

Impact of the decision to renew Trident on devolved matters

The UK Government's decision to renew the Trident nuclear weapon system will have a substantial impact in Scotland over the next half century.

The Concordat between Scottish Ministers and the Secretary of State for Defence says:

"The Secretary of State for Defence undertakes to inform the Scottish Ministers of all relevant draft legislation, executive functions he proposes to exercise, and policy developments in sufficient time for the policy and practical implications for devolved matters to be examined and representations made as appropriate".¹

The Scottish Government has a duty to consider the impact that this decision will have on devolved matters and to convey its opinion to the Secretary of State for Defence.

On 4th December the Ministry of Defence (MoD) and Foreign Office published a White Paper on "The Future of the United Kingdom's Nuclear Deterrent". In this the Prime Minister stated "We have therefore decided to maintain our deterrent system beyond the life of the Vanguards with a new generation of ballistic missile-carrying submarines. We will also extend the life of the Trident D5 missile."²

If this decision is implemented, then the following will happen -

- 3 or 4 new nuclear-powered submarines will be built at Barrow. The first will arrive on the Clyde in 2022 for Contractors Sea Trials and will be operational in 2024. The vessels will have a planned life of between 25 and 30 years. The system could remain in operation until around 2060.
- Initially the submarines will be armed with Trident missiles. Later the UK may purchase the next generation of US ballistic missiles. These new missiles will enter service in the US Navy around 2030.
- The missiles will carry nuclear warheads. The number of missiles and warheads to be carried has not yet been announced. Currently Trident submarines are each armed with 48 nuclear warheads.
- The submarines will be based at Faslane. Facilities at Faslane and Coulport will be modernised at a cost of £2-3 billion over the life of the new system.
- Between 2010 and 2015 the Government will decide whether to build a new design of nuclear warhead or to refurbish the existing warheads. Most of the facilities at Aldermaston and Burghfield will be rebuilt over the next decade.
- A new generation of nuclear reactor will be designed.³ This will require a shore-based prototype, which would be operational by 2018. This might be built at HMS Vulcan, Dounreay, which houses the current navy prototype reactor.
- Annual expenditure on nuclear weapons will be at least £1.5 billion per year from 2008 until 2060. Construction of the new system will cost between £15 and £20 billion. In-service costs will be around £45 billion.

This will have a substantial impact on matters devolved to the Scottish Parliament. It will affect civil defence, emergency planning, the environment, policing, the courts, prisons, the economy, fishing, tourism and the obligation to comply with international law. Expenditure on nuclear weapons will also have an impact on the Scottish budget.

¹ Concordat between the Scottish Ministers and the Secretary of State for Defence; 17 April 2007; <http://www.scotland.gov.uk/Resource/Doc/175752/0049502.pdf>

² The future of the United Kingdom Nuclear Deterrent, Cm 6994, December 2006; http://www.mod.uk/NR/rdonlyres/AC00DD79-76D6-4FE3-91A1-6A56B03C092F/0/DefenceWhitePaper2006_Cm6994.pdf.

³ Rear Admiral Matthews, Director General Nuclear, wrote in the April 2007 edition of the MoD magazine Preview that they will a new generation of nuclear propulsion plant for the new submarines. However in a Written Answer on 13 June 2007 Des Browne said "Decisions on whether or not to develop a replacement for PWR2 have not yet been taken."

Civil Defence and Emergency Planning

The deployment of nuclear weapons and nuclear-powered ballistic missile submarines in Scotland for the next 50 years will significantly increase the risk of a nuclear emergency.

Types of Emergency

a. An accident involving the reactor on a submarine or nuclear weapons or both.

Over the timescale considered in the White Paper it is likely that the risk of a nuclear accident at a civil facility will decline. Hunterston and Torness would reach the end of their planned life in 2011 and 2023 respectively. The decision to renew Trident means that the risk from defence nuclear facilities would remain a significant factor until at least 2055.

Nuclear warheads, containing a combination of nuclear material and high explosives, are transported on roads across Scotland several times each year. A major accident could lead to the dispersal of plutonium over a wide area. Plutonium emits alpha radiation. It is very dangerous but also difficult to detect. The Ministry of Defence recognise, in their safety case, that it is possible that an accident could result in a nuclear explosion.⁴

The operation of nuclear-powered ballistic-missile submarines from Faslane also poses a significant risk. An accident involving the reactor of a submarine could be on the same scale as Chernobyl.⁵

b. A terrorist attack on a submarine or on vehicles transporting nuclear weapons.

The consequences of a terrorist attack could be similar to an accident. However the likelihood of a terrorist attack is affected not just by technical considerations but also by an assessment of how many people are motivated to carry out such an attack. Existing MoD risk assessments may not accurately reflect this. These assessments lie at the heart of plans for responding to nuclear emergencies.

c. A nuclear attack on Faslane by another country

The large arsenals of nuclear weapons held by Russia and the US are primarily maintained in order to attack one another. The British nuclear force at Faslane is integrated into the US nuclear system. Faslane is likely to remain a prime target for Russian nuclear planners so long as nuclear weapons are based on the Clyde.

A nuclear attack would probably involve several high yield nuclear weapons exploding over Faslane. Coulport would be a second target. If Russian intelligence assessed that a submarine was likely to be hidden in any other specific location, then it would be targeted. This would have a catastrophic impact on the West of Scotland.

Scottish Government responsibilities

The Scottish Government is responsible for civil defence and emergency planning. Scottish Ministers regulate and monitor the work of local authorities, the emergency services, health boards and SEPA. These bodies are required to assess risks and prepare adequate plans for a wide range of emergencies.

Preparing for a nuclear emergency affects a wide range of devolved areas. In the event of a nuclear accident police could be required to implement measures to protect the public. Restrictions on agriculture and fishing could be imposed. Ambulances and

⁴ Operational Safety Case for the Transport of Nuclear Weapons, Executive Summary, Issue 2, January 2005, Nuclear Movements and Nuclear Accident Response Group. Obtained under the FOIA by Rob Edwards, Sunday Herald. http://www.robedwards.com/2006/07/road_crash_coul.html

⁵ Hazards of a reactor accident, Department of nuclear science and technology, Royal Naval College Greenwich

Current Guidelines

There are currently a range of guidelines available, but they do not cover all eventualities.

Table 2 Guidelines for responding to defence nuclear emergencies

Guidelines	Author	Scope
Local Authority and Emergency Services Information (LAESI)	MoD	Accident during the transport of defence nuclear materials, including nuclear weapons, by road, rail and air.
HM Naval Base Clyde, Off-site Contingency Plan	Argyll & Bute Council	Nuclear submarine accident at Faslane, Coulport, Loch Goil or Rothesay Bay.
Highland Safety Scheme (Highsafe)	Highland Council	Nuclear submarine accident at Broadford Bay or Loch Ewe.
NRTE Vulcan Off-site Emergency Plan	Highland Council	Accident at the Naval Reactor Test Establishment, HMS Vulcan, Dounreay

There do not appear to be specific guidelines for a nuclear submarine accident at sea. The likelihood and consequences of such an accident are different from the risks of an accident at a berth. If an accident at sea were to occur it is likely that the response would draw from both generic emergency planning guidelines and the specific measures in the Clyde, Highland and Rosyth schemes. Greater clarity is required.

US nuclear powered vessels visit Scottish waters and ports, particularly Faslane. The MoD do not have access to information on the design of US naval reactors and so are unable to carry out a risk assessment of these vessels. It is not possible for the MoD to establish if the provisions in the Clyde off-site plan are appropriate.

The role of HSE

HSE play a crucial role in assessing the risk of an accident at civil nuclear facilities. However the role that HSE play with regard to military nuclear sites is more limited. This lack of independent scrutiny has a bearing on the risk assessments that lie at the heart of emergency plans.

Some defence nuclear facilities are licensed by HSE. These include Devonport, Derby and Aldermaston, but none of the sites in Scotland. Faslane, Coulport and the naval test reactor at HMS Vulcan, Dounreay, operate without a licence from the HSE.⁹ Consequently HSE are less able to reduce the risks or effects of a nuclear accident in Scotland.

If a submarine goes into Dock 10 at Devonport for routine maintenance it is in a licensed facility. The same package of work can be carried out in the shiplift at Faslane, which is not in a licensed facility. The HSE recognise that in the past they have pay less attention to the shiplift because it is not licensed.¹⁰ The lack of a license also reduces HSE involvement at HMS Vulcan.¹¹

Even on licensed sites HSE do not have access to all the necessary information. They are not given details of the design of submarine reactors or of nuclear weapons. They are not able to influence the design of military reactors or weapons.

⁹ NII Regulation of non-licensed naval nuclear sites, Issue 001, 19/03/07, Nuclear Safety Division – Business Management System, HSE; www.hse.gov.uk/foi/internalops/nsd/inspection/gins005issue1.pdf

¹⁰ Regulation of weapons and naval programme activity, Issue 001, 2/2/07, Nuclear Safety Division – Business Management System, HSE; www.hse.gov.uk/foi/internalops/nsd/inspection/gins004.pdf.

¹¹ Local Liaison Committee reports for HMS Vulcan illustrate the level of HSE involvement.

The HSE requires that nuclear operators keep risks As Low As Reasonably Practicable (ALARP). However the application of ALARP to the operation of nuclear submarines and nuclear weapons is difficult.¹² For example - there is not space in a submarine for the safety measures that would be required in a civil facility; and carrying torpedos and missiles on a submarine increases the risk of an explosion close to a nuclear reactor.

The MoD argue that they are a special case and have a "defence imperative". However the view of the HSE is that this "defence imperative" is not in principle different from other imperatives, such as the Fire Service imperative (fire fighters may be exposed to greater risk carrying out their duties).

Impact on emergency planning resources

The obligation to prepare for nuclear accidents, as a consequence of the renewal of Trident, will have an impact on the ability to prepare for other emergencies which are likely to arise. Over the next 50 years there is likely to be a need for a substantial response to emergencies resulting from climate change. The likelihood of terrorist attacks will also be a factor.

Nuclear accident exercises organised by the Ministry of Defence do provide opportunities to practice general responses to emergencies. However there are significant differences between nuclear accidents and other types of emergency, in particular the concern with monitoring levels of radiation and the need for protection from contamination.

Environment

The Scottish Government has responsibility for the environment. It is also responsible for regulating the functions carried out by SEPA.

A serious accident, terrorist attack or nuclear attack would have a long term detrimental effect on the Scottish environment. In addition the renewal of Trident would have other implications for the environment.

Nuclear waste

Nuclear submarines at Faslane, nuclear warhead facilities at Coulport, and the naval test reactor at Dounreay all create nuclear waste. The continuation of these discharges over the next 50 years will have an impact on the environment.

Authorisations for nuclear discharges are issued under the Radioactive Substances Act 1993. However the Act does not apply to the MoD. Instead the MoD "issue analogous registrations and authorisations which are intended to have identical practical effect".¹³

Discharges of liquid radioactive waste from Faslane into Gareloch and tritium into the atmosphere from Coulport are the subject of letters of agreement between the MoD and SEPA.

Impact on the local environment

The nuclear weapons' store at Coulport currently occupies over 600 acres of land in one of the most scenic areas of Scotland. The area around Faslane and Coulport was specifically excluded from the Loch Lomond National Park. The construction of new facilities at Faslane and Coulport will have an impact on the environment.¹⁴

¹² www.hse.gov.uk/foi/internalops/nsd/inspection/gins004.pdf.

¹³ MoD Radioactive Waste Management, Chapter 6, RWMAC Annual Report 1999/2000, para 6.7; <http://www.defra.gov.uk/rwmac/reports/annrpt9901/pdf/chap06.pdf>

¹⁴ The White Paper says that £2 –3 billion will be spent on infrastructure over the life of the new submarine system. Parliamentary replies disclosed that this expenditure will be at Devonport and the Clyde Naval Base.

Policing

In January 2007 an ICM opinion poll found that 73% of Scots were opposed to the Government's plan to spend around £50 billion on new nuclear missiles. The Church of Scotland, Roman Catholic Church in Scotland and the Scottish Episcopal Church have all condemned the presence of nuclear weapons in Scotland. The Scottish Trade Union Congress has also spoken out against Trident.

This widespread opposition to Trident from the general public and from civic Scotland has been reflected in a series of demonstrations against nuclear weapons. Many of these have taken place at the Faslane nuclear base.

The decision to renew Trident is likely to result in continuing demonstrations in Scotland, including at Faslane and Coulport, for the next 50 years. These demonstrations will have an impact on policing. Officers will be diverted from other tasks in order to police these demonstrations.

An argument could be made that protesters should pay for policing costs. However, in his review of marches and parades, Sir John Orr said that organising groups should not be charged for the costs of policing a procession. His recommendation was accepted in the Scottish Executive's Review of Marches and Parades in Scotland.¹⁵

Each time that nuclear weapons are transported by road across Scotland there is a substantial police operation to escort the military convoy.¹⁶ This involves officers from Lothian and Borders, Strathclyde and Central Police forces.

There are arrangements for football clubs to contribute towards the costs of policing matches. Where MoD police are deployed in support of a local force the MoD Police can charge for this assistance.¹⁷ It may be possible for Scottish police forces to charge the MoD for policing nuclear weapons convoys. A case could also be made for charging the MoD for the costs of policing demonstrations at Faslane.

While Chief Constables are responsible for operational aspects of policing, police authorities and joint police boards are responsible for setting police budget and for ensuring that best value is attained for the public purse.

Courts and prison service

A significant number of people are willing to face arrest in order to try to prevent the operation of Weapons of Mass Destruction from Faslane. This has resulted in a significant number of court cases and some protesters spending time in prison. The renewal of Trident, in the face of substantial public opposition, is likely to have an impact on the judicial and prison systems.

Economic impact

In March 2007 Des Browne, the Defence Minister, said that there were 859 civilian jobs in Scotland which were directly dependent on Trident. The renewal of Trident will mean that a significant workforce continues to be employed sustaining nuclear-armed ballistic-missile submarines. These skills could be employed on project which produced greater long term value to Scotland. For example many of the workers could be employed in the construction of wave machines and other projects to tackle climate change. MoD police at Coulport could be retrained for civilian police work. The Coulport site which currently

¹⁵ Review of Marches and Parades in Scotland, Scottish Executive, December 2006

¹⁶ Section 23 of the protocol between the MoD and the Scottish Police Service 2002 says that arrangements for the escort of nuclear materials should be made in accordance with the Report of the ACPO Terrorism and Allied Materials Committee's Working Group on the transportation of Nuclear Materials 1998.

¹⁷ Section 26 of the protocol between the MoD and the Scottish Police Service 2002

stores nuclear weapons and missiles, could be converted to an alternative industrial project.

Fishing

In 2006 the total value of fish landed in Scotland was £370 million. In the same year there were 5209 employed in fishing and 2224 active fishing vessels.¹⁸

Submarines operating submerged around the coast of Scotland can present a hazard to fishing vessels. On 22 November 1990 the trawler Antares was sunk by the submarine HMS Trenchant. The Marine Accident Investigation board said that the accident was the result of "a partial breakdown in the watchkeeping structure and standards on board Trenchant".¹⁹

Tourism

In 2005 tourists spent £4.2 billion in Scotland. In the same year there were 17 million overnight trips by tourists.²⁰ "The quality of the environment and the landscape are the main reasons for visitors choosing Scotland as a holiday destination".²¹

The deployment of new nuclear submarines and nuclear weapons to the Clyde is not consistent with presenting an image of Scotland as a place with a clean environment or as a place of peace. Renewing Trident will have a negative effect on the ability to attract visitors to Scotland. Ending their presence would be an opportunity to boost the image of the country.

Transport

Nuclear weapons are transported in large convoys including several 48 tonne lorries. These movements have an impact on the Scottish transport system.

The construction of new facilities at Faslane and Coulport will have an impact on the transport system in the surrounding area.

International legal obligations

While Foreign Affairs are reserved to Westminster, the Scotland Act 1998 says that "observing and implementing international obligations" are not reserved.

Article 6 of the nuclear Non Proliferation Treaty requires all nuclear weapons states to make progress towards disarmament. The renewal of Trident is not consistent with this undertaking and will encourage other states to ignore their obligations under the Treaty.

The NPT will be reviewed in 2010. A preparatory meeting was held in Vienna in May 2007. The Chair's paper, summarising discussions at this meeting, said:

"Concern and disappointment were voiced about plans to replace or modernize nuclear weapons and their means of delivery or platform"²²

¹⁸ Provisional figures of value of fish landed by Scottish vessels in 2006, May 2007, Scottish Executive.

¹⁹ Report of the Chief Inspector of Marine Accidents into the collision between the Fishing Vessel Antares and HMS Trenchant with the loss of four lives on 22 November 1990, 15 April 1992.

http://www.maib.gov.uk/cms_resources/antares_pub_1992.pdf

²⁰ Tourism in Scotland 2005 www.visitscotland.org

²¹ www.scotland.org

²² <http://www.acronym.org.uk/npt/chair.pdf>

The devolved functions outlined here are essential for the operation of nuclear submarines and weapons. Carrying out these functions for the next 50 years is not consistent with the obligations of the Non Proliferation Treaty.

The Scottish Government should be seen to comply with all its obligations under international law. The renewal of Trident presents a challenge to this compliance.

Financial impact

Central government expenditure of at least £1.5 billion per year on nuclear weapons will have a significant impact on the budget of the Scottish Government and consequently on the ability of the Scottish Government to carry out its responsibilities. This will affect the allocation to Scotland in each three-year Comprehensive Spending Review period.

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hospitals would need to take special precautions to handle casualties who were contaminated with radiation. Health advice would be given to the public, including the provision of potassium iodate tablets. There would also be an impact on the economy and on tourism.

Emergency Planning Regulations

Regulation 11 of the Civil Contingencies Act 2004 (Contingency Planning) (Scotland) Regulations 2005 says that Scottish Ministers can produce guidance for local authorities, emergency services, health boards and SEPA on the likelihood of a specific kind of emergency and its effect on human welfare and the environment.

The Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPPIR) require local authorities and other bodies to prepare for reasonably foreseeable radiation emergencies.

Regulation 9 of the Civil Contingencies Regulations seeks to avoid duplication with REPPPIR. It attempts to exclude emergencies covered by REPPPIR.⁶ However REPPPIR is not comprehensive. REPPPIR applies to nuclear sites and rail transport, but not to road or sea transport of nuclear materials. In addition the Secretary of State for Defence can issue a certificate to exempt British and visiting forces from the requirements of REPPPIR.⁷ REPPPIR is based on the European Directive EC 89/619. But this directive does not apply to military facilities.⁸

Table 1 Application of regulations to military nuclear emergencies

	REPPPIR	Civil Contingency Regulations 2005
Nuclear accident at Faslane	yes, with potential exemption	?
Nuclear submarine accident at a Z berth	yes with potential exemption	?
Accident at HMS Vulcan Dounreay	yes, with potential exemption	?
Nuclear submarine accident at sea	no	yes
Nuclear weapons transport accident	no	yes
Nuclear attack on Faslane	no	yes

It would appear that Scottish Ministers could produce guidance for local authorities and other bodies on nuclear submarines accidents at sea and nuclear weapons transport accidents, under the Civil Contingency Regulations. They could also produce guidance on the risk and effect of nuclear war. Despite the wording of Regulation 9, they may also be able to issue guidance for accidents at Faslane, HMS Vulcan and Z berths.

⁶ Regulation 9c of the Civil Contingencies Regulations says that Scottish Category 1 responders need not perform a duty under section 2(1) in relation to any radiation emergency within the meaning of regulation 2 of REPPPIR. This was noted in several responses to the consultation on the Civil Contingency regulations. The Scottish Utilities Contingency Planning Group argued that excluding REPPPIR and other types of accident "may cause confusion and inconsistency of approach when dealing with essentially the same subject". SUCPG Response to the Draft Contingency Planning (Scotland) Regulations 2005, 25 April 2005.

⁷ Regulation 18 of REPPPIR

⁸ Following the repair of the nuclear submarine HMS Tireless in Gibraltar, the European Commission took legal action against the UK. In 2006 the European Court ruled in Britain's favour and said that EC 89/618 does not apply to military facilities.