

Trident Replacement

Presentation to
Scottish CND Annual Conference

STUC Glasgow
22 November 2008

John Ainslie, Coordinator, Scottish CND

Trident Replacement



Submarine



Missile



Warhead

David Gould June 2007

This afternoon we are going to outline our plan to maintain the UK's nuclear deterrent. The intention is to replace the entire Vanguard Class submarine system. [REDACTED]

[REDACTED] S35

In June 2007 the MoD held an Industry Day on Trident Replacement. Scottish CND obtained the welcoming speech by David Gould of the MoD. However the text was censored. The full text was only released after a Freedom of Information review.

David Gould June 2007

This afternoon we are going to outline our plan to maintain the UK's nuclear deterrent. The intention is to replace the entire Vanguard Class submarine system. [REDACTED]

[REDACTED] S35

This afternoon we are going to outline our plan to maintain the UK's nuclear deterrent. The intention is to replace the entire Vanguard Class submarine system. Including the warhead and missile.

Trident Replacement



Submarine



Missile

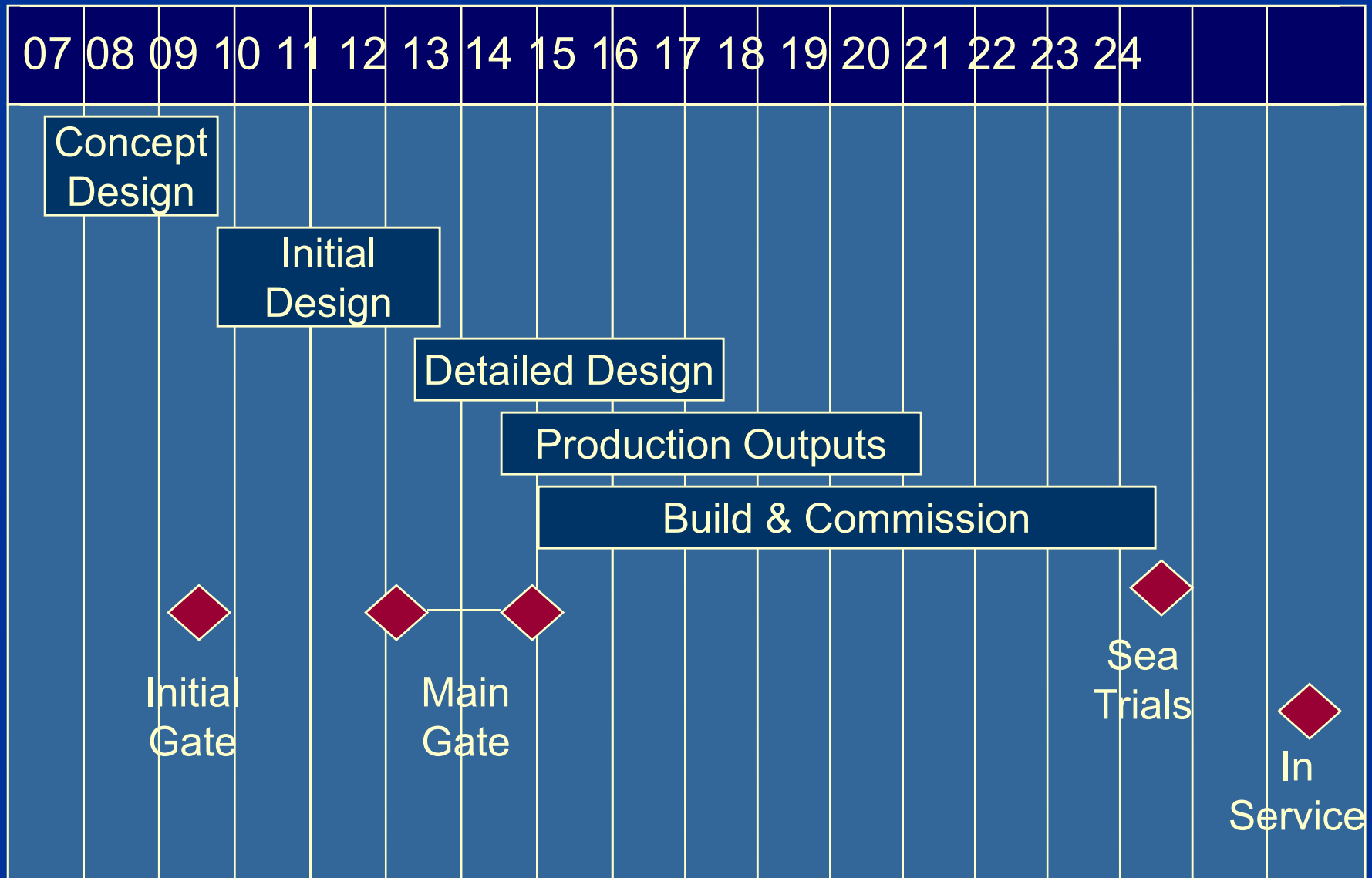


Warhead

“Successor” Submarine



New submarine Timeline



2009 programme

Agree with US on Common Missile
Compartment

Choose reactor

Set basic specifications for submarine

Improve cost estimates

September 2009 – Initial Gate

Oct/Nov 2009 – Report to MPs

Options for reactor



PWR 2

**PWR 3
(Navy & RR choice)**

3rd option



Will PWR 3 need a prototype
and if so where ? Dounreay ?

Continuous Patrols

One nuclear-armed submarine
on patrol at all times

	Patrols
1968-2007	300
2008-2060 ?	450
Total	750

“our planned future programme should take
us up to 750” Rear Admiral Matthews

Trident Replacement



Submarine



Missile



Warhead

Missile System



Underwater Launched Missile System (ULMS)

New US missile to replace
Trident D5

In service by 2029

Initial concept studies
started in 2007

Considered by Strategic
Advisory Group November
2007



Underwater Launched Missile System

“any successor to the D5 system should be compatible with, or be capable or being made compatible with, the launch system for the D5 missile” Bush to Blair Dec 2006

“concepts for future submarines may have missile tubes larger than 87 inches in diameter”
ULMS Test Bed Request for Information
7 Nov 2007

Trident Replacement



Submarine

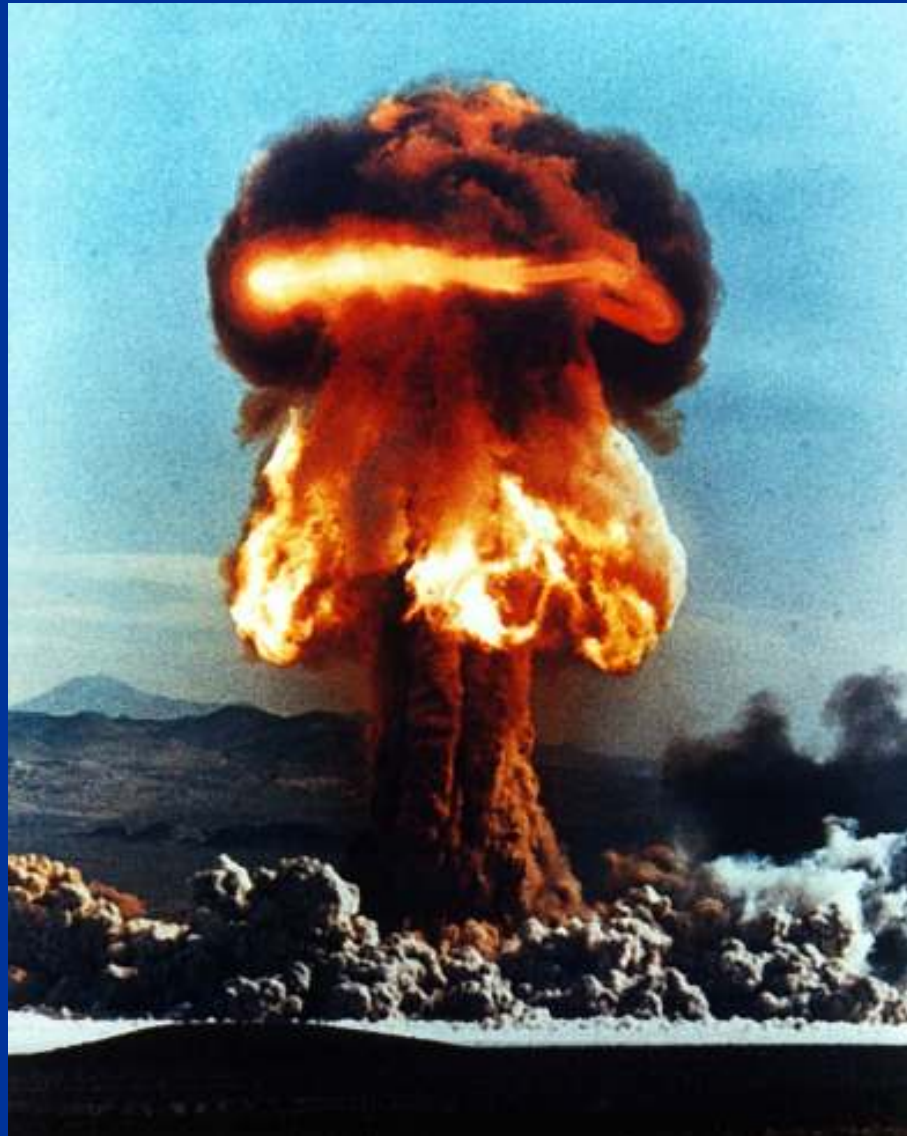


Missile

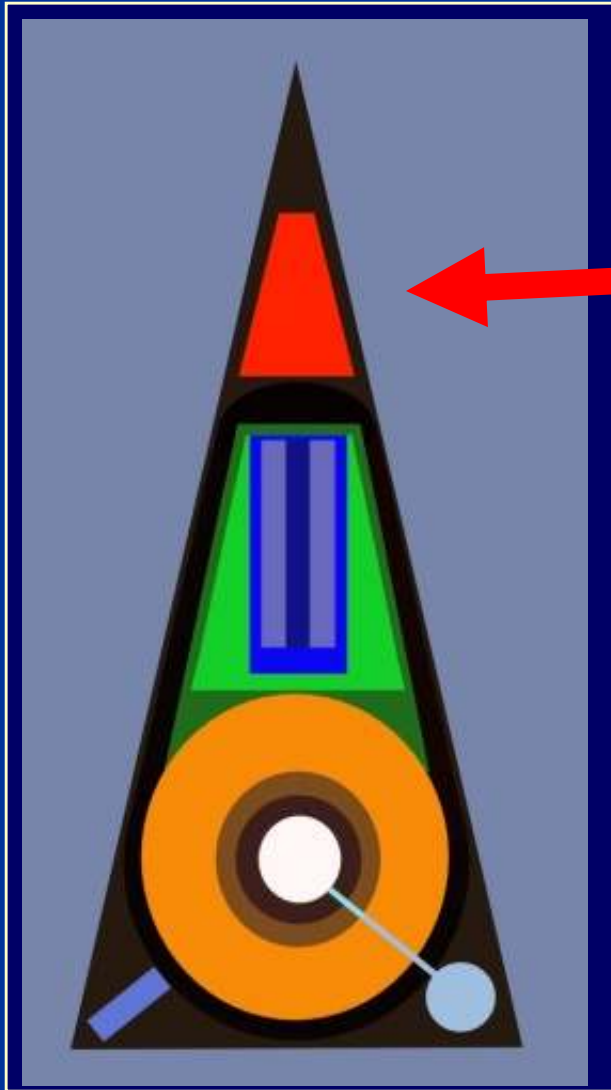


Warhead

Nuclear Warhead



Upgrade of current warhead



**Arming, Fuzing & Firing
System to be replaced by
2017**

Upgrade of current warhead



MK4 Arming Fuzing & Firing System

advanced fuzing options

increased targeting flexibility and effectiveness

increase the warfighting effectiveness of the D5 system

Options for British warheads



more Life Extension

or

new High Surety Warhead

Britain will follow US lead

US Reliable Replacement Warhead (RRW)



Livermore design chosen

No funding for RRW 2008 or 2009

Funding for “Advanced certification”

US Nuclear Weapon Reviews



Congress Commission

Reports in Dec 2008

Policy Review

2009

Posture Review

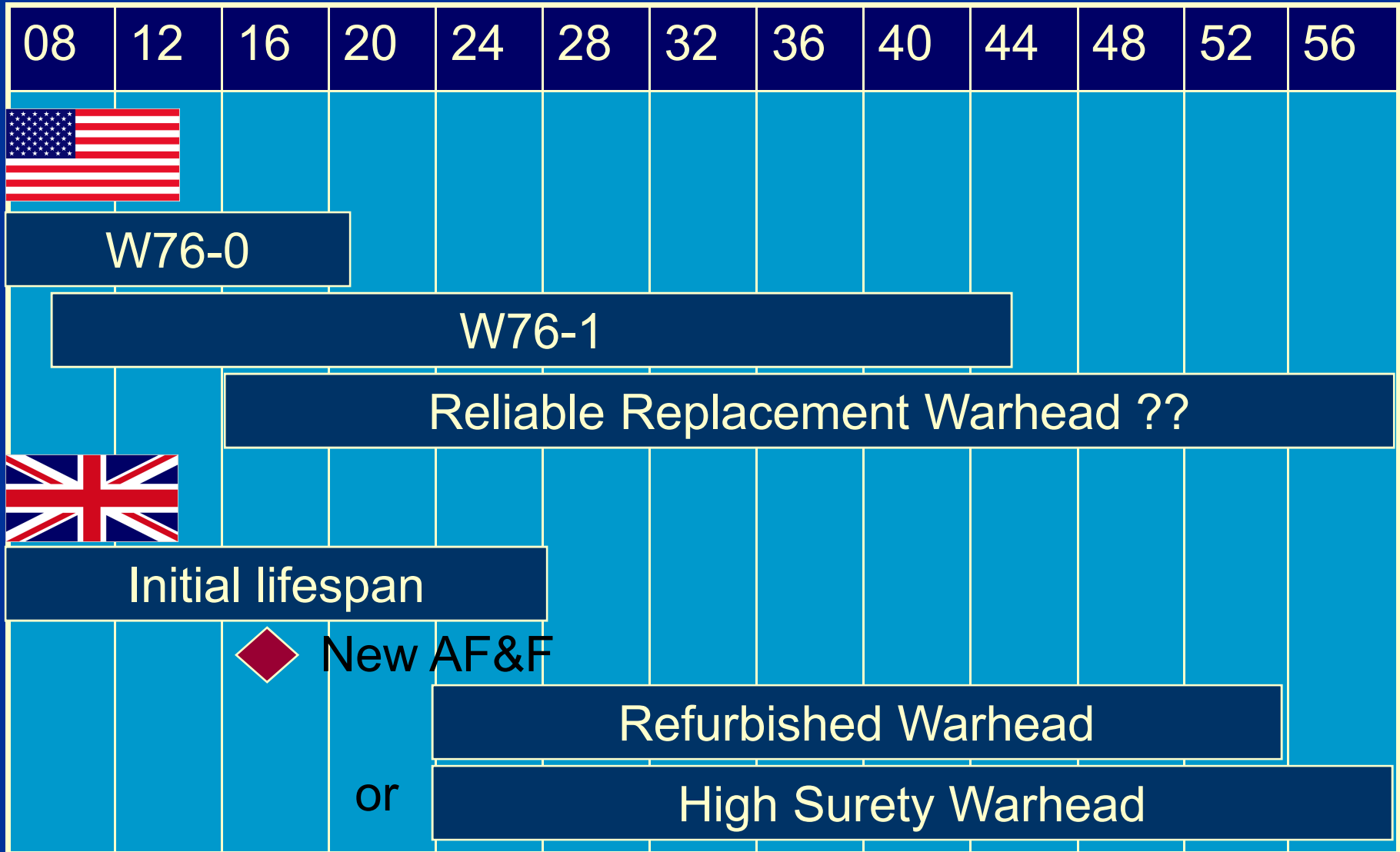
2010

Barack Obama on RRW



“I do not support a premature decision to produce the RRW”

Warhead Timelines



Modernisation of AWE

Aldermaston



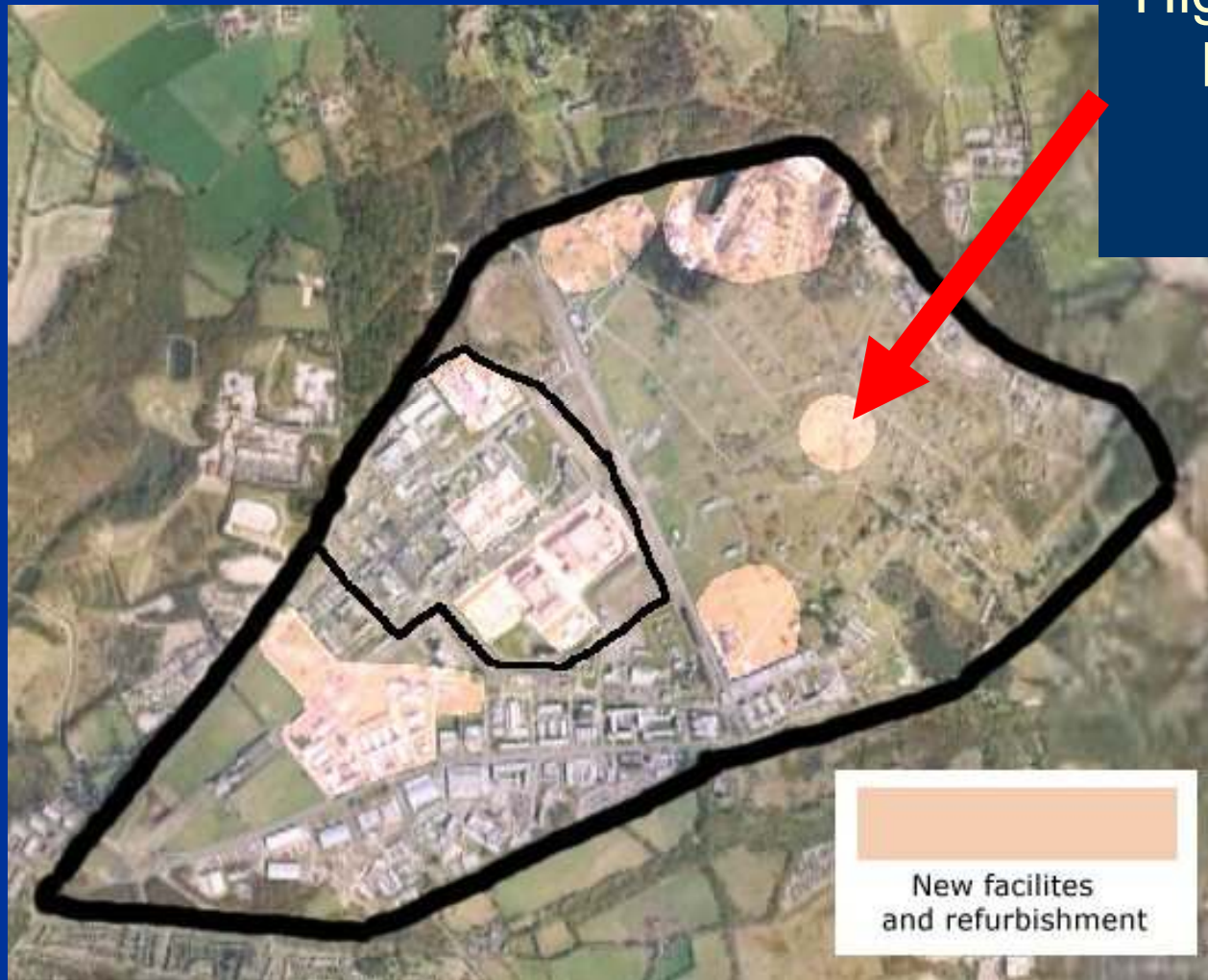
Orion
Laser

New facilities
and refurbishment

Modernisation of AWE

Aldermaston

High Explosives
Fabrication
Facility



New facilities
and refurbishment

Modernisation of AWE

Aldermaston

Hydrus
Hydrodynamic
Facility



New facilities
and refurbishment

Modernisation of AWE

Aldermaston

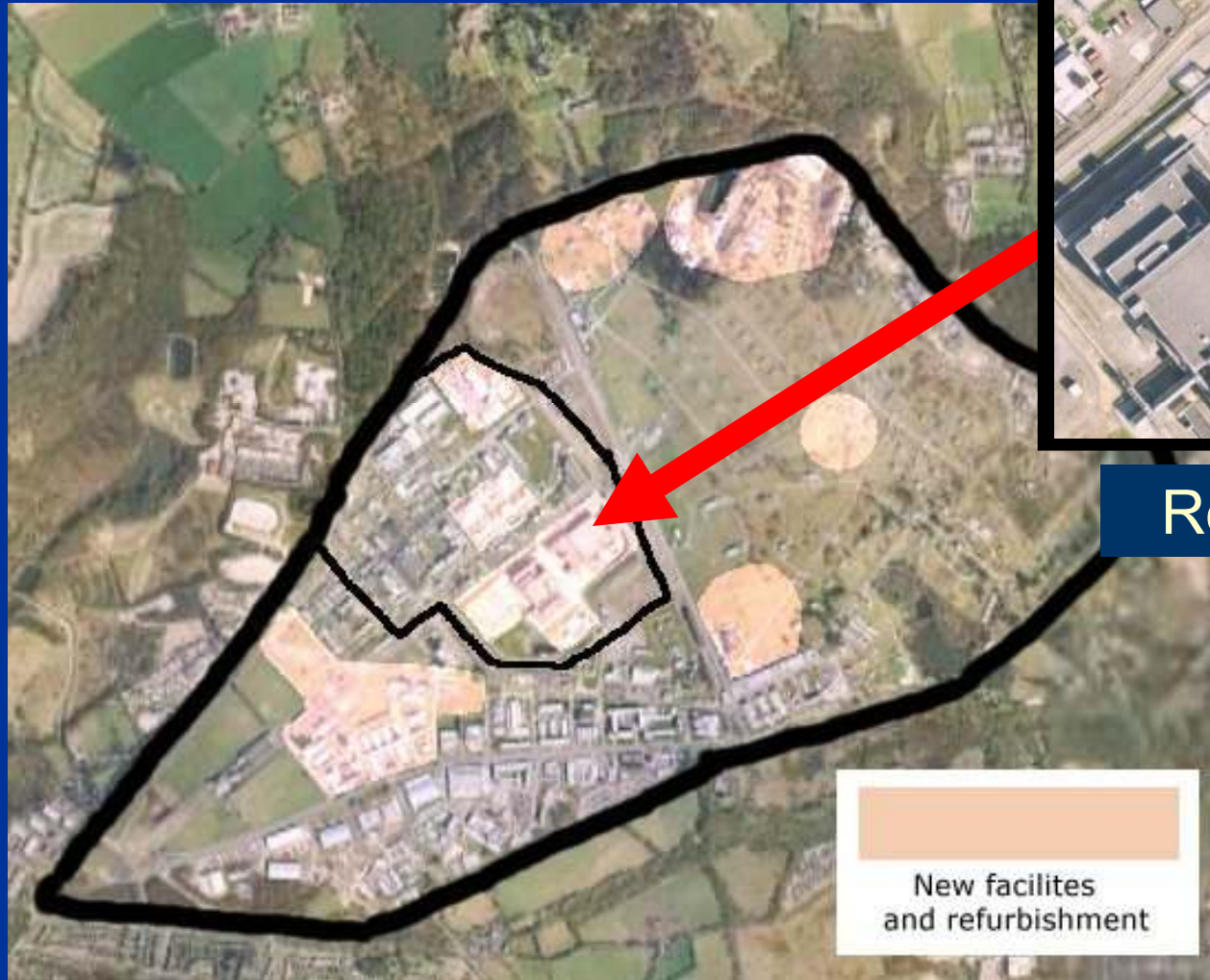
Enriched Uranium Facility



New facilities
and refurbishment

Modernisation of AWE

Aldermaston

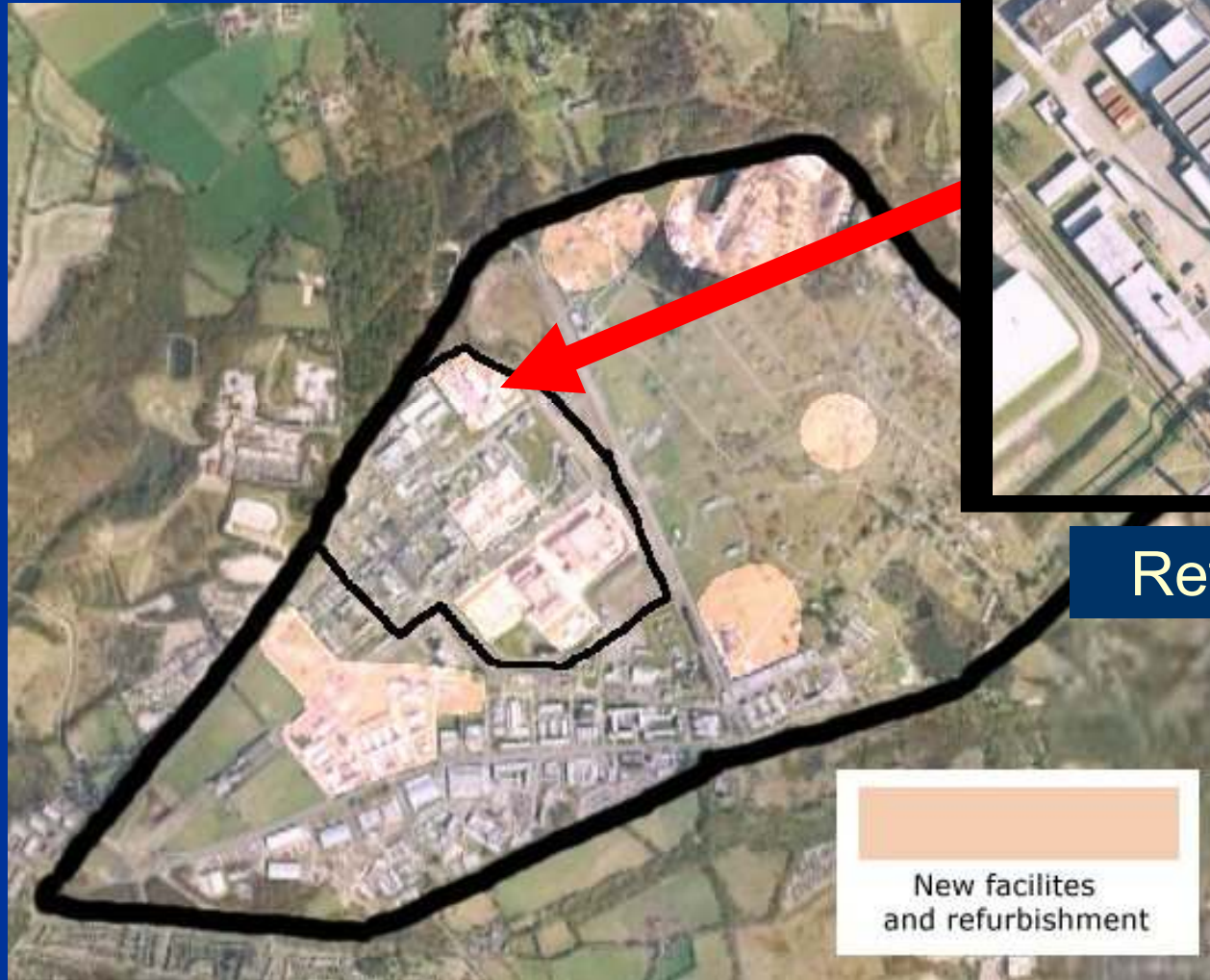


Refurbish A90

New facilities
and refurbishment

Modernisation of AWE

Aldermaston



Refurbish A45

New facilities
and refurbishment

Modernisation of AWE

Aldermaston



New
Supercomputers

New facilities
and refurbishment

Modernisation of AWE

Burghfield

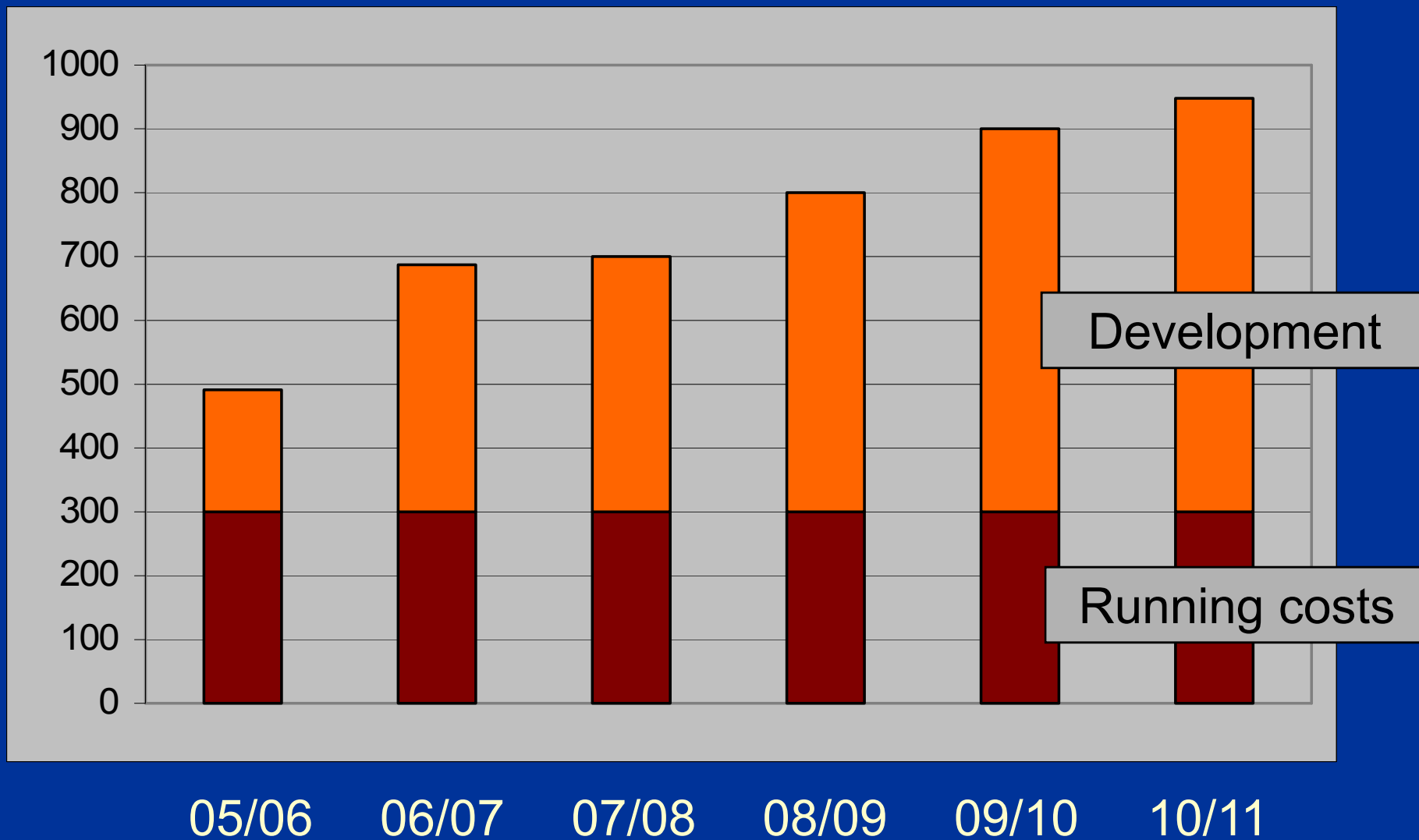
New Warhead
Assembly &
Dissassembly
Facility



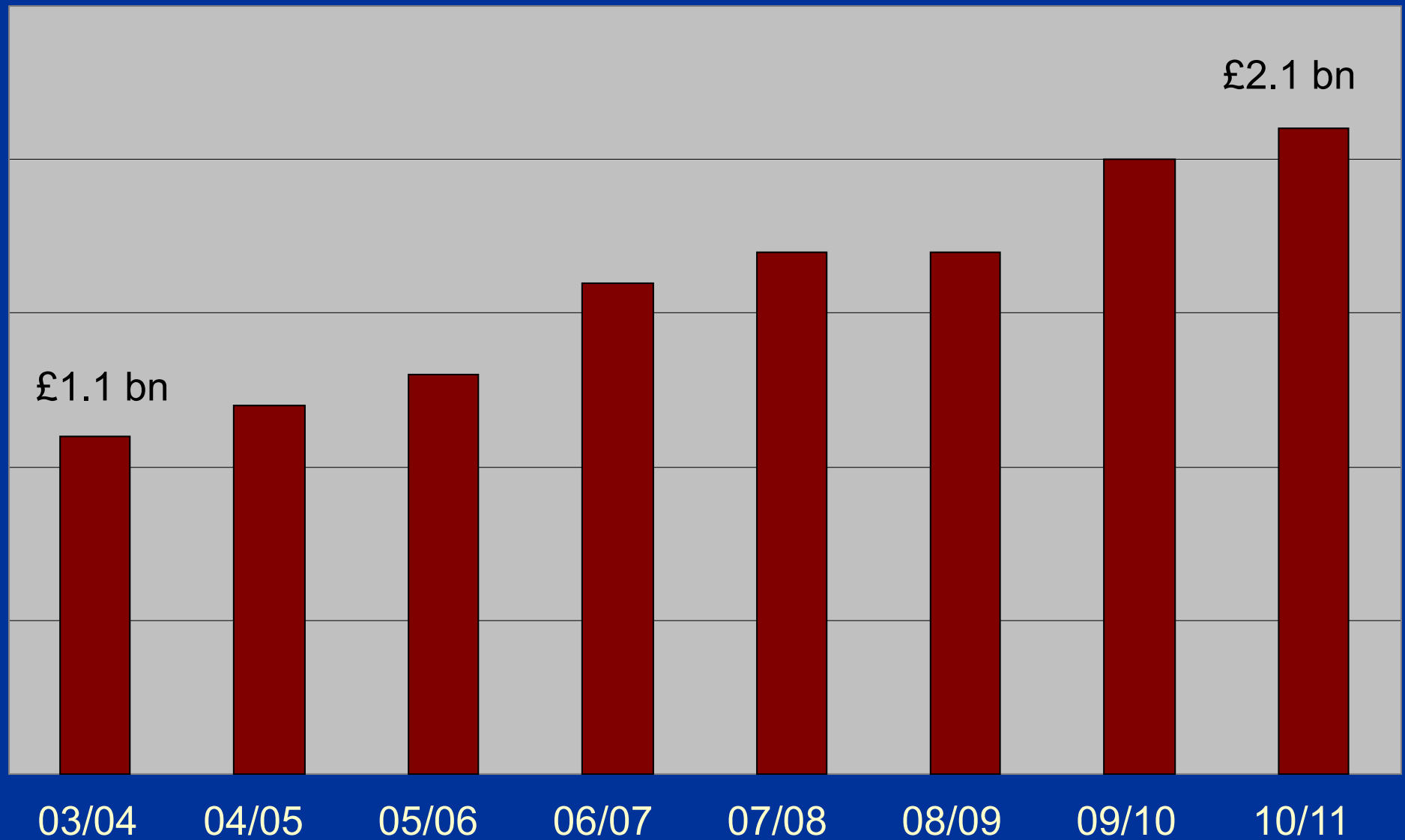
Current
Gravel
Gerties

AWE budget 2005 - 2011

£ million



UK nuclear weapons' budget 2003 - 2010



Trident Replacement



Submarine



Missile



Warhead