

PART 5: PRACTICAL TRIDENT DISARMAMENT

5.1 Background Information on Trident, Faslane and Coulport

In the mid to late 1970s the British Government set up a secret committee to determine a replacement for the Polaris fleet. That led to the decision to build four submarines designed to carry the US Trident missiles, armed with British-built nuclear warheads. The UK Trident submarine-launched nuclear missile programme has been aided and abetted throughout its design, development and deployment by the US Government.

Although the US has not directly provided the UK with a complete nuclear warhead for Trident, it has done everything but, through discussion groups, the supply of design, development and manufacturing information and the provision of materials and technology. All British nuclear weapons are almost entirely dependent on US technology and support. Some 30 per cent of the total Government estimated cost of Trident is being spent in the United States.

The British Trident missiles are leased from a central US missile pool. The missiles will also be refurbished in US facilities.

The US has also supplied:

- Highly enriched uranium to fuel the nuclear reactors onboard Trident submarines;
- Assistance with the design and testing of the Trident warhead;
- All sixteen missile tubes for the first Trident submarine, HMS Vanguard and technical assistance to aid in the installation of the missile tubes in the other three Trident submarines; and
- Targeting, communication and guidance systems for Britain's Trident missiles and the use of US navigation satellites.

The submarine's pressurised water reactor power plant is designed to operate seven years without overhaul. The original prototype of this reactor is kept at HMS Vulcan, next door to Dounreay.

Trident is a major escalation in Britain's nuclear war fighting capability. The previous Polaris/Chevaline system was only able to hit one target per missile regardless of how many warheads were being carried. Trident on the other hand has independently

Specifications for the British Trident Submarines:				Specifications for the Trident-II D5 Missiles:			
Length	491 feet			Length	44.6 feet		
Hull diameter	43.3 feet			Diameter	83 inches		
Height	4 stories			Launch weight	130,000 lbs		
Displacement	16,000 tonnes submerged.			Weight	130,000+ lbs		
Speed	25 knots submerged			Number of motors (stages)	3 plus post-boost control system		
Power plant	1 pressurized water PWR-2 nuclear reactor, geared steam turbines, 1 shaft			Range	4,000+ nautical miles		
Crew	132			Navigation system	Two-dimensional stellar inertial guidance (SIG) NAVSTAR GPS update to position the sub before launch		
Armaments	4 torpedo tubes for Spearfish torpedos, 16 Trident-II D5 SLBMs carrying a maximum of 48 Mk-4/100-kt MIRVs			Accuracy	400-500 feet CEP		
				Max. warhead loading	8 Mark-5/W-88,475 kt. MIRVs, or 12 Mark-4/W-76, 100 kt MIRVs		
<i>Comparison of Polaris with Trident</i>							
	No. of subs	Yield per warhead (kt)	Warhead deployment per sub.	Max. warhead deployment on 3 operational subs	Max. no of targets per sub.	Range (kms)	Accuracy (metres)
Polaris	4	200	32	96	16	4,700	900
Trident	4	100	48	144	48	7,400	120

targetable warheads. Every warhead that is carried on Trident can hit its own target. Trident also has a far greater range, is far more accurate and can hit its targets in a far shorter time period.

The four British Trident submarines are HMS Vanguard (first patrol 13/12/94), HMS Victorious (first patrol 7/1/96), HMS Vigilant (first patrol 1997), and HMS Vengeance (first patrol estimated early 2001).

British Trident submarines are based at the Clyde Submarine Base, Faslane, in Scotland, where the routine maintenance between patrols is carried out. RNAD Coulport handles the nuclear warheads. Normally there are 144 nuclear warheads on submarines plus between 30 and 50 at RNAD Coulport. Coulport inspects warheads and carries out basic maintenance work on them. From time to time small numbers of warheads are removed from each submarine and replaced. This is done at Coulport. Trident missiles can also be removed and there are bunkers to store up to 16 missiles on land, but normally the missiles remain on the submarine at all times. The missiles are loaded and unloaded at the US Navy Base at Kings Bay, Georgia. Coulport is also the storage and loading/unloading port for the conventional torpedoes.

The British Trident missiles are serviced at Kings Bay. The British missiles are ordered and stored with the US missiles and not assigned to Britain until they are drawn out of inventory to install in a British submarine. The missiles normally stay in the submarine for the duration of its seven-year commission, but capabilities are available at RNAD Coulport for the removal of missiles in an emergency. The Navy submarine museum at Gosport is worth a visit. It does not have a Trident but the old subs are there and will give you a feel of what a sub is like. They are basically all the same with minor modifications for electronics and different weapons systems etc. The address is The Royal Sub Museum, Haslar Jetty Rd, Gosport, Hampshire, PO12 2AS. Tel: 01705-529217.

5.2 How To Safely Disarm a Trident Submarine

General common sense is your best guide plus thorough thought, discussion and role play. Remember that it is more important to be peaceful, loving and accountable than to get to the submarine, road or pylon to disarm it at a particular time. The intention and commitment is what matters - the intention to peacefully disarm and the commitment to keep coming back and trying again. This total commitment means that there will be no excuse for the authorities to treat us badly - they can just arrest us quietly - but then they will have to put us in prison to stop us trying again and

yet again. The more peaceful and accountable we are the more we will attract others to join us and with hundreds and thousands of people joining us we have more chance of total and complete disarmament.

The easiest way the authorities have of stopping Trident Ploughshares growing is to portray us as violent and terroristic, therefore we must be careful to act in ways that can never honestly be interpreted as such. Of course, we may have to contend with dishonest slurs on our behaviour but these slurs will not hold up if we really are loving and open in all our actions.

5.2.1 Some General Safety Considerations

Emergency vehicles - to ensure that ambulances and fire engines can still operate in the base please ensure that any blockades and road digging can be easily cleared or bridged for emergency access.



Razor Wire - is very sharp so you can get a serious cut and not notice it. It can sometimes spring back at you when you cut it, so be careful to allow it room to do so without harming yourselves. It is best to remove whole bits back to their ties and all bits that stick out rather than risk getting snagged. There is usually a coil of razor wire on top of the 3 metre weld mesh and usually three coils piled up on the ground inside the fence, sometimes more. It is possible to climb over the coils without cutting it if you use a piece of strong carpet laid over the coils. Choose a place

where the coils are most dense and strongest. Take First Aid with you in case you get cut and a torch for night cutting. There is fencing within fencing, and once you have managed to get through one area there are often several other areas that will need similar treatment.

Dogs - are always near their handlers and are well trained. Keep still and wait until the handler calls the dog off. Usually you are warned by the handler before the dog is let loose and the dog usually goes for any person running away. They are often used to find people hiding or to search rough ground. Keep calm and if in doubt just keep still and quiet.

Guns - as far as we know the only Ministry of Defence Police with guns are those at the gates. However, armed Marines guard all the high security areas, like the warhead bunkers and the submarine berths. If challenged by them identify yourself as an unarmed protester. A Faslane Peace Camper who swam onto a submarine tapped a marine on the shoulder and said "Hi, I'm from the Peace Camp" and he fainted with shock! Remember he may be as freaked out to see you as you are him. It is best to assume that there is a shoot to kill policy in operation in all highly secure areas. We will not know their exact orders but if discovered make sure you stay still and quiet and

hold your hands out to show they are empty and you pose no threat. Speak quietly and calmly and say you will do no harm. Unarmed protesters have been discovered over the years by armed guards in very difficult circumstances without being shot. This is because it would be highly politically embarrassing for an unarmed peace protester to be shot whilst protesting about the illegality and immorality of weapons of mass destruction. Bear in mind that the guards may be very nervous and unsure of when or if to pull the trigger so make it clear that you pose no threat. Be sensitive. Not only do we not want any activist shot but we also do not want any guard to have that on their conscience either.

Cliffs - Coulport is a very big base, much of it on rough hillside which is unlit. There are steep cliffs and ravines. Don't run if you cannot see where you are going.

Water - the water in the Clyde is always cold so wear suitable clothing. It is tidal and there are currents. And remember that the weather conditions can change quite rapidly. It is advisable to talk to someone with local knowledge (contact the Peace Camp or Scottish CND office for contacts) and study the tide tables and maps before going onto the water. Police and Marines drive about in fast powerful boats of various kinds. If the only way to stop you in your boat or canoe is to capsize you they won't think twice, they will however then rescue you from the water. Swimmers will be blocked and hauled out of the water. The police can get tens of boats into the water quite fast. There are eight special guard boats plus armed guards with Trident and there are thirteen launchers and many inflatables for both Faslane and Coulport. With the warning we are giving them they may easily be able to call on reinforcements if necessary. At night, police and marines drive about fast with no lights on. Tugs and other boats may also be moving about. Armed Marines patrol the decks of the submarines and the dockside.

Typical security for escorting Trident subs might include two large tug boats, two or three police launches (one of which leads the procession with a blue flashing light), six special forces rigid inflatables (with armed soldiers) which seem to be almost glued to the sub, three on each side. Then there are any number of aquaplods whose role it is to keep us away. A recent defence security exercise at Coulport involving a sea action by Royal Marines succeeded in overwhelming the security. They had about eight fast boats and managed to land folk on both the old Polaris jetty and the newer Trident Explosives Handling jetty. Greenpeace have also managed to get people onto HMS Revenge using four boats. Anyone wanting maps of the area showing the restricted zones around the base waterfronts should contact the Core Group or Faslane Peace Camp.

There is a pump-jet (an internal propeller) which sucks in water along the sides of the sub, so avoid this area of large water intake. Also be careful of the area of water around all moving vessels that can draw small craft in. An MoD Policeman was killed in an

exercise when he was manoeuvring his boat at high speed at night in front of a Trident submarine.

When Clyde Sea Action began in 1986 with the widening of the entrance to the Gareloch the reaction to the waterborne actions was a bit heavy. There was ramming and capsizing of boats. However, relationships have improved and there tends to be less of this now. A rough law might be "The level of MoD response is proportional to the level of embarrassment caused". If you outmanoeuvre an aquaplod who has spent a lot of time training then they may respond in a fairly irresponsible way.

You are less obviously a protester if you wear a wetsuit. Sometimes there are exercises on the base when thunder flashes (powerful fireworks) are thrown into the water. They can make a swimmer unconscious. However, several protesters have managed to swim in and enter submarines without harm. Wearing protective wet-suits will protect you from the cold and any possibility of unlikely stings of ordinary jellyfish. During all three of the Disarmament camps held in August 1998, 1999 and 2000, pledgers have got within a few yards of the Trident berth at Faslane by swimming across the loch and through the floating boom at night.

There are many ways of getting into the base - not only through the wires, but also over, under, around, by sea, land, or air, by balloon, parachute, hang-glider, canoe, raft, diving, bicycle, stilts, misleading costumes, old cars, with all kinds of tools.

Nuclear reactor and nuclear warheads - A Trident submarine is a floating nuclear power plant. Damaging unidentified equipment could affect the safe operation of the nuclear reactor. Some equipment in the main control room is related to reactor operations. Do **not** interfere in any way with the nuclear reactor areas, the warheads, the missiles or the missile fire control computers or bunkers where the warheads are stored. On the submarine these areas are situated to the back of the conning tower, the long end of the sub, but the front area contains the torpedoes which are also a problem, and there are reactor-safety-critical components are throughout the submarine. Any fire on a Trident submarine is a major incident with potentially disastrous consequences. Great care should be taken to avoid taking any action, such as damaging electrical equipment, which could result in a fire. Any cables or pipes that go into the submarine from the dockside should be left alone as we do not want to risk cutting through the back-up emergency systems for the nuclear reactor. See the photo for a glimpse of just how many wires and cables there can be. Trident missiles each contain over 50 tonnes of high explosive and rocket fuel, in addition to the nuclear warheads. The third stage of the rocket around which the warheads are placed is made of a type of rocket fuel which is particularly prone to accidental detonation.

The Spearfish torpedoes are powered by Otto fuel which is both a toxic and an explosive hazard. There has been at least one fatal accident during early trials on these torpedoes. An accidental explosion is more

likely to occur on Spearfish torpedoes than on the older ones which used to be in service.

The submarine casing on the outside should be safe to hammer upon as it has to withstand very high pressures when it dives in deep seas but do not hammer or strike the missile tubes or the area under which the nuclear reactor can be found. The pouring of sticky substances or paint over the entire outer surface of the submarine would be safe however.

It is best to be absolutely safe and sure of what you are doing and if in doubt do not do it. If you do not know for certain what a piece of equipment is for, then leave it alone. The front of the submarine, in front of the conning tower, (the short end), is away from both nuclear reactor and nuclear missiles and therefore is the safest place to hammer, drill or cut. Also remember that any "secret" or "unannounced" Ploughshares actions must still be accountable. We are not doing a sabotage action but a considered disarmament action and are willing to take the consequences of our actions and explain why we are doing them. There may be a greater risk of violence from security personnel in "secret" actions as they will not be expecting us. So make sure you have thought up ways of making your sudden presence unthreatening and obviously peaceful.

5.2.2 Ideas for Disarmament

It is up to each affinity group to decide what and how it will disarm - within the nonviolent and safety ground-rules of the whole project. Only do what your whole group feels comfortable and safe doing and what you are capable of doing.

Inside the Trident submarine - some general ideas are to superglue the lock to the safe where the firing codes are held or blockade yourself inside the control room, sleeping quarters, toilets, kitchen area or lock-on anywhere inside the submarine except the areas indicated in the diagram of HMS Victorious (areas 11,16, 20 and 27) where no-one should go. The subs cannot go to sea with an activist on board. Drill holes from the inside to the outside to create leakages. Find the periscope and communications controls and make them unworkable. Damage the door fixings to prevent the doors from sealing properly.

Please refer to the diagram of the Trident submarine, HMS Victorious, with numbered areas.

The following areas should be left alone:-

- Area 11** - the nuclear reactor
- Area 16** - the Trident missile tubes
- Area 20** - the diesel generator as this is vital for reactor safety
- Area 27** - the torpedo stores

Caution should be exercised in **Area 18** - the missile control centre - equipment to control the safety of the environment in which the missiles sit onboard the sub are within this room. Damage to any equipment in this room could affect the missiles. However, the liberal spreading of syrup, paint, jam and glue should be safe and effective. Also be careful in **Area**

33 as there may be some torpedoes here and be cautious in **Area 10** as the engine room controls may also contain reactor controls.

Key areas that are safe to disarm using all available nonviolent means are:

Areas 3 & 4 - the rudder machines and the clutch. Like any vehicle if you damage the steering and the gears it will not go very far.

Area 13 - the evaporator/distiller. This provides fresh water for the sub and recycles the air the crew breathe. Putting this out of action means the sub cannot go anywhere.

Area 17 - navigation centre. This area is self-explanatory and the same applies to this area as to areas 21 & 29.

Area 21 - the main control room. This is the brains of the submarine, running the entire operating system. Any substance poured into computers in here will create havoc with the electronics but be careful of the reactor controls and leave them alone.

Area 28 - hydroplane machinery. This area controls whether the sub goes up or down. Any disarming done in here will render Trident inoperable.

Area 29 - the operations room. Like the main control room this is another key area of the sub. From here threats to the sub are assessed and responded to. Again there are plenty of electronics to damage that would render the sub inoperable but leave alone the reactor controls.

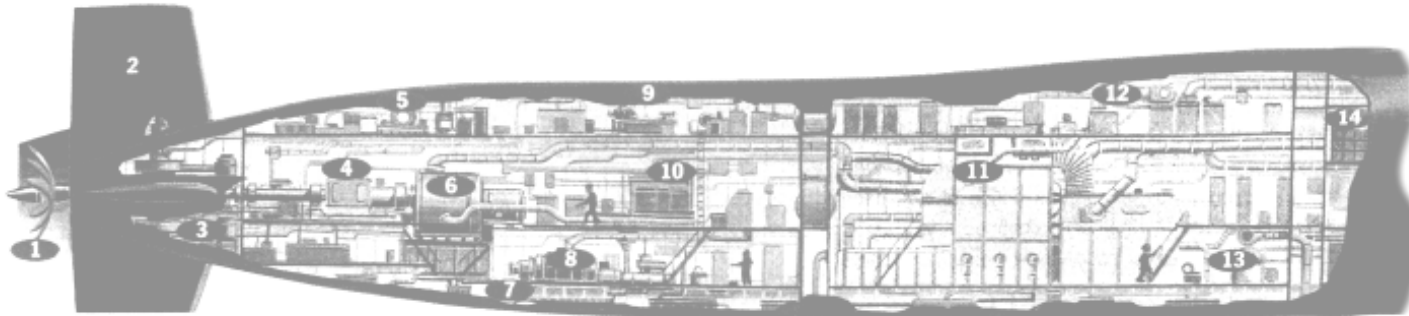
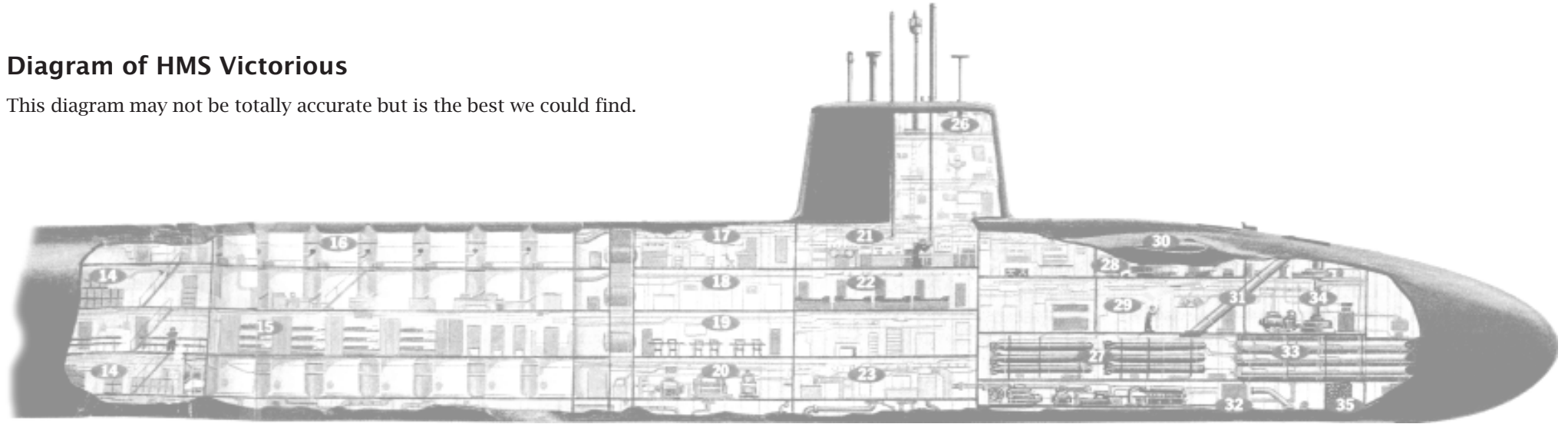
On the outside of the Trident submarine - hammer on the openings and flaps. Hammer the sonar arrays around the front. Damage any sonar arrays that are for dragging behind the sub (called the towed array) and that may be somewhere near the docked sub and slightly submerged. They are also often on the top of the submarine. If you look at the photo overleaf, you can see at the back an object that looks just like a huge cotton reel. This is part of the towed array and the cables on the reel can be cut through to great effect!

The submarine surface is covered with anechoic tiles that deafen and absorb any sound, therefore making the submarine harder to detect. Any anomaly in these tiles will create a noise. By removing the tiles, throwing paint or any other substance over them, you will make it more visible and audible to the 'enemy' and therefore unusable. In practice they often come into port with tiles missing so you would have to remove quite a few to make much difference.


On top of the conning tower there are numerous holes and cavities where radio and radar antennae and periscopes are usually kept. Most of these are usually retracted. These can be damaged through the use of metal punches, screwdrivers or any long piece of metal being driven into them and then superglued in place. The communication equipment on the conning tower (periscope, antennae etc) could also be

Diagram of HMS Victorious

This diagram may not be totally accurate but is the best we could find.



Double Decker
bus to scale

 = Do not go in this area

- | | | | | |
|-------------------|--------------------------|---------------------------|-----------------------------|-------------------------|
| 1 propeller cone | 8 turbo generator | 15 crew accommodation | 22 officers' accommodation | 29 operations room |
| 2 rudder | 9 workshop | 16 nuclear missile tubes | 23 auxiliary machinery room | 30 hydroplane |
| 3 rudder machines | 10 engine room controls | 17 navigation centre | 24 periscopes | 31 torpedo entry tube |
| 4 clutch | 11 nuclear plant space | 18 missile control centre | 25 radar | 32 oil fuel |
| 5 air compressors | 12 air conditioner plant | 19 wardroom | 26 bridge | 33 torpedo tubes |
| 6 main turbine | 13 evaporator/distiller | 20 diesel generator | 27 torpedo stowage | 34 machinery/winch room |
| 7 ballast tanks | 14 stores | 21 main control room | 28 hydroplane/machinery | 35 ballast |

cut, hammered, or bent in various ways. All of this will damage these very sensitive items of equipment rendering the sub blind and therefore unable to go to sea before repairs are carried out.

Sticky jam, syrup, treacle, glue, and other adhesive materials are also useful and can be used to bung up the periscopes and radar antennae if poured into these cavities. Syrup or treacle with sand, salt and water added have been found to be more effective than jam. Concrete and arc welders could be used on the diving planes at the front of the submarine.

The Hunter-Killer submarines that accompany the Tridents are part of the system and can be disarmed in a similar way to Trident. At present (January 2001), six of the fleet of twelve Trafalgar and Swiftsure class subs have been found at risk of the same cooling and system cracking as HMS Tireless that is still docked at the emergency (Z) berth in Gibraltar undergoing repair after a near reactor meltdown.

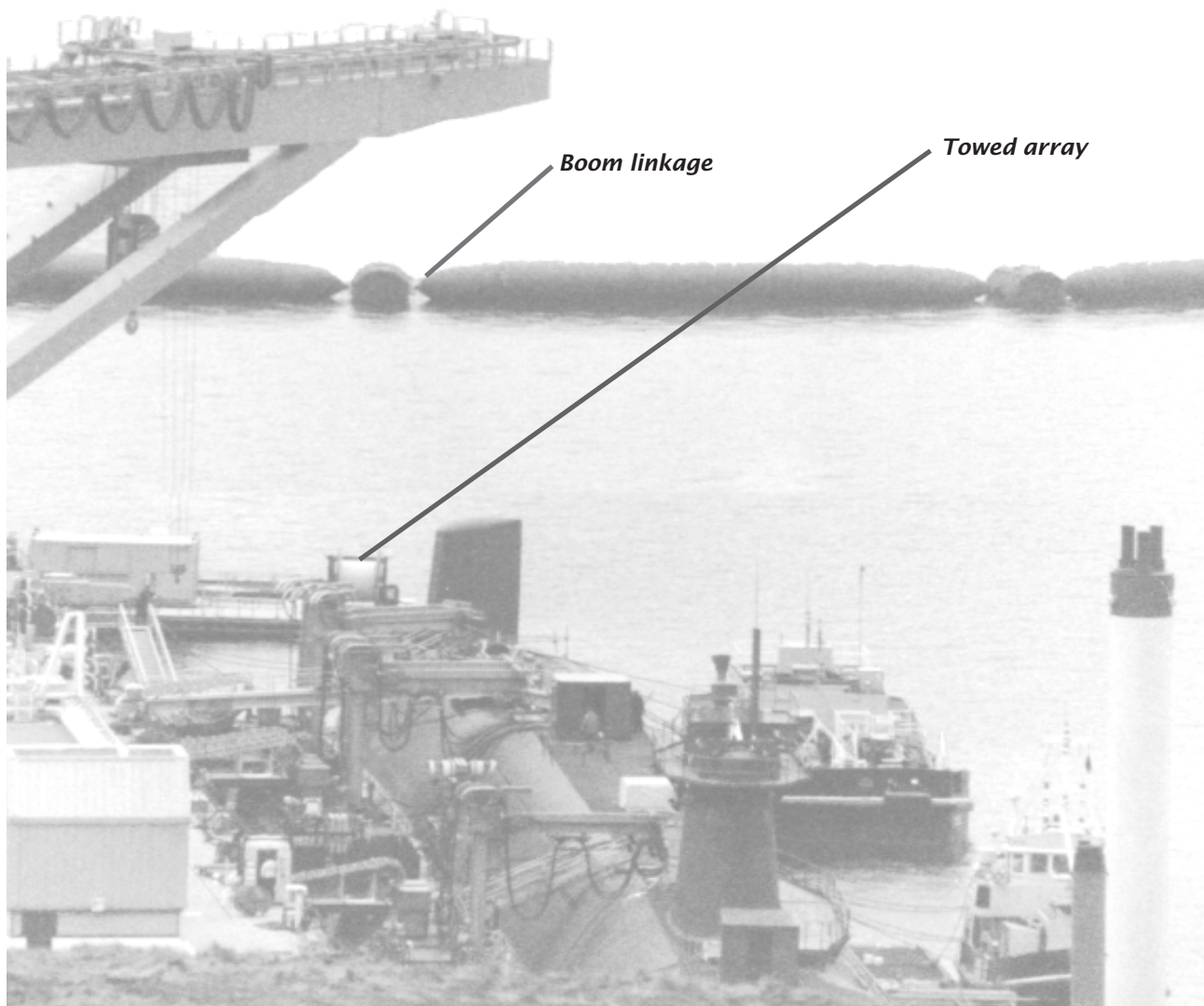
You might feel that the tugs and police launches that guard the Trident subs and guide it into port, are also part of the system and need disarming.

In March 1998 four TP women whilst on a pre-August reconnoitre found a police boat with its keys in it at the dock at Coulport. They borrowed it for a War Crimes

Inspection and after inspecting the Explosives Handling Jetty at Coulport took it 14 miles round the loch to Faslane where they landed one of the women on the floating boom before being arrested. When the opportunity presents itself military equipment can be quite useful in disarmament work! Such opportunistic work however, inevitably carries an increased element of risk, because it isn't planned. Practise the skills of quick decision making in your affinity groups.

The ship-lift at Faslane - the ship-lift building contains facilities for the 491 foot Trident submarines to be lifted clear of the water to carry out the maintenance work that is essential to keep Trident operational and would have to stop if peace activists were also there. There are three levels from which workers can reach the 80 foot high sub. By using a saw or some other useful tool you could damage the various cranes, gantries and other equipment. Damaging cranes at Faslane in the Trident area would stop repairs or loading of stores to Trident subs. Damage can also be done by unscrewing screws or bolts and by drilling holes in vulnerable places.

Access routes - the Rhu Narrows are a bottleneck for Trident submarines coming in and out of Faslane and blockading them or other parts of the channel is a possibility. Buoys and weights joined by steel cables can be floated in the water. Fishing nets can be laid and also boats can be turned over to get in the way. How



about sending messages to all boat and ship owners to come and block the narrows? There is a 12 knot speed limit. How about a Reclaim the Seas action? There are lights and radar towers on the Rhu Narrows that could be occupied although there are probably alternative guidance systems for Trident to use.

All actions should take into account the fact that a submarine running aground could result in a nuclear accident. The sub has to have clearance underneath for nuclear safety - there are water intakes for the reactor cooling system on the bottom of the sub. Also a collision with the ground could affect reactor operations, so put up warnings along with the blockades and contact the base too.

Locking on to the boom would also restrict access. See the photo opposite for details of linkage between the boom parts where you can lock on. There is an infra-red system that is meant to pick up canoes and boats approaching from the sea but all security systems are fallible. Part of the boom round the Trident area is like a gate and is opened to let subs in and out. You can stand on it and it is possible to lock on to various parts of it as well as to get through or over it quite easily. Check it out for size. We have had almost 20 incursions into the high security boom area over the three years of the project. It would be a good idea if your affinity group visits Faslane at least once before your planned action to get your bearings and check the feasibility of your plans.

Digging up various access roads with pick-axes or JCBs and setting up barricades with old cars and locking on to them, in and outside the bases could be good. The access road from the nuclear warhead storage bunkers is vital. When thinking about digging up roads remember access for emergency vehicles. There are two roads to the Explosives Handling Jetty at Coulport, one is too steep for warhead transport, but could be used for emergency vehicles. A nuclear accident could happen at any time with so many nuclear reactors in the various subs there or with the nuclear warheads and there needs to be access for all the emergency vehicles. If you plan any blockade or road digging then make sure you have safe and workable plans and equipment to bridge any hole in the road or to lift the blockade for access to emergency vehicles. We are trying to stop the movement of heavy warhead transport and of supplies to and from the sites not access by emergency ambulances and fire engines. There are many minor accidents and emergency vehicles go in and out on a very regular basis.

5.3 Background information on Aldermaston and Burghfield

5.3.1 What are AWE Aldermaston and Burghfield?

The Atomic Weapons Establishment (AWE) Aldermaston has been at the centre of British nuclear weapons production during most of Britain's nuclear programme. And from the marches of the 1950s and 1960s to the present day, the site has attracted a fluctuating amount of interest from anti-nuclear campaigners, environmentalists and anti-militarists.

AWE plc (the company), at the Aldermaston site, specifically, is currently responsible for the production, maintenance and (eventual) decommissioning of Britain's Trident warheads. It is also engaged in developing other areas of nuclear science: including laser technology and materials testing. AWE also retains the capacity for developing a new generation of nuclear weapons, should the British government decide to upgrade/replace

Trident at some point in the future (something which, it has been suggested, is already in the pipeline).

Aldermaston is owned by the British government, specifically the Ministry of Defence, but since the early 1990s AWE has had 'GOCO' status, that is Government Owned - Contractor Operated. This means that while the Ministry own the site, private companies manage day to day operations, and somehow (we've never quite figured this one out), make a profit. This status also applies to AWE Burghfield - Aldermaston's sister site, located approximately seven miles away. At Burghfield, high explosives (necessary to detonation) are packed into the warheads (and also removed - for maintenance and in decommissioning). Burghfield is also an occasional home to the nuclear warhead convoy - 'greens' (when it pops by to collect/deliver warheads for deployment/servicing). Though the 'greens' do not visit Aldermaston directly, the site has special status as home to Special Nuclear Materials convoy vehicles ('Blues'). These small trucks trundle around Britain with the MoD's 'Special Escort Group', collecting/depositing nuclear materials. Their favourite destinations include: Sellafield (BNFL, Cumbria), Chapelcross (MoD reactor, Scottish borders), Harwell (AEATech, Oxfordshire) and Rolls Royce Nuclear (submarine nuclear reactor manufacturers, Derby).

"-now hold your breath and carefully remove the lump of plutonium by the detonator..."



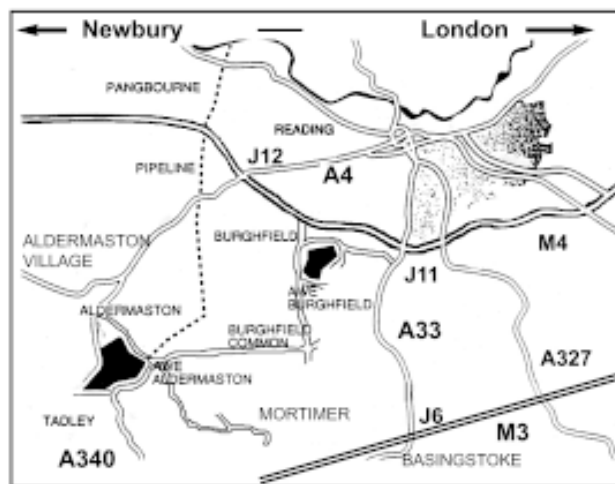
Editor's note: This is a *joke*. We really *don't* want people trying this sort of thing!

For seven years, until April 2000, the AWEs were managed by the Hunting-BRAE consortium (Hunting Plc, Brown & Root and AEATech). However since Hunting-BRAE's contract expired on 31 March 2000 the government chose a new consortium to manage the site from 1 April 2000. This consortium is comprised of BNFL, Lockheed Martin and Serco. Most British activists probably know a thing or two about BNFL, whereas Lockheed and Serco may be less well known. In fact Lockheed is one of the biggest weapons manufacturers in the world (responsible for the Trident missile bodies, the stealth bomber and manages several US nuclear installations such as Oak Ridge in Tennessee). Serco is a 'facilities management' company who have been the beneficiaries of many British contracts, particularly in the field of private prisons, rail and hospitals. They all have websites where you can find out more information about their dodgy corporate goings-on.

In terms of waste, AWE Aldermaston is engaged in burning, burying, flushing and storing all grades of radioactive waste. BNFL's Drigg site and Southampton's Shanks incinerator have contracts with AWE, for burying and burning respectively, other waste is deposited into small brooks which flow from the site itself, or through the (now infamous) Pangbourne pipeline, where it is deposited into the Thames. Yum. Aldermaston has many unpleasant features, including 'hot-spots' (from historic dumpings/accidents), chemical contamination of parts of the site and its environs, and a large store of radioactive waste on-site. Both sites do have dangerous areas both intended and otherwise, so if you are taking action try to find out as much information as possible beforehand about all the possible health and safety consequences of your action.

We hope from the above text, you can see how critical it is that anti-nuclear, environmental and anti-militarist activists apply and maintain pressure on Aldermaston (and Burghfield) as part of our continuing resistance to Trident.

5.3.2 Where are they?



AWE Aldermaston, location map
Junction 11 or 12 on M4 or junction 6 on M3

5.3.3 Some Ideas for Action

General

AWE Aldermaston is a hard nut to crack unless you have the right tools for the job. Choose your methods carefully and hope for a healthy dose of luck. However, nowhere can be perfectly defended and there are several weak points around the site. Ultimately if police resources are stretched by several incursions or there is a strong element of surprise (like taking action NOT at a TP disarmament camp), one or more groups have a good chance of getting somewhere. Unlike Faslane and Coulport, the site has the luxury of being at least 40 miles from the sea, and is surrounded by useful bushes and trees, with several dark areas. The perimeter is about six miles, so without a vast increase in policing, it is impossible for the entire site to be observed at all times, although there are many cameras.

Safety

Like Faslane and Coulport, both AWEs at Aldermaston and Burghfield are defended by Ministry of Defence Police (MDP). They are armed with pistols and machine guns. They also have the usual range of dogs, cuffs and possibly other non-lethal weapons (though women from the regular peace camp have never seen them with any). There is no history of serious injury being inflicted on protesters at the AWEs, although several women have regularly received minor injuries and had dogs released on them (and in some cases been bitten!).

At **Aldermaston** the A90 area (the 'dark side') is 'protected' by up to three extra fences (depending on where you approach from) and has armoured vehicles patrolling (Tacticas).

At **Burghfield** commando-style MDP 'Response Force' personnel defend the high security area from foxholes. So be prepared!

Radiation: At **Aldermaston** there are several contaminated areas on the site and around the perimeter, resulting from both radioactive and chemical spills/dumps etc. These are located at the Northwest and Southeast corners of the site (external) and internally around the old reactor site (see map on page 84). The entire 'A' area should be assumed to be mildly radioactive and also the storage areas (large amounts of radioactive waste are stored on site). The North Ponds area is the site of historic radioactive contamination and is also the store for Tritiated water being released into the Aldermaston brook (which is also contaminated - some times more than others), so try not to fall in!

Security

The entire **Aldermaston** site is surrounded by a minimum of two fences. The first perimeter is a regular chainlink fence topped with barbed wire. The second is a 15 foot (2.5m) high weldmesh fence, topped with rolls of razor wire. There are approximately five thin sensor wires held taut about

two foot out from the fence and running from about one foot from the ground to near the top. A mixture of static and highly manoeuvrable infrared cameras also surrounds the site. The 'A' area is surrounded by a further chainlink fence. You may encounter several more depending on which way you travel across the site.

At **Burghfield** the perimeter is chain-link with five sensor wires held off the inner wall of the fence by struts. However, it is possible to cut through the fence and very carefully slip through between two sensors (if you are lucky, skinny, take your time etc).

Possible targets for disarmament work

At Aldermaston

Convoy vehicles (both blue and green). For technical information about these vehicles you could try Nukewatch or Scottish CND (see Part 10.1 for contact information).

The admin building/home to the Chief Executive. There are lots of lovely bits of paper and computers in these officers which it would no doubt be tragic to lose. There would also be opportunities for using their power supply/ phone lines etc for broadcasting out during an occupation.

The A90/'A' complex. This building is vital to the production of Trident, because of this it is also potentially very dangerous to interfere with its operations. If you seriously intend taking action here or at other sensitive sites in the 'A' complex please seek lots of advice first. Even interfering with ventilation systems could have catastrophic results. Never do anything unless you know the consequences of your actions are safe.

The Special Escort Group. These personnel and their vehicles are required in order for the convoy to move anywhere. Their HQ and garages are located to the left and ahead of Tadley Gate (see map on page 84).

At Burghfield

Convoy vehicles/high security area (HSA). In order to get near here you either have to approach from the south side, minding ditches, walls, the many cameras and the Rapid Response Force. This is possible (others have done it), but requires both skill and luck. Alternatively you could approach from the east and take your time (less obvious, but more chance of getting caught en route). The convoy support vehicles hang around **outside the HSA** and are much easier to reach (see map on page 85). The convoy cannot travel without these vehicles.

Blockading. Burghfield only has two gates and can (and has been) effectively blockaded by just two women before now. A larger and better-resourced group could hold the base for a long time. If the warhead convoy is on-site and about to take Trident up to Scotland then this would be the most politically effective time to launch such an action.

5.4 Other Trident-Related Sites

Some affinity groups will want to disarm essential parts of the Trident system that are not located at Faslane, Coulport, Aldermaston or Burghfield.

Trident submarines were built at **Barrow** by Vickers Shipbuilding and Engineering Ltd (VSEL), now BAE systems. Nuclear materials for Sellafield are also received at Barrow.

Trident submarines are based at **Faslane** and their warheads are stored at **Coulport**. The missiles - which the subs themselves bring across from the US - stay on board. They are taken back to the US for maintenance. Coulport is the only place in Britain that we know of where rocket fuel, high explosives and plutonium are kept in close proximity.

Most components for Trident warheads are built at the Atomic Weapons Establishment, **Aldermaston**. This site has cradle to grave responsibility for all British nuclear weapons. It is however highly radioactive in certain areas and large quantities of explosives are stored in other areas. Caution is advised if entering this site.



All components for British nuclear weapons are transported to Atomic Weapons Establishment, **Burghfield**. Here they are assembled into nuclear weapons. They are transported by road to Coulport with overnight stopping places at **Wittering, Albermarle and Longtown**. There are regular convoys taking small numbers of warheads to Burghfield for detailed inspection - they are then either refurbished, or replaced with newly-built warheads.

The nuclear reactors that power the Trident submarines are built by Rolls Royce at **Derby** before being moved by rail to Barrow for installation. The fuel that powers Trident's nuclear reactors is also made here. Little is known of this site yet it plays a key role in the Trident programme. The fuel rods are manufactured at **Springfields**. The prototype of the reactor used on Trident submarines is at HMS Vulcan which is run by Rolls Royce Associates at Dounreay. The reactor was refuelled in 1998 with a fuel core designed to run for 15 years.

The major nuclear elements in the warheads are plutonium, tritium and Highly Enriched Uranium (HEU). Plutonium has always been produced and stored at **Sellafield**, through the reprocessing of spent nuclear fuel from the nuclear reactors at **Calderhall** and **Chapelcross**. No plutonium for use in nuclear weapons is currently being produced here but large stocks of military plutonium are held in special vaults at the site.

Uranium enrichment took place at **Capenhurst** up until a few years ago. Owing to the large stocks of HEU now held by Britain the special military enrichment plant at Capenhurst is no longer in use.

Tritium production goes on at Chapelcross. The same reactors that used to produce plutonium for the bomb

now help to produce tritium. Tritium is one of the key ingredients in modern day nuclear weapons. Without a continuing fresh supply of tritium Trident warheads would wither and die.

When on patrol, each Trident submarine is escorted by a nuclear-powered hunter-killer submarine. These are also built at Barrow and are based at Faslane or **Devonport**.

Anti-submarine helicopters used to support Trident will be based at **RAF Culdrose** in Cornwall, and will continue to operate from **Prestwick**. The Nimrod aircraft support base for Trident is at **Kinloss**.

The Trident submarines will all be refitted at Devonport. New facilities for these refits are being constructed over the next few years. Any delays or cost overruns to this construction programme will have a serious knock-on effect for the operational viability of Trident.

Some of the hunter-killers are at present refitted at **Rosyth** but all this work will soon be transferred to Devonport.

Rosyth and Devonport dockyards are also the dumping grounds for old, withdrawn nuclear submarines. Both sites have extracted the nuclear fuel (the reactor core) from several submarines as part of refitting or decommissioning. These cores are transported to Sellafield where they are stored until someone finds a way of reprocessing and/or disposing of them. Rosyth and Devonport also have large quantities of low and medium level nuclear waste stored on-site.

Command and control systems begin with the Ministry of Defence in **Whitehall**, London. Actual operational instructions are transmitted from **RAF Northwood**. However, Trident is also linked into the US command and control system and with various NATO systems.

The main sites for command and control of Trident submarines include **Criggion, Rugby, Anthorn** and **Inskip**. These sites normally consist of radio masts and little else. Radio masts are easily taken down through the removal of the odd bolt here and there or through the severing of the wires that hold them up but be very careful where and how they fall. Some of these sites also have civilian uses so caution and the gathering of information prior to any action should be used to ensure the right masts are rendered inoperable.

Pitreavie (HQ of RN Flag Office for Scotland and Northern Ireland); **Bristol** (MOD Procurement HQ) and **Bath** (RN Procurement HQ) are key administrative centres.

Sites on **St Kilda** and **Uists** monitor missile - but not Trident missile - tests.

The massive US spy base at **Menwith Hill** in Yorkshire has links with the radio transmission station near **Rugby**, now run by BT on behalf of the MoD. Menwith Hill is a vital part of the US' worldwide intelligence gathering network and is linked into the

Command and Control system for Trident.

All new British submarines, including the Tridents, undergo sonar and torpedo trials east of **Skye**. These are monitored by BUTEC (British Underwater Test and Evaluation Centre) whose administrative base is at **Kyle of Lochalsh** with range operations control sites at **Rona** and **Applecross**.

Emergency (Z) berths for submarines are dotted along the West coast of Scotland, including **Coulport, Loch Goil, Loch Ewe, Rothesay** and **Skye**. In England there are Z berths in **Plymouth Sound, Spithead, Southampton, Cardiff** and **Liverpool**.

Devonport Royal Dockyard in **Plymouth** is currently undergoing a £350 million dock expansion in preparation for re-fitting HMS Vanguard in early 2002. The other submarines will then follow suit.

Loch Goil is also a noise range which is used to listen to the noise generated by individual vessels. It is used on a regular basis by Trident and other submarines.

Cove - there is an electronic range off Cove which is regularly used by Trident and other submarines.

Loch Long, South of Coulport, is used regularly for submarine trials.

The area of water between **Arran** and **Bute** is used for submarine diving trials, mostly at weekends.

References and Acknowledgements

Many thanks to Faslane Peace campers and various CND members who gave advice and help as well as to Faslane and Coulport security and police for opportunities for practical experience! This section was updated with the help of Lionel Trippett, John Ainslie, Clive Fudge and Joe Button.

5.1 Background information on Trident, Faslane and Coulport

Trident Resister's Handbook - Bob Aldridge.

Trident - 30 years of the Polaris Sales Agreement - Ministry of Defence 1993.

5.2 How to safely disarm a Trident submarine

The Safety of Trident - an assessment of the radiation risks associated with the UK Trident programme - John Ainslie, Scottish CND, February 1994.

Safe in our Hands? RNAD Coulport - Faslane Peace Camp and Scottish CND, 15th July 1993.

We all live in a Nuclear Submarine - Article and diagram in *Radio Times*, 10-16th August 1996.

5.3 Background information on Aldermaston and Burghfield

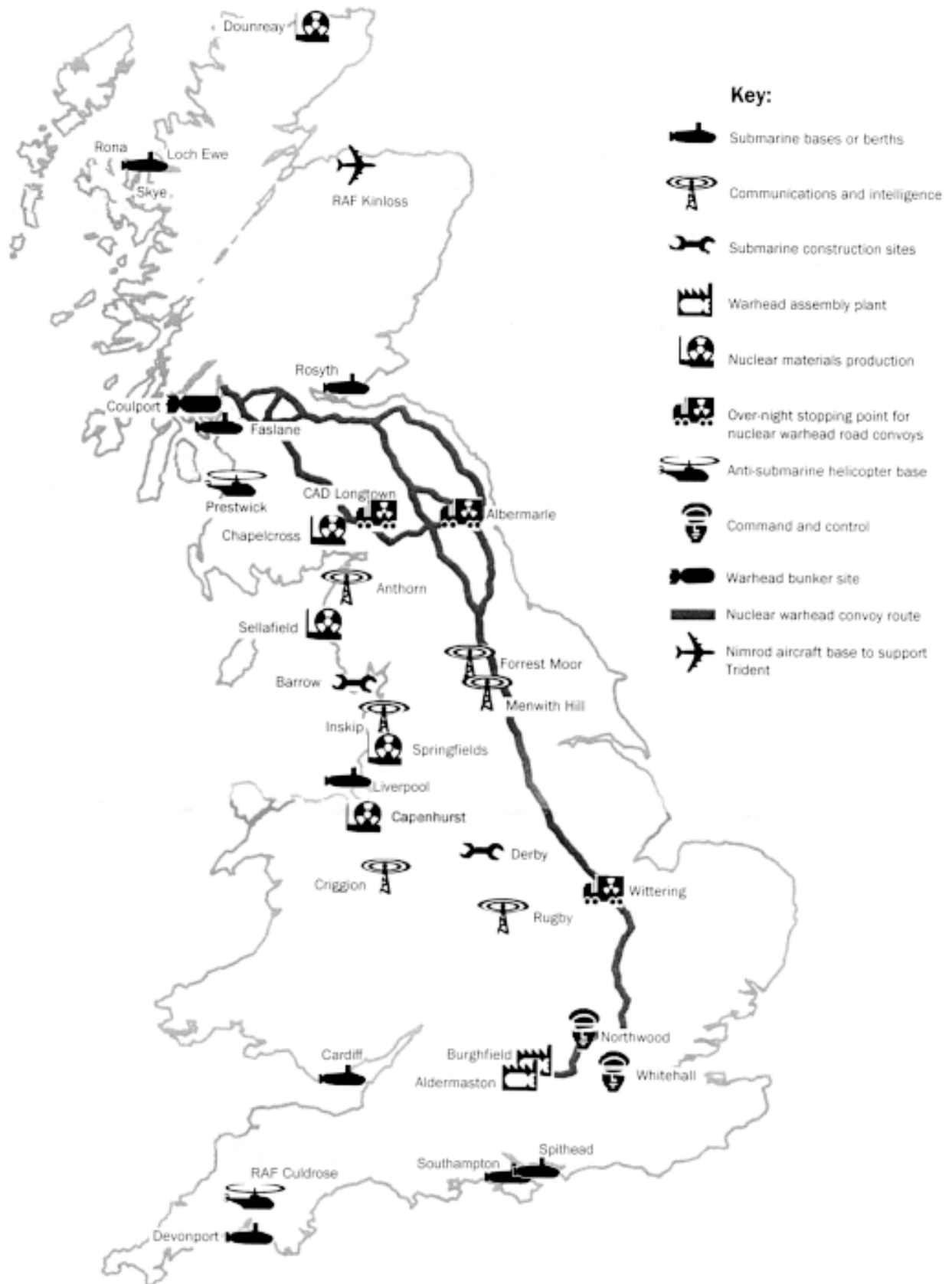
This section was written by Ippy.

5.4 Other Trident related sites

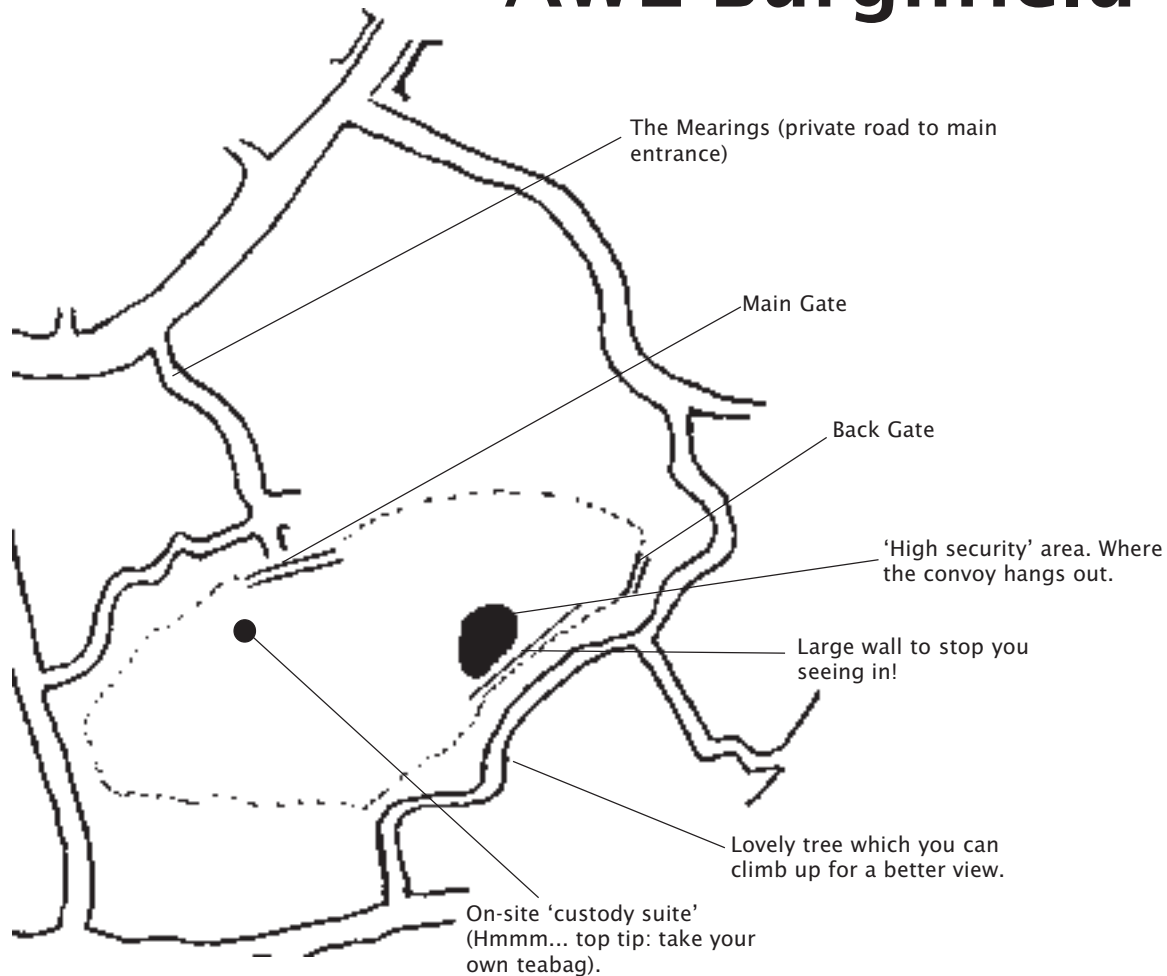
Nuclear Scotland in the 1990s - Scottish CND.

Main Trident Sites in the UK - CND.

Main Trident sites in the UK



AWE Burghfield



Aldermaston: local facilities (inc opening times)

Toilets	Mulfords Hill (Tadley) 24hrs M&F
Post Offices	Mulfords Hill, Pamper Heath Rd (9-5)
Photocopying facilities	Mulfords Hill PO (5p), Tadley Library (10p) Pamber Heath Rd PO/shop (open Sundays too!)
Faxing facilities	Mulfords Hill - Redwood Estate Agents
Public phones	Aldermaston Rd (01265 314700), Burnham Rd
Hospital/A&E	Royal Berks, London Rd, Reading (01189 877020)
Chemists	Next to Budgens Supermarket (9-7)
DIY equipment	56 Bishopswood Rd, Tadley & Mulfords Hill
Cashpoints	Link and RBS (Old Forge - Heath End Rd TSB Mulfords Hill) Barclays - Mulfords Hill

Travel Information

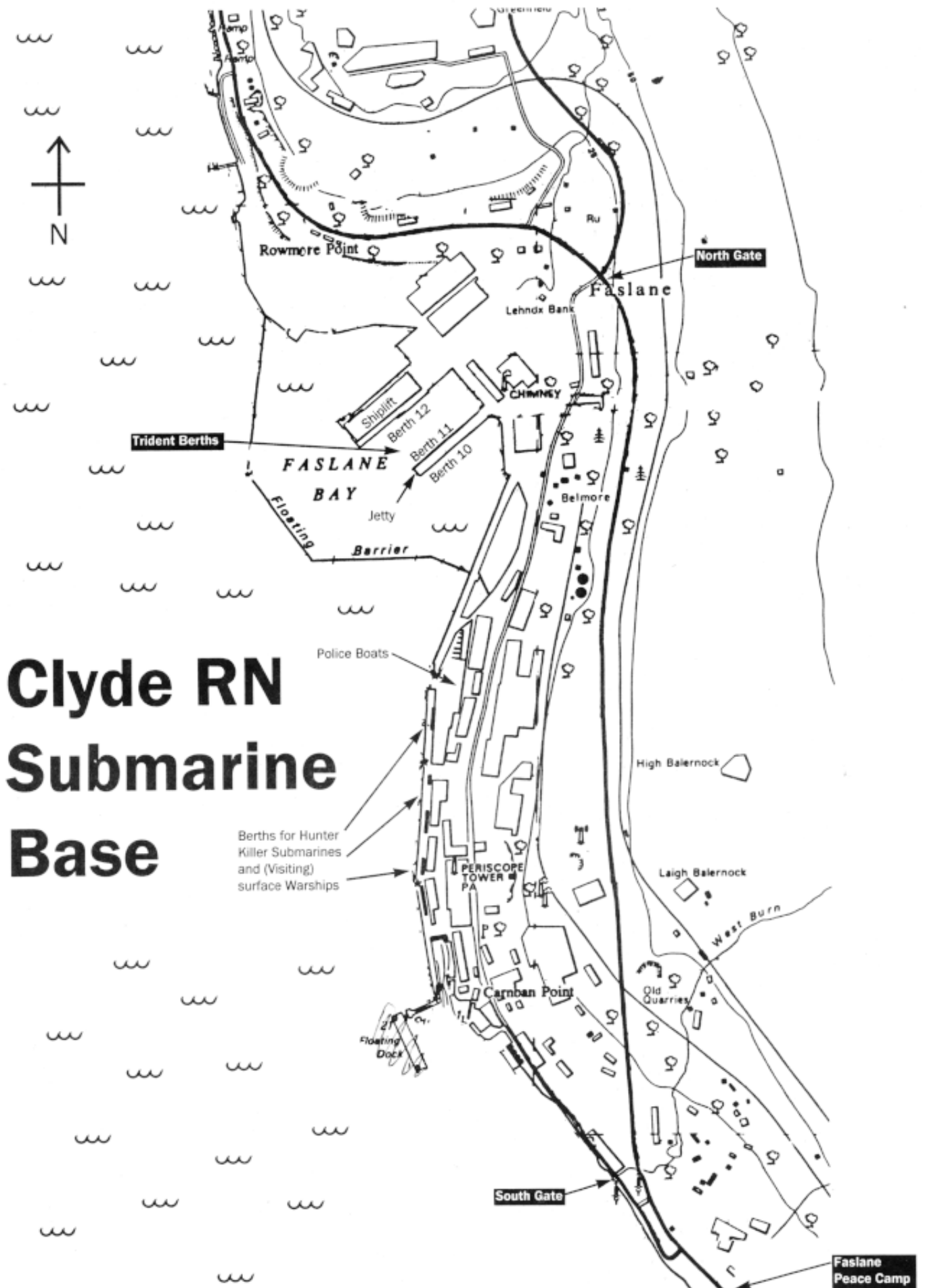
Reading Buses (143)	01189 594000
Hampshire Bus	01256 464501
The Bee Line (Bus)	01344 424938

Nearest Bus stops:

From Reading train station - Franklin Rd	Bus no. 143
From Basingstoke train station - Falcon Inn	Bus no 50/51 (A)

Nearest train stations (in order of closeness - first = nearest)

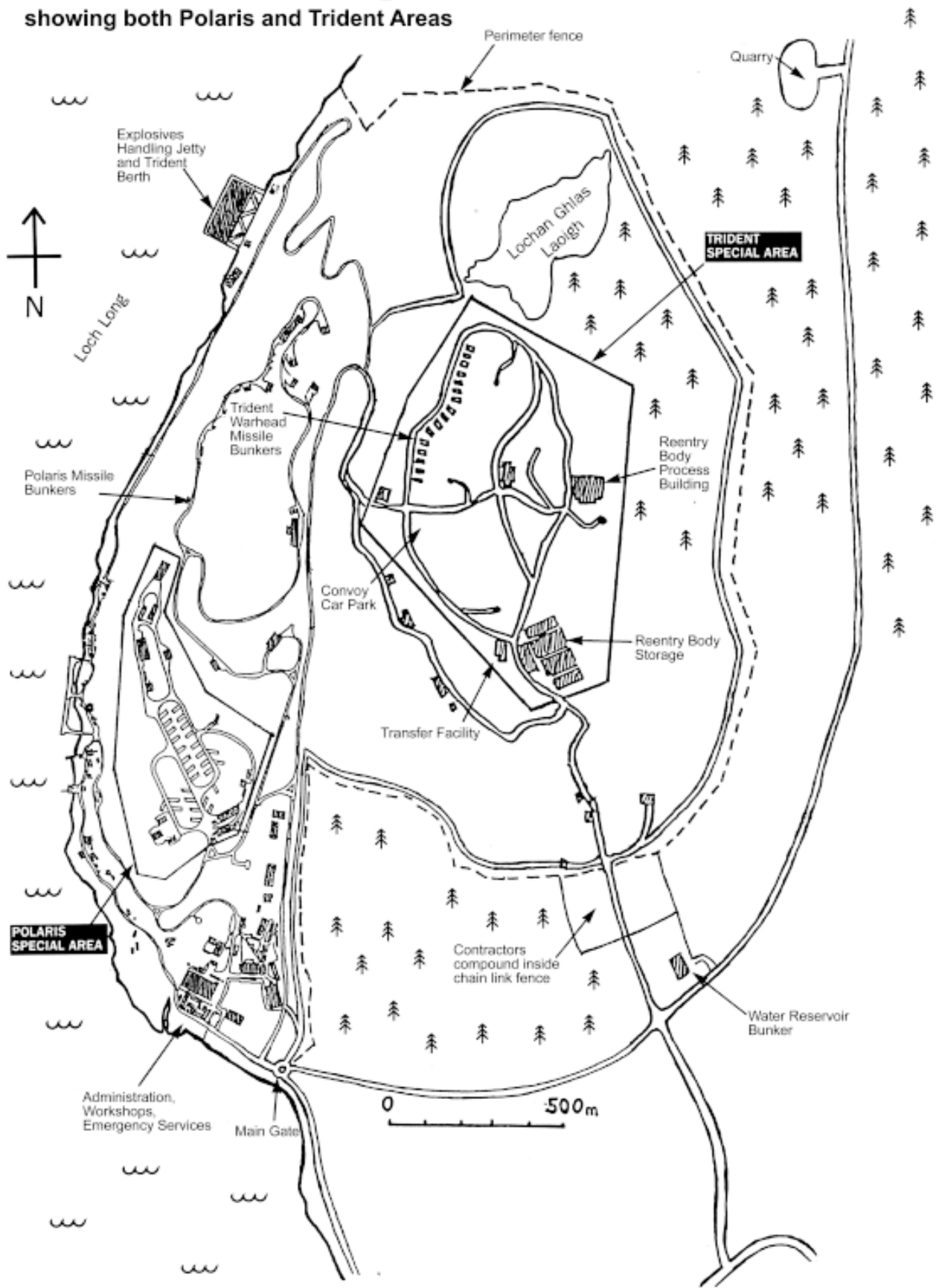
Mortimer	(10 mins) but better connected
Aldermaston	(10 mins)
Reading	(25 mins) On bus route to Tadley (143)
Basingstoke	(25-30 mins) On bus route to Tadley (50/51)



Clyde RN Submarine Base

RNAD Coulport

showing both Polaris and Trident Areas



Faslane and Coulport

