 1941, Churchill read C.S. Forester's splendid novel *Captain Hornblower*, set in the Napoleonic Wars, one of the few works of fiction he read during the war. 'Time and again,' his military secretary Pug Ismay recalled, 'he would quote from Nelson's Trafalgar memorandum: 'No captain can do very wrong if he places his ship alongside that of an enemy.'<sup>28</sup> It was a maritime version of the message he was trying to give his generals in North Africa at the time. On the evening before they reached their anchorage he watched *That Hamilton Woman* yet again, for the fifth time in a month, telling his audience: 'Gentlemen, I thought this film would interest you, showing great events similar to those in which you have been taking part.'<sup>29</sup> Harry Hopkins then proceeded to take seven guineas off him at backgammon.

When in September 1941 the King offered Churchill the Lord Wardenship of the Cinque Ports he accepted, despite being daunted by the cost of Walmer Castle's upkeep, largely because previous Lord Wardens included Pitt the Younger, Wellington and Lord Palmerston.<sup>30</sup> When he heard about Pearl Harbor two months later his first thought

was that ‘We should not be wiped out. Our history would not come to an end.’<sup>31</sup> He could tell immediately that the intervention of the United States would be decisive, and allow British history to continue, and not be snuffed out.

Churchill the historian rightly did not allow non-historians to gainsay him over facts. In August 1943, he had an audience with King Farouk of Egypt in Cairo. The King stood by a large map of North Africa and put his whole hand over Cyrenaica stating that it had once all belonged to Egypt. Churchill wasn’t going to let him get away with that, and ‘at once replied that he could not remember when. To the best of his belief if had belonged to Turkey before the Italians took it.’ According to the British Ambassador, Sir Miles Lampson, this left the king ‘rather stumped’.<sup>32</sup>

Needless to say, Churchill was right; indeed in the 13th century BC it was the Cyrenaican tribes that made incursions into Egypt, rather than the other way around. One can’t imagine what King Farouk could have been thinking of trying to make an erroneous historical point to Winston Churchill, of all people. (I have a particular interest in King Farouk, in that one of his former mistresses, Barbara Skelton, once made a pass at me in a taxi. I was 25; she was 72. I would have been in a sexual daisy chain that included Cyril Connolly and George Weidenfeld, as well as the last King of Egypt. We all have our regrets in life.)

During the rest of the war, Churchill compared Auchinleck’s exposed position at Alamein to Napoleon’s before Austerlitz; told Stalin about the battles of Ramillies and Blenheim (who was unimpressed and lectured Churchill back about Waterloo); contrasted Cairo in 1942 to Napoleon’s defence of Paris in 1814;<sup>33</sup> and when he reached the River Metauro in Italy he later recalled, ‘Here Hasdrubal’s defeat had sealed the fate of Carthage, so I suggested we should go across too.’<sup>34</sup>

On the evening of his stroke in July 1953 he had earlier been dilating on the influence which Italy had exercised upon the civilization of Europe, and how the Roman legions crossing the Alps ‘bore with them something greater than they knew.’<sup>35</sup> This might have involved plumbing, as when he met the newspaperman Charles Eade in March 1954 he said: ‘Do you realise that from the time the Romans left Britain until he arrival of the American heiresses, this country was completely without central heating?’<sup>36</sup> He ‘then went on to speculate about what the Romans did about lavatories, as he did not think that anyone had ever found any remains of Roman lavatories in this country.’

I have drawn my examples almost at random and could have included not just dozens or scores but literally *hundreds* of others, but in order to promote his views Churchill called in aid Caractacus, Nelson, Genghis Khan, the Catalans, Napoleon, Babylon, the Norman Conquest, the Elder and Younger Pitts, Carthage, Charles I, the Armada, Cromwell, the battles of Cannae, Blenheim, Ramillies and Austerlitz, Charles XII, Wolfe of Quebec, Clive of India, the sieges of Toulon and Acre, Hasdrubal and Ancient Roman lavatories.

His historical imagination allowed him to see himself in the direct line of succession from King Alfred, Marlborough, Pitt & Lloyd George – as the saviour of the nation. This powerful historical sense allowed him to appreciate that he was himself the greatest of all the English tribal leaders since Queen Elizabeth I.

'How strange it is that the past is so little understood and so quickly forgotten,' as Churchill said. How modern those views seem today, yet how often they have been expressed in the past. Pliny the Consul said much the same thing in his Letter No. 62 to Albinus, and he died in 115AD.

The work that Defence UK does in trying to ensure our country has strong defences is intimately bound up with the certain knowledge that history proves how important this is for the survival of our democracy and our way of life.

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<sup>1</sup> FH, pp19-20.

<sup>2</sup> Sir J. Plumb, *The Dominion of the Past*, p2.

<sup>3</sup> ed, Middlemas, *Whitehall Diary I*, p181.

<sup>4</sup> CAC EMAR 1.

<sup>5</sup> W.S. Blunt, *My Diaries II*, p461.

<sup>6</sup> W.S. Blunt, *My Diaries II*, p288.

<sup>7</sup> RA PS/PSO/GV/C/F/285/13.

<sup>8</sup> RA PS/PSO/GV/C/F/285/8.

<sup>9</sup> CSIII 2431.

<sup>10</sup> James, *Failure*, p119.

<sup>11</sup> CSIII 2948.

<sup>12</sup> OB V 319.

<sup>13</sup> Gilbert, *Other Club*, p236.

<sup>14</sup> CAC EMAR 2.

<sup>15</sup> Churchill, *Marlborough II*, p331.

<sup>16</sup> CSVI 6193,

<sup>17</sup> ed Gilbert, *At the Admiralty*, p1152.

<sup>18</sup> Montgomery, *Memoirs*, p69.

<sup>19</sup> J. Colville, *The Fringes of Power: Downing Street Diaries 1939-1955*, p213.

<sup>20</sup> CAC WCHL 6/61.

<sup>21</sup> CHOH/3/CLVL.

<sup>22</sup> Sherwood, p242.

<sup>23</sup> J. Colville, *The Fringes of Power: Downing Street Diaries 1939-1955*, p363.

<sup>24</sup> J. Colville, *The Fringes of Power: Downing Street Diaries 1939-1955*, p364.

<sup>25</sup> J. Colville, *The Fringes of Power: Downing Street Diaries 1939-1955*, p368.

<sup>26</sup> CSVI 6379.

<sup>27</sup> J. Colville, *The Fringes of Power: Downing Street Diaries 1939-1955*, p412.

<sup>28</sup> Ismay, *Memoirs*, p269-70.

<sup>29</sup> ed. Dilks, *Cadogan*, p396-97.

<sup>30</sup> J. Colville, *The Fringes of Power: Downing Street Diaries 1939-1955*, p439.

<sup>31</sup> WSC, WW2 III, p539.

<sup>32</sup> ed. Evans, *Killearn Diaries*, p245.

<sup>33</sup> Hillsdale, vol 17, p1098.

<sup>34</sup> WSC, WW2 VI, pp106-07.

<sup>35</sup> Dilks, *Solitary*, p14.

<sup>36</sup> CAC EADE 2/2.

## 'Phasors to Stun': Dazzle, Blind or Destroy

**By Fred Dupuy**



The instruction from Captain Kirk of the Star Ship Enterprise, in the science-fiction television series Star Trek, for the setting of personal weapons, may not be so far-fetched for commanders of the future. In a speech at the 2015 Defence & Security Equipment International Exhibition in London, First Sea Lord Admiral Sir George Zambellas stated that the Royal Navy intended to demonstrate a Direct Energy Weapon by the end of the decade. To this end the Ministry of Defence instructed their development arm, the Defence Science & Technology Laboratory (DSTL) to set about the task and consequently, MBDA with industry partners, Leonardo and QinetiQ, have produced Dragonfire, which they intend to test and demonstrate this year, 2019.

Dazzling and targeting lasers have been used by the military for some time but the systems now in development will take their capabilities to a level where they will be able to destroy selected targets and become very capable defensive and offensive systems in their own right. The US Navy deployed a direct energy system on the USS Ponce in 2014 and video footage of that weapon bringing down an unmanned air vehicle (UAV) and detonating ordnance on a remotely controlled target boat is in the public domain. The Russians are developing such systems for their armed forces and no doubt other nations are doing the same.

Because of an attempt by terrorists, using a man portable air defence system (MANPADS), to bring down an EIAI Boeing 757 at Mombasa airport in 2002, the Israelis have fitted a defence system (Sky Shield/C-Music) to some of their airliners, which utilizes a laser to blind the seeker in such infra red guided missile systems. Developed systems however, will take that capability further in that they will dazzle at distance, blind as that distance reduces and destroy at closer range. Holding the focus of a direct energy beam at a distance however, presently poses a challenge, in that a turbulent atmosphere, through which it has to travel, can disrupt its molecular structure and lead to an attenuation of that concentrated energy. Targets moving at very high Mach numbers also pose the challenge of minimal reaction time and the ability to hold the focused beam on target long enough to do damage. Initially therefore, these systems will be most effectively used against UAVs, possibly in swarm quantities and other relatively slow-moving targets, such as small craft manoeuvring in a threatening manner. As their focusing and reactive targeting abilities improve however, they will pose an effective threat to aircraft and missiles.

I have seen it quoted that any potential enemy with a Red Spot (an ability to pinpoint a target) and a capable missile system can take out any of our Aircraft Carriers at will, thus making them obsolete. One only has to look at the results of the Falklands War however to realise that sweeping statement is flawed. Of the six and possibly seven



HMS Sheffield, sunk by Exocet missiles

Exocet missiles fired by the Argentine forces only one found its intended target. On 4 May 1982, two were fired at what was hoped to be one of the Aircraft Carriers, HMS Hermes or HMS Invincible, but was in fact HMS Sheffield which did nothing to defend herself. One of those missiles struck, the other fell into the sea. On 28 May two were fired directly at HMS Hermes but were successfully decoyed away and they struck home on the Atlantic Conveyor, a vessel with no defence against missile attack.

On 30 May one Exocet was fired at what was thought to be HMS Invincible but was in fact HMS Avenger. That missile was either brought down by the Avengers 4.5" gun, which was engaging it or possibly by other means. It ran into the sea and did not reach its target. On 12 June a land based Exocet was fired at HMS Glamorgan, which was close to the shore and had little time to react. Some reports say that two missiles were fired at Glamorgan but the first did not find its target. She was struck by the second but survived to fight another day. The Exocet did not have an unblemished record in the South Atlantic. Ship killing missiles have of course improved dramatically since the 1980s but so have the defences and Dragonfire is a part of that continuous improvement in defensive capability.

Therein lays the rub with a Red Spot. If it waivers, so does the point of aim. For a successful strike, that spot has to remain generally on target throughout the flight of a munition but specifically and accurately so in the terminal phase. Assuming that an enemy's reconnaissance assets do not remain unmolested, that naval units produce little or no electromagnetic transmissions, and I remain to be convinced that this will be the case when operating the Electro-Magnetic Aircraft Launch System (EMALS), the other side will have to hunt for their targeting data. Once they have achieved that however and providing that their missile has been able to evade the defensive hard kill systems, it then has to overcome the electronic warfare and decoy defences that will endeavour to move that Red Spot to one side. While these defensive systems are attempting to destroy or confuse the incoming missile it will also be engaged by Dragonfire, which does not necessarily have to physically destroy it. It can dazzle or blind that missile's various seekers or as it gets closer damage or disrupt its electronic guidance systems, thus turning it into a dumb munition, with a very high chance of missing its target. For the enemy, even with very capable area denial forces, knowing where their target is does not automatically mean that they will be able to hit it. Once proven and deployed as part of a defensive mix from manned fighters, through the long-range Aster and medium range Seaceptor missiles, 4.5" & 5" radar and optically controlled guns, electronic countermeasures and decoys, through to the close-in 30 mm cannon and 20 mm Phalanx systems, Dragonfire will prove to be a very welcome addition to the in depth protective umbrella that can be deployed from a modern Royal Navy fleet.

For the Army there are plans to deploy the system on the back of an off-road vehicle to shoot down enemy UAVs and tackle other targets of choice and there is even a

suggestion that a lightweight system could be developed for installation in the next generation of manned fighter aircraft or helicopters. The challenges of providing a lightweight power source to fit into a relatively small aircraft however, with sufficient energy density to power such a system, must be placed alongside the afore mentioned beam attenuation and targeting problems. Thus, such developments remain a future prospect, but the direction of travel is clear. Stealthy long endurance UAVs armed with Dragonfire derived systems and loitering at a great distance up threat, may, in future, form the leading edge of a combat air patrol (CAP) and be the first barrier met by an approaching enemy. A high-flying UAV, so armed, may be able to blind, if not destroy, a low orbiting observation satellite. Potential for the further development of these systems is enormous.

Beyond the arming of military vehicles however, Dragonfire offers great potential for the protection of commercial operations. Ship owners and managers hate the idea of munitions on their vessels, which produce endless administrative problems for them when travelling internationally. Tanker operators in particular, who for obvious reasons, won't even let people smoke on deck are less than happy with the idea that guns may be discharged anywhere near their highly volatile cargoes. After many years of resisting the suggestion however, some ship owners now allow armed teams to escort their vessels when transiting the pirate infested southern Red Sea and Gulf of Arabia. Those teams have been made possible by government agreement at the points of embarkation and disembarkation or in some cases, where that local agreement does not exist, by them joining and leaving the vessels at sea and outside of territorial limits. Problems with the later system can arise, however, as the Chennai thirty-five, six of whom were British, found out to their cost. It could be argued that the elevated insurance premiums for these transits have been as, or more, influential in affecting this shift of policy rather than any sympathy for the welfare of the crew or safety of the ship and cargo. Ten years ago, the company I was working for paid half a million US\$ for an armed launch escort through the Gulf of Yemen and up into the Red Sea. A year earlier, going the other way, we had no escort.

In the 1984-87 Iran/Iraq tanker war, 451 merchant vessels were attacked, mostly by guided missile, rocket and rocket propelled grenades, the later from small fast speed boats. This occurred despite a heavy naval presence from the US, UK and other nations, which was aimed at protecting merchant shipping. During the last Gulf War, there was a suggestion that attacks on merchant shipping, in transit through the Mediterranean to the Persian Gulf, might take place off North Africa and coalition naval forces were deployed along that coast to discourage such acts. More recently, Houthi Rebels have launched missile attacks at merchant ships off the coast of Yemen. All of these incidents show that unless vessels are gathered into a convoy that can be heavily defended by warships, there is a limit to the protection offered by naval forces which have to cover a wide area. The obvious answer is to give merchant ships their own point defence and provided operational considerations can be accounted for, Dragonfire ticks virtually all of the boxes except for those involving subsurface attack, i.e. mine and torpedo.

One modern large container ship will carry as much or more cargo than a WW2 convoy and a large tanker may carry two million barrels of oil, at possibly US\$60-100 per barrel

(do the maths!). The destruction of such vessels would result in a substantial financial loss for the insurance underwriters. Dragonfire may have the effect of safeguarding those underwriters' interests and substantially reducing the ship owners' insurance premiums when transiting areas of high risk. With a scalable effect from dazzle through to damage and destroy, the merchant vessel would have, without the deployment of ordnance, an effective point defence against fast approaching and threatening small craft through to rocket and missile attack. Such systems could be modular, portable and embarked with their small operating team, only for the passage through areas of risk. They could then be disembarked and made ready to pick up vessels travelling in the other direction. Directional noise generators have been deployed by at least one cruise line as a defence against pirate or terrorist attack from small boats; Dragonfire would take this protection to a much higher level.

The possible misuse of these systems, either by accident or on purpose may act as a barrier to their deployment on merchant vessels. Although they do not involve the use of explosives, they can still be very destructive weapon systems and can have a range far greater than the user's radar or visual horizon. Operational considerations may therefore require stringent rules of engagement and possible physical restrictions. Mounted high on a large container ship or tankers superstructure such systems may be 30 or 40 meters above sea level and while detection, tracking and priming of the system can commence when the potential target is at a great distance, firing can be restricted until the point of aim is below the horizontal thus ensuring a physical limit to the beams range. At the end of the day however, just as mounting losses eventually drove the ship owners to accept armed escort teams on their vessels, a similar situation may lead them to look favourably at direct energy weapons. When someone is threatening you with serious bodily harm, the ethical and legal objections to administering a well placed and timely kick in the crutch seem to lose their importance!

Beyond the protection of merchant shipping however there are other situations where Dragonfire would be of great value. How do you remove a privately-owned UAV that has wandered into the aircraft approach lane of a busy airport like Heathrow? Dragonfire will knock it out of the sky. Some might say that there would be a danger to those on the ground – and so there might, but it would be a mere shadow of that which threatened those in the air. In such a circumstance, I for one would have no hesitation in choosing the lesser of two evils! The same would apply to UAVs used by terrorists for the delivery of explosive devices and in remote areas, like Dartmoor, to stop the delivery of illegal items into our prisons.

The tracking, focusing and holding on-target of the direct energy beam is of course crucial with these systems. MBDA and partners are heavily involved in this research. The ability to deliver large amounts of electrical power in a very short period of time is also crucial and Admiral Zambellas has suggested that research into Flywheel technology, a form of mechanical energy storage, is being pursued. Direct Energy weapons are the future, and one day Dragonfire's offspring may make many types of missile and gun systems obsolete. It is incumbent upon the government to provide sufficient ongoing investment so that this sovereign system can be developed further and allow the UK to continue as one of the world's leading arms producers.

## What is the Army Industrial Engagement Framework?

By Colonel (Retd) Andy Allen MBE



Endorsed by the Secretary of State for Defence on 5 September 2019, the publication of the Army Industrial Engagement Framework (AIEF) is a very welcome development. This is the first time the Army has articulated what it requires from industry to deliver capability and an approach to support the UK Prosperity Agenda. How the AIEF will actually operate and deliver on its Commitment Statements will be closely watched by Defence UK.

The AIEF builds on a number of policy aspirations, for example, as part of the Defence and Security Review 2015, the Ministry of Defence was tasked to include within its formal objectives the promotion of prosperity, in line with

National Security Objective three: ‘Promote our prosperity’- seizing opportunities, harnessing innovation to strengthen our national security, and working with industry to ensure we have the capabilities and equipment that we need. Our economic and national security go hand-in-hand.’ Furthermore, the 2018 report by Philip Dunne, then Minister of State for Defence Procurement, entitled ‘Growing the Contribution of Defence to UK Prosperity’, highlighted defence’s contribution to UK prosperity, including recommendations to improve its agility to meet future challenges.

The ‘Prosperity Agenda’ thankfully now sits high on our Armed Forces’ ambitions.

Information on the AIEF report and the report itself can be found at <https://www.army.mod.uk/news-and-events/news/2019/09/army-launches-industrial-engagement-framework/>. But here is the Secretary of State’s Foreword and Executive Summary.

### Foreword by the Secretary of State for Defence, Ben Wallace

The Army has enjoyed a long and deep relationship with its industrial partners. This remains constant, but the Defence environment has not; the threat is evolving constantly and rapid technological advances risk outpacing capability delivery. In response to this challenge, the Army is undertaking an ambitious transformation programme, both in its operating concept and in its approach to how it engages with Industry. The Army and industry have recognised a need to think differently about how their relationship should work in the future. Industry wants clarity from the Army on its future requirements so it can be better served, and the Army wants to gain advantages over its adversaries through the technology, innovation and efficiencies that industry can offer. This is the first time that the Army has articulated what it requires of industry in one document, describing its route to modernisation in the form of design principles and capability objectives. This clarity will encourage innovation and suggest where Industry may want to focus its own research and development. This document aligns itself with key Defence, industrial and prosperity policies, and offers a range of new

and strengthened approaches for current and future engagement. I am pleased to endorse the Army's new approach to industry; this framework will benefit industrial partners as they support Defence in the delivery of Army capability for the future.

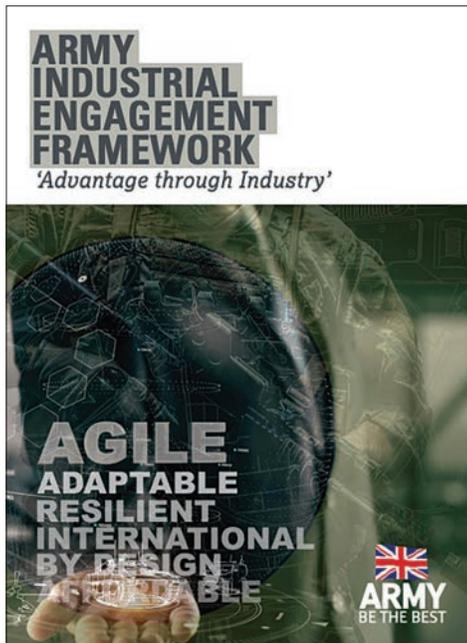
### Executive Summary

The world is changing at an increasingly rapid pace; the political, social, economic and technological environments are shifting constantly. Defence, and not least the British Army itself, must find the ends, ways and means to adapt with this change to ensure operational and strategic advantage over our adversaries. Today's threats are more diverse, more unpredictable and more numerous than at any other time in history. The Army is increasingly called upon to conduct a multitude of tasks at home and around the world, so an inherent adaptability in our structures and capabilities is critical. Affordability will remain a key enabler in shaping our response.

*'Capability is the combination of equipment, trained personnel and support that give the armed forces the capacity to achieve the tasks they are given.'*

*Defence Acquisition Operating Model 2015*

These challenges cannot be faced in isolation; the British Army needs to work closely with allies and partners but, most importantly, it must work more closely with Industry. Multiple platforms with increasing longevity, diverse operating environments and relatively low capital costs for some equipment mean a more dynamic market. These considerations present an opportunity for the Army to establish its future capability requirements, and for Industry to include the Army's needs in their research and development programmes. Closer engagement, aligned to the Army's future force planning, will mitigate these challenges. Science and Technology and Innovation will be key in driving the Army's development of new approaches to military requirements and help exploit game-changing advances. The Army is committed to modernising its capabilities and concepts. Industry has a central role to play in this modernisation. Aligned to other Defence initiatives, this engagement framework demonstrates how the Army intends to work with Industry to deliver modernised future Land capabilities. Through a series of engagement activities that seek to exploit innovation set against future force planning considerations, this framework will underpin a collaborative relationship, increase transparency and ultimately support UK prosperity.



Specifically, the framework sets out:

- How the Army's aspiration to create a future force that is international by design and NATO by default, will encourage closer cooperation with international partners, helping to drive interoperability, economies of scale and generate export opportunities. It will also recognise those technologies and skills Defence would wish to assure access.
- Through the primacy of a market driven approach and Technology-led Modernisation, the Army will seek new ways of engaging with Industry, including small and medium-sized enterprises (SMEs) and non-traditional defence suppliers, to develop world-leading products and services. The Army will also seek opportunities for agile acquisition and procurement, pulling concepts rapidly through to delivery using increased experimentation and promoting coherence across Defence.
- The Army's contribution to UK prosperity will be taken into account throughout the capability development process. Exportability will be considered at the outset such that, in meeting the Army's requirements, opportunities for wider sales are enhanced. Through our acquisition and experimentation, supplier innovation will be promoted; and the local nature of supply chains will be encouraged within acquisition to support regional prosperity.
- As the largest employer within Defence, and as an inherently people-centred organisation, the Army applies a Whole Force Approach to ensure that human capability remains at the heart of our decision-making. The Army will also ensure outputs are delivered efficiently by the right mix of capable and motivated people from the Regular, Reserve, Civil Service, contractors and the wider Defence and security community, both now and in the future. The time is right for a strategic approach to Land capability through a deliberate engagement framework with Industry that optimises the mutual benefits of working with and supporting a forward-thinking and innovative Army. Together, we must forge and sustain an Army that must be prepared to meet the many new challenges today and in the future.



## Questions of the Type 31... Why is the General Purpose warship not considered fit-for-purpose?

By Dr. Alex Clarke



In the First and Second World Wars the backbone of the global British fleet was its Cruisers – General Purpose (GP) warships. Even at the beginning of WWII, often fitted with ASDIC, what was considered a heavy Anti-Air armament comprised a mixture of high angle 4in guns with machine guns of various calibre, torpedoes and either 6 or 8in main guns. In addition, prior to WWII the Royal Navy had fought for, built and would very successfully use a class of GP Destroyers, the *Tribal* class, which would in turn be emulated during the war by the *Battle* class, before being properly succeeded by the 1950s *Daring* class.

General Purpose was considered an asset, not a hindrance, it meant a ship which was a 65-75% solution for all tasks – for the RN's Cruisers this had meant that treaty limitations made it easier to accomplish with a 6in gun than an 8in as the turrets took up less displacement. With the Destroyers, the *Tribal* class, as they started off with far less space than a Cruiser it was perhaps drastic. Compared to a normal Destroyer, a *Tribal's* General Purpose profile had meant a reduction in torpedo armament from the usual eight in two quadruple launchers to a single such launcher, which in theory would make them weaker against larger enemy ships; but the increase in gun armament it allowed was envisaged to better engage aircraft and other Destroyers – a justifiable return therefore. As for anti-submarine weaponry, they carried a healthy quantity of depth charges – which would be put to good effect in wartime.

The key was that, as a class, the *Tribals* were built with off-the-shelf technology, in terms of much of their systems, and the only real new tech other than their size and the composition of their fit compared to other Destroyers, was their fire control and the range of communications systems. This made procurement rapid and kept development costs low and, whilst providing them with a relative advantage over potential adversaries, it also provided them with the ability to be upgraded in due course – for which the extra space in their design was especially.

Whilst WWII would not be plain sailing for the class, by 1943 12 of the RN's 16 *Tribal* Destroyers would have been sunk, and this was not because of a major weakness in the design or the concept ... more a strength of concept leading them to be



*Tribal* Class – HMS Zulu

used again and again for the highest risk operations. They were heavily involved in Commando operations, being crucial to many in Norwegian and Mediterranean waters, as well as in constant demand for convoy and fleet work – even at the end of the war they would be deployed at the forefront of operations, seeking out and finding the enemy far from their own fleet.



Type 31 Arrowhead

However they were not without weaknesses; the loss of HMS *Afridi* and HMS *Gurkha* was caused by the limited elevation (40 degrees) of the QF4.7-inch guns and could not engage effectively attacking aircraft, a problem common to most classes of Destroyers. For most this entailed major work to modify (often entailing losing the second quadruple torpedo launcher), for the *Tribals*, X turret was swapped for a 4-inch HA weapon, which was also quite good at engaging motor torpedo boats.

By the end of the war the Royal Navy had developed a requirement for a shell of specialist anti-submarine Frigates and air defence Destroyers that would be structured around a core of GP Cruisers and Destroyers that could either operate unsupported or as part of a Task Force. This was the balanced force that was planned, and even partially executed, but the arrival of the Cold War changed maritime perspectives. The term 'General Purpose' became short-hand for vessels which were not able to fight the kind of anti-submarine war which was the priority, in a period which at one point reached the (logically straightforward, but a little extreme) policy of replacing medium calibre armament with Anti-Ship missiles on ships in refit and designing ships without guns completely, focussing entirely on ASW weapons and sensors.

This situation also led to the Falklands Amphibious Task Group entering San Carlos Water with some escorting Frigates having no medium calibre guns at all and thus unable to provide Naval Gunfire Support (NGS) to engage land targets. However in 1982 the Task Force was made up of ships that were available at the time and comprised both GP and Air Defence Destroyers, GP Frigates and specialist ASW Frigates.

This perhaps explains the muted reaction to the news that the Type 31 will be 'General Purpose' and the increasing campaign to turn them into anti-submarine warfare ships. This presents two problems: firstly, they are specifically designed to be cheaper general purpose assets, and whilst there is a strong argument for building more expensive high quality Type 26 ASW/GP Frigates, turning the Type 31s into GP/ASW Frigates will mean they suffer by comparison with the T26 and the RN will either find them cut completely, as they aren't good enough, or cut in favour of one or two additional Type 26s – and subsequently suffer the fate of T45 hulls 7 & 8 and never built at all!

Secondly the RN actually needs some GP ships; this does not mean that the Type 31s at 5,700 tons displacement shouldn't be fitted for a towed array sonar – just as the Air Warfare Type 45 Destroyers. But this does mean, especially with the selection of the Babcock Arrowhead 140 design and its space, that there is the option for systems like the BAE MK 110 57mm, as fitted to LCS & Zumwalt class to be considered as part of



BAE Systems' Mk 110 57mm

capability. It also has great potential as a system to up gun the *River Class* OPVs, giving them a more lethal potential in a General Purpose manner.

Why does the RN need some General Purpose ships, instead of, as has been the practice, using specialist ships in GP roles? The same reason that the MK 110 57mm is seen as being useful in the anti-fast boat/swarm attack role. The RN is returning to forward deployments in order to maximise force global presence; returning to the pre-1970s 'East of Suez', and returning even to the 1930s, when every potential threat wasn't just asymmetric or peer, but were uniformly hybrid in a world which was never quite at peace, but also not openly at war. Forward-based presence ships require 'general purpose' to be their motto as much as patrol vessels; one day they might be dealing with pirates, the next conducting exercises with peers, the third conducting a freedom of the seas passage or interacting with potential aggressors, the fourth conducting port visits - or any combination, variation or permutation of the above.

The 'specialist' ASW Frigates, or AA Destroyers, have from the Batch 3 Type 22s onwards always been fitted with some systems to give them a GP capability. This sensible design practice, however, has often been used to further support the idea that GP ships are not needed, as, after all, 'these ships can do that and have this amazing primary capability too'. The RN, looking to re-engage with the wider world as part of a 'Global Britain', needs to build a truly General Purpose warship that capabilities which would allow it to fill in for both roles and for independent global patrolling/presence. A ship which is designed from the start as a good all-rounder, like the Type 23 *Duke Class* has evolved into, and to a great extent what set the Batch 3 Type 22s apart.

What does this mean in modern design terms? Well for this ship data sharing will be critical, if it is to be able to back up the AA ships, but not carry an expensive AA radar (eg, Sampson) then it will have to get the data from ships which do. Fitted for not with a towed sonar array is probably what their standard fit will be, but if that is to be case the towed array ship must able to be rapidly forward deployed and fitted under circumstances of minimal base support. With the selection of the Arrowhead 140, there is certainly space which needs to be used to fit as accommodating a vertical launch missile system as possible. Preferably a system which will allow the ship to carry Sea Viper or Sea Ceptor AA missiles, land attack, possibly anti-ship (although those could be fitted to a separate deck mounted launch system), potentially even anti-submarine.

their secondary weapons fit. Why the 57mm? Well, it's an off-the shelf step up from the 30mm cannon for anti-fast boat/swarm attacks, whilst being alright as a Close-In Weapon System - a one/one combo of that mounted B position forward and a Phalanx mounted above the hangar aft would provide a more General Purpose

In other words, a system such as a 24-32 cell Mk 41 Strategic Length system; which would also potentially have the advantage of quad-packing Sea Ceptors – meaning 32 could be carried in 8 cells, leaving 16-24 cells for the carriage of other weapons, like Tomahawk cruise missiles. The gun armament has already been discussed, the current proposed fit is a 57mm main gun and two 40mm in B & X positions; these are systems new to the RN, with consequential logistic and training impacts. As effective as both these systems are, they are clearly focussed on the threat from small craft and ‘swarms’, a role for which they are excellent. However the lack of a medium calibre gun, such as the BAe 5” 62-calibre Mk 45 gun to be fitted in the Type 26, that can provide NGS, would seem a shortcoming in a vessel termed General Purpose. These combinations would still provide the desired anti-small craft capability, whilst retaining the ability to provide significant naval gunfire support for amphibious operations.



BAE Systems' Bofors 40 Mk4 Naval Gun System

These primary combinations when combined with a pair of 30mm cannon/missile combination systems, two-four minigun mounts and two-four GPMG mounts, would provide a full spectrum of coverage and capability whilst also achieving the desired potency against small vessels. Plus, each variation would only introduce one new system to the RN, either of which could be used to up gun the River class OPVs, even the *Queen Elizabeth* class carriers might benefit. The weapons fit cannot stop with just missiles and guns – potential should also be factored into the design for the later adoption of high energy weapon systems, such as lasers or potentially railguns.

Such an equipped vessel would be the GP midfielder that the RN needs, with the more specialist/mission orientated vessels switching between the roles of striker and defender depending upon the threat. Since the beginning of the Cold War specialist ships have been the easiest ‘sell’ when it comes to the Treasury and Parliament, but just as a football team is more than one player, it is not a single ship but the whole force which makes up the true broad offensive and defensive capability needed by the at sea CTF. Effective deterrence, which when it fails, becomes effective warfighting. The function of a GP vessel is that, due to its nature, it is the most flexible tool in peace time, and that, whatever the reason for it to be where it is, it is fit for purpose.

Despite their potential, the designation of Frigate is traditionally associated with ASW warfare and is the metric against which it is judged. It has to be accepted that as capable and useful a General Purpose ship might be, the Type 31 will always suffer in the artificial ‘top trumps’ Frigate stakes. The real question must be why are they being called Frigates at all?

It's not a tonnage thing – the last time tonnage was defined, Destroyers had an upper limit of 1,500 tons (1,850 if Destroyer Leaders), Cruisers were virtually anything greater



River Class B2 OPV

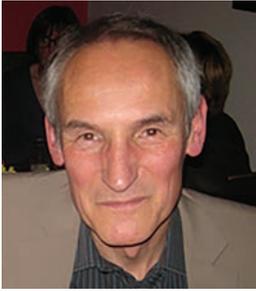
than that with a ceiling of 10,000 tons. Simply put, all escorts the Royal Navy either has in service or is building are Cruisers by that definition. Simply put, all escorts that the Royal Navy either has in service, or is building, are 'cruisers' by that definition. 'Destroyer' is unsuitable as that indicates a primary air defence role; note that the *Arleigh Burkes* of the USN are termed 'General Purpose'; but their construction is so specifically defined by the Aegis air defence system that they are known as 'destroyers' What else is there? There is of course always the option of chucking it all away and instating a new version of the 'rated system', with Aircraft Carriers being 1st rates, Amphibious Ships 2nd rates, Cruisers and Destroyers 3rd rates, Frigates 4th rates, Type 31 5th rates, OPVs and so on down the scale. That does seem a little silly, though, and it would be a nightmare to get NATO to adopt it. So that leaves the type names.

From these, 'Cruiser' might be the obvious one, but unfortunately that has imperial connotations which mean as apt as it maybe, it would never get approved – plus whilst 5,700 tons is bigger than many WWII Royal Navy Cruisers, the Arrowhead 140 design is still smaller than the Type 26 *City* class Frigates and Type 45 *Daring* class Destroyers. This leaves Sloop, Corvette or Brig. The latter has not been brought back since the age of sail, so would be a clean slate – but, honestly, Brig? So, Corvette or Sloop... Corvette is in use, many navies have them, but as wide a definition as it may be now, at 5,700 tons, the Type 31 would be very big for a Corvette. Which leaves Sloop.

Type 31 Sloop: it works, even though one of the definitions for Sloop is 'a small anti-submarine warship used for convoy escort in the Second World War,' but luckily having been out of use so long it has no real baggage. There is even the advantage that a study by the Royal Navy a few years back actually used the term; this was the Black Swan Sloop proposal – a concept that proposed a distributed force of networked vessels working in concert to achieve tactical ends. It is arguable that, despite much of it seeming to have been ignored, this is the proposal that has actually had a long-term impact which is shaping the fleet as it becomes now. Whatever, 'Sloop' is acceptable to the modern navy as a term.

## What is the point of the Army's new 'Strike Brigades'?

By Steve Coltman



The British Army is proposing to form one or two new medium-weight brigades. They will be called the 'Strike Brigades'. The idea is not without merit, in principle, but how good are the proposals in practice? Go back a generation or so and there were no medium brigades on either side of the iron curtain. Well over 90% of the units on both sides were heavy armoured or mechanised brigades (heavy by the standards of the time) with only a few light brigades (paratroops, mountain troops and the like). No medium units, because what was the point?

It was only in the post-Cold War era that the limitations of just having heavy and light units became apparent. When Saddam Hussein's Iraq invaded Kuwait and looked as if it might invade Saudi Arabia as well, the US could only rush a parachute division to Saudi at short notice. Good though the 82nd Airborne soldiers might be, they would have been no match for the heavy armour of the Iraqi divisions. They lacked firepower and had too few vehicles for any worthwhile battlefield mobility. The paras said they were 'speedbumps' – they would have slowed the Iraqi armour down a bit, but that is all.

Another incident provided additional proof that something else was needed. When NATO forces moved into Kosovo the US attempted to move one of its heavy mechanised brigades from Germany to the Balkans but it took so long, the logistics of the move were so difficult, that the operation went ahead without them.

During the Cold War most of the heavy units on both sides were already more-or-less in the places they needed to be. Post-war however, much smaller armies need to be able to move rapidly from one part of a continent to another or indeed from one continent to another, and do so with useful firepower and tactical mobility. Light forces lack the firepower and tactical mobility; heavy units lack operational and strategic mobility.

Tactical mobility is the ability to move over relatively short distances, miles or tens of miles. Tracked vehicles are very good at this but 6- or 8-wheeled vehicles are also acceptable. Operational mobility is the ability to move over perhaps hundreds of miles and on the road, tracked vehicles cannot cope with such distances. It will wear out the tracks and the tracks will ruin the road surfaces. Tracked vehicles have to be carried on tank transporters.

Strategic mobility involves moves of perhaps thousands of miles – this can be accomplished by ship, by aircraft and in some circumstances by rail. Rail is not generally an option for maritime powers like the UK. Ships can take even heavy units easily enough, but slowly. If we want to move anything by air the weight and number of the vehicles is the main limiting factor and if we want to move forces quickly (in days rather than weeks and months) air is the only option.

Medium weight units are a compromise, a sacrifice of weight (and hence armour protection) and firepower in return for operational and/or strategic mobility.

So, how do the Army's Strike Brigades measure up by the criteria established above? The proposal is to equip the British Army's Strike Brigades with two main types of vehicle, the tracked Ajax and the 8-wheeled Boxer. Both vehicles are in the 30-40 tonne weight range so airlifting anything other than token numbers is out of the question. If they need to travel over strategic distances they will have to be moved by ship – they have strategic mobility little better than a heavy armoured unit. What is worse is that, having a mixture of tracked and wheeled vehicles compromises their operational mobility as well. Others have made the point that the two types of vehicle would take different routes to the battlefield and hence are unlikely to arrive where they are needed as a coherent, complete unit. In all likelihood the wheeled Boxers would arrive before the tracked Ajaxes.

So, compared with an Armoured Brigade, these Strike Brigades have little advantage in strategic mobility and only a modest advantage in operational mobility but there is a sacrifice in armour protection and a huge sacrifice in firepower. The Strike Brigades will lack artillery (an extraordinary omission!) and the biggest gun they will carry will be the CT40, a 40mm cannon which is reputedly more powerful than it sounds but unlikely to be a match for Russian 125mm tank guns.

Given that one of the Army's three armoured infantry brigades has been disbanded and cannibalised to form the first of these Strike Brigades, one can hardly argue that we have a better, more powerful army as a consequence of this development. This is a defence cut in disguise.



AJAX Future British Army Fighting Vehicle

## A Tri-Service Approach to UK Maritime/Air Strategy

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### **By Squadron Leader Dave Tisdale RAF (Retd) (National Defence & Strategy Research Group, DefenceSynergia)**

Over the decade since DefenceSynergia (DS) was formed, we have consistently maintained that the United Kingdom's vital national interests should be enabled by a combination of commercial, diplomatic and military means; all of which would be interlinked domestically and internationally. Any stable global diplomatic environment has been enhanced by British core values which, historically, have been admired and emulated internationally. These values of Tolerance, Honesty, Reliability, Activity and Generosity create the conditions essential for manufacturing and world trade to aid prosperity but, increasingly now, we are in severe danger of being overwhelmed by, for example, the burgeoning ambitions of the People's Republic of China (PRC).

Protection of vital interests must form the core of UK strategic thinking. As history has consistently demonstrated, the UK's primary National Interest has been protected through a maritime rather than a continental approach to diplomacy and security; thus, the principal vulnerability of the British Isles, whether threatened by Napoleon, Hitler or their modern-day equivalents, has been and continues to be resource starvation.

Based on evidence gathered in consultation with Sir Michael Howard, Sir Hew Strachan, Dr Julian Lindley-French, Sir Bernard Jenkin and others, DS has concluded that the UK's strategy since the end of the Cold War has not been articulated in any coherent sense by Her Majesty's Government, of whatever hue. As a result, British Global Interests have been addressed piecemeal or neglected in the past and, consequently, current UK security and defence planning and implementation has been grossly underfunded. Therefore, the Government's ability to anticipate rather than simply react to events remains severely limited.

This has been amply demonstrated in the Gulf where Iranian threats to the freedom of navigation and commerce led to a British-registered tanker being seized before the Royal Navy presence in the region could be reinforced and before the Foreign & Commonwealth Office and Ministry of Defence had worked out which centre of influence would best suit British Interests. Should it be the European Union, with no defence assets and a confused diplomatic relationship with Iran, or the United States, which had a carrier group already in theatre and a full understanding of a firm stance in their opposition to Iranian geo-political power politics?

The UK has chosen to meet its social choices through a domestic social welfare system which, like defence and security, must be funded by borrowing and taxation. Two of the largest providers of taxable income in the UK are private finance and industrial sectors which rely upon unhindered global trade and the secure exchange of data. The need for economic growth dictates that UK's prime National Interest must be secure lines of communication (trade routes and cyber) and open dialogue to ensure future prosperity.

Existential threats have the capability to rapidly degrade the nation's ability to function; therefore, we believe that UK national security interests would be enhanced through much greater integration of intelligence, diplomatic, commercial and military input to meet the UK's strategic aims. The establishment of the National Security Council (NSC) and its structure has provided a multi-departmental approach designed to offer a single point of focus to take the lead in meeting international and domestic emergencies through the pooling of intelligence, expertise and resources. However, the current organisation is dominated by the Cabinet office and the FCO neither of which has a role in generating and articulating a National Security Strategy. This leaves inter-departmental planning largely fragmented so that individual departments largely make their own strategies that are in turn constrained by the resources that they expect to receive rather than the threats they should be countervailing. The NSC has always been led by a diplomat as National Security Adviser, and the Defence contribution is just one person, the Chief of the Defence Staff, who cannot credibly convey the complexity and the nuances of Defence and Security issues to the Council. At present the priorities of the National Security Adviser's task must be recommended by the Cabinet Secretary who holds both responsibilities but cannot, necessarily and by the nature of the two tasks, combine their functions coherently.

The Strategic Defence & Security Review (SDSR) 2015 clearly calls for a UK worldwide role within NATO. Therefore, support of international commerce conducted within a rules-based system and a military commitment to a NATO Article 5 operation offer the focus for UK military tasking and planning. These two major tasks provide the baseline for establishing the Order of Battle (ORBAT) for the British Armed Forces – lower level discretionary operational joint tasking should be prioritised within this fully funded ORBAT.

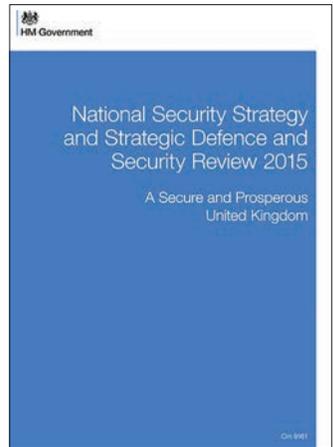
Thus, the diplomatic and military thrust of the UK must be Maritime/Air and Intelligence focused. Maritime, land and air capability should then be balanced to support this doctrine. Protection of free world borders, trade, UK trade routes, storage, manufacturing infrastructure, ports, air, space and cyberspace are key security priorities that underpin UK defence strategy alongside and within our NATO commitment. These balanced forces would form the core of UK expeditionary capability to deter aggressors, respond to overseas threats and provide resources for humanitarian operations – operating either alone or as part of coalitions. The term 'Maritime/Air focus' implies a joint domain within the MOD. With the passage of time and the now rapid development of technology, what earlier strategists may have referred to as a 'maritime virtuous circle' is becoming a 'Global Commons' requiring a worldwide 'joint' defence policy as described in SDSR 2015.

Nevertheless, SDSR 2015 is incoherent since HMG is mute on the Strategy it will employ to achieve their intended worldwide role. From any proper analysis of this review, it should transpire, to any thinking strategist, that there is a desperate requirement for the RN to have more submarines and surface escorts; for the RAF to have at least double the number of planned P-8 Poseidon Long Range Maritime Patrol Aircraft (LRMPA) and for the British Army to have many more and more flexible heavy armour transportation

enablers – together with rapidly deployable troops – to put a firm foot on the ground rapidly in support of the UK's allies so as to secure ground in time to deter aggression whilst at the same time applying defence supported diplomacy. Otherwise, our influence will be very severely diminished.

Doctrinally, all three services must be given clarity and embrace a strategic maritime/air concept for all future procurement and operational planning.

As Professor Rosa Brooks of Georgetown University said in 2012 whilst discussing US National Security Strategy: ‘... without some notion of where you want to go, there’s no principled or consistent basis for making even the most incremental decisions, so you end up with a foreign policy at risk of appearing almost random. As they say, if you don’t know where you are going, any road will get you there. It’s a sentiment that may have worked fine for the Cheshire Cat, but it’s not a recipe for a sound foreign policy.’<sup>1</sup>



An articulated UK ‘Grand Strategy’ has thus far been avoided by HMG and therefore SDR 2015 and the National Security Strategy (NSS) are incoherent without Strategic guidance. They both rely upon an implied strategic definition to continue the ‘national worldwide role’ – without articulating the strategic ways and means for achieving such a nebulous aim. This has placed government planners (not least the Chiefs of Staff in MOD) in the position of having to decide the scope of spending on various changing priorities without any clear sense of when and how the meagre resources are to be used or what direction they are to travel, when they are expected to arrive and how long they must be sustained for?

Living off reputation, however honourably and heroically won, will not fill the gaps in personnel and experience left when manpower establishments are downsized to save short term cash. It is easy to gap but extremely hard, sometimes impossible, to backfill personnel or weapons platforms and systems which, however capable, can still only be in one place at any one time.

Which is why we continue to say that HMG’s Defence and Security position is incoherent. By not articulating a Grand Strategy for the FCO, MOD and Treasury, the Government has created confusion, leading to unbalanced and severely underfunded Forces which are not resilient, ready or logistically able to rapidly react *en masse* at the speed required. Therefore, Defence & Security expenditure is merely funding Armed Services that appear to have impressive capabilities but which in practice cannot perform to expectations. Only a National Strategy supported by appropriate funding and a closer integration across governmental departments can channel the nation’s resources on a coherent path to a coherent path to national prosperity.

<sup>1</sup> <https://foreignpolicy.com/2012/01/23/obama-needs-a-grand-strategy/>

## Large White Ships

By Jock McCody

The Member of Parliament for Portsmouth North, Penny Mordaunt, while she was the Secretary of State for International Development, proposed that the UK builds two Humanitarian Aid and Hospital Ships to be permanently stationed in parts of the world that frequently suffer natural disasters. The most likely of these are the Caribbean and South East Asia. The proposal suggests that these ships be UK registered merchant vessels, built in the UK, manned by British seamen and emergency intervention teams and that they should be paid for and operated out of the foreign aid budget.



Penny Mordaunt MP, former Defence Secretary and International Development Secretary

The suggestion that the foreign aid budget should be used to maintain and operate vessels in a disaster relief mode, thus offering some relief to the Royal Navy and the defence budget, has been made in two discussion papers and a personal view, previously published on the UKNDA/Defence UK website. They were: 'The Carrot and the Stick', 'Are Big Warships Really Sinking the Royal Navy?' and 'Diligence, Argus & Ocean'. Thus, this move through the corridors of power to put the idea into effect can only be welcomed. A large white ship with the Union Flag and Red Crosses painted on her sides, stationed in a prominent and well used port will be a sign to the world of the UK's benevolence and an obvious indication of her ability and willingness to help those in need. Should such a proposal come to fruition however, what form should these ships take?

Firstly, they should be vessels of great burden so that they can carry the stores and equipment required to assist a community affected by a natural disaster. They should have an across the beach capability so that equipment can be landed when port facilities have been destroyed or are unavailable. They should have the ability to carry, maintain and operate several large helicopters and unmanned air vehicles (UAVs). They should be fast, so that they can get to a disaster scene quickly. Once on location, they should be able to hold position by use of a capable dynamic positioning system (DP) in case there is no available port and the situation is unfavourable for anchoring. They should have the capacity to produce copious amounts of fresh water and they should contain a fully equipped hospital and casualty reception facility. In short, they should be a civilian version of a large and very capable amphibious assault ship.

Of course, the flip side of this coin is that, in extremis, should such a vessel or vessels be required to support a military campaign, they would be available for charter by the Ministry of Defence in effect being taken up from trade. Some might say that

this would be a reason not to use the foreign aid budget to pay for them, but that argument has never been applied when the boot has been on the other foot. For instance, in October 2014 the Department for International Development, using the foreign aid budget, chartered the RFA Argus, a military aviation support and casualty receiving vessel, with a 100-bed hospital, to support their medical teams tackling the Ebola outbreak in Sierra Leone. Among the stores and equipment that she transported to that country were 32 civilian pick-up trucks to support the medical teams ashore. The Argus is now over 40 years old, nearing the end of her operational life and the Navy is hard pressed for funds to replace her.

I have written to my MP asking him to support this proposal and I urge others to do the same. If these vessels are built, and I very much hope they will be, may I suggest two names for them? One to be called Florence Nightingale and the other, ideally the one to be based in the Caribbean, Mary Jane Grant.



## The Reality and Improbability of the Armed Forces of the European Union – The ‘EU Army’

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**By Commander Graham Edmonds RN**



In December 2017 a framework for defence co-operation was agreed within the EU. All but three of the 28 EU member states agreed to participate in the Permanent Structured Cooperation (PESCO) in which member states’ resources will be combined and joint missions (operations) will be undertaken. The EU’s High Representative, Frederica Mogherini, said this was an ‘important moment’ which assembled ‘all the building blocks of a defence and security union’. The UK, Denmark and Malta are the three non-signatory states. PESCO aims to fulfil a long-standing Commission ambition to integrate EU defences and to

**fund, develop and deploy common armed forces together. It will eliminate duplication between national armies and will reduce reliance on the United States..**

PESCO criteria establishes that member states will:

- Co-operate and harmonise requirements and pool resources related to defence equipment acquisition, research, funding and utilisation, particularly programme initiatives of the European Defence Agency.
- Have the capacity at national level or as part of a multinational force, to provide combat units and supporting elements units to tactical battle groups for planned missions within 5 to 30 days and to respond to UN requests which can be sustained for up to 30 to 120 days.
- Be capable of carrying out tasks of joint disarmament, humanitarian and rescue, military advice, assistance, conflict prevention, peace-keeping, peace-making and post-conflict stabilisation.

Despite dissent to further ‘closer Union’ voiced by a large proportion of EU member states’ voters (evidenced by the rise of populist parties), there can be little doubt that within Brussels, and especially the EU Commission, the drive towards a federal United States of Europe will continue, a drive that has been restated by the new President of the Commission, Ursula von der Leyen.

The next stage is to formulate common defence and security policies to which, it has to be assumed, all member states must agree. President Macron of France is an ardent and vocal supporter of ever closer union, may well seize upon the current political and economic weakness in Germany to attempt to dominate EU foreign and defence policies and, as France has the largest armed forces and an independent nuclear deterrent, to influence the direction of PESCO into a French-led EU military and foreign affairs role.

The likelihood that the European Union can bring together all the military forces of the EU states, 22 of which belong to NATO and five of which are declared neutral, and

forge sufficient loyalty in personnel from disparate cultures to the EU with – in some cases – significantly different languages and script, may well prove to be challenging.

Europe's existing military forces, including those of the UK, have been seriously weakened by decades of reduction in defence spending. The German armed forces, even with a recent but modest increase in defence spending, will not meet NATO readiness targets before 2030. Military operations overseas by EU member states have required, almost without exception, considerable support from the USA. Under the guise of NATO, these operations (for instance, Afghanistan and Iraq) have been better co-ordinated and included contributions from the European NATO nations and coalition allies.

When the USA has not engaged in combat, as in Libya in 2011 when it withdrew from the fighting, British and French forces required Cruise missiles from the Americans to suppress Libyan command and control centres and air defence forces. The US also supplied enormous Electronic Warfare, Intelligence and Logistical support, all of which was beyond the capability of the British and French.

As the French have found in Mali since 2013, the US and UK, along with other NATO nations, have provided significant intelligence and logistical airlift support. According to France's Strategic Review of Defence and National Security the French dependence on US forces in Africa 'is not healthy' and will undermine France's pursuit to act autonomously. Arnaud Danjean, who is Chairman of the European Parliament Subcommittee on Security and Defence (SEDE), which is a sub-committee of the European Parliament Committee on Foreign Affairs (AFET), stated: 'They [the US] are happy to give leadership [of local command] to France,' referring to a small deployment of 800 US troops in Niger. But 'we would do less well without them in the Sahel,' he said. 'That poses a problem.'

The Anti-Ballistic Missile Defence (BMD) of Europe is provided by the USA through NATO and relies on the 'Aegis Ashore' system and four Aegis cruisers and destroyers based at Rota in Spain. A number of EU member states, but not the UK, have invested in US supplied Patriot BMD systems integrated into NATO's Ballistic Missile Defence system for Europe, which has reached an 'interim capability'. This means that a command and control centre has been tested and installed at NATO's Allied Air Command HQ in Ramstein in Germany.

The common and reliable defence theme is NATO with the US. The EU has never been able to generate sufficient military 'force' in both quantity of personnel, logistical support, airlift and quality high-tech equipment to form truly independent armed forces for joint or single-service operations. Without NATO, any EU formation would be, as the Chinese once said of the UK, a 'paper tiger'. It is doubtful that even in the long term the EU could generate sufficient resources, let alone achieve total agreement between its member states, to match the military forces of the USA, Russia or China.

There are those in the EU Commission and Council who argue that PESCO must 'morph' into an 'EU Army' beyond the current HQ and commitment, not requirement, for member states to support EU military operations. If a common defence and foreign policy is approved, will the Commission seek a military whose loyalty must lie with the EU and not their home state?

## Red Flare: A Case Study in Terrorism at Sea

**By Fred Dupuy**

At 22.30 on 29 March 2019, the bridge team on the passenger car ferry MV *Grace Darling* sighted a red distress flare, about three miles off her starboard bow. At the time the vessel was on passage from Spain to the UK, and 20 miles north of the Spanish coast. She had onboard a crew of 67 and 423 passengers. Very shortly after seeing the flare they received a distress call on VHF channel 16 from a small motor yacht that was in a sinking condition. The captain was immediately called to the bridge and on verifying that the flare and distress call were from the same vessel a rescue procedure was quickly initiated.

The ferry was slowed, engine room put on standby, bow and stern thrusters run up, fast rescue craft (FRC) crew put on immediate standby and the Northern Spanish Maritime Rescue Co-ordination Centre (MRCC) Bilbao, contacted on their telephone number 34 944 837053. While this was going on, contact with the sinking yacht, via VHF, verified that she had suddenly started to take on water, was about to founder and there were five people onboard that required rescuing. Fortunately, the weather at the time was benign, with a very low swell, rippled sea and a light south westerly breeze, thus rescue was deemed to offer little difficulty.

Contact between MV *Grace Darling* and MRCC Bilbao was maintained throughout and it was quickly established that the ferry would carry out the rescue and relay the details to the rescue centre. It was therefore decided that no immediate physical assistance would be required from the Spanish rescue services. As the *Grace Darling* was a UK-registered ship however and bound for the UK, Bilbao informed Her Majesty's Coastguard (HMC) National Maritime Operations Centre (NMOC) at Fareham, Hampshire, of the situation and they in turn were in continuous contact with the UK National Maritime Information Centre (NMIC) at Portsmouth. Both of those UK agencies continued to monitor the situation from afar.

The *Grace Darling* was brought to a stop with the sinking yacht a little over 100 metres from her starboard side, such that the bulk of the ferry's hull offered a lee and shelter from the light breeze. The FRC was launched and quickly came alongside the motor yacht, the main deck of which was almost awash and the five desperate people, three men and two women, quickly jumped aboard the rescue craft. All five, who were wearing lifejackets and insulated yachting oilskin suits, were very obviously happy to see their rescuers. As the FRC was recovered to the deck of the ferry, the motor yacht, which had been illuminated in the beam of a signal lamp, was seen to sink and disappear from view. The ferry quickly resumed her course and the facts were relayed to MRCC Bilbao along with the advice that the survivor's appeared to be in good health and that their details, once gathered, would be passed back to the rescue centre. The rescue had been completed within twenty minutes of the initial flare sighting and everybody was complimenting themselves on a slick operation and a job well done.

Once on the deck of the ferry one of the rescued men asked if they could be taken to the bridge to thank the captain for saving them. 'Of course,' said the 2nd Mate, who had been the coxswain of the rescue craft and as the crew secured the FRC, he led them from the boat deck to the bridge. On entering the wheelhouse, the leading man of the rescued five unzipped the side of his modified lifejacket, which he



was now carrying, and as the smiling captain advanced towards him with his hand outstretched, pulled out a silenced Glock 9 mm pistol and shot him in the middle of the chest. The captain immediately dropped to the deck where he quickly died. Because the bridge, darkened for night operations, was only dimly lit by the glow from the various navigation and equipment screens, most of those present were initially unsure of what exactly had happened and in their immediate shock and confusion, the four other rescued individuals quickly pulled silenced pistols from their lifejackets and moved to cover the two bridge wing doors and the one to the rear of the chart area, thus stopping anyone from leaving. The leader of the five then ordered the bridge team to bring the vessel to a stop and once he had seen how that was done, they, the rescued five, shot and killed everyone else on the bridge.

Five armed terrorists had now gained access to a passenger ship at sea, killed everyone on the bridge and for the moment, no one else on the vessel or ashore was aware of what had happened. They now split into three teams and while maintaining contact via UHF hand held radios, the leader destroyed the Global Maritime Distress & Safety System (GMDSS) at the back of the bridge and all the VHF radios that he could locate. He then proceeded to the monkey island and cut the cables (with very small shaped charges) to both of the satellite communications domes, and then destroyed every small dome and antenna he could find above the wheelhouse; thus, cutting off any chance of immediate contact with the outside world. The other four split into two teams of two and then proceeded to the passenger lounges, restaurant and bars. With one team working along the starboard side and the other the port, they shot everybody they met as they moved through those compartments. From there they moved to the alleyways through the cabin accommodation and as the occupants opened their doors to a knock and call, they and others in the cabins were shot.

Meanwhile, having finished his destructive work on the monkey island, the leader returned to the wheelhouse and shot the few of the ship's crew, which included the last of the deck officers that had quickly gathered there to find out what was happening. With each member of the terrorist gang possessing a silenced Glock 9 mm pistol, the standard magazine of which holds sixteen rounds, and ten spare magazines distributed around their voluminous yachting jackets, they had ammunition enough for their murderous rampage. Within 40 minutes of arriving on the bridge, the terrorist teams had finished their assault through the vessel and they gathered on the starboard



Lockheed C-130 Hercules

and 117 seriously wounded, many of whom died later. Navigating by a hand held GPS unit, they had a predetermined location and pick up organised, from where they would disappear and scatter throughout Europe and beyond.

By this time the authorities ashore had realised that something unusual was happening. Shortly after the successful rescue had been reported to MRCC Bilbao, the staff at MNIC Portsmouth noted, from the data transmitted by the *Grace Darling's* automatic identification system (AIS), that she had gathered way and resumed her course. A short while after that they noticed that she had slowed and stopped and then her AIS indicator disappeared from their screen. On trying to contact her by telephone, they then realised that her satellite link had gone down. The three agencies, MNIC, HMC and MRCC Bilbao, then tried to contact the *Grace Darling* via digital Telex and medium frequency voice transmission, which would normally have been received on her GMDSS system. Silence was the reply. Nor did she reply to Bilbao's call on VHF channel 16, either directly on the off chance that she was still in range of that system or via another vessel in the area. They quickly realised that something was wrong and that action on their part was required. However, it was now nearly midnight in Spain and 01:00 in the UK. While the emergency and rescue services operate at 24-hour readiness, it has to be said that, as a generality, they are less ready at midnight than they are at midday.

MRCC Bilbao alerted the Spanish rescue services and one of their helicopters, nominally on one-hour standby, was made ready to launch. The French rescue services were also alerted to a possible problem and they put their elements on standby. In the UK, HMC, in co-ordination with MNIC started to contact other vessels in the area to warn them of a possible marine casualty involving a passenger vessel and they started to collate other assets that might be required. At MNIC, however, an agency operated by the Royal Navy and having among its remit an anti-piracy and anti-terrorist element, a red flag was raised when they realised that all contact had been lost, immediately after taking onboard five new people, and not even a signal from an Emergency Position Indication Beacon (EPIRB) had been received. While the possibility of a terrorist attack had not been raised by any other agency, they alerted the Royal Marine anti-terrorist unit at Poole in Dorset and had a Helicopter and Hercules aircraft put on standby at

bridge wing. The leader placed a timed charge on the main bridge consul and then all five of them proceeded to the starboard FRC, the one that had initially taken them off the sinking motor yacht, which they boarded and launched. An hour and 20 minutes after the initial sighting of the red flare, these five terrorists were speeding away for the coast of Northern Spain, about 25 miles and little more than an hour to the south, extinguishing the boats navigation light and dismantling its radar reflector, as they went, to hamper detection. They left behind them 138 dead

RAF Brize Norton. While this was going on, however, in *Grace Darling* the passengers and crew were being murdered in their dozens.

As the Spanish helicopter crew were strapping themselves into their seats and running through their pre-flight checks, the five terrorists were already well clear of the *Grace Darling* and that aircraft would pass over them as they sped below in the darkness. Shortly after the helicopter lifted and was on her way to the *Grace Darling's* last known position, a crew member on the vessel, who had survived the onslaught, activated an EPIRB that was attached to a ship side life buoy, thus confirming her present position and removing any doubt ashore that a major problem existed. By the time the helicopter had located the vessel, that same crew member had obtained a hand-held VHF radio from one of the lifeboats and informed the helicopter pilot of the situation onboard. Immediately after those details had been passed back to MRCC Bilbao, the full emergency rescue services of Spain, France and the UK burst into life but by that time of course, the deed had been done. The five terrorists were now close to running the FRC ashore, sprinting for their pre-positioned pick up and being whisked away from the immediate area. The Royal Marine anti-terrorist unit was mobilised but by the time they got onto the scene, their job was merely to analyse exactly what had happened.

So why has this atrocity not been blazoned over the world's news media? Why has it been kept secret? That is, of



course, because it hasn't happened – yet – and for the purposes of this story the MV *Grace Darling* is a fictitious vessel. But could it happen? The answer has to be yes. Last year I attended a lecture given by a senior person from one of the UK's anti-terrorist squads. He laid it on the line when he said that, 'It is not a case of if an armed terrorist or terrorists will get onto a passenger ship, or ferry, it is only a case of when, and when that happens, it will be a long time before the men in black slide down that rope to take the situation in hand.'

A day after that lecture I spoke to the Marine Manager of a very large and well-known cruise liner company. I asked if his company employed armed marshals onboard or had fire arms available to trained members of the crew. He responded 'No'. When I mentioned that the Israelis had them on both their aircraft and ships, he answered 'yes, and the Americans too, but we don't want people with guns wandering around our ships. Our security precautions are so efficient that it is almost impossible for someone to get guns on to any of our vessels.' But is it? When I mentioned the conversation to another person on the course we were all attending, he thought it would 'take a three figure head count to change that attitude'.

The sequence of events described above could very easily happen. All that would be required is someone with a little knowledge of how a ship's bridge works and the

communication systems likely to be onboard. That information is easily come by. By travelling on a previous voyage of *Grace Darling*, the terrorists, or accomplices could map out the internal layout of the vessel and pictures of the upper superstructure would give a good idea of the antenna layout and what type of communication equipment she had onboard. At the same time the vessels track could be recorded on a hand-held GPS system and her AIS signal could be monitored using a small, portable and cheaply available commercial tracker. Thus, the vessels expected track, time on location (ferries run to a time table) and positive ID would be known. All that would then be required of the terrorists would be to wait at an advantageous location, let the victim deliver herself for the slaughter and then sink their boat as she approached. An inflatable life raft would be their insurance policy if the ship sailed past. If the 9/11 plotters could train a whole team to fly and navigate jet airliners, then co-ordinate their hijacking of four commercial aircraft, of the type that they had been trained on, so that they were all in the air at the same time and then carry out their plan of murder and destruction, by comparison taking over a lone ship would be an easy task. Pirates have often gained access to ships at sea and Military Special Forces periodically exercise for the eventuality when they might have to do exactly that. The term 'almost impossible' can be rephrased as 'it is possible'!

Passenger liners have been in the sights of terrorist organisations before. In October 1985, four terrorists of the Palestine Liberation Front (PLF) took over the passenger liner *Achille Lauro*. Fortunately for most of the passengers, their intent was not murder (although they did kill one elderly man) but the release of 50 PLF members, who were held in prisons elsewhere. More recently, in October 2017, two handguns were found hidden in the toilet of a cross channel ferry, probably to be smuggled into the UK, but who knows? They had passed through security and were onboard, only to be accidentally found by the cleaning staff.

Put yourself into the position of a ship's captain who comes across a distress situation with people in danger of drowning. What should he do? Pass them by and possibly report their position to a coastal authority or rescue service, and what would happen then if he were in a part of the world where rescue services were a long way away, or possibly even nonexistent? Should he pick them up but have them searched when they board the FRC (difficult) or thoroughly searched when they reached the deck of his ship? If the former, they could hold the boat crew at gun point and have them return to the ship, if the later they would have gained access to the vessel anyway! Most captains have it in their DNA to rescue those in peril on the sea and it will take a definite and identifiable threat to make them do otherwise.

In 2008 while on passage from Suez to the Bay of Bengal and at the eastern end of the Gulf of Yemen, a piracy hot spot, I was called to the bridge shortly after midnight, after two of our lookouts had sighted a parachute flare astern of the vessel. It is extremely difficult to judge the distance from such things on a crystal-clear night, especially in that part of the world where ducting is common, but they suggested two or three miles. As I considered the possibility of a Pirate's ruse, I had the ship turned around and put onto a reciprocal course. I then immediately telephoned UK Maritime Trade Operations (UK MTO) Dubai, the RN run anti-piracy desk and informed them of the

situation. Their advice was that they had no assets in the area that could come to my assistance and that if I spotted anything suspicious I should turn around and get out of the area as quickly as possible. At eleven knots flat out and with a low freeboard vessel that was easily boarded I was going nowhere quickly. We searched, found nothing, eventually resumed our course and reported the fact to UK MTO Dubai. Obviously that flare had been ignited many more miles away than we had thought. In the years that have followed that incident however, I have often pondered what might have been and thought to myself, there but for the Grace of God!

For years, ship owners resisted the suggestion that armed escort teams should be put aboard their vessels for the passage through the Red Sea and Gulf of Yemen piracy area. Eventually when the taking of ships, primarily tankers and cargo vessels, became a very lucrative business for the Somali piracy syndicates; they were forced to do so. It has been suggested that the massive increase in insurance premiums, for the vessels passing through that area and their even more valuable cargoes, was one of, if not the main driving force in this change of heart. Let us hope that it will not take a three-figure head count to drive up the insurance premiums for passenger ships to a level required for a change of heart on that side of the business.

If you have the will and a little knowledge, it is not impossible to board a ship through bluff, deception or in secret. I can think of ways to do it, other than the one mentioned above. The ferry and passenger ship operators know that getting fire arms onto one of their ships, while difficult, is possible. It is time for them to adopt a proactive rather than reactive approach to the problem and work out how they would effectively protect their very valuable cargo, the passengers and by default the crew, in the event that it should happen.

## Contributors to this issue of *Pro Patria*

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**Professor Andrew Roberts FRHistS FRSL** is a renowned historian and journalist. A Vice-President of Defence UK, he is Visiting Professor at the Department of War Studies, King's College London, and is the author of numerous works of political and military history including *The Holy Fox: A Biography of Lord Halifax*, *Salisbury: Victorian Titan*, *Eminent Churchillians*, *A History of the English-Speaking Peoples since 1900*, *Waterloo: The Battle for Modern Europe*, *Napoleon: A Life*, *The Storm of War: A New History of the Second World War*, and, most recently, *Churchill: Walking with Destiny*.

**Colonel (Retd) Andy Allen MBE** is a Director of Defence UK, having left the Army in 2015 to work in the defence industry. During a 30-year military career he specialised in aviation engineering, acquisition, guided weapons and logistics, supporting Apache, Chinook, Merlin, Sea King, Puma, Lynx, Gazelle, Scout and Special Forces platforms on operations around the world.

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**Steve Coltman** has been an active Liberal Democrat and was involved in formulating the party's defence policy for the 2015 General Election. A member of the LibDem working group on defence, he was instrumental in getting the 2010-2015 Coalition Government to publish a document examining the Alternatives to Trident. He is also a former chairman of the Association of Liberal Democrat Engineers & Scientists (ALDES), is a member of Defence UK, and is the author of a book on UK defence policy.

**Fred Dupuy** has had a 45-year career in the Merchant Navy, spending the first part of his career in general cargo trades, rising to Chief Officer and then transferring to the marine sector of the offshore oil and gas industry. For the last 20 years he has served as Ship's Master on various vessels, with experience in emergency intervention, diving support/construction, survey and wind-turbine installation. He is a Director of Defence UK.

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interest and expertise in defence affairs and distributes a private e-mail newsletter on worldwide defence and security issues to Defence UK members, academics, politicians, defence correspondents, friends, colleagues and former shipmates.

**Jock McCody** comes from an Army family, and all of his childhood was spent around military establishments. On leaving school he joined the Merchant Navy and spent a short spell in the Royal Naval Reserve. He has an ongoing interest in military affairs and supports a strong and capable defence.

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**Squadron Leader Dave Tisdale RAF (Retd)** served for 25 years in the Royal Air Force – 10 years as an airman and 15 as an officer. Among other postings, he saw service in Northern Ireland (three tours), Norway, Germany, South Atlantic (Ascension Island), as well as Cyprus and Bosnia. He commanded two squadrons, one as second-in-command of a joint Army/RAF unit in Cyprus, and held planning and logistics posts with the UN in Bosnia, the Ministry of Defence, RAF Strike and Support Commands. After retiring from the service, he worked for the RAF Benevolent Fund and the Royal British Legion. He was a founder-member of the defence and strategy research group, DefenceSynergia.

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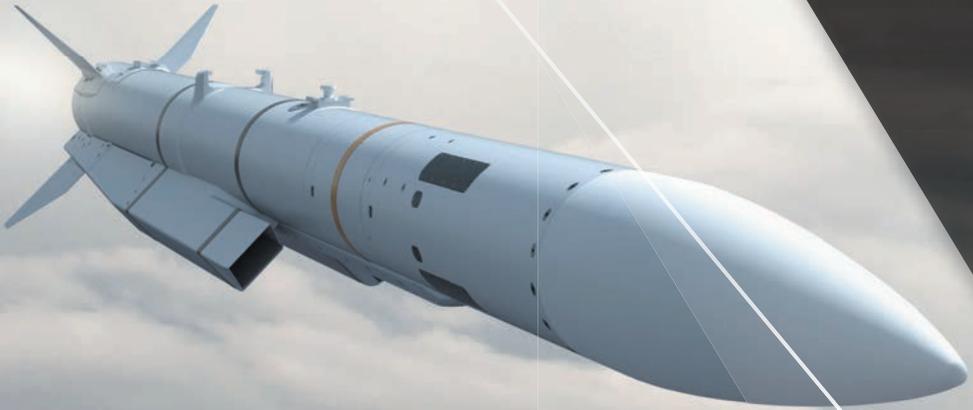
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