

FTRIDENT ON THE SKIDS

A TUCND PAMPHLET OUTLINING THE DANGERS INVOLVED WITH TRIDENT AND THE CONSIDERABLE ADVANTAGES IN GETTING RID OF IT

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TRIDENT ON THE SKIDS

Malcom Rifkind announced on the 15th of November 1993 that Britain would work for a comprehensive ban on the testing of Nuclear Weapons by 1995 and that the government would reduce the number of warheads to be carried on Britain's Trident submarines.

This is, in effect, an admission of a crisis around the Trident programme which TUCND have been saying is the case for some time.

Rifkind's proposals show that the MoD have accepted that they have been unable to produce Trident in its original format. Within the government's own terms of reference the logical implications are that the fourth boat is superfluous. However, a rational assessment of the programme shows that the real purpose of retaining the programme is political rather than military and that given the financial problems the Government face, the programme as a whole is expendable. What Rifkind has done is to accept what he can get, without working out how this fits in with an overall strategy in military terms. He has shown the Government's defence programme to be in disarray.

He announced a cut in the number of warheads Trident would carry. Trident will still be an increase in firepower over Polaris but this is the first time that Britain has made any significant cut in existing programmes of modern nuclear weapons systems. The reductions are not so great and they have been forced on a reluctant, truculent Government by a combination of circumstances over which they had no control and by their own incompetence. Forced on them it may have been, but it nevertheless represents the first concession our Government has made to the political realities of the post cold war world.

WHAT HAS BEEN PROPOSED

The MoD leaked a story to the Financial Times saying that Trident was to be cut back to an explosive power equal to Polaris. The article speculated that the 44 missiles already acquired from the US would suffice and there would be no need to buy more.

However, the final statement is vague. Rifkind announced that each Trident submarine would carry no more that 96 warheads - a cut of 32 on the theoretical maximum. He also said that there will be little change to the original order for missiles from the US. The current order is thought to be a total of 67 missiles, including spares and test missiles for a duration of 30 years. However, this depends on the US being prepared to sell us them at the price they were originally estimated. Also the Government previously indicated Britain would deploy the maximum of 8 warheads per missile and a total of 512 warheads. Although the government have never officially released details of the numbers of missiles or of how many warheads they intend to deploy, because some of the missiles would be for test purposes or for spares, to have 8 warheads on those we deploy we would have had to have considerably more than the 67 stated. 67, therefore, must be a cut in the number of missiles they originally intended to buy from the US - but Rifkind is saying that it isn't.

Rifkind was claiming that Trident would be reduced to an equivalent explosive power of Polaris. They have never released figures on warhead yields but it is clear from US figures that to bring Trident down to the same level as Polaris/Cheveline would require either a massive reduction in the number of warheads (we may even have less than one per missile) or redesigning the warhead. To do that would require the ability to test warheads, which we do not have. Mr Rifkind clearly has great difficulties with his arithmetic.

Some papers reported that Britain would be joining the moratorium on testing nuclear weapons. What Rifkind said was that we would work for a comprehensive ban in 1995. Britain depends on the US for test facilities and the US have made it clear they are seeking a total ban by the year 1995. Politically,

however, the announcement means that the British government is no longer publicly resisting the move towards a complete ban. That is a step forward for the nuclear disarmament process.

A NEW EURO-BOMB?

In his announcement Rifkind also said that "it is difficult to identify any area where we are likely to have a fundamental difference of national security interests as members of the European Union". and "there are no differences between France and the United Kingdom on fundamental nuclear issues." Wedgwood Benn took this to be a move towards establishing "a new nuclear superpower".

Britain has no test facilities but France does have. France officially supports a ban on testing nuclear weapons but this has been promoted by Mitterand who will only remain in power until the end of 1994. Rifkind would appear to moving towards a position where Britain and France develop and control nuclear weapons on behalf of the rest of the EC.

However, the French acquired the technology to build nuclear weapons through a secret deal with the United States in the 50's. Part of that deal was that they would not use these without US consent. It would be difficult for France to develop an independent role for nuclear weapons outside US control. Britain also depends on US patents for submarine nuclear reactors.

There have been strong rumours for some time that the next generation of nuclear powered submarines will be a joint French - British project so there may be long term plans to develop nuclear weapon capacity independent of the US. The new weapons will, however, require testing. That will depend on a range of variables and there is a strong probability that the conditions will not exist for this to happen.

Also the US are developing the technology to stop incoming missiles (the SDI programme) and have offered to share this technology with Russia. Continuing with Trident will mean that technology will have to be developed to overcome these counter measures. In other words SDI makes Trident unusable against a number of potential targets and continuing with it implies additional costs in the near future.

PROBLEMS IN PRODUCING TRIDENT WARHEADS

British nuclear warheads are manufactured at Aldermaston and maintenance work is carried out either there or at Burghfield. The intention was to expand considerably the facility at Aldermaston to cope with the substantial increase in warheads that Trident involves. Additional sections were to be built to carry out the work on manufacturing the warheads (A90) and to deal with the substantial increase in the amount of liquid waste (A91) which would result. But that programme has been fraught with problems.

The A90 plant had a number of serious design faults and this, together with a number of errors in the management of the construction, has meant that the plant is not yet functioning. Production of warheads was supposed to begin in 1986 but the Government's current estimate is that it may begin in 1994. This means they are at least seven years behind schedule in their warhead production.

At the moment the work is being carried out by the ageing A45 plant which was designed to manufacture WE177 freefall bombs, Polaris warheads and the now de-commissioned nuclear depth charges deployed by the Royal Navy.

A further difficulty at Aldermaston arose from a mistake made near the end of the construction of the A91 plant. This was being built to deal with coolant from machine tools working Plutonium as well as with water from the laundry and a number of other forms of nuclear waste from all over the plant. In this plant radioactive dust is separated from the liquid. The resulting sludge is then stored while the water is discharged into the Thames. The plant was apparently flushed out with ordinary tap water, rather than distilled water, which means that impurities will have been introduced into the system. A patch up job is underway, but there will not be the capacity in the plant to deal with the liquid waste in the volume needed if or until it does begin functioning. Currently this waste is dealt with by the ICG unit at Aldermaston

What is clear is that there are serious doubts over Aldermaston's capacity to produce warheads at the rate originally planned.

The MOD have admitted that they cannot "meet the requirements of the Trident programme in full".

In other words one of the reasons why Rifkind has announced these cuts is that the MoD simply can't produce enough warheads for the original plan.

PROBLEMS WITH THE US MISSILES

In February this year the number of missiles the US was intending to produce per year was reduced from 39 to 24. This pushed up the cost of each missile by an additional \$13 million, from \$36 million to \$49 million each. The US intends to equip ten submarines with the new D5 missiles and to retain the older C4 missiles currently in service in the US Trident fleet.

Originally Britain was going to buy something like 70 D5 missiles but this was to be over a period up to 1997. There is some pressure within the US to close down the production facility altogether in the next couple of years. The US estimates it could save \$5:6 billion if production were stopped after 1994. A bill was introduced in 1993 by Representative Tim Penny (Democrat, Minnesota) which would have prohibited funds being spent on the production after Fiscal Year 1993. Senator Dale Bumpers (Democrat, Arkansas) tried to have production stopped after 1993 which would leave the US with just under 300 missiles. He argued that if they increased the number of warheads on each missile they would lose nothing in firepower but save a great deal of money. Although these measures were not passed, they do indicate a groundswell of opinion which may have a major effect on Britain.

200 of the current order of 440 missiles are for a programme of testing lasting the next 20 years. As one Pentagon official put it recently "It's still uncertain how many we need for testing or even for the UK".

The missile test programme is being reviewed by the Pentagon as well as the overall deployment of the missiles. The language the Pentagon uses suggests that Britain's purchase of these missiles, both in terms of the price and the numbers, is at the discretion of the US rather than being guaranteed a fixed agreed price.

A political rift has developed between the US and British Governments which has implications for the British nuclear weapons programme. This problem began during the US Presidential election. The British Government searched their files to see if Clinton had applied for British citizenship to avoid being drafted to fight in the Vietnam war. There has also been a considerable difference in the approach to the US moratorium on testing nuclear weapons and to the commissioning of the THORP plant by Britain.

PROBLEMS WITH A SUB-STRATEGIC ROLE FOR TRIDENT

Although the term "sub-strategic" has been used liberally by our Government it isn't immediately obvious what they mean by it. They were asked about whether this was defined in terms of range, yield or military function and the answer suggested that it was defined in terms of the latter. Rifkind has also said that some of the Trident missiles would have only one warhead on them, which doesn't really change much in terms of how they could be used.

Sub-strategic means it will be intended for use with conventional weapons to fight what used to be regarded as a conventional war. There are a number of problems with this. The Trident warhead is designed to penetrate a hardened Russian missile silo. It's high destructive power was intended to make sure the missile in the silo was destroyed. A "sub-strategic" role means that it would be used against such targets as communication centres, air bases or troop concentrations. It also implies that it would be used in a military confrontation which suggests the presence of civilians and either our troops or those of a friendly power close to the target.

A Trident warhead could be used against targets such as those outlined but if we look at what would happen it is clear that it would not necessarily gain any military advantage from doing so. Because the warhead would be exploding in the ground a fair proportion of the blast would be deflected upwards. Bunkers in the immediate area would be destroyed but not necessarily those some distance away. The same would apply to armoured vehicles.

So civilians would be killed as would ground troops but its military infrastructure could survive. Also hundreds of thousands of people would be affected by radiation, which would require expensive medical support for decades.

Altering the flightpath of the missile would not technically be difficult but to alter the nature of the warhead would. Using the warhead against troops or specific targets would imply that they would wish the blast to travel at surface level horizontally from the point of explosion or downwards from a point above the surface, in the same way as the bombs dropped on Hiroshima and Nagasaki. But that's different to the type of explosion Trident was designed to produce, which is downwards into a buried missile silo.

A further problem exists in that the missiles depend on US Satellites for guidance which means they cannot be targeted independently of the Pentagon. It is difficult to see how Rifkind could represent Britain's military posture as realistically independent if a fundamental part of our military capacity is under the control of the US.

For a number of years David Owen argued that submarines should be fitted with nuclear armed Cruise missiles instead of the Trident missile. This would have required different missile tubes which could have been fitted while the submarines were built. It would be expensive, however, to have the Trident tubes removed and new ones fitted. This would have made the concept of using the Trident submarines in a sub-strategic role credible, but is no longer an option.

It is likely that in a military confrontation in which the US were sympathetic to Britain's position would also involve their own military forces, in which case there would be no need to use Trident. Colin Power, for instance, is on record as having said that the Gulf War proved that conventional weapons could now do what would have required nuclear weapons to achieve some years ago. If, on the other hand the US is not sympathetic, as was the case in Margaret Thatcher's war with Argentina, it is unlikely they would sanction the independent use of Trident nuclear weapons.

A sub-strategic role for Trident would strongly suggest the need for an independent capacity to target the warheads and that would require our very own satellite system. Britain did make an effort to acquire a satellite (it was called the Zircon project). Duncan Campbell exposed this in the mid 80's and the plan had to be scrapped.

An independent sub-strategic role for would logically require a number of satellites covering most of the globe. Zircon, in the mid 80's, was estimated to cost in the region of £500 million. Global coverage could require five or six such satellites.

Were we to decide to deploy such satellites independently of the US we would face an additional problem, that of getting the things up there. Since Britain does not at the moment have the ability to launch satellites this too would require US cooperation, unless the French, Russians or Chinese were prepared to allow us to rent a launch for such a system. These either have weight restrictions or there are political problems associated.

Britain has the technology to be able to develop such a capacity. There was a British design (HOTOL) for a re-usable space vehicle for launching small satellites. However, this has not been developed and would require a large amount of money from the government to do so.

It has been suggested by sources within the MOD that Trident warheads could be equipped with conventional explosive warheads. (It is at this point that the MoD's thinking on Trident begins to appear surreal). It is worth noting that a Trident missile costs roughly the same as the estimate for a European Fighter Aircraft. In other words using Trident to deliver a conventional warhead would cost the same as buying an aircraft which could deliver a heavier payload, would be re-usable and would not require a satellite guidance system.

Tests are being carried out in the US with conventional warheads. Because of the host of expensive problems this involves it remains unrealistic for Britain, which has now been admitted by the MoD.

What has never been examined by our government is what the political costs of using a nuclear weapon in this way would be. Had for instance, Margaret Thatcher used a nuclear weapon against Argentina in the Falklands war (a Polaris submarine was on route to the South Atlantic and there are strong indications that Thatcher was prepared to use it against Buenos Aires - Polaris was designed to destroy cities and kill large numbers of the population) it is probable that Britain would have been forced to rescind its claim over the Falklands, that we would be required to resource some of the medical support for the survivors. It is unlikely that Thatcher would have survived as Prime Minister and possible she would have been subjected to a war crimes tribunal

For a range of reasons, therefore, to suggest that Trident could perform a sub-strategic role is a little less than credible.

THE PROBLEM WITH THE COST ARGUMENT

Harold Wilson won the 1964 election with a commitment to scrapping the Polaris programme. He then argued we wouldn't save much money so it would be best to keep it. Thus he quietly committed Britain to a nuclear-dependent defence system. 30 years later the Labour movement is still arguing about the silly illusion of our "independent" bomb and it still sits like a lead weight around the neck of Britain's foreign, defence and industrial policies.

Just before the 1993 national conference Mike Gapes MP, together with a couple of others, wrote to each CLP making basically the same case about the cost of Trident that Wilson did in the 60's over Polaris.

Wilson approached defence issues in isolation from industrial and foreign policies and so his arguments were flawed 30 years ago. They are a bizarre anachronism in the modern world.

Mr Gapes used the recently modified government figures on running costs. Most credible sources now accept that the real figure for the lifetime cost of Trident will be at least £33 billion. This is based on the assumption that Trident would cost the same as Polaris to run and refit and this is what the government claimed it would for the past ten years. They have recently published an estimate of the running costs as a third of that Polaris. On average a naval vessel costs about twice as much to run for 20 years and to refit as it costs to buy in the first place. The government quotes half that figure for Trident - and Mr Gapes believes them! Well, what can one say?

Trident is leading edge technology. It is vulnerable to other technological developments and thus has to have systematic up-dates. It is likely that, as with Polaris, there will be a major revision of its systems half way through its life cycle, but the new government figures do not take into account that probability. No nuclear submarine has as yet been decommissioned so the costs involved remain an estimate. If anything £33 billion is a conservative estimate of the true overall costs.

This is not to say that cancelling Trident will produce a saving of 33 billion, because substantial sums have already been committed and because the cost of maintaining the people currently employed on Trident on the dole would also be significant. It is possible that no money would be "saved" if this is not handled correctly. If the money saved by cancelling Trident were to be put towards rebuilding our merchant shipbuilding industry and our shipping fleet substantial numbers of jobs would be created and substantial savings to the economy achieved. In addition there could be a saving to the social security budget of roughly 1.5 billion per year.

John Knott, the defence minister responsible for the initial stages of the Trident programme said that even with the biggest computer in the world and a Nobel prize in Maths you would be unable to tell the final costs until they were incurred. The most accurate assessment is an estimate. And yet Mr Gapes says he "now knows" the running costs will be a third of that of Polaris.

Government figures on unemployment, hospital waiting lists or the ministry drinks bill are rarely believed, so why believe them on defence? One would be a fool to buy a second-hand car from figure masseurs like the current Government, let alone base our country's defence on their figures.

THE RISK OF ACCIDENTAL NUCLEAR EXPLOSION

Crudely speaking, a nuclear warhead comprises of radioactive material with conventional explosives packed round it. Early bombs were a hollow sphere of plutonium or uranium. The explosive goes off,

the nuclear material is forced inwards and its atoms begin colliding at a rate which triggers a chain reaction, causing a full scale nuclear explosion.

Nuclear warheads have to be revamped every so often to maintain the radioactive components in a state where they would trigger a nuclear explosion if detonated. That means they have to be transported, by road, from Aldermaston and Burgfield to the submarine base near Helensburgh.

A report by the US government chief scientific advisor (The Drell Report) on the safety of Nuclear Warhead transportation concluded that a number of very serious things could happen. The scientists who prepared the report used US technology not available to the MoD called '3 dimensional computer modelling'. They said that there was a risk from fire, from impact and from radio interference. An accident to a Trident warhead involving one of these three could result in - i) the conventional explosive either burning or exploding without causing a nuclear explosion. This would spread a plume of radioactive dust over a wide area with a high proportion of the people in that area being killed. - ii) a 'Partial yield' nuclear explosion. - iii) A full nuclear explosion.

When the US government discovered the risk involved they decided to modify the design of their warhead to reduce the risk and to reduce the volatility of both the conventional explosive and the fuel in the warhead tank. Apparently for cost reasons Britain has decided to remain with its original design.

Trident warheads also carry a small fuel tank to help guide them to their target on re-entering the atmosphere. The fuel in them is volatile and, rather than risk an accident when draining and refilling the tank, they remain filled while they are moved.

Convoys of usually five seven axel articulated lorries, a fire engine, a breakdown truck, a spare tractor unit, a mobile workshop, several van loads of armed marines, police and MoD police motorcycle outriders travel through most our major urban areas roughly twice a month.

If a civilian contractor tried to carry nuclear material together in the same load as 'conventional' high explosive they would be arrested and put in prison. European legislation demands that when dangerous materials, including nuclear material, are moved the emergency services are informed so they can prepare for an accident. Britain's MoD refuses to comply with this legislation. The lorries used to transport warheads are 20 tons heavier than the legal maximum. They break down regularly and have been involved in a number of accidents with other vehicles.

There is clearly a risk of a serious accident involving one of these convoys. There is also clearly a small risk of such an accident triggering either a nuclear explosion or the large scale contamination of densely populated areas. A statistical possibility becomes a certainty when the practice is repeated constantly.

In other words, unless the practice is stopped sooner or later there will be a major accident.

After years of denying the convoys existed the government issued guidelines to local authorities on what to do if there was an accident. A number of the Emergency Planning Officers contacted were so disturbed by what they read in these guidelines they protested to the MoD. Not only do local authorities not have the resources to implement these guidelines, the guidelines implicitly reveal that a major catastrophe is a possibility, should one of the warhead carriers be involved in an accident.

NEW TECHNOLOGY MAKES TRIDENT VULNERABLE

Trident was designed around the mid 70's concept that it could be rendered untraceable by going very deep. However both the Russians and the US developed the technology to trace them - from the slight disturbance of the water on the surface and from the heat from the reactor coolant. This tracking technology is now, in all probability, for sale.

Because the Trident submarines are so large in order to minimise the risk of them being traced by the engine noise or noise from the propellers, they travel slowly - under normal circumstances, about 4 knots. This would mean that its missiles would have to be launched from some considerable distance from the target. Were that not to be the case, the submarine could well be traced by surface vessels. This makes them vulnerable.

eir he fuel in sign. he illing the A further problem then exists once the single warhead missile has been fired, in that it would then have revealed the submarines position. In a all out nuclear war this is not such a problem because all the warheads are fired at once and the submarine has done its job. This wouldn't be the case in using Trident in a sub-strategic role.

The normal method of attacking such submarines would be with other submarines called Hunter/Killers. Britain's Hunter/Killer fleet is comprised of Trafalgar class submarines which cost roughly £200 million each and weigh 5,200 tonnes. The US version is called Seawolf, costs three or four times as much and weighs about 9,100 tonnes per submarine. The Russians built some hunter/killers with Titanium hulls called the Alpha class which weigh about 3,700 tonnes. Apart from the hull these also had a unique form of reactor which made them capable of travelling 40 knots while submerged.

All of these are too expensive for the type of government who would probably be on the receiving end of such a sub-strategic Trident. The problem is that while nuclear power plants provide the possibility of travelling long distances without surfacing they also require a large amount of space, are expensive to build and require a sophisticated nuclear industry to supply the necessary fuel rods etc. Several countries are, therefore, looking for alternatives.

Sweden is reputed to have developed the Stirling engine for use in submarines and Germany has an experimental submarine (the U-1) powered by a fuel cell although neither have as yet, matched the performance of nuclear powered subs. Russia also has a 1,900 tonne research submarine which is powered either by batteries or fuel cells.

However, a new type of submarine was developed in the late 80's for the Italian Government which is cheap to build and goes some way to matching the nuclear power capacity. They use closed circuit diesel engines and what is termed a 'Toroidal' hull. Those built so far have been tiny compared with conventional submarines, but so also is the price tag. Since they use readily available technology there is no reason why they should not be developed by one of the potential target countries.

In addition to these new developments in submarine design Russia has shown a willingness to sell state of the art conventional submarines to countries we may regard as a potential enemy. Iran has, for instance, bought three 'Kilo' class submarines, much to the dismay of the US and British governments. India already has ten of these and Algeria one. These are designed to harass shipping but could, if coupled with tracking technology on surface vessels, be used as hunter/killers.

Sweden made a number of protests over what they believed to be small submarines from what was the Soviet Union entering their waters. They went to the lengths of trying to depth-charge these on a number of occasions. A number of countries believe, therefore, that small submarines represent a significant threat.

Thus Submarine technology has developed apace since Trident was conceived, as has the technology to counter Trident-type submarines. This means that Trident is vulnerable to attack by potential enemies and at price they can afford. It means that the concept of a sub-strategic submarine implies a radically different type of submarine to Trident, a radically different type of missile and a radically different type of warhead.

PROVOKING AN UNCONTROLLABLE NUCLEAR ARMS RACE

In attempting to develop a sub-strategic role for Trident the British government is publicly stating that they intend to target those countries with whom they may come into conflict. If this statement has any credibility at all then it will be a considerable incentive for those countries to develop both a nuclear deterrent of their own and the technology to deal with Trident. The technologies associated with both, although complex and sophisticated, are very probably available for sale and, since the important factor here is the technology rather than large quantities of hardware - because of the developments in submarine technology outlined above, both will be available to John Major's potential enemies.

As a result, attempting to deploy Trident in these circumstances would be frighteningly dangerous; the environmental damage from a knocked out Trident, for instance, would be horrific. Threatening to deploy them is a considerable incentive to the countries we would be threatening with Trident to produce their own nuclear weapons and their own anti-Trident capability.

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sign. ne Within 15 years South Korea went from having virtually no shipbuilding to having 25% of the worlds orders, by a mix of measures aimed at supporting the industry. This was not done on cheap labour. Were that the case Britain would not face the problems it does in competing - wages in Japan are more than 20% higher than in Britain and they had 40% of the world's shipbuilding orders in 1992.

Converting our warship-dominated shipbuilding industry to building merchant vessels is not a difficult problem. It would involve money, but not more than pursuing the current Trident programme. The benefits to our balance of trade, to employment, to the rest of industry and to our economy overall could be substantial. It merely requires the political will.

Currently, for instance, with 1% of the worlds shipbuilding orders roughly 20,000 people work in Britain's industry. With the right legislation and support, similar to that existing in other shipbuilding nations, it should be possible to achieve 15% of the worlds orders within 10 years (South Korea began from a lower base when the market was smaller and achieved 25% in 15 years). That could mean employing 200,000 people and that is where the estimate of £1.6 billion saving from the social security budget comes from.

CONCLUSION

Despite the fact that Trident remains an escalation over Polaris and puts Britain at the forefront of nuclear proliferation, the fact that our government has been forced to be seen to be cutting nuclear weapons is excellent news.

Rifkind initially leaked information about the 'cuts' and suggested that they would be larger than they turned out to be. He has tried to emphasise rather than play down the scale of the 'cuts'. This suggests that he is responding to pressure for cuts and that he has been reluctant to carry them out. It is probable that the decision was made because of problems with the production of warheads and because of pressure from the US.

It has been repeatedly suggested by our Government and in the press that we need Trident because of the existence of dangerous madmen such as Hussien or Gaddafi. But it is difficult to see how Trident could have had a role in the Gulf War and difficult to imagine circumstances which would ever arise where it could be possible to use such a "weapon". If Hussien presents a threat to Britain it is difficult to see how Trident could be used to overcome that threat. In reality the proposal to use Trident in a sub-strategic role would be so difficult to carry through that the suggestion lacks any real credibility. But the threat of doing so is extremely provocative and could itself trigger a nuclear arms race amongst those who we would target.

Rifkind clearly feels that he can-not do away with Trident for political reasons and is desperately trying to find a justification for them. His political problem has led him into irresponsible and immoral military posturing.

Part of Rifkind's problem is the industrial implications of cutting military production in Britain, where our manufacturing base has been devastated as a result of his government's economic and industrial policies. There are, however, straightforward alternatives which could benefit our economy.

The skids are clearly now under Trident and as time progresses the government will find it increasingly difficult to sustain the programme.