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E3a p1-18	Factors Relating to Further Consideration of the UK Nuclear Deterrent. Part 1: the Politico-Military Requirement. Complete without redactions.
E3aa p1-3 (annex A)	Part 1:The Politico-Strategic Background: The States to be deterred.
E3ab p1-9	Part2: Criteria for Deterrence. Numerous redactions.
E3ac p1-3 (annex C)	An Assured Second Strike Capability. Bolt-from-the-blue-attack unlikely. Enhancing readiness visible to Soviets and might be provocative. Strong case for continuous deployment to minimise pre-emption risk.
E6a p3 of 6	Part 3: System Options. Technical, operational & cost drawbacks from choosing French M4. Trident D5 too capable Trident C4 MIRVed best choice. Trident C4 MRV or Polaris A4 (3000nm range) fallback position. All could be technically superior to French M4.
E6a p4 of 6	Cruise options 80 SLCM purchased from US per UK unique dedicated SSCM sub. Fewer SLCM in SSN attack subs drawbacks.
E6a p5 of 6	SLCM not cheaper and cannot meet damage criteria. Combined force of SLBM and SLCM unaffordable.
E7 p1	Assertion that NATO and US strategic weapons are NOT targetted on cities.
E9 p1-3	Letter from David Owen to PM Callaghan.
E12-1 6pps	Updated E6a.
E12-2 15pps	Part 3 System Options updated. Esp on CMs (p11)
E12-2 annex C p3-6	Anti-CM defences.
E12-2 annex D 6pps	Alternative Straegic Launch Platforms considered. Fixed land-based Mobile land-based Air-launched Surface ship-launched Sea-bottom fixed launchers Sea-bottom mobile.
E12-2 annex E 3pps	Summary of US & French SLBM & SLCM programmes.
E12-2 annex F 7 pps	International Political Aspects of System Choice. Anglo-US collaboration over a Successor System European attitudes Anglo-French collaboration over a Successor System US attitude to Anglo-French collaboration German attitude to Anglo-French collaboration Lesser forms of Anglo-French collaboration. The Case for Independence. A UK developed system.
E12-2 annex G 2pps	Cruise Missile procurement options. UK CM development and production. Anglo-French collaboration.

	CM purchase from US Purpose-built nuclear-powered CM submarines (SSCN) 80 CM per sub. Purpose-built conventionally-powered CM subs (SSK) 16 or 32 CM per sub.
E12-2 annex H 3pps	Costs of submarine, missile and warhead combinations, and running costs. p3: Table.
E13 10pps	David Owen's original 1978 paper on cruise. Identified from E21 MoD paper. "At present the British nuclear Polaris forces are targetted. Under SACEUR's Scheduled Strike Programme, on military installations in the three western military districts of the Soviet Union: interestingly they are not required to have a capability for major strikes against cities or against hardened missile silos. There would thus be no need, in NATO terms, for any future British nuclear force to be more effective in range, yield, or penetration capability than the present one."
E15 3pps	Poor man's deterrent. CM options. Polaris A4 might be a better fallback than Trident C4. "The judgements reached here [ref: CMs] are likely to be unpalatable to at least one Minister." [meaning Owen?]
E17	Briefing points for SoS @ MoD. "Dr Owen's new criteria – a million dead – would be an order-of-magnitude change downward in our capability." ....
E18	40M Soviet deaths in 20 years. 1930-1950. 20% of population.
E21 3pps	Quinlan at MoD criticism of Dr Owen's "capability step-down" proposal. Soviet "Threshold of Horror" is not [the same] as ours. Would Soviets regard loss of ½% of population not from Moscow area as unacceptable? Unclear whether Dr Owen envisages lowering other criteria as in: Readiness to fire Invulnerability to pre-emption Probability of penetration.
E21 p2 para 5c	Sub-Strategic targets? Term used to describe SACEUR's Polaris NATO targets. Tactical targets? relying on pure terrorism in the cities." Quote attributed to PM Callaghan.
E26-1 p1	Sub-Strategic nuclear options.
E26-1 p2	Para 25 (a) "in circumstances where Allied deterrence as broken down and the Soviets threaten action against the UK for which the use of our national ultimate strategic capability may be considered too escalatory, Ministers might at very short notice require the Chiefs of Staff to present them with Sub-Strategic Nuclear Options." Para 25. Delete sub-para (g) and substitute: "Polaris should not be considered as a delivery system for SSNOs unless 3 boats are deployed."
E26 p1 4pps	Owen's riposte to the MoD's criticism of his cruise proposals.
E27 2pps	Chiefs of Staff discussion on SSNO (Sub-Strategic Nuclear Options).

E28 10pps	Paper by Neville Trotter MP Defence Sub-Committee of the Commons Expenditure Committee. Nothing relevatory.
E30	Minute to PM ref Owen's paper, day before Ministerial meeting. "to save time tomorrow". Ref: a) order-of-magnitude reduction in damage criteria. b) Small packages of CMs on SSNs changes other criteria. c) Eg, year-round readiness d) Increased vulnerability because boats do other things than hide. e) Increase reaction time because boats may be out of firing position f) Increase reaction time because boats may have communication difficulties. g) SSN deployment pattern is incompatible with strategic pattern. h) Too few SSNs now for existing SSN roles. i) 40 mins must elapse between salvoes. CMs penetration chances when fired in penny-packets are reduced. j) SSN position compromised at first salvo. k) Hull life. US boats are made of different metal to ours. l) Polaris motor life. All USN missiles are much older than ours, so acquiring US stocks pointless.
E34 p1 E34 p2 paper 3pps	WE.177 replacement. ORC(N) endorsed NAST 1231 Dec 1978. WE.177 life-expired 1986-1996. ORC(N) endorsed a 9-month feasibility study of one or more weapons to replace WE.177. Directed mainly to free-fall weapons. But it will also consider application to P3T [Sea Eagle], NATO ASSM and CMs. Will also take account of possible requirements for a heavyweight torpedo, or overland stand-off weapon.
E35 2pps	Repeat of E34.
E36 26pps	Public Statements by SoS or MoState @MoD on Polaris and Polaris Improvements.
E38 15 pps	Public Statements and PMQ answers by SoS or MoState @MoD on Polaris and Polaris Improvements and Successor Systems.

James Callaghan – Labour

CHANGE OF GOVERNMENT AFTER 1979 GENERAL ELECTION

Margaret Thatcher - Conservative

E42 8pps	Draft paper for Successor Systems at a restricted Ministeral meeting 21 May 1979. First meeting on this topic by the incoming Thatcher govt.
E45-3 3pps	Successor to Polaris. Paper for new SoS @ MoD. First sight of MoD's Polaris replacement views by the Thatcher govt.
E45-3a annex A 2pps	"Approaches to the United States"
E45-3b annex B 4pps	"Force Characteristics" and damage criteria.
E48	First meeting of the Thatcher govt with US representatives ref Polaris Successor System. At NATO HQ.

E49 4pps	Brief for SoS @ MoD on the Defence Nuclear Programme. Ref to: Present warhead programme for Chevaline Pu production probs Pu recovery probs Pochin Industrial probs Future supplies of HEU Pu supplies in short and long term
E51 2pps	Brief for SoS @ MoD on TNF Modernisation
E54 2pps	Pu production probs Pu recovery probs Pochin BNFL
E59 p1	August 1979 UGT. If not successful a further test will be essential. Even if successful, then one or two further UGTs desirable, UNLESS almost complete design info is made available by the US for a Successor System. Ergo, May, August 1979 UGTs were for Trident, and possibly the two following tests.
E60 p2	Sub-Strategic in relation to LRTNF.
E64 p2	[Polaris] is targetted by SACEUR on "sub-strategic" military targets.
E65-1 p2	UK GLCM proposed.
E65 p1	Cruise alternate to Trident. Carrington of the FO also proposed cruise at the recent ministerial meeting of the inner group of Ministers. According to Carrington, from his experience, the Navy always wants the best, most modern, and over-elaborate systems at totally uneconomic cost. Carrington worried that the Navy would price themselves out of business.
E68 pps 2-3	TNF modernisation – German issues.
E70 p1	TNF modernisation WE.177 modernisation
E72 p1	GLCM no more than 100 costing over £300M – staff view.
E79-1 p1	Polaris motors. Models 100-400. 300 & 400 solution had little to commend them as an anwer to the UK motor replacement problem. As a missile in it's own right for the longer term there were problems related to UK R&D costs and uniqueness. The only advantage being in Explosive Safety Distances. C4 would phrase out of USN by year 2000. If problems arose in fitting UK REBs we could remove the 3rd stage motor, but this would involve uniqueness and additional R&D. If there was a problem in storing C4 in the UK, a possibility was to store at the USN Charleston facility, and mate missiles and REBs in the SSBNs themselves. Technically feasible with C4. C4 low-risk. C4 reliability better than earlier missiles.

	Every technical, magagerial and financial advantage in retaining PSA for the new missile.
E82 p2	Poor Man's Deterrent.
E86 p2	Polaris Successor System. Brief for initial approach to the US government. Updated version of damage criteria, system options and force size. French collaboration not a realistic option. 19 pps including Annexes A & B.
E87	Polaris motor design life 10 years. Improbable that they would last 20-25. On options Lockheed said that the advantage of the 300/400 model was that it had a common technical base with C4. System would always be unique and characteristics not predictable from C4. Flight tests necessary. In-service flight testing also required because of the lack of a US flight test programme.
E96a	Polaris Successor System. Updated brief for initial approach to the US. Updated version of damage criteria, system options and force size. French collaboration not a realistic option. 22 pps including Annexes A and B and list of questions to be put to the US.