Twitter Thread by ■

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@Aamani_03

Part 1

It's a bit lengthy, just keep reading :)

The British Nuclear Policy In The 1970s. https://t.co/DE1A7e1SQ0



> This is the TOP SECRET paper from the 1970s, sets out how many nuclear warheads the British Royal Navy thought it could use to destroy Moscow in WW3.
>
> Will make a complete thread soon.. pic.twitter.com/gDSK05BgIy
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> — \u2728 (@Aamani_03) November 14, 2021

The British nuclear submarine-based deterrent initially came into service in the late 1960s, providing ultimately 4 ‘RESOLUTION’ class SSBNs, each carrying 16 Polaris missiles, with 3 warheads, intended to deter aggression by the Soviet Union.

The power of the Polaris system was that unlike fixed airfields & other sites, it was practically invulnerable to a first strike attack, & could exist to threaten to wipe out #Moscow & other major Soviet cities if required, even after UK had been obliterated in a nuclear attack.

In theory the UK nuclear deterrent was committed to @NATO – and would be employed alongside other NATO nuclear weapons if called upon as part of an integrated strike which would involve all out nuclear release.

This was the main role for the force, but in addition it could be, in theory, returned to national control and used to conduct a unilateral nuclear strike if British national survival was under threat.

The criterion that the UK used to determine its threshold for nuclear strikes in the latter category drove nuclear planning in the 1960s and 70s.

The challenge was how to ensure that in the event of a unilateral nuclear attack, British warheads could be reasonably certain of holding Moscow at risk, and being able to penetrate the ‘anti-ballistic missile’ (ABM) systems around the city, intended to protect it from attack.

A NATO strike would have seen literally dozens, if not hundreds, of nuclear warheads being targeted on Moscow, wiping the city out in a vast cacophony of nuclear blasts.

But a British solo strike would have been more complex – in a ‘bolt from the blue’ scenario, where the UK found itself with only one nuclear submarine on patrol, there would be only 16 missiles available to fire, and no support from allies, would this be enough to destroy ...

.. Moscow in isolation?

This problem – the so-called ‘Moscow Criterion’ defined how the UK would tackle the challenge of Cold War nuclear planning – the assumption was that the deterrent would only work on a policy level if the Soviets planned on the assumption that the UK ..

.. could overcome any credible defences and wipe out their main cities.

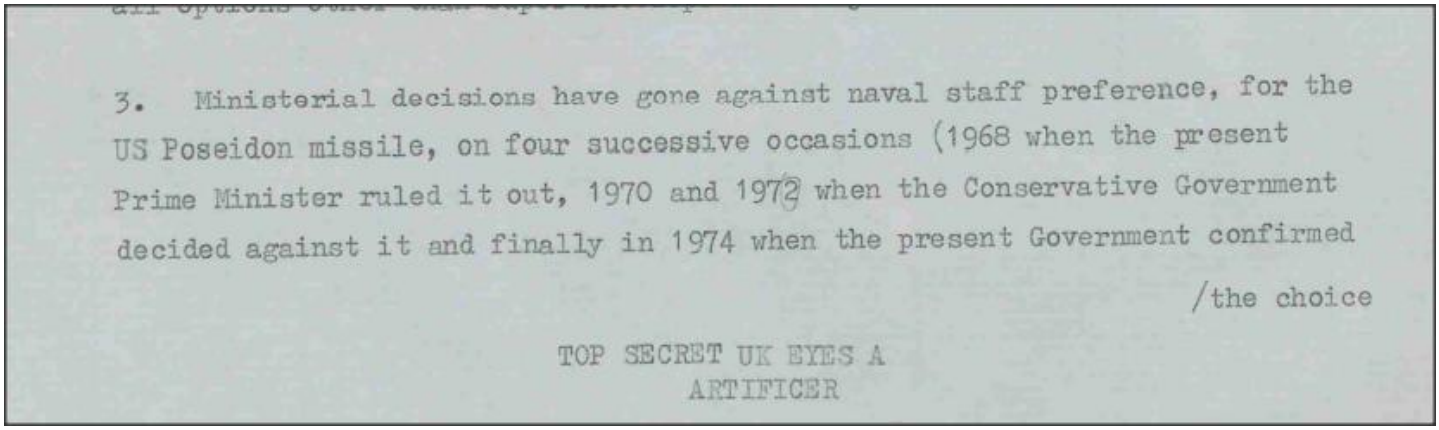
Even as Polaris entered service it was clear that this was very quickly not going to work as a plan – the missiles range was short and they were incapable of carrying enough warheads to overcome the potential city defences.

By 1968 the UK had introduced improvements to the Polaris missile known as the ‘super antelope’ which was assessed to provide a credible deterrent capability.

The Royal Navy quickly pushed to step away from Polaris, and instead purchase the more powerful Poseidon missile, ..

.. which was then entering service.

According to the files, the Naval Staff pushed for the purchase of this missile on at least 4 different occasions between the late 1960s and mid 1970s, (1968, 1970, 1972 and 1974) without success.



3. Ministerial decisions have gone against naval staff preference, for the US Poseidon missile, on four successive occasions (1968 when the present Prime Minister ruled it out, 1970 and 1972 when the Conservative Government decided against it and finally in 1974 when the present Government confirmed

/the choice

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Instead the decision was taken to invest in an update programme to the Polaris missile involving refitting it with an entirely new ‘front end’ that would provide a complex range of decoys, balloons and nuclear warheads...

that would manoeuvre after launch to simulate incoming missiles to minimise the risk to the actual warheads, and maximise the chance of their penetrating Moscow and destroying it.

The programme became known as ‘Chevaline’ & was conducted in utmost secrecy, trying to develop & deliver a credible strategic nuclear deterrent for the 1970s & 1980s.

Parliament was not informed about the programme for many years after it began, raising accusations of secrecy.

The problem that Chevaline soon experienced was that it was not only extremely technically challenging, but it also raised significant safety risks too.

The files reveal in significant detail that the Royal Navy was extremely concerned about the proposed upgrade plan, noting that it would involve putting a liquid fuelled top stage of the missile on top of a solid fuelled missile.

This raised very large safety case concerns for the RN, which was worried that the risks of explosion onboard an SSBN could be much higher than for inert solid fuel, and potentially cause the loss of an SSBN on patrol.

Part 2 next.

CHEVALINE

Having read the MOD papers which you handed to me this morning, I have the following observations.

The arguments arising in the choice of fuel for the Penetration Aid Carrier, in the Chevaline system, illustrate once again the difficulties in balancing risks, of various kinds, against what can be afforded within one's own technological capacity.

In this case the Navy wish to take out an insurance now against the contingency that liquid fuels might prove unsuitable; otherwise they fear that if safety problems with the system based on liquid propellants were not resolved there would not be time to change to solids. Yet neither US nor UK technical experts, including the Ordnance Board, have so far identified any insuperable safety problems. Given this fact do the Navy assess their residual worry about a liquid fuel system to outweigh the risks that could arise through switching to a fuel technology which is not already known in this country? This new debate, and perhaps the reasonsfor it, has obvious similarities to the Super Antelope/ Option M debate, in 1973.

It can be claimed that most solid fuels are intrinsically safer than liquid fuels but I have not seen any comparative evidence on this for whole systems, and the Navy participated in the many technical discussions which culminated in the choice of liquid fuel for the Chevaline system.

Ideally where there is unease, as the Navy now display, there is everything to be said for trying to remove it provided its magnitude and import are not outweighed by unease in another or a number of other respects. Judged by this criterion, it is not clear that the Navy have made their case*for introducing delay, additional costs, and possible risks with a new technology to be developed in this country, all quite apart from political implications both at home and with or for the Americans.