

## The UK's Role in Star Wars

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United States President George W. Bush is committed to taking the US National Missile Defence (NMD – also known as ‘Son of Star Wars’) programme forward if some of the planned series of tests are successful. History has shown that, if a particular test is to determine the future of such a programme, it is almost always successful! Ted Postol, Professor of Engineering at the Massachusetts Institute of Technology, has gone to great pains to demonstrate how some of tests previously deemed as ‘successful’ were in fact rigged.

Much has been written recently concerning the threat posed to world stability by the United States developing a National Missile Defence system. However, although President Clinton has left any decision on the further development of NMD to his successor, there are key systems currently running and being developed in the United Kingdom that would be vital components to any star wars system that may be eventually implemented. Both systems are situated in North Yorkshire – one at Fylingdales, near Whitby, and the other at Menwith Hill, near Harrogate.

### **Fylingdales**

Fylingdales in the North Yorkshire Moors National Park has been the home of a US Ballistic Missile Early Warning System (BMEWS) since the Cold War days of the 1960s. The base is run for the US by the Royal Air Force and is one of the three stations in a chain linked across the North Atlantic. The other stations are Thule in Greenland – operated by the 12th Space Warning Squadron (or SWS) and Clear in Alaska – operated by the 13th Space Warning Squadron – both components of the United States Air Force 21st Space Wing based at Peterson Air Force Base in Colorado Springs.

RAF Fylingdales originally consisted of three white spherical radomes over 40 metres in diameter. Each radome housed and protected a large radar dish that could be mechanically

steered to search for intercontinental ballistic missiles that threatened the North American Continent from the Soviet Union. At this time an uneasy balance of strategic nuclear weapons was held between the two super powers by setting an agreed limit to each side's ability to counter a full-scale nuclear attack. In this way, any nuclear first strike would risk Mutually Assured Destruction (a MAD idea in more ways than one). The Anti-Ballistic Missile Treaty (ABMT), signed in 1972 by the United States and the Soviet Union, set limits on the anti-ballistic systems (missiles and radars) that could be deployed by each side.

Between 1989 and 1992 the three giant 'golfballs' at Fylingdales were replaced by a Phased Array Radar in the form of a 40-metre high truncated pyramid. Each of three faces of the pyramid contains an array of 2,560 aerials, transmitting a total mean power output of 2.5 Megawatts. Limited by the conditions of the Anti-Ballistic Missile Treaty, the upgraded radar has a similar output power and the same 3000 mile range as the old one, but is able to operate over a full 360°, rather than 120°. The radar system at Thule was upgraded in a similar fashion in 1987 and, together with the system in Alaska, they provide (in conjunction with the Defence Support early warning satellites) a Tactical Warning/Attack Assessment directly to the US Joint Chiefs of Staff. Fylingdales operates under the US 'Masterplan for Tactical Warning and Attack' which lists the aims of Ballistic Missile Early Warning System as being to:

- 1 Support and aid the survival of strategic military forces.
- 2 Provide an accurate basis for national (i.e. US national) command authority response decisions.
- 3 Enhance warfighting effectiveness of the strategic nuclear forces.

As well as its Early Warning Function, Fylingdales also forms part of the Space Surveillance Network (SSN) intelligence network, tracking and maintaining a catalogue of space objects (military and civilian satellites and space debris). Fylingdales is therefore a significant command, control, communications and intelligence installation. Information gathered by the radar installation is fed directly to the North American Aerospace Defence Command (NORAD) in Cheyenne Mountain, Colorado. From there information is passed to the National Command authorities and to Headquarters, Strategic Air Command (SAC). In time of war, it would provide the US President with information on what has and has not been attacked, monitor trajectories of both surveillance satellites and incoming ballistic missiles, and allow prioritising and accurate response and targeting on 'enemy' satellites and ballistic missiles.

For National Missile Defence, however, detection and warning are not enough. Accurate tracking and discrimination between warheads, debris and decoys is required. A 'preliminary' architecture released by the US Ballistic Missile Defence Organisation (BMDO) in March 1999 describes the NMD system as being deployed in three phases. All three phases would use the current US early-warning radars in California, Massachusetts and Alaska, and at Thule and Fylingdales, but they are not able to track targets accurately enough to guide interceptors, so the first phase involves an Upgraded Early Warning Radar

(UEWR) programme to give them this capability. This would involve replacing existing computers, graphic displays, communication equipment, and the radar receiver/exciter for National Missile Defence. New Early Warning Radar software would allow the acquisition, tracking, and classification of small objects near the horizon and this data would be passed to other National Missile Defence elements using improved communications systems.

The upgraded early-warning radars will still be extremely limited in their ability to discriminate real warheads from decoys or to deal with other types of counter-measures. The system will therefore also deploy new high resolution phased-array X-band radars which use high frequencies (5.2-8.5 GHz) and advanced radar signal processing technology to improve target resolution. Phase One would see an X-band radar at Shemya in the Aleutian Islands (to cover missile launches from North Korea). Phase Two would include additional X-band radars at the current Ballistic Missile Early Warning System sites (including Fylingdales). Recently questions have been raised regarding the possible danger to the health of people living close to these installations. The Ballistic Missile Defence Organisation insists that the microwave leakage from these high power radars is safe – but others are not so sure and independent investigations into possible health hazards need to be made.

The United Kingdom Government does not deny that RAF Fylingdales would play an important role in National Missile Defence should it go ahead. However, despite repeated questioning by the press and in the Commons, it will not pronounce on what its decision would be should the United States ask permission for the changes to be made. The Foreign Secretary, Robin Cook, has said: 'Until we know both the nature of the question and also the circumstances in which we are being asked that question, it would be premature for us to debate what might be, particularly since there is no commitment by the United States to ask the question.' It has been said that the UK Government is 'working behind the scenes' and is not willing to make public statements that might put the Anti-Ballistic Missile Treaty in danger. A number of US politicians have spoken of abandoning the Treaty if it becomes too difficult to renegotiate to allow them to deploy National Missile Defence. Perhaps this explains the apparent differences of opinion in government. On the same evening in March 2000, Foreign and Commonwealth Office minister Peter Hain said on the BBC that, he did 'not like the idea of a Star Wars programme'. Meanwhile on Channel 4, Defence Secretary Geoff Hoon stated that Britain would be sympathetic to any request from the US to use Fylingdales. Officials in Washington are also confident that any such requests would not be turned down.

However, Russia is extremely unwilling to change the Anti-Ballistic Missile Treaty to allow upgrades and changes for National Missile Defence. Most countries, including Russia and China, have expressed grave concerns that breaking or abandoning the ABM Treaty would lead to a new arms race to counter the proposed National Missile Defence shield. Perhaps this is a good opportunity for the United Kingdom to say that it will have no part in National

Missile Defence – and use any influence it has to encourage the US to rein back on this issue.

The Ministry of Defence is currently undertaking a three-year Technology Readiness and Risk Assessment Programme (TRRAP) to look at the threat posed by ballistic missiles and the possibility of defending against them. It is also working within NATO to explore the possibility of Theatre Missile Defence (TMD) systems which could be deployed whenever and wherever military action occurs.

### **Menwith Hill**

The other US National Missile Defence component in Yorkshire is at Menwith Hill, which is probably better known for its electronic monitoring activities. Menwith has attracted a lot of publicity since it was revealed that it uses a system called ECHELON to systematically intercept fax, email and telephone messages and search for key words. ECHELON was first revealed by Duncan Campbell in 1988 and detailed by Nicky Hagar in 1996. The existence of the ECHELON system was eventually officially confirmed in a report 'Assessing the Technologies of Political Control' commissioned by the Civil Liberties Committee of the European Parliament. A follow-up report by Duncan Campbell describes the ECHELON system and the state of the art in Communications Intelligence (COMINT) in some detail. The European Union is currently investigating these activities further.

The US Air Force and British War Office signed an initial agreement for the use of the land at Menwith Hill in 1951 and the station became operational in 1959. The Ministry of Defence described Menwith Hill as a 'communications relay centre' but in 1966 the United States National Security Agency (NSA) took it over and the interception of satellite communications began as early as 1974. At this time the first satellite communications dishes were installed – there are now nearly 30.

In 1997, the British Government announced that Menwith Hill was due to become the European Ground Relay Station for the Space Based Infra Red System (SBIRS) which has two components – SBIRS-High and SBIRS-Low. General Howell M. Estes III (Commander in Chief, North American Aerospace Defence Command and US Space Command and Air Force Space Command, Commander) said in a speech urging the US Congress to 'help fulfil the promise of space' that: 'These systems will significantly improve our ability to provide much more precise launch and impact point of theatre missiles to forces in a theatre of operations. They are key to our ability to cue systems that we'll use for active defence as part of both theatre and national missile defence.' SBIRS-High will replace the early warning satellite system known as the Defence Support Programme (DSP) to detect the boost stage of a ballistic missile after launch and provide initial trajectory information. The SBIRS-Low system is to detect and track cold missiles much later in their trajectory. Both would be used for National Missile Defence. However, Prof. Ted Postol has expressed grave doubts that

SBIRS-Low will ever work, and SBIRS-High will be used to detect ballistic missile launches even in the absence of National Missile Defence. Also, if the US wanted to use data relayed through Menwith Hill for National Missile Defence, it would need to ask for UK consent.

The first two satellite dishes for the relay system are now in place at Menwith Hill, but their construction attracted the attention of local peace campaigners. Although local planning permission is not required for building at Menwith Hill Station, plans are sent to the local Planning Office in Harrogate as a matter of courtesy. As a consequence, concerned local people who continually monitor the expansion of the base noticed the proposed construction of the Spaced Based Infra Red System. In particular, the Campaign for Accountability of American Bases (CAAB) recognised the significance of the plans. In October 1999 they issued a Claim (formally known in the English legal system as a Writ) in the High Court in London to seek an injunction to stop the building of the SBIRS radomes on the grounds that it would cause the United Kingdom to be aiding and abetting the United States in breaking the Anti-Ballistic Missile Treaty and it would also be against the spirit of the Outer Space Treaty (which the United Kingdom signed in 1967 and which advocated the peaceful use of space). The Claim was served on the American Base Commander, the Secretary of State for Defence, the Defence Land Agent and the RAF Liaison Officer at Menwith Hill. The UK defendants applied to the High Court that the Claim be struck out but this was denied in January 2000. The US defendant separated from the three British defendants and claimed State Immunity. In an extraordinary move, solicitors acting for the US Base Commander asked for costs against the issuer of the Claim of £13,000. They suggested that if £6,000 were paid within 14 days, then they would waive the rest if an undertaking was given not to bring any action connected with this matter against the US Government or their agents. No such undertaking was given. Eventually, following President Clinton's announcement in September 2000 not to authorise the deployment of National Missile Defence, the Campaign for Accountability of American Bases was advised to withdraw and all defendants are now claiming massive costs against them.

The National Missile Defence and Theatre Missile Defence programmes being considered and developed by the US and others must be seen as an extremely serious and worrying development. The US has made no secret of the fact that it considers space to be the military high ground. If you master space you can control the world. The US is already calling itself 'Master of Space' – if National Missile Defence plans do go ahead, space based components will play a crucial role. Other nations will react by considerably increasing their arsenals and many treaties will be broken or put at risk. How long will it be before weapons are stationed in space – to be aimed at any target anywhere on Earth? How long before the star wars fantasy becomes a grim reality?