Introduction
The United States Missile Defence system – now integrated with the NATO Ballistic Missile Defence network – is making the world a more dangerous place by leading us into a new arms race.

Successive US administrations have committed to its development, seriously hampering international efforts towards nuclear disarmament. The system is a particularly contentious issue between the US and Russia, with the latter concerned that the system surrounds and threatens its territory. The UK plays a crucial role in the missile defence system with key bases at Fylingdales and Menwith Hill. CND is concerned that there is no public or parliamentary debate about that role, which makes our country a prime target in any US-led wars.

Missile defence has nothing to do with global security but everything to do with US global dominance. It is the ‘shield’ that complements a US-led nuclear sword and is generating a new nuclear arms race. This is because, although described as a ‘defence’ system, it actually enables first-strike attacks to be made by the US without fear of retaliation. An attack can be launched and the missile defence system will block any retaliation. ‘This ends the notion of ‘mutually-assured destruction’ – the balance of terror that is supposed to prevent nuclear weapons ever being used. As a result of this, missile defence installations in Europe are severely obstructing any further progress on nuclear arms reduction between the US and Russia. This is particularly damaging given the ongoing crisis in Ukraine and the strained relationship with Russia.

Many analysts are concerned that an important role of missile defence is to take the Pentagon a step further towards the weaponisation of space. The Pentagon is using missile defence as a shield in more ways than one and are busy developing weapons systems to fight wars in and from space. Clear demonstrations of the anti-satellite capabilities of missile defence systems have been presented by Russia, China, the US and India.

Missile defence systems have been or are being developed by a number of states, including the US, Russia, China, Israel and India while France and Italy have jointly developed a missile capable of ballistic missile defence. Many other countries are also purchasing or hosting (mainly US) missile defence systems or components, including Poland, Spain, Romania, Germany, Greece, Turkey, Israel, Egypt, Kuwait, Japan, the Netherlands, Saudi Arabia, the UAE, Oman, Jordan, South Korea, Taiwan and the UK. The decision in 2019 by NATO member Turkey to purchase a missile defence system from Russia rather than the US has been met with threats of sanctions from the White House. We will focus on the US/NATO system in this briefing, as it involves UK participation.

How it all started
The current forms of US Missile Defence began with Ronald Reagan’s so-called ‘Star Wars’ speech in 1983, in which he proposed the development of a system that would make nuclear weapons ‘impotent and obsolete.’ Reagan had been persuaded that it was possible to build a shield that would protect the United States from a missile attack from anywhere in the world. The Strategic Defence Initiative (SDI) was implemented as a result and involved research and development into various kinds of speculative and extremely expensive technology such as ground and space-based interceptor missiles, energy beam and laser weapons. The command and control of these components would be coordinated through a global satellite system.

It was soon realised that this grand plan was technically unfeasible but successive US administrations have continued to finance missile defence research and development, spending $300bn on it since 1983 and with a current annual budget set at $11.5 billion.

In 2001, President George W. Bush announced that the US would unilaterally withdraw from the Anti-Ballistic Missile (ABM) Treaty with Russia in order to further develop, test and deploy missile defence technology. The ABM Treaty was an important agreement which had been a massive success in preventing the deployment of missile defence systems. President Bush insisted that the US needed missile defence in case terrorists or ‘rogue’ states such as Iran or North Korea were ever to obtain missiles able to reach them.
Immediately after withdrawing from the ABM Treaty, the US began to deploy a Ground-Based Midcourse Defense (GMD) system to intercept intercontinental ballistic missiles (ICBMs). This system uses land-based missiles to intercept incoming ballistic missiles in the middle of their flight, outside the atmosphere. There are four such missiles based at Vandenberg AFB in California, and 26 at Fort Greely in Alaska. Other components include powerful detection and tracking radars in Alaska, Greenland, Norway and the UK (at Fylingdales in Yorkshire).

But significant opposition to US bases being established in Europe meant these plans looked vulnerable at the end of Bush's second term of office as US President. CND successfully campaigned against part of the system, an anti-ballistic missile site, being located in the UK and also worked successfully with European partners to prevent the siting of a radar at Brdy in the Czech Republic.

Obama: A shift in strategy

Before being elected President in 2008, Barack Obama stated that he would cut investments in unproven missile defence technology, but he also said that he was not opposed to the system altogether. The first statement was welcomed by many but the second was more or less forgotten.

Obama did cancel the original projects proposed for Poland and the Czech Republic which had been subject to enormous public opposition. Encouraged by this development, Russia signed up to the New START Treaty for bilateral nuclear reductions with the US in April 2010. The new treaty stirred up some controversy in the US, with Republicans accusing the President of giving in to Russia on the deployment of missile defence in Europe.

But the reality was that new plans were in place for US missile defence – to modify and expand ship and land-based systems for installation in Europe, the Middle East and Asia. The full details were presented in 2010 in a Ballistic Missile Review Report which showed that the Obama Administration was shifting from ‘defending the homeland’ against long-range missiles to ‘defending against regional threats’.

Obama wanted land-based Patriot missiles and sea-based Aegis SM-3 interceptors and Aegis Ashore – the land-based equivalent – to be installed in Europe for ‘protection’ against short, medium and intermediate-range missiles.

The Obama administration announced in 2016 that it had agreed to deploy the Terminal High Altitude Area defence (THAAD) missile defence system in South Korea. It was declared operational in 2017. As well as incurring huge protests from local residents who fear the system could make them a target, China and Russia are also concerned that this system (and others introduced into the Pacific region) could impact on their nuclear capabilities. These moves look set to further antagonise international relations in the region and undermine any attempts to de-escalate tension and alleviate concerns.

Donald Trump: no constraints

In the early days of Donald Trump’s presidency, one of the few military policies on the new White House website was a commitment to missile defence, and the Missile Defence Review (MDR) published in January 2019 explicitly states that the US will
not accept any limitation or constraint on the development or deployment of missile defense capabilities.\textsuperscript{3}

The MDR also announced that the US would be deploying 20 additional interceptor missiles in Fort Greely, Alaska, as part of the GMD system, as early as 2023. There is renewed interest in the possible use of high energy laser technology to destroy missiles in the boost phase.

The idea of space-based interceptors has also re-emerged – despite the huge technical problems encountered by similar projects in the past. The militarisation of space is not new to Trump but he accelerated the process when in 2018, he announced he had directed the Pentagon to develop a Space Force, to ensure ‘American dominance in space’.

Launching the Review, Trump made it clear that his intention was not for the system to be simply defensive, saying ‘It’s new technology. It’s ultimately going to be a very, very big part of our defense and, obviously, of our offense.’\textsuperscript{4}

**Enter NATO**

NATO has been developing a missile defense system since 2005 when, after a two-year feasibility study, it embarked on the Active Layered Theatre Ballistic Missile Defence (ALTBMD) programme to provide complete coverage against tactical ballistic missiles with ranges up to 3,000 kilometres wherever NATO forces might be deployed.

At the 2010 Lisbon Summit, NATO members decided to extend this system by linking together the satellite, ship, radar and interceptor systems of different states into a missile defence system under NATO command and control. This would then be joined with the US systems to cover the entire territory of 29 nations and a combined population of up to 900 million.

The 2016 Warsaw Summit declared the system in Europe as having an Initial Operational Capability. The command and control centre has been set up at NATO’s Air Command HQ in Ramstein, Germany; four US missile defence destroyers are based at Rota in southern Spain; a forward-based early-warning radar is operational at Kurecik in Turkey and Romania hosts an Aegis Ashore missile site in Deveselu. Further Aegis Ashore missiles are due to be sited at the Redzikowo military base in Poland, which is nearing construction. In 2019 a THAAD system was integrated into the NATO system while temporarily sited at Deveselu during an upgrade of the Aegis Ashore system.

NATO claims that missile defence is needed to counter threats to Europe by Iran and North Korea, but neither country has actually threatened Europe and the real target for NATO is more likely to be Russia which has repeatedly expressed concern about this undermining of its deterrent capabilities.

**Britain’s role**

The UK is crucially involved through two bases in Yorkshire, at Fylingdales and Menwith Hill. Fylingdales is one of five US Ballistic Missile early warning radar stations across the world. Despite major public and political opposition on the grounds of international security and local health concerns, the British government gave permission for Fylingdales to be used as part of the US missile defence system in 2003. This joint US Air Force and RAF base in North Yorkshire detects enemy missiles and initially determines their intended trajectories, allowing interceptor missiles to be targeted and eventually fired from other locations to knock them out.

Menwith Hill is run by the US National Security Agency (NSA). It operates as part of a global network of bases used to spy on all forms of international telecommunications, including private phone calls, emails and faxes. The base is crucial for the intelligence-gathering necessary for any US-led military attack.

In 2007, Britain announced that Menwith Hill would also become the European Ground Based Relay station for the US Space-Based Infra-red System (SBIRS) which is another component of the early warning and tracking system for missile defence. The UK government effectively quashed any opportunity for proper parliamentary consideration of this matter by announcing the collaboration in a written statement on the day before the summer closure of Parliament. The ‘manner and timing’ of the announcement ‘and the resulting lack of Parliamentary debate on the matter’ was subsequently criticised by Parliament’s Foreign Affairs Committee.\textsuperscript{5}

SBIRS was developed to upgrade the US Defense Support Program (DSP) satellite system and consists of three components operating at Low Earth Orbit (LEO), Geostationary Orbit (GEO) and Highly Elliptical Orbit (HEO). Technological failures and cost overruns led to a number of changes in the programme and in 2001, the GEO system was replaced by the Space Tracking and Surveillance System and in 2018, SBIRS evolved into the Overhead Persistent Infra-red system.

The UK government’s 2015 National Security Strategy (NSS) sets out three tiers of risks in order of priority based on a National Security Risk Assessment.\textsuperscript{6} The highest priority risks (Tier One) listed includes international terrorism, cyber-attack, flooding and pandemics. A nuclear weapon attack by another state on the UK was judged to be lower on the scale. It does not make sense therefore for the UK to be investing resources in developing a missile defence shield. Far from protecting us, missile defence bases are putting the people of Britain at greater risk. The NSS goes on to state that the UK will ‘commit significant funds to the NATO Ballistic Missile Defence Network’ and that it will look into the possibility of the Type 45 Destroyers Ships operating in a missile defence role.

The government is also building a ground-based missile defence radar. A Request for Information was issued to industry in 2017 and it is expected that the radar will be in service by the mid-2020s possibly either at a site in the UK or Cyprus.
**Russian response**

The US missile defence system has increased tensions with Russia which believes that the system is a threat to its nuclear weapons defensive capability. In 2002, immediately after the US announced its withdrawal from the ABM Treaty, Russia reacted by refusing to implement START II. In 2015, Russia quit the Treaty on Conventional Forces in Europe (CFE), citing the development of a missile defence system in Europe as one of the reasons.

In November 2011, when the US failed to agree to make the missile defence shield a joint project with Russia, then-President Dmitry Medvedev announced sweeping plans to address what Moscow considered to be a threat to national security. In December 2013, Russia confirmed that Iskander (9K720) missiles had been stationed in its westernmost territory of Kaliningrad for over 18 months.

The Intermediate-range Nuclear Force Treaty (INF) between the US and the Soviet Union (now Russia) was agreed in Reykjavik in 1986 and ratified in 1987. It resulted in the withdrawal and destruction of a whole range of intermediate range missiles from Europe, but was torn up in August 2019. Russia claimed that the US violated the INF treaty through missile defence tests and because of the deployment of the Aegis Ashore missile defence system deployed in Poland and Romania that could also be used to launch nuclear missiles. In turn, the US claimed that Russia breached the treaty because of its testing and deployment of SSC-8 cruise missiles and 9M729 Iskander missile systems – the US claims they have a range outside that allowed by the INF. Unless another agreement can be reached, the end of the INF treaty is likely to start a new arms race with the possibility of intermediate range nuclear weapons being stationed in Europe once again, as well as in north-east Asia.

**Missile Defence in Northeast Asia**

Following North Korea's missile test in 1998, Japan decided to partner with the US to research, develop and deploy ballistic missile defence systems. The country is now one of the most active players in the field, announcing an extra 2.9 trillion yen (approx. £20 billion) of funding for the system in 2017. In 2004, the Japanese government decided to make missile defence programmes an exception to their self-imposed arms export ban in order to collaborate with the US on developing interceptor missiles. Japan is currently hosting two high-powered US missile defence radars and is developing a 'layered' missile defence system composed of sea-based Aegis destroyers, US mobile THAAD or Aegis Ashore systems and short-range Patriot missiles.

As well as the THAAD missile defence system in South Korea, the US has also deployed THAAD in Guam and has 17 sea-based systems as part of its Pacific fleet with intentions to increase this number to 41 by the end of 2019. A further THAAD system is due to be installed in Hawaii by 2023.

Although the US continues to claim that these systems are aimed at the developments of missile and nuclear technology in North Korea, Russia and China have expressed concern over the deployment of missile defence systems that could also be targeting them and say that regional security is being threatened.

**Would it work?**

The effectiveness and reliability of missile defence and its associated technologies have always been questioned. Independent scientists and engineers suggest that the proposed US Missile Defence system can easily be overcome by countermeasures such as cheap inflatable decoys. In outer space, where the intercepts are likely to occur, it's impossible to tell decoys from warheads. Deploying large numbers of dummy warheads could therefore easily overwhelm the small number of interceptor missiles available.

The US's non-partisan Government Accountability Office (GAO) expressed concern about the system in 2012 due to major delays, cost overruns and critical technological problems. The US National Academy of Sciences concluded around the same time that the proposed system 'cannot offer protection to the United States'.

Even before these reports, confidence in the system had waned. The US Missile Defence system is neither robust nor reliable. In a real confrontation missile defence would offer no meaningful protection. Missile defence is, however, working very well for the corporations who make billions of dollars from government contracts and international sales.

**Conclusion**

The US and NATO are surrounding Russia and China with missile defence and other military installations which are continually upgraded and moved closer to their borders, exacerbating international tensions and hindering nuclear disarmament.

The international community has serious problems to deal with, including climate change, migration and terrorism, for which it will need countries to cooperate. Instead, the US and NATO insist on pursuing a militarily aggressive foreign policy which undermines their relationships with countries such as Russia and China.

France, Italy, Poland, India, China, Israel, Russia, Japan and Taiwan are in various stages of development of their own missile defence systems. It would surely be better for these countries to come together to discuss ways in which nuclear threats might be removed rather than spend huge amounts of money on perpetuating a new arms race.

Missile defence does nothing to encourage international understanding and cooperation. It is offensive, expensive, destabilising and extremely dangerous. CND will continue to raise awareness of and campaign against Britain's role in the US missile defence system and thereby the country's complicity in making nuclear war more likely.
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