

## **Hansard 5 March 2007**

### **Nuclear Weapons**

**Nick Harvey:** To ask the Secretary of State for Defence whether the costs of building a new uranium processing facility, warhead assembly and disassembly facility, core punch facility, explosives handling facility and material science facilities at the Atomic Weapons Establishment are included in the estimates for (a) the procurement costs in paragraph 5-12 and (b) the in-service costs in paragraph 5-14 of the White Paper on the Future of the United Kingdom's Nuclear Deterrent. [124011]

**Des Browne:** These facilities are part of the programme of investment in sustaining capabilities at the Atomic Weapons Establishment, both to ensure we can maintain the existing warhead for as long as necessary and to enable us to develop a replacement warhead if that is required. The costs of building, and subsequently operating and maintaining, these facilities are included in the estimates set out in paragraphs 5-13 and 5-14 of the White Paper: "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994).

## **Hansard 6 March**

### **Nuclear Weapons**

**Nick Harvey:** To ask the Secretary of State for Defence what provision was made for the operating cost of conventional forces protecting the nuclear deterrent within the current and projected in-service costs of the UK's nuclear deterrent published in paragraph 5-14 of the White Paper on the Future of the United Kingdom's Nuclear Deterrent. [123987]

**Des Browne:** Paragraph 5-14 of the White Paper: "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994) refers to the current and future in-service costs of the UK's nuclear deterrent, including the costs for the Atomic Weapons Establishment. It does not include the cost of any conventional forces. This is in line with the way we normally report the costs of the nuclear deterrent.

**Nick Harvey:** To ask the Secretary of State for Defence what proportion of the work detailed in the breakdown of nuclear liabilities outlined in the answer to the hon. Member for Newport, West (Paul Flynn) of 24 July 2006 on nuclear liabilities, is likely to be carried out before 2055; and which of the items in that answer are included in the projected in-service costs for Trident and its replacement in paragraph 5-14 of the White Paper on the Future of the United Kingdom's Nuclear Deterrent. [124012]

**Des Browne:** Some 65 per cent. of the nuclear liabilities outlined in the answer to my hon. Friend the Member for Newport, West (Paul Flynn) of 24 July 2006, are expected to be incurred before 2055. The elements of those liabilities related to the current Trident system are included in the estimate of in-service costs of the UK's nuclear deterrent set out at paragraph 5-14 of the White Paper: "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994). That estimate also includes an allowance for the decommissioning of a successor system.

**Mr. Hancock:** To ask the Secretary of State for Defence what assessment he has made of the role of the British nuclear deterrent in countering terrorism from abroad; whether he plans to revise the new chapter of the Strategic Defence Review on this subject to take account of the White Paper on Trident; and if he will make a statement. [124652]

**Des Browne:** As we set out in paragraph 3-11 of the White Paper "The Future of the United Kingdom's Nuclear Deterrent (Cm 6994)".

"While our nuclear deterrent is not designed to deter non-state actors, it should influence the decision making of any state that might consider transferring nuclear technology to terrorists."

As such, the position is entirely consistent with the analysis set out in the Strategic Defence Review: New Chapter (Cm 5566).

**Mr. Frank Field:** To ask the Secretary of State for Defence what he expects the annual expenditure on renewing the UK's nuclear deterrent capability to be in each of the next 20 years. [125067]

**Des Browne** [*holding answer 2 March 2007*]: Our initial estimates of the future costs (including the procurement costs) involved in sustaining our independent nuclear deterrent capability were set out in paragraphs 5-11 to 5-14 of the White Paper: "The Future of the United Kingdom's Nuclear Deterrent", published on 4 December. At this

very early stage in the procurement process, we are not in a position to break down these estimates in the way requested.



nuclear materials and nuclear warheads for any replacement **Trident** nuclear programme after 2055. [126918]

**Des Browne:** As I explained to the hon. Member for North Devon (Nick Harvey) on 6 March 2007, *Official Report*, column 1877W, the estimate of in-service support costs of the UK's nuclear deterrent set out at paragraph 5-14 of the White Paper, "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994), includes an allowance for the decommissioning of a successor to the current system. At this very early stage, we are not in a position to provide figures in the way requested.

In 1995, the UK announced that it had ceased production of fissile material for weapons purposes. This moratorium remains in place, and we do not envisage any requirement to change this position.

The UK's current warhead design is likely to last into the 2020s, and decisions on whether and how we may need to refurbish or replace it are likely to be necessary in the next Parliament.

-13 Mar 07

### **Trident**

**Dr. Gibson:** To ask the Secretary of State for Defence what estimate he has made of the change in the cost of nuclear decommissioning liabilities which would arise from the replacement of the Vanguard class **Trident** nuclear submarines; what factors are included in the estimate; and if he will make a statement. [116644]

**Des Browne:** It is too early to make a reasonable estimate of the nuclear decommissioning liabilities associated with a new class of submarines built to maintain our nuclear deterrent. However, the nuclear liabilities in the Department's annual report and accounts for 2005-06, HC1394, include a figure of £333 million for all current in-service submarines, including the Vanguard class. More detail on the MOD's current nuclear decommissioning liabilities is set out in the answer I gave to my hon. Friend the Member for Newport, West (Paul Flynn) on 24 July 2006, *Official Report*, columns 778-79W.

-13 Mar 07



**Nick Harvey:** To ask the Secretary of State for Defence what the average annual in-service cost of the UK's nuclear deterrent, including the Atomic Weapons Establishment, was in each year from 1998 to 2005, calculated using the method applied to calculate the in-service costs quoted in paragraph 5 to 14 of the White Paper on the Future of the United Kingdom's Nuclear Deterrent. [123988]

**Des Browne:** As set out in paragraph 5 to 14 of the White Paper on the 'Future of the United Kingdom's Nuclear Deterrent' (Cm 6994). We estimate that the in-service costs of the UK's nuclear deterrent will be around 5 to 6 per cent. of the defence budget once the proposed fleet of replacement SSBNs comes into service. This calculation is based on initial whole life estimates of in-service and disposal costs for the deterrent capability and the estimated costs of the Atomic Weapons Establishment, averaged over the currently expected life of the new submarines and compared to the current defence budget. Taking similar costs for the current system, from 1998 to 2005, and comparing them to the actual defence budgets for those years, the average annual in-service cost was around 4 per cent. of the defence budget. The cost of the deterrent in 2006-07, including the cost of the Atomic Weapons Establishment, is expected to be around £1,500 million, or just over five per cent of the current defence budget.

**-12 Mar 2007 : Column 56W**

## **Nuclear Weapons**

**Mr. Dai Davies:** To ask the Secretary of State for Defence how many of the questions submitted by the public as part of his online question and answer session on 17 January were on the UK's nuclear weapons; and what criteria were used to select the questions to be answered. [112255]

**Des Browne:** During the online webchat on 17 January, there were nearly 550 questions submitted, around 20 per cent. of which were related to the UK's nuclear weapons or non-proliferation policy. There were no set criteria used to select the questions to be answered.

## **Nuclear Submarines**

**Nick Harvey:** To ask the Secretary of State for Defence what the additional costs are of *(a)* maintaining and protecting continuous at sea deterrence and *(b)* keeping a submarine-based nuclear force without continuous at sea deterrence. [123986]

**Des Browne:** As paragraphs 5-7 and 5-8 of the White Paper: 'The Future of the United Kingdom's Nuclear Deterrent' (Cm 6994) makes clear, our policy is to maintain continuous at sea deterrent patrolling to ensure our deterrent remains fully credible. There would, theoretically, be a number of alternative postures to continuous patrolling but we do not regard them as providing credible deterrence. However, for a given size of fleet, the cost difference between maintaining continuous deterrent patrolling and not doing so would potentially be relatively minor since the costs directly associated with operating the submarine on patrol are a very small proportion of the overall costs of maintaining, supporting and operating the deterrent. Total expenditure on the capital and running costs of the Trident nuclear deterrent, including the costs of the Atomic Weapons Establishment, in 2006-07 is expected to be around £1,500 million.

- 12 Mar 2007 : Column 55W

## **Nuclear Submarines: Decommissioning**

**Mr. Dai Davies:** To ask the Secretary of State for Defence what estimate he has made of the cost of decommissioning *(a)* nuclear submarine hulls, reactor compartments and propulsion reactors, *(b)* warhead design and production facilities at Aldermaston and *(c)* fissile material stores at Sellafield should it be decided to go ahead with a replacement for **Trident**; and whether any independent audit of such decommissioning expenditure has been made. [126307]

**Des Browne:** Paragraph 7-5 of the White Paper: "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994) indicated that decisions on whether to acquire a replacement for the **Trident** missile are unlikely to be needed until the 2020s. The White Paper set out the decisions needed now to join the programme to extend the



life of the **Trident** D5 missile and to start detailed concept work on new submarines to replace the Vanguard class.

The Ministry of Defence has made provision in its accounts for a wide range of nuclear decommissioning liabilities. The latest estimate of these liabilities is shown in the Ministry of Defence annual report and accounts for 2005-06, HC1394, which were certified by the Comptroller and Auditor General. More detail is set out in the answer I gave to my hon. Friend the Member for Newport, West (Paul Flynn) on 24 July 2006, *Official Report*, columns 778-79W.

The estimate for the in-service costs of the UK's nuclear deterrent, once new submarines come into operation, set out at paragraph 5-14 of the White Paper includes an allowance for the decommissioning costs of a successor system. This estimate has not been subject to external scrutiny. At this very early stage, we are not in a position to provide a breakdown of decommissioning costs in the way requested. Investment at the Atomic Weapons Establishment has been increased in recent years primarily in order to ensure we can sustain the existing **Trident** warhead in-service for as long as necessary. This investment involves the replacement or refurbishment of a number of facilities related to the design and production of nuclear warheads. Proceeding with the plan to replace our Vanguard-class submarines and participate in the life extension programme for the **Trident** D5 missile would not have a material effect on these plans. As the White Paper makes clear, decisions on whether and how to replace or refurbish our warhead stockpile are likely to be necessary in the next Parliament.

Facilities at Sellafield are the responsibility of the Nuclear Decommissioning Agency and British Nuclear Group Sellafield Ltd.

**-13 Mar 2007 : Column 208W**

## **Nuclear Weapons**

**Paul Flynn:** To ask the Secretary of State for Defence pursuant to the answer to the hon. Member for North Devon of 6 March 2007, *Official Report*, column 1877W, on nuclear weapons, what estimate he has made of the cost of decommissioning future (a) submarine reactor hulls and cores and (b) facilities used to create future fissile



**Paul Flynn:** To ask the Secretary of State for Defence pursuant to the answer of 26 February 2007, *Official Report*, column 1046W, on nuclear weapons, if he will make available copies of each of the written submissions on the future of UK nuclear weapons. [125050]

**Des Browne** [*holding answer 5 March 2007*]: I refer my hon. Friend to the answer I gave earlier today to my hon. Friend the Member for Morley and Rothwell (Colin Challen).

**Joan Ruddock:** To ask the Secretary of State for Defence what assessment he has made of the effects of exploding a (a) 0.5 KT, (b) 100 KT and (c) 500 KT nuclear warhead launched from a **Trident** submarine on to a centre of population density. [126564]

**Des Browne:** The impacts of the detonation of a nuclear weapon would depend on a wide range of variable factors. These include the yield and design of the weapon; the accuracy of the delivery system; the nature and construction of the target; the geographical characteristics of the surrounding terrain; geological conditions in the target area; the height of weapon burst; and the weather conditions at the target. I am withholding information on UK nuclear warhead yields as it would, or would be likely to prejudice national security.

- 9 Mar 2007 : Column 2313W

### **Atomic Weapons Establishment: Finance**

**Mr. Hancock:** To ask the Secretary of State for Defence what percentage of the defence budget was spent on the Atomic Weapons Establishment in each of the last 10 years; and what the planned figures are for the next five years. [124588]

**Des Browne:** The percentage of the planned defence budget spent on the Atomic Weapons Establishment in each of the last 10 years is as follows:

	<i>Outturn spend as a percentage of the planned budget</i>
1996-97	1.3
1997-98	1.4
1998-99	1.3
1999-2000	1.3

2000-01	1.2
2001-02	1.1
2002-03	1.1
2003-04	1.1
2004-05	1.3
2005-06 <sup>(1)</sup>	1.8
<sup>(1)</sup> Provisional.	

The forecast percentage of the planned defence budget to be spent at the Atomic Weapons Establishment is 2.4 per cent. in 2006-07 and 2.7 per cent. in 2007-08. This is due primarily to the programme of additional investment in sustaining key skills and facilities announced by my right hon. Friend the Member for Airdie and Shorts (John Reid) on 19 July 2006, *Official Report*, column 59WS.

We will continue the programme of investment in sustaining capabilities at the Atomic Weapons Establishment, both to ensure we can maintain the existing warhead for as long as necessary and to enable us to develop a replacement warhead if required. This, and our plans for the maintenance of the independent nuclear deterrent were set out in the White Paper "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994), published in December 2006.

-13 Mar 2007 : Column 202W

### **Nuclear Submarines: Decommissioning**

**Mr. Dai Davies:** To ask the Secretary of State for Defence what estimate he has made of the cost of decommissioning (a) nuclear submarine hulls, reactor compartments and propulsion reactors, (b) warhead design and production facilities at Aldermaston and (c) fissile material stores at Sellafield should it be decided to go ahead with a replacement for Trident; and whether any independent audit of such decommissioning expenditure has been made. [126307]

**Des Browne:** Paragraph 7-5 of the White Paper: "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994) indicated that decisions on whether to acquire a



replacement for the Trident missile are unlikely to be needed until the 2020s. The White Paper set out the decisions needed now to join the programme to extend the life of the Trident D5 missile and to start detailed concept work on new submarines to replace the Vanguard class.

The Ministry of Defence has made provision in its accounts for a wide range of nuclear decommissioning liabilities. The latest estimate of these liabilities is shown in the Ministry of Defence annual report and accounts for 2005-06, HC1394, which were certified by the Comptroller and Auditor General. More detail is set out in the answer I gave to my hon. Friend the Member for Newport, West (Paul Flynn) on 24 July 2006, *Official Report*, columns 778-79W.

The estimate for the in-service costs of the UK's nuclear deterrent, once new submarines come into operation, set out at paragraph 5-14 of the White Paper includes an allowance for the decommissioning costs of a successor system. This estimate has not been subject to external scrutiny. At this very early stage, we are not in a position to provide a breakdown of decommissioning costs in the way requested. Investment at the Atomic Weapons Establishment has been increased in recent years primarily in order to ensure we can sustain the existing Trident warhead in-service for as long as necessary. This investment involves the replacement or refurbishment of a number of facilities related to the design and production of nuclear warheads. Proceeding with the plan to replace our Vanguard-class submarines and participate in the life extension programme for the Trident D5 missile would not have a material effect on these plans. As the White Paper makes clear, decisions on whether and how to replace or refurbish our warhead stockpile are likely to be necessary in the next Parliament.

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**-13 Mar 2007 : Column 208W**

### **Nuclear Weapons**

**Paul Flynn:** To ask the Secretary of State for Defence pursuant to the answer to the hon. Member for North Devon of 6 March 2007, *Official Report*, column 1877W, on



nuclear weapons, what estimate he has made of the cost of decommissioning future (a) submarine reactor hulls and cores and (b) facilities used to create future fissile nuclear materials and nuclear warheads for any replacement Trident nuclear programme after 2055. [126918]

**Des Browne:** As I explained to the hon. Member for North Devon (Nick Harvey) on 6 March 2007, *Official Report*, column 1877W, the estimate of in-service support costs of the UK's nuclear deterrent set out at paragraph 5-14 of the White Paper, "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994), includes an allowance for the decommissioning of a successor to the current system. At this very early stage, we are not in a position to provide figures in the way requested.

In 1995, the UK announced that it had ceased production of fissile material for weapons purposes. This moratorium remains in place, and we do not envisage any requirement to change this position.

The UK's current warhead design is likely to last into the 2020s, and decisions on whether and how we may need to refurbish or replace it are likely to be necessary in the next Parliament.

## Trident

**Dr. Gibson:** To ask the Secretary of State for Defence what estimate he has made of the change in the cost of nuclear decommissioning liabilities which would arise from the replacement of the Vanguard class Trident nuclear submarines; what factors are included in the estimate; and if he will make a statement. [116644]

**Des Browne:** It is too early to make a reasonable estimate of the nuclear decommissioning liabilities associated with a new class of submarines built to maintain our nuclear deterrent. However, the nuclear liabilities in the Department's annual report and accounts for 2005-06, HC1394, include a figure of £333 million for all current in-service submarines, including the Vanguard class. More detail on the MOD's current nuclear decommissioning liabilities is set out in the answer I gave to my hon. Friend the Member for Newport, West (Paul Flynn) on 24 July 2006, *Official Report*, columns 778-79W.

17 Public Petition,—A Public Petition from constituents from the Isle of Arran opposed to replacement of Trident nuclear weapons against the current trident nuclear missile system and any plans to update or replace that system was presented and read; and ordered to lie upon the Table and to be printed.

## Trident

**Nick Harvey:** To ask the Secretary of State for Defence (1) if he will update the committed and contingent figures in table 7 of Annexe B to Supporting Essay 6 of the Strategic Defence Review 1998; [124047]

(2) what the estimated annual operating cost is of conventional forces (a) committed to the protection of Trident and (b) with a contingent role in the protection of Trident, calculated on the same basis as the figures provided in the answer to the hon.

Member for Crawley of 2 November 1998, *Official Report*, columns 349-50W, on Trident. [124048]

**Des Browne:** In addition to the four Vanguard-class submarines, all of which are dedicated to Military Task 1.2—Nuclear Deterrence—the current planned force elements assigned to support nuclear deterrence are shown in the following table.

The changes in both committed and contingent forces since publication of Supporting Essay 6 of the Strategic Defence Review reflect the changing nature of the threat to the deterrent, and of our response to that threat as described in paragraphs 2.7 and 2.8 of the 2004 White Paper, 'Delivering Security in a Changing World—Future Capabilities' (CM6269).

<i>Force element</i>	<i>Committed<sup>1)</sup></i>	<i>Contingent<sup>2)</sup></i>
Attack submarines	0	2
Destroyers and frigates	0	1
Minewarfare vessels	1	3
Royal fleet auxiliary vessels	0	1
Survey vessels	1	0



Merlin ASW helicopters	0	5
Maritime and reconnaissance aircraft	0	8
<sup>(1)</sup> Force elements committed to the military task as their primary role <sup>(2)</sup> Force elements held contingent are assigned to a number of tasks and are not planned routinely to deploy in support of the deterrent.		

We do not routinely calculate the operating cost of specific committed or contingent force elements in support of the deterrent, and such estimates are necessarily illustrative, given the differing cost of varied operating patterns. A broad order estimate, however, of the annual operating costs of committed conventional force elements would be around £25-30 million.

A similar estimate for contingent conventional force elements would be around £250-300 million, although this is the estimated cost of generating these force elements for a range of tasks and it is not the cost of support to the deterrent.

These estimated costs are not directly comparable to those given in 1998, as the calculation has been conducted on a different basis using a more recent methodology.

**-8 Mar 2007 : Column 2145W**

### **Nuclear Submarines: Decommissioning**

**Mr. Dai Davies:** To ask the Secretary of State for Defence what estimate he has made of the cost of decommissioning *(a)* nuclear submarine hulls, reactor compartments and propulsion reactors, *(b)* warhead design and production facilities at Aldermaston and *(c)* fissile material stores at Sellafield should it be decided to go ahead with a replacement for *Trident*; and whether any independent audit of such decommissioning expenditure has been made. [126307]

**Des Browne:** Paragraph 7-5 of the White Paper: "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994) indicated that decisions on whether to acquire a replacement for the *Trident* missile are unlikely to be needed until the 2020s. The White Paper set out the decisions needed now to join the programme to extend the



life of the **Trident** D5 missile and to start detailed concept work on new submarines to replace the Vanguard class.

The Ministry of Defence has made provision in its accounts for a wide range of nuclear decommissioning liabilities. The latest estimate of these liabilities is shown in the Ministry of Defence annual report and accounts for 2005-06, HC1394, which were certified by the Comptroller and Auditor General. More detail is set out in the answer I gave to my hon. Friend the Member for Newport, West (Paul Flynn) on 24 July 2006, *Official Report*, columns 778-79W.

The estimate for the in-service costs of the UK's nuclear deterrent, once new submarines come into operation, set out at paragraph 5-14 of the White Paper includes an allowance for the decommissioning costs of a successor system. This estimate has not been subject to external scrutiny. At this very early stage, we are not in a position to provide a breakdown of decommissioning costs in the way requested. Investment at the Atomic Weapons Establishment has been increased in recent years primarily in order to ensure we can sustain the existing **Trident** warhead in-service for as long as necessary. This investment involves the replacement or refurbishment of a number of facilities related to the design and production of nuclear warheads. Proceeding with the plan to replace our Vanguard-class submarines and participate in the life extension programme for the **Trident** D5 missile would not have a material effect on these plans. As the White Paper makes clear, decisions on whether and how to replace or refurbish our warhead stockpile are likely to be necessary in the next Parliament.

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**-13 Mar 2007 : Column 208W**

## **Nuclear Weapons**

**Paul Flynn:** To ask the Secretary of State for Defence pursuant to the answer to the hon. Member for North Devon of 6 March 2007, *Official Report*, column 1877W, on nuclear weapons, what estimate he has made of the cost of decommissioning future (a) submarine reactor hulls and cores and (b) facilities used to create future fissile

nuclear materials and nuclear warheads for any replacement **Trident** nuclear programme after 2055. [126918]

**Des Browne:** As I explained to the hon. Member for North Devon (Nick Harvey) on 6 March 2007, *Official Report*, column 1877W, the estimate of in-service support costs of the UK's nuclear deterrent set out at paragraph 5-14 of the White Paper, "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994), includes an allowance for the decommissioning of a successor to the current system. At this very early stage, we are not in a position to provide figures in the way requested.

In 1995, the UK announced that it had ceased production of fissile material for weapons purposes. This moratorium remains in place, and we do not envisage any requirement to change this position.

The UK's current warhead design is likely to last into the 2020s, and decisions on whether and how we may need to refurbish or replace it are likely to be necessary in the next Parliament.

-13 Mar 07

### **Atomic Weapons Establishment: Finance**

**Mr. Hancock:** To ask the Secretary of State for Defence how much each of the armed services is contributing to the planned additional spending at the Atomic Weapons Establishment in each of the next five years. [124587]

**Des Browne:** As the White Paper, "The Future of the United Kingdom's Nuclear Deterrent", published in December 2006, made clear, the investment required to maintain our deterrent will not come at the expense of the conventional capabilities our armed forces need. The additional investment at the Atomic Weapons Establishment averaging £350 million per annum over the years 2005-06 to 2007-08 was included in the Defence Budget through the 2004 Spending Review process. The Defence Budget for future years will be set in the Comprehensive Spending Review.

-12 Mar 07

### **Trident: Contracts**



**Nick Harvey:** To ask the Secretary of State for Defence when the first contracts were placed with US contractors on behalf of his Department, under the Polaris Sales Agreement, for work related to the Trident D5 Life Extension programme; and what the total value was of those contracts. [123985]

**Des Browne:** No order has yet been placed with the US authorities for procurement of Trident D5 Life Extension on behalf of the UK.

- 7 Mar 2007 : Column 1991W

### **Nuclear Weapons**

**Nick Harvey:** To ask the Secretary of State for Defence whether the costs of building a new uranium processing facility, warhead assembly and disassembly facility, core punch facility, explosives handling facility and material science facilities at the Atomic Weapons Establishment are included in the estimates for (a) the procurement costs in paragraph 5-12 and (b) the in-service costs in paragraph 5-14 of the White Paper on the Future of the United Kingdom's Nuclear Deterrent. [124011]

**Des Browne:** These facilities are part of the programme of investment in sustaining capabilities at the Atomic Weapons Establishment, both to ensure we can maintain the existing warhead for as long as necessary and to enable us to develop a replacement warhead if that is required. The costs of building, and subsequently operating and maintaining, these facilities are included in the estimates set out in paragraphs 5-13 and 5-14 of the White Paper: "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994).

-5 mar 07

### **Trident Missiles**

**Nick Harvey:** To ask the Secretary of State for Defence what assessment he has made of the likely effect of the introduction of the Mk4A Arming, Fusing and Firing system on the (a) ability to accurately adjust the height of burst of the Trident warhead and (b) probability that the Trident warhead will be effective against hardened targets. [129539]



Des Browne: The MK4A Arming, Fusing and Firing system is a non-nuclear component being introduced into the UK Trident warhead to replace a similar component which is becoming obsolete. This is necessary to ensure that we can keep the existing warhead in service in the 2020s. I am not prepared to discuss the detailed performance characteristics of our nuclear weapons.

-28 Mar 2007

## **Trident**

**Angus Robertson:** To ask the Secretary of State for Defence if he will estimate how many *(a)* direct and *(b)* indirect civilian jobs in (i) Scotland and (ii) the rest of the UK rely upon the Trident programme. [107942]

**Des Browne:** The number of civilian jobs that rely directly on the current Trident programme is estimated to be 859 in Scotland with an additional 7,455 in the rest of the UK. The number of indirect civilian jobs is estimated to be 250 in Scotland and 6,700 in the rest of the UK.

Additionally, a significant number of military jobs in the UK directly support the Trident programme. In Scotland this amounts to some 1,776 jobs. It is not possible accurately to estimate the number of civilian jobs indirectly employed as a result of these military posts.

-23 March 2007

## **Atomic Weapons Establishment**

**Nick Harvey:** To ask the Secretary of State for Defence what the projected total cost is of the capital programme at the Atomic Weapons Establishment from 2005 to 2025. [108856]

**Des Browne:** Additional investment averaging some £350 million per annum over the years 2005-06 to 2007-08 was announced last year. As was made clear in the White Paper (CM 6994) on the Future of the UK's nuclear deterrent (at para. 5-13), spending plans for subsequent years will be set as part of the Government's Spending Review process.

**Nick Harvey:** To ask the Secretary of State for Defence what the projected average annual cost is of operating the Atomic Weapons Establishment from 2007 to 2055. [108857]

**Des Browne:** I have nothing further to add to paragraph 5-13 of the White Paper (Cm 6994) on the future of the UK's nuclear deterrent, which was published on 4 December.

**Nick Harvey:** To ask the Secretary of State for Defence when his Department expects to complete the major capital programme at the Atomic Weapons Establishment. [108858]

**Des Browne:** The investment programme at the Atomic Weapons Establishment is aimed at sustaining the capabilities needed to ensure we can maintain the existing warhead for as long as necessary and to enable us to develop a replacement warhead if that is required. Investment at AWE will continue as long as these capabilities are required.

## **Nuclear Submarines**

**Nick Harvey:** To ask the Secretary of State for Defence how many warheads in the stockpile of operationally available warheads will be dismantled as a result of the reductions in the stockpile announced in the White Paper CM6994; and if he will make a statement. [108792]

**Des Browne:** The 20 per cent. reduction in the maximum number of operationally available warheads from fewer than 200 to fewer than 160, announced in the White Paper "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994) published on 4 December, will be matched by a corresponding number of warheads (ie about 40) being dismantled.

**Nick Harvey:** To ask the Secretary of State for Defence what the procurement timeframe is for the programme to build new Vanguard-Class ballistic missile submarines; at what stage he expects main gate approval; and if he will make a statement. [108798]

**Des Browne:** I refer the hon. Member to the answer given to the hon. Member for North Essex (Mr. Jenkin) on 12 December 2006, *Official Report*, columns 395-96W.

**Nick Harvey:** To ask the Secretary of State for Defence what the (a) planned service life at construction and (b) actual service life was for each decommissioned nuclear submarine that has been in service with the Royal Navy. [108805]

**Des Browne:** Information on the planned service life at construction of the Dreadnought, Valiant-Churchill and Resolution Classes of nuclear submarine is not readily available. The actual service life of vessels in these classes was as follows:

<i>Vessel</i>	<i>Actual Service Life in Years</i>
HMS Dreadnought	19
HMS Valiant	28
HMS Warspite	23
HMS Churchill	20
HMS Conqueror	21
HMS Courageous	21
HMS Resolution	27
HMS Repulse	28
HMS Renown	28
HMS Revenge	25



The Swiftsure Class of nuclear submarines were designed with a hull life at construction of at least 25 years. The actual service life of those vessels that have been withdrawn from service is as follows:

**8 Jan 2007 : Column 100W**

<i>Vessel</i>	<i>Actual service life in years</i>
HMS Swiftsure	18
HMS Sovereign	32
HMS Spartan	26
HMS Splendid	22

**Nick Harvey:** To ask the Secretary of State for Defence what estimate his Department has made of the cost of developing a new design of submarine reactor with a passive cooling system that could function without relying on cooling pumps. [108807]

**Des Browne:** The existing pressurised water reactors in Royal Navy submarines have a passive cooling system that functions without relying on main coolant pumps.

**Dr. Cable:** To ask the Secretary of State for Defence if he will break down by main budget heading the costs of the new Trident nuclear deterrent. [109889]

**Des Browne:** Paragraphs 5-11 to 5-14 of the White Paper: "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994), published on 4 December, set out our current estimate of the overall costs involved in sustaining our current independent statement. A more accurate breakdown is not yet available. Copies of the White Paper are available in the Library of the House.

**Dr. Cable:** To ask the Secretary of State for Defence if he will provide a break down by main budget heading the costs of replacing the nuclear fleet with three submarines. [109955]

**Des Browne:** I have nothing further to add to paragraph 5-11 of the White Paper: "The Future of the United Kingdom's Nuclear Deterrent" (Cm 6994), published on 4 December, copies of which are available in the Library of the House. At this very

early stage of the procurement process, we are not in a position to break these estimates down in the way requested, for either a four or three submarine fleet.

**Dr. Cable:** To ask the Secretary of State for Defence which external organisations provided estimates for the costs of option *(a)* one, *(b)* two, *(c)* three and *(d)* four, outlined in the White Paper *The future of the United Kingdom's nuclear deterrent*. [109959]

**Des Browne:** The cost estimates reflected in paragraph 5-2 of the White Paper: *"The Future of the United Kingdom's Nuclear Deterrent"* (Cm 6994) were produced within the MOD, with some assistance from costing experts in Qinetiq.

## **Submarines**

**Dr. Cable:** To ask the Secretary of State for Defence what estimates have been made of the cost of modernising the submarine infrastructure at *(a)* Coulport and *(b)* Faslane. [109886]

**Des Browne:** As stated at paragraph 5-11 of the White Paper *"The Future of the United Kingdom's Nuclear Deterrent"* (Cm 6994), published on 4 December 2006, copies of which are available in the Library of the House, our initial estimate of the procurement costs for infrastructure will be in the range of £2-3 billion over the life of the new ballistic missile submarines. These estimated costs include modernisation of infrastructure at Coulport and Faslane to support the UK's strategic deterrent.

## **Trident**

**Mr. Dai Davies:** To ask the Secretary of State for Defence what environmental impact assessments (EIAs) his Department has undertaken of the *(a)* deployment, *(b)* infrastructure facilities required for maintenance and *(c)* facilities used for decommissioning redundant or replaced parts of the Trident nuclear weapons system; and whether these EIAs have been published. [105267]

**Des Browne:** The Ministry of Defence has undertaken a number of Environmental Impact Assessments (EIAs) in connection with the Trident nuclear weapons system. During the deployment of Vanguard Class submarines, EIAs are conducted whenever there is a requirement to do so, for example prior to the discharge of bilge



water. Such EIAs are not published as to do so could enable deductions to be made on the operational location of the submarines and would, or would be likely to, prejudice the security of the United Kingdom.

For the infrastructure facilities required to support the maintenance of the system, an EIA was undertaken for Faslane and Coulport entitled "Proposed Development at the Clyde Submarine Base (Faslane and Coulport) Environmental Impact Assessment". This was published in May 1984. The MOD also lodged an EIA in support of the D154 Project in Devonport with Plymouth City Council in 1994. No EIAs have yet been completed in respect of decommissioned redundant submarines.

**Lynne Jones:** To ask the Secretary of State for Defence what his estimate is of the time it would take to procure further Trident D5 missiles. [108974]

**Des Browne:** As set out in paragraph 2-5 of the recent White Paper, "The Future of the United Kingdom's Nuclear Deterrent, (Cm 6994), we believe that no further procurement of Trident D5 missiles will be necessary. Copies of the White Paper are available in the Library of the House.

**Mr. Dai Davies:** To ask the Secretary of State for Defence what assessment he has made of the availability of (a) project management and (b) nuclear decommissioning expertise between (i) 2007 and 2012, (ii) 2013 and 2017 and (iii) 2018 and 2024 on projects related to Trident. [109486]

**Des Browne:** The Department aims to ensure that it has sufficient expert personnel to meet current and future nuclear programme demands through external recruitment, internal staff development and close involvement with industry. This includes those personnel required for the project management and nuclear decommissioning disciplines. The assessment of the likely demand for nuclear experts is undertaken in conjunction with the Nuclear Sector Skills Council who maintain an oversight of the issues surrounding the national requirement for staff with key nuclear skills, both civil and military. In addition, the MOD is represented at the Nuclear Employers Steering Group, which monitors trends at a national level to scope the likely future demand for staff.