

## Secret upgrade of Trident warheads

A recruiting agency has given away what the Government have been trying to keep secret for years. One uncensored job advert has revealed that Aldermaston are working on a substantial upgrade of the existing Trident warhead. Successive Defence ministers failed to disclose their involvement in this American programme when asked about it by MPs in recent years. This upgrade will make Trident more useable and so lower the nuclear threshold.

There is a vacancy at the Atomic Weapons Establishment for a "Warhead Electrical Engineer". The job description published by the Beechwood recruitment agency says that the engineer will "support the approval programme for the introduction of the Mk4A AF&F system into UK Trident".<sup>1</sup> The Aldermaston website advertises the same post. However the term "Mk4A AF&F" has been deliberately removed from the job description five times.<sup>2</sup>

The US are upgrading their Trident warheads to a new specification, Mk4A.<sup>3</sup> This upgrade covers many of the components in the warhead. A crucial element has been the development of a new Arming, Fuzing and Firing System (AF&F).

This is not just a question of replacing ageing components. The upgrade will increase the "targeting flexibility and effectiveness" of the warhead.<sup>4</sup> The component which will give the warhead this enhanced capability is the new AF&F. This AF&F will include "advanced fuzing options".<sup>5</sup>

Hans Kristensen of the Federation of American Scientists, a leading expert on the US nuclear weapons programme, said:

"The bottom line is that the new Mk4A .. is part of a broad effort to increase the warfighting effectiveness of the D5 system. .. It appears to be intended to give the warfighter greater flexibility in setting the optimum height of burst in a wide range of attack options. This will broaden the range of targets that can be held at risk with the weapon."

On three occasions Defence Ministers have failed to disclose that they are involved in this upgrade when replying to specific question from MPs. In February 2002 Lynne Jones (Labour) asked whether the MoD had discussed the warhead upgrade and the new AF&F with the US. Dr Moonie replied saying that they had discussions on issues of mutual interest, but he did not acknowledge Britain's involvement in either project.<sup>6</sup> In May 2006 Angus Robertson MP (SNP) asked about the Mk4A warhead and received a similar answer.<sup>7</sup>

At the end of last year Nick Harvey (Liberal Democrat) asked whether the MoD had any plans to upgrade and refurbish Trident in the next five years. Des Browne replied - "We occasionally replace components of our nuclear warheads, if and when they become obsolete, but we have no plans to upgrade or refurbish our Trident warhead stockpile in the next five years". He added that "decisions on whether and how we may need to

<sup>1</sup> <http://www.beechwoodrecruit.com/vacancy-1223.html> It had also been published on Planet Recruit but has now been removed.

<sup>2</sup> [https://careers.awe.co.uk/wd/plsql/wd\\_pds?p\\_web\\_page\\_id=25952](https://careers.awe.co.uk/wd/plsql/wd_pds?p_web_page_id=25952)

<sup>3</sup> The US Department of Defense calls the original warhead Mk4 and the upgrade Mk4A. The Department of Energy calls the original warhead W76-0 and the upgrade W76-1.

<sup>4</sup> <http://www.globalsecurity.org/wmd/systems/w76.htm> This phrase was also used on the Los Alamos Laboratory website in a description of the W76-1 project, but the relevant page has been removed.

<sup>5</sup> Statement by Paul Robinson (Sandia National Laboratory), House Armed Services Committee, 12 June 2002.

<http://www.sandia.gov/news/resources/testimony/pdf/020612.pdf>

<sup>6</sup> Hansard Written Answer 6 February 2002

<sup>7</sup> Hansard Written Answer 2 May 2006

*The AF&F is the basis of the nuclear warhead*

*It controls*

*when + how*

*the warhead*

*delivers*

*\_\_\_\_\_*

refurbish or replace the warhead stockpile are likely to be necessary in the next Parliament."<sup>8</sup>

Des Browne's answer was deliberately misleading. Introducing the new AF&F is an upgrade. It is not a minor change. Developing the Mk4A warhead has been the largest single project in the US nuclear weapons programme since it was started in 2000. The American programme will enable Trident to be effective against a wider range of targets. It will also extend the life of the US warhead by 30 years.

Coming in the period when Parliament and the public are considering the future of British nuclear weapons, Des Browne's failure to disclose Aldermaston's involvement in the Mk4A project undermines the whole process of debate. This vital piece of information should have been disclosed to the Defence Committee, to Parliament and to the general public.

There are no technical reasons for keeping this secret. Sandia National Laboratory are proud of the technological breakthroughs they have made while working on the Mk4A. They have published on their website detailed descriptions of the components in the upgraded warhead along with diagrams showing how they work.<sup>9</sup> Des Browne is not withholding technical details, he is keeping secret the fact that a political decision has been made to upgrade the current Trident warhead.

In their report on the future of the UK Strategic Deterrent the Defence Committee suggested that the MoD may be lowering the threshold of nuclear use. This latest revelation confirms that this is the case. The White Paper on Trident revealed that Britain deploys a lower-yield warhead on some missiles. If the new AF&F is deployed then this warhead would be more effective against a wide variety of targets. This makes Trident more "useable". As such it lowers the threshold of nuclear use.

It should be noted that Mk4A is not the same as the Reliable Replacement Warhead (RRW). While RRW is still at an early stage of development the first production units of Mk4A should be produced by the US in 2007.

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<sup>8</sup> Hansard Written Answer 18 December 2006

<sup>9</sup> Details of warhead are contained in Annex I of The Future of the British Bomb  
<http://www.banthebomb.org/future.doc> (Word 860 kb)