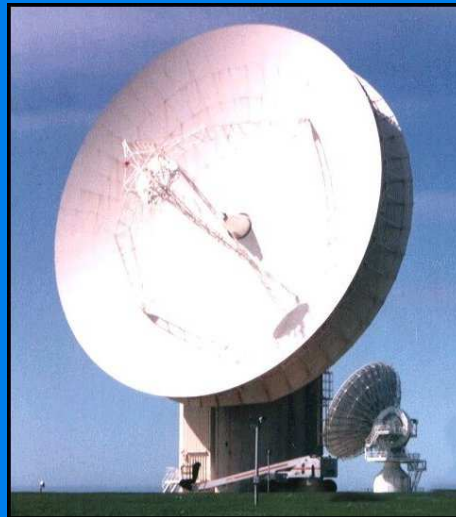


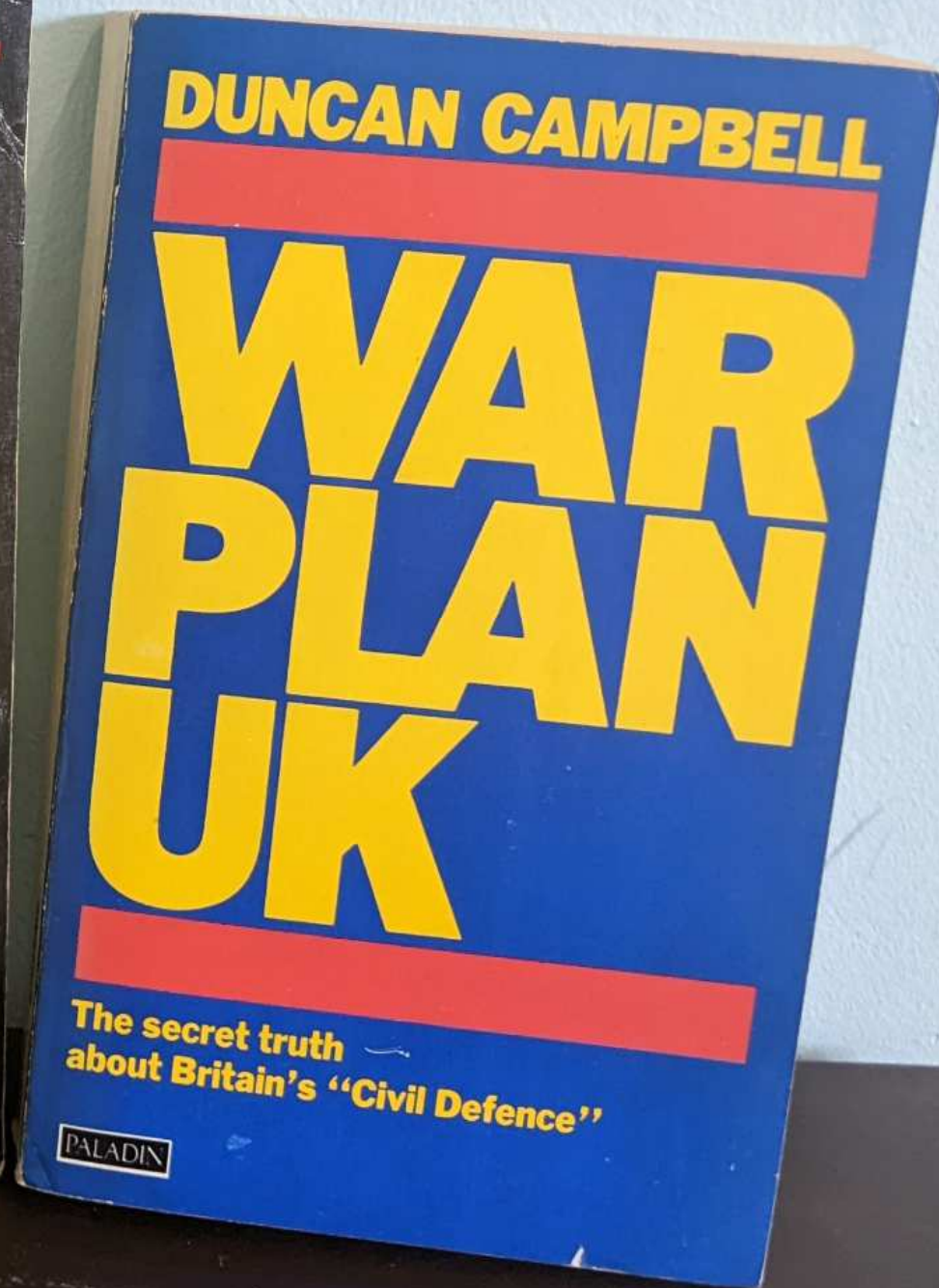
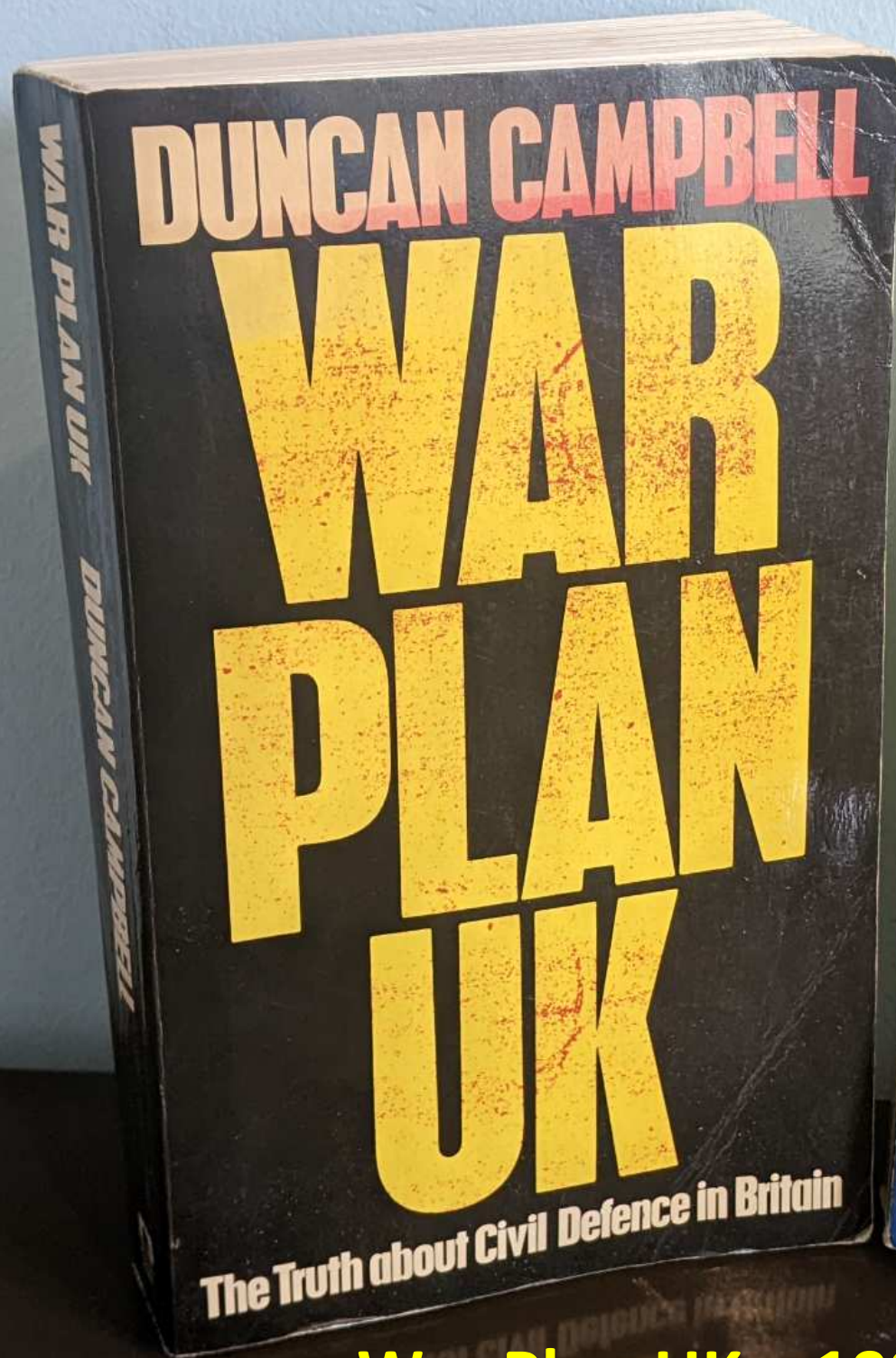
Plannning for Nuclear War

Long range intelligence

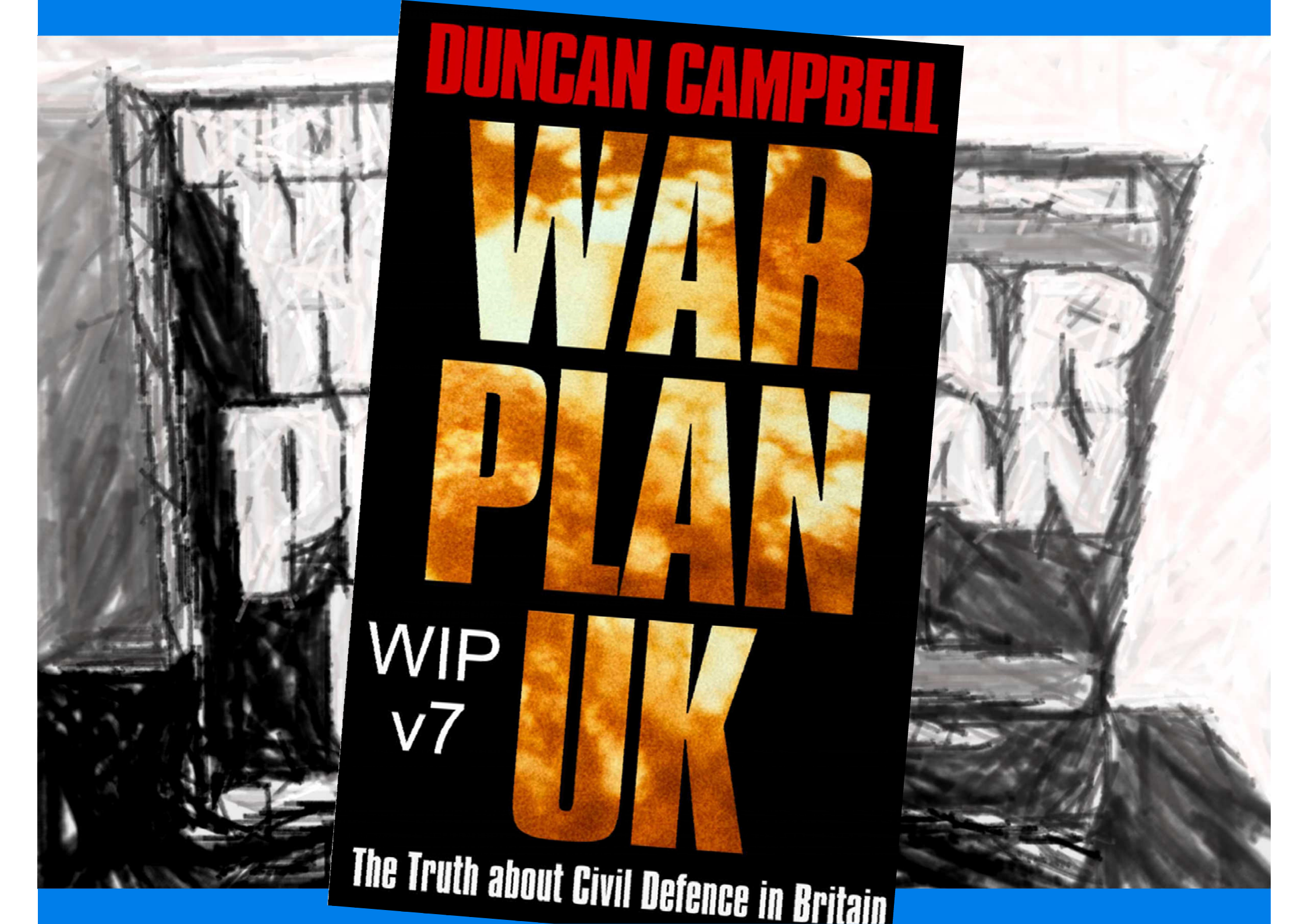
Duncan Campbell

**COLD
WAR
NETWORK**





War Plan UK – 1982 & 1984



DUNCAN CAMPBELL

WAR PLAN

WIP
v7

UK

The Truth about Civil Defence in Britain

[Home](#) > [Discovery](#) > GLAWARS

You are in

- [2110 - London South Bank University Archives Centre](#)
- This record (browse from here by [hierarchy](#))

Catalogue description

Greater London Area War Risk Study (GLAWARS)

Reference: GLAWARS

Title: Greater London Area War Risk Study (GLAWARS)

Description: Contains the records of the Greater London Area War Risk Study arranged into the following sections:

- GLAWARS/1 Home Office
- GLAWARS/2 Greater London Council (GLC)
- GLAWARS/3 Research Materials
- GLAWARS/4 Background, Terms of Reference and Research Task Outlines
- GLAWARS/5 Newsletters, Progress Reports, Home Office and Consultants' Meetings
- GLAWARS/6 Commissioners
- GLAWARS/7 Presscuttings
- GLAWARS/8 'London Under Attack'

Date: 1967-1987

Held by: [London South Bank University Archives Centre](#), not available at The National Archives

Creator: Greater London Council (GLC)

You are in

- [2110 - London South Bank University Archives Ce](#)
→ This record (browse from here by [hierarchy](#))

Catalogue description

Greater London Area War Ri

Reference: GLAWARS
Title: Greater London Area War Ri
Description: Contains the records of the

Annex:

- A. Probable Nuclear Targets in the United Kingdom -
Assumptions for Planning. (3 pages)
B. Weapon Yield to Target. (6 pages)

Date: 1967-1987
Held by: [London South Bank Univer](#)
Archives
Creator: Greater London Council (G

TOP SECRET

COS 1311/2/5/72

Copy No⁶⁸ of 90 copies

Ministry of Defence

Chief of the Defence Staff
Chief of the Naval Staff
Chief of the General Staff
Chief of the Air Staff

Copy to:

UKCICC

Cabinet Office (Cdr N A B Anson RN)

COS Restricted List

PROBABLE NUCLEAR TARGETS IN THE UNITED KINGDOM
ASSUMPTIONS FOR PLANNING

1. You will be aware (1) that the list of probable nuclear targets in the United Kingdom is reviewed annually by the Machinery of Government in War Sub-Committee. This year's review has now been completed and I attach at Annex A a revised list of probable nuclear targets that incorporates amendments proposed by the Ministry of Defence.

Home Office query that challenged the targets. the method

4. Since 1967 it has been necessary for you to endorse the list before it can be used for military planning purposes (3)(4). Accordingly, I request that you take note of Annexes A and B

Probable UK targets JIC 1967

TOP SECRET
TOP SECRET

COS 1311/2/5/72

Copy No ⁶⁸ of 90 copies

Ministry of Defence

Chief of the Defence Staff
Chief of the Naval Staff
Chief of the General Staff
Chief of the Air Staff

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COS Restricted List

File

132/9

ACDS(S) 23/9/74

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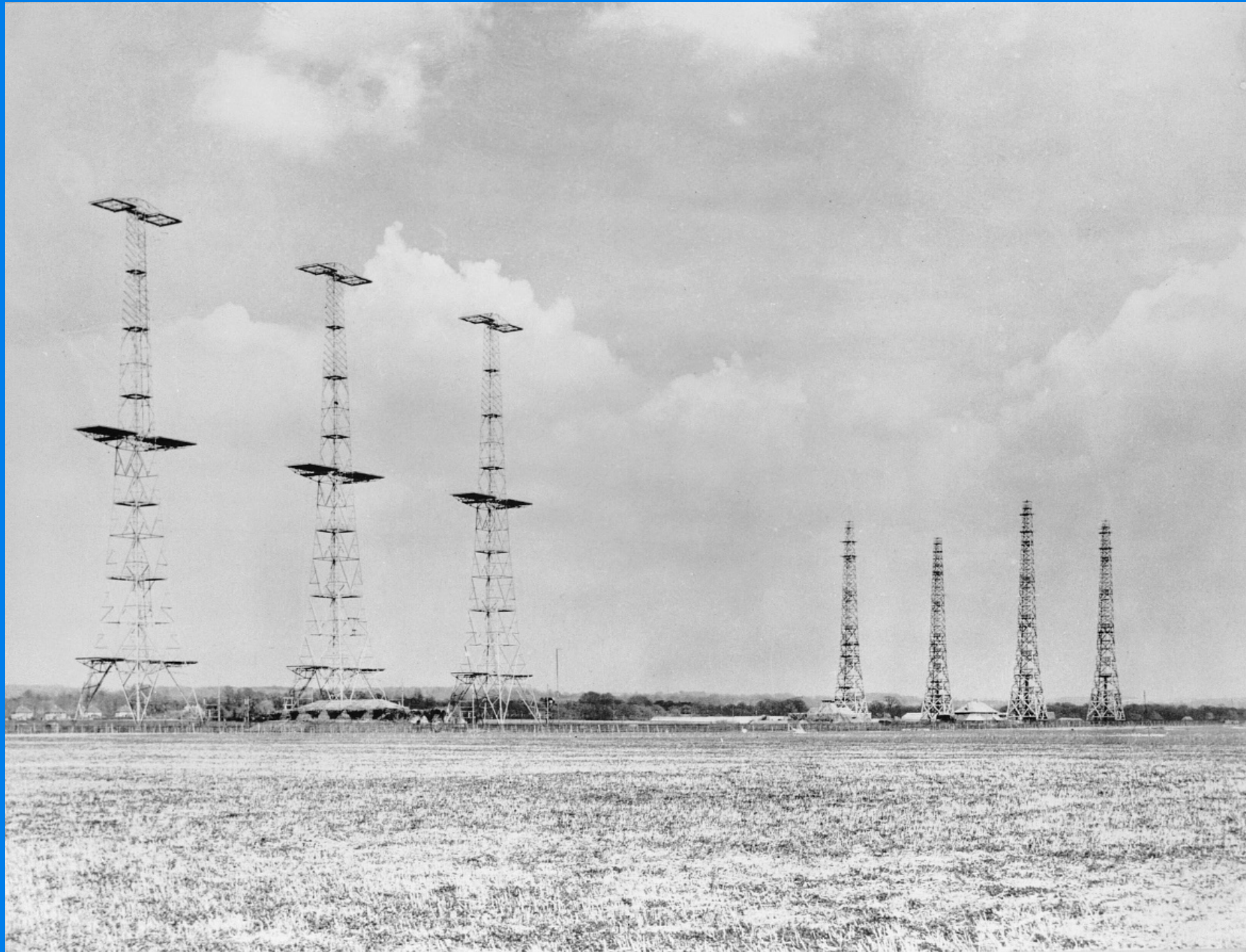
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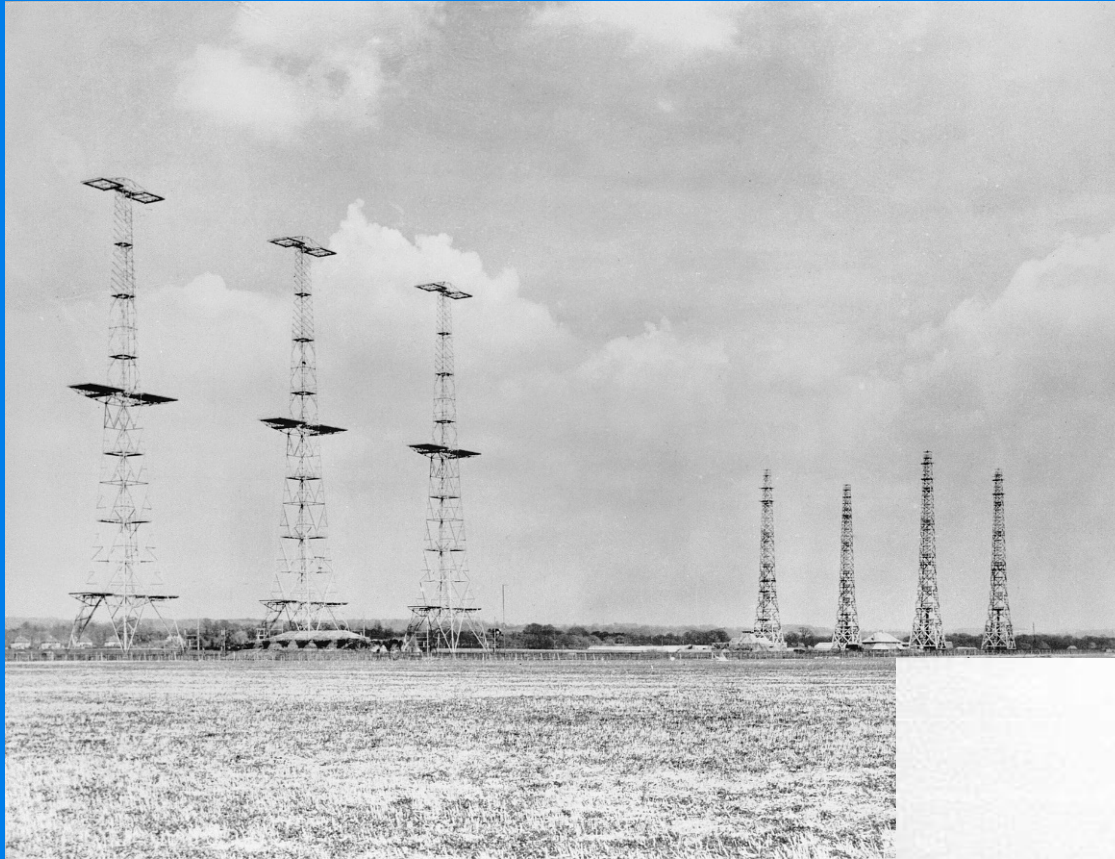
and wish to use the list which are almost certain to be attacked.

4. Since 1967 it has been necessary for you to endorse the list before it can be used for military planning purposes (3)(4). Accordingly, I request that you take note of Annexes A and B

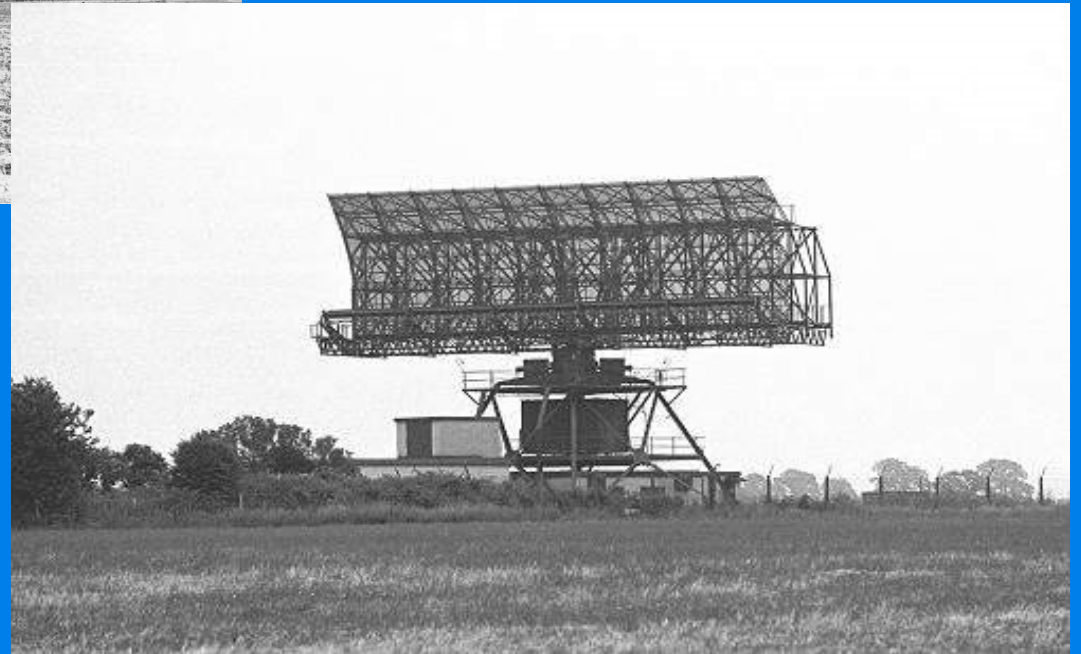
In the beginning CHAIN HOME



CHAIN HOME



TYPE 80



UNDERGROUND



ROTOR

The magazine that tells you what's on and where to go in London.
March 21-27 1980 No. 518 35p

Time Out



Northern Zone Control, Fife.



Sub Regional Headquarters 21, York.



Sub Regional Military Headquarters, Brentwood, Essex.



Home Office Radio Station, Brighton, Sussex.



RAF Wartling (now dismantled), Eastbourne, Sussex.



Beachy Head Coastguard Station, Eastbourne, Sussex.

The military's last outposts.

In the nuclear age civil defence is obsolete, survival of government is everything. Some of these innocent-looking bungalows hide the entrances to Britain's Regional Seats of Government.

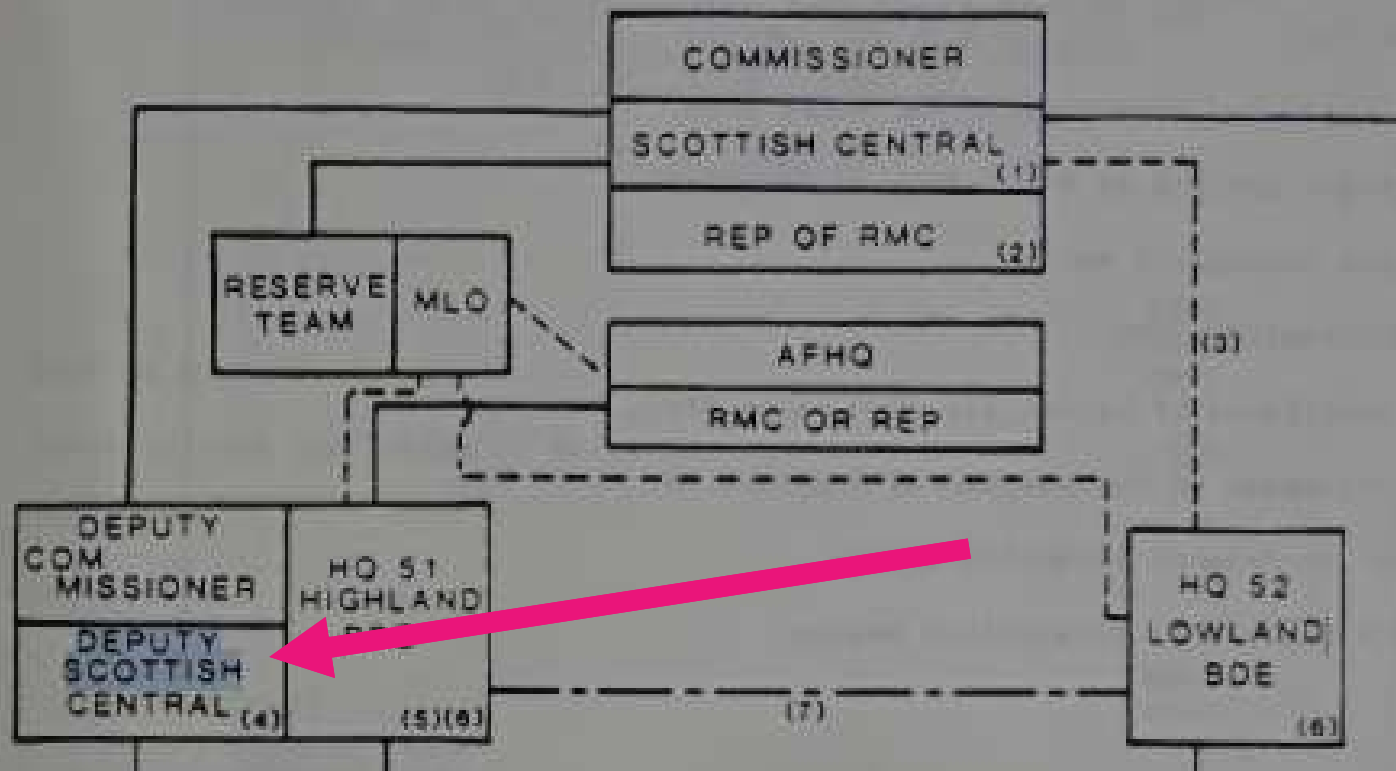
Deputy Scottish Central Control



RESTRICTED

APPENDIX 5 TO
ANNEX W TO
UKCICC 1252
DATED 3 SEP 84

REGIONAL MILITARY COMMAND STRUCTURE SCOTLAND



RAF Wartling (now dismantled), Eastbourne, Sussex.

Beachy Head Coastguard Station, Eastbourne, Sussex.

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RESTRICTED

APPENDIX 5 TO
ANNEX W TO
UKCICG 1252
DATED 3 SEP 84

REGIONAL MILITARY COMMAND STRUCTURE SCOTLAND

Scotland's Secret Bunker

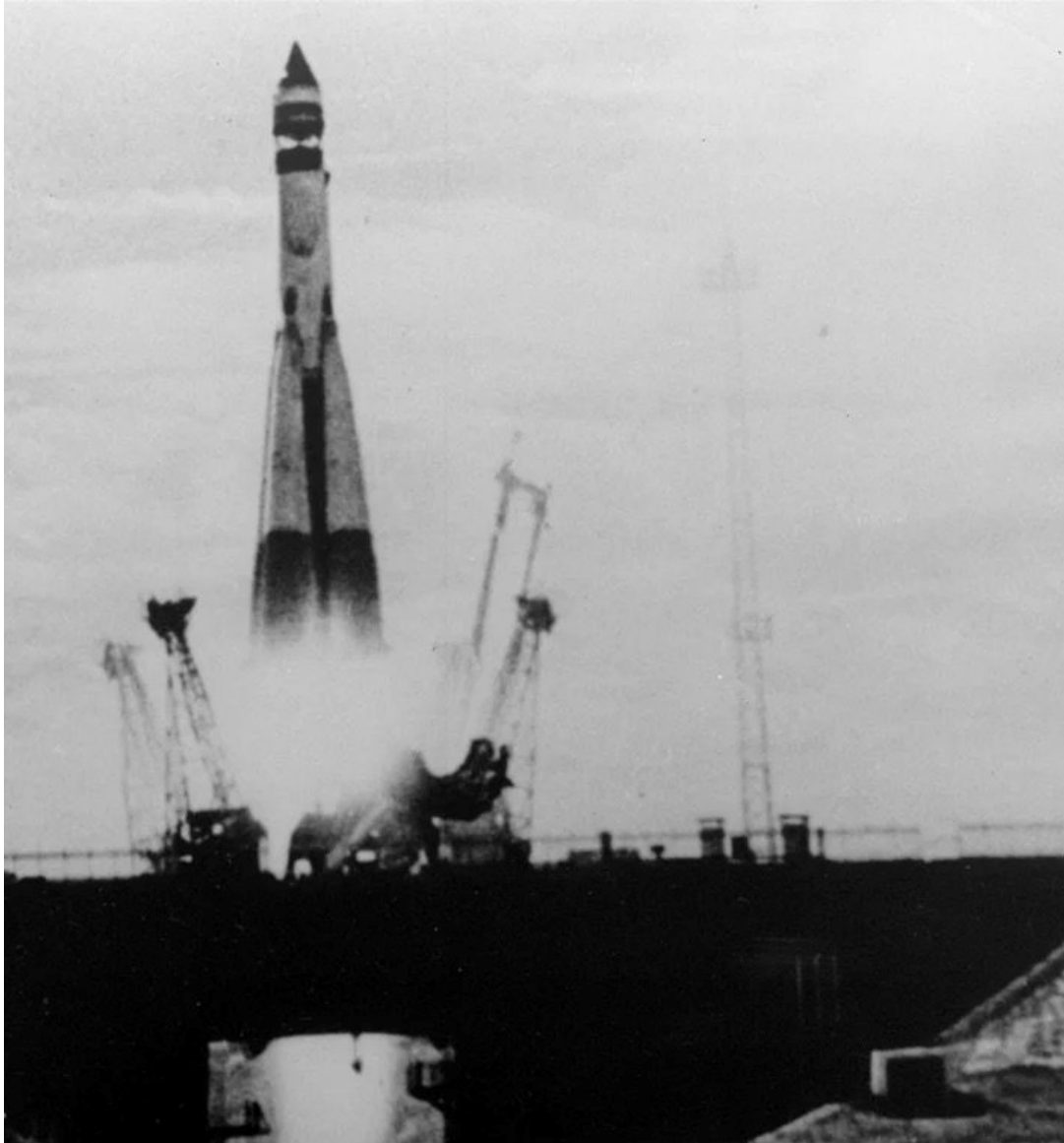


HQ 52
LOWLAND
BDE

The military's last outposts.

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Sputnik 1957



Jodrell Bank



Over The Horizon (OTH) 1960

TOP SECRET

TOP SECRET



1. Mr. Wolfe

2. Mr. McKean

c.c. Mr. Wyatt
Mr. Bailey

SANDRA

This is an equipment for gaining intelligence about missile firings in the U.S.S.R. which the Air Ministry wish to deploy in Cyprus in 1963. In his letter of 25th November, 1960, Mr. Trend approved the preliminary work and gave approval in principle to the whole scheme at an estimated cost of up to £680,000.

2. We have now been asked (Knighton's letter of 8th September and Thorp's letter of 15th September) to approve the full R. and D., production and (in principle) works programmes at an estimated total cost of £612,500. Since this is within the original estimate we should normally go ahead without further ado. But there is

and one subsidiary, problem to consider.

that Sandra is to be

MIDAS / SANDRA 1963/64 ?

TOP SECRET

1. Mr. Wolfe

2. Mr. McKee

c.c. Mr.
M

This is
firings in
Cyprus in
approved to

the whole

2. We have

and Thorp

production

total cost

we should

one major

TOP SECRET

SANDRA

Function of System

To detect missiles fired from the Soviet test area on low or high trajectories and high speed aircraft at all heights flying in the beam and thus provide intelligence on Soviet research and development in these fields.

Time Scale

Cyprus installation of SANDRA expected to be operating in Spring 1963.

Target Sensitivity

Targets whether high speed aircraft or missiles down to the order of 1 sq. metre may be expected, e.g. Polaris type missiles. To be detectable, targets must have a velocity component of about 300 knots along the direction of propagation of the signal. It is not necessary for the missile to be in boost.

Coverage

The coverage of SANDRA is bound in the first place by beam width of the aerial system which, for the Cyprus installation, is 6° at the top end of the frequency band and 11° at the bottom. The range attainable is a complicated function of the ionospheric conditions, but ranges out to 2,000 miles can be expected on small targets.

MIDAS

To detect missiles as they emerge from the atmosphere during their booster phase and thus provide early warning of attack.

The MIDAS station at Kirkbride is expected to be operational in mid-1964.

It is necessary for missiles to be in boost. Initial capability of detecting I.C.B.Ms only. Eventually it is hoped to extend the sensitivity to Polaris and possibly Skybolt type of weapons. Aircraft will not be detected at any altitude.

The total coverage provided by MIDAS is dependent on the distribution of read out stations and the number of satellites employed. With read out stations only in the northern hemisphere as initially planned, there will be scant coverage in the southern hemisphere. With eight satellites as presently planned there will be redundant coverage over the North Pole which becomes erratic as the Equator is approached, that is, while most areas of interest will be seen some time, they will not be under observation continuously.

Height Limitations

In general, it is possible SANDRA to

The MIDAS system is specifically designed

MIDAS

TOP SECRET

SANDRA

MIDAS

Function of System

To detect missiles fired from the Soviet test area on low or high trajectories and high speed aircraft at all heights flying in the beam and thus provide intelligence on Soviet research and development in these fields.

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The MIDAS station at Kirkbride is expected to be operational in mid-1964.

SECRET

SECRET

DRAFT TECHNICAL AGREEMENT BETWEEN THE ROYAL AIR FORCE AND THE UNITED STATES AIR FORCE ON THE ESTABLISHMENT AND OPERATION OF A MISSILE DEFENCE ALARM SYSTEM (MIDAS) STATION IN THE UNITED KINGDOM

1. General

(a) This Technical Agreement is pursuant to the MIDAS agreement between the governments of the United Kingdom and the United States signed on [blank] and sets out the responsibilities of each service.

(b) Changes in this Technical Agreement may be made by agreement between the Royal Air Force and the United States Air Force,

(c) Detailed particulars for implementation of this Technical Agreement shall be jointly developed by the Royal Air Force and the United States Air Force.

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signed

Time Out



3. TARGETS RELATING TO AIR DEFENCE (15)

a. CONTROL CENTRES (1)

West Drayton (Southern Joint Control Centre)

b. FIGHTER BASES (4)

Leuchars *
Wattisham ϕ
Binbrook
Coltishall * Z

c. BMEWS (1)

Fylingdales

d. RADAR STATIONS (9)

Boulmer (Master)
Patrington (Master)
Bawdsay (Master)
Neatishead (Master, being rebuilt)
Buchan (Master)
Saxavord (Satellite)
Staxton Wold (Radar site for Patrington)
Feltwell (Over-the-horizon radar)
Orfordness (Over-the-horizon radar)



RAF Wartling (now dismantled), Eastbourne, Sussex.



Beachy Head Coastguard Station, Eastbourne, Sussex.

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Time Out



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FROSTING / ECHELON

1966

TOP SECRET//COMINT//REL TO USA, FVEY

THE NORTHWEST PASSAGE

JANUARY 2011

VOLUME 2, ISSUE 1

(U) BLAST FROM THE PAST: YRS IN THE BEGINNING

(U//FOUO) YRS has recently unearthed mountains of historical records; everything from photos to fascinating 40-year old briefings. To celebrate the amazing work the YRS Chief of Staff has accomplished, through sorting and archiving these valuable documents, The Northwest Passage will begin a series of monthly historical tidbits. We will start at the beginning with a brief history of the Yakima Research Station....

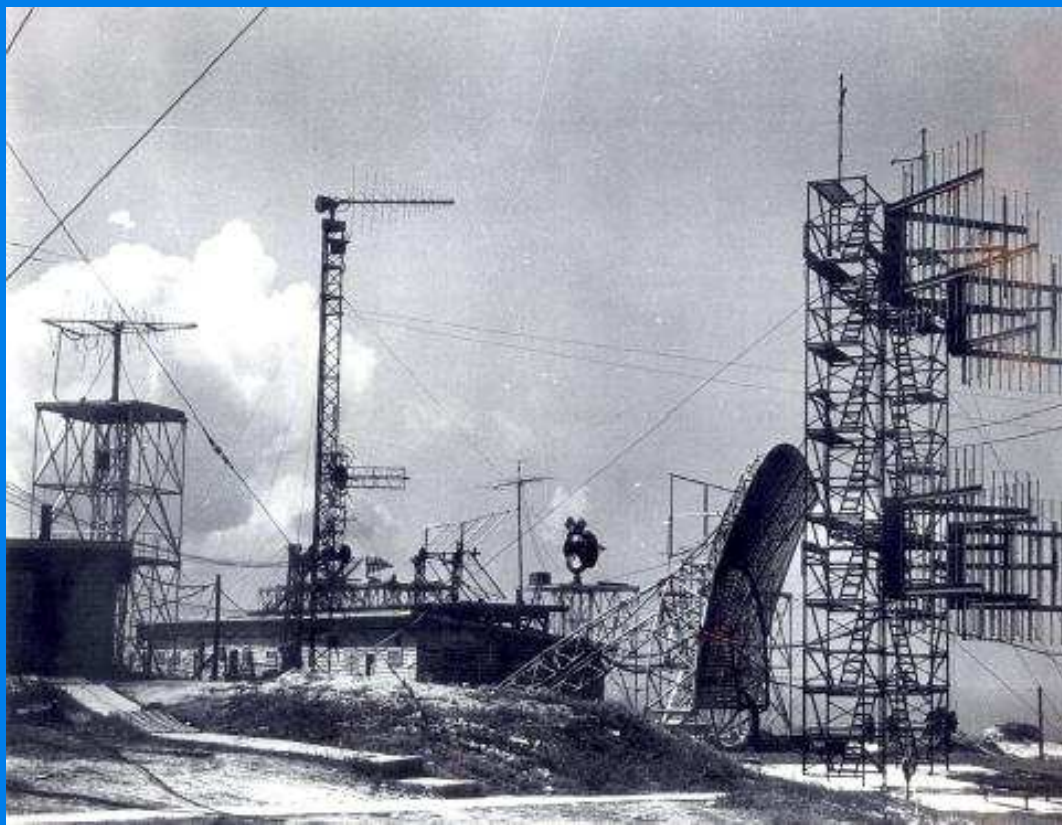
(C//REL) Almost 10 years passed between the launch of the first Soviet (MOLNIYA-D) and INTELSAT communications satellites (EARLY BIRD) in 1965 and the time Yakima Research Station (YRS) – built to respond to this emerging technology – reached full operational capability in 1974. As we inch closer to our 40th anniversary in 2014, YRS is pleased to share some of its unique history with our newsletter audience in a series of articles that highlight various aspects of our operations, activities, and environment.

(S//SI//REL) In 1966, NSA established the FROSTING program, an umbrella program for the collection and processing of all communications emanating from communication satellites. FROSTING's two sub-programs were TRANSIENT, for all efforts against Soviet satellite targets, and ECHELON, for the collection and processing of INTELSAT communications. Two years later, approval was given for FROSTING's West Coast project (JACKKNIFE) to begin initial site surveys and Mr. Jack G. Daniels (later to become the second YRS Chief of Station) was designated JACKKNIFE Project Manager.

(S//SI//REL) Several locations were considered in addition to the site eventually selected on the Yakima Firing Center (later renamed Training Center) in south central Washington. Alternate sites in the area of Yelm, Washington, rejected because of interference (EMI/



(U//FOUO) YRS Construction Site, July 1971.



**TURKEY - 1971
("TUSLOG")**

Trabzon

Sinop

Samsun

**>>> Menwith Hill
FROSTING
MOONPENNY**

- Molniya tracks



ORFORDNESS 1966 /1973



COBRA MIST System 441L

ORFORDNESS 1966 /1973 System 441L

FINANCIAL CONTRIBUTIONS

Serial Number	Heading (a)	Site Facilities Increasing Costs In US Dollars			
		Aug 68 (b)	5 Dec 68 (c)	29 Jan 69 (d)	22 May 69 (e)
1	Site Preparation	2,061,600	2,440,800	2,698,800	2,956,800
2	Access and Ferry	1,053,920	1,662,720	1,566,700	1,629,120
3	I.T.S. Building	6,111,600	7,052,800	6,666,000	7,464,000
4	Antenna Foundations	926,000	1,180,000	1,366,800	3,814,800
5	Roads	612,000	2,269,200	1,488,000	1,468,000
6	Utilities	91,200	271,200	513,600	528,000
7	Domestic Facilities	165,600	165,600	26,400	260,400
8	Switch Vault	442,800	586,800	562,800	562,800
9	Fencing	78,000	78,000	78,000	86,400
10	Elect. Dist.	213,600	213,600	240,000	216,000
11	Contingencies	2,057,280	3,288,000	2,858,935	1,536,000
12	Cost of Contracts Awarded to UK Contractor by MPBW (Serials 1 to 11)	13,813,600	19,208,720	18,066,035	20,308,320
13	Less Fixed UK Contribution	1,749,600	1,749,600	1,749,600	1,749,600
14	Add MPBW DES (7% of Serial 12 less 13)	915,300	1,311,984	1,223,732	1,391,904
15	Add cost of Contracts let by USAF	1,025,000	1,025,000	1,025,000	1,025,000
				18,565,167	20,975,624

1973 Fishermen – and pacemakers

SUGGESTED FORM OF MESSAGE FOR MARINERS

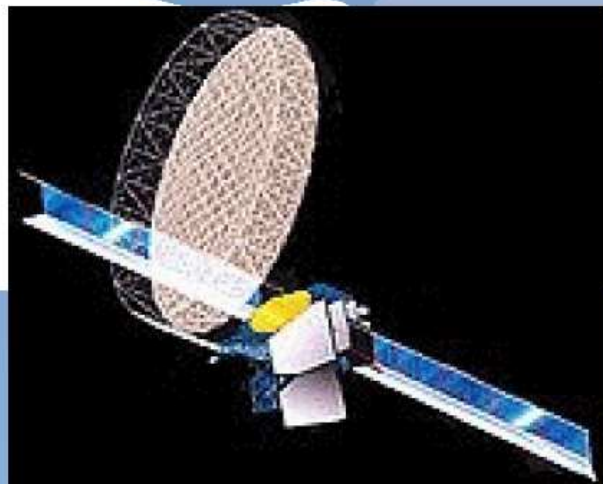
or after

Beginning on 15 February 1971 experimental radio transmissions will be made from Royal Air Force Station Orfordness, which is located in position $52^{\circ} 06' 21$ sec.N, $01^{\circ} 35' 02$ sec.E. The transmissions will take place on certain assigned frequencies in the band 6 to 40 MHz.

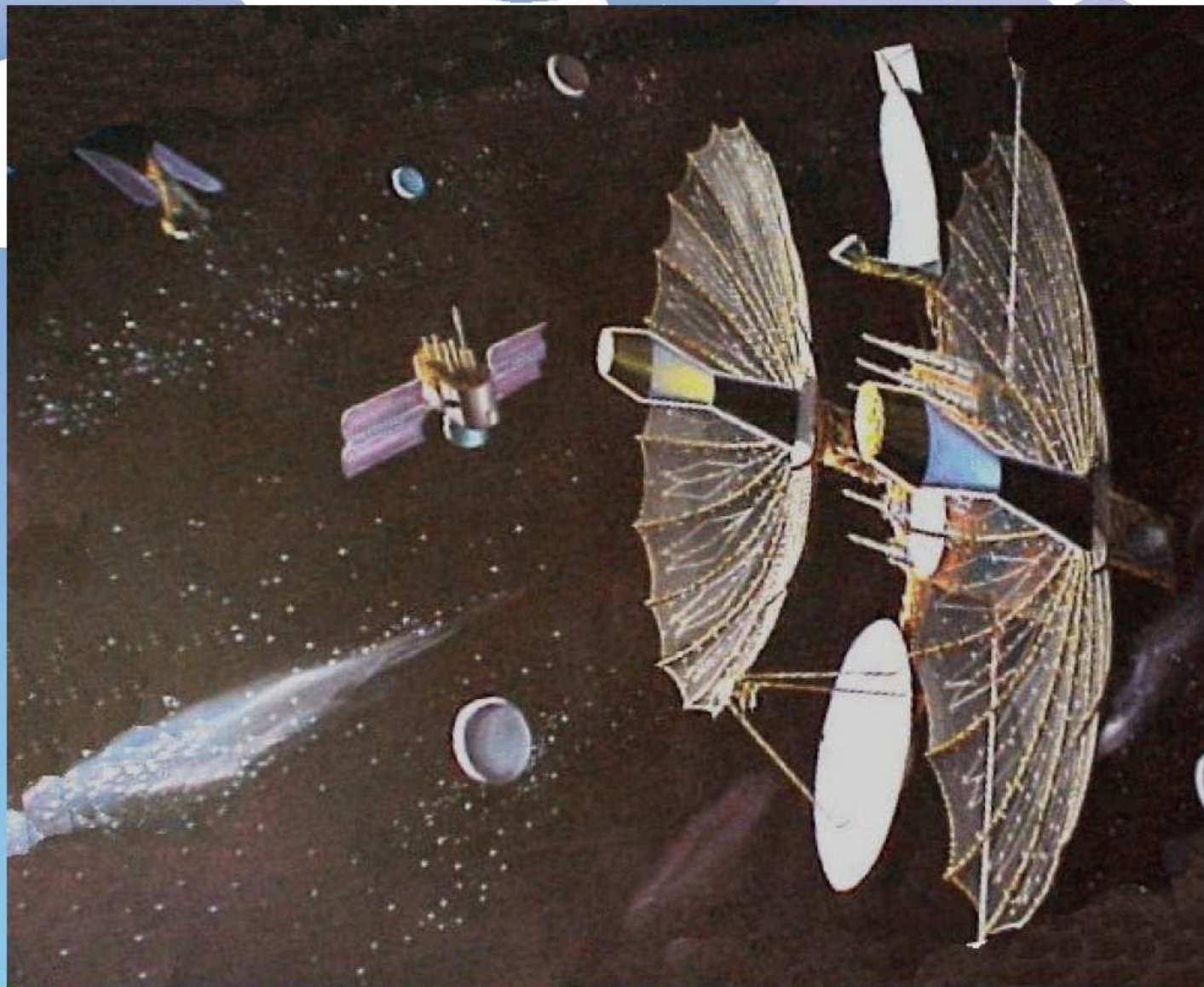
2. There is a very remote possibility that these transmissions may occasionally give rise to certain side-effects to seaward of the station. These effects, if they occurred at all, would be intermittent and of short duration and they would resemble the effects of mild static electricity. They would be likely to be of significance mainly to the operators of commercial shipping, to whose attention they are being brought by the Ministry of Defence in the attached Notice to Mariners. Nevertheless, you are advised to take note of the remote possibility of their occurrence if you are considering sailing in the area within a radius of three nautical miles to seaward of the location given, north of latitude $52^{\circ} 05' N$.

3. The electric shock effect mentioned in the Notice would, if it occurred, resemble the brief discharge which is sometimes encountered on touching metal handrails in certain kinds of building. It would be entirely harmless in itself. The remote possibility of its occurrence can be eliminated altogether by insulating any metal riggings or structures which you are likely to touch, eg by binding them with insulating tape or by using protective gloves.

Space platforms



**SIGINT
and ELINT
satellites**



Menwith Hill Station - 1980



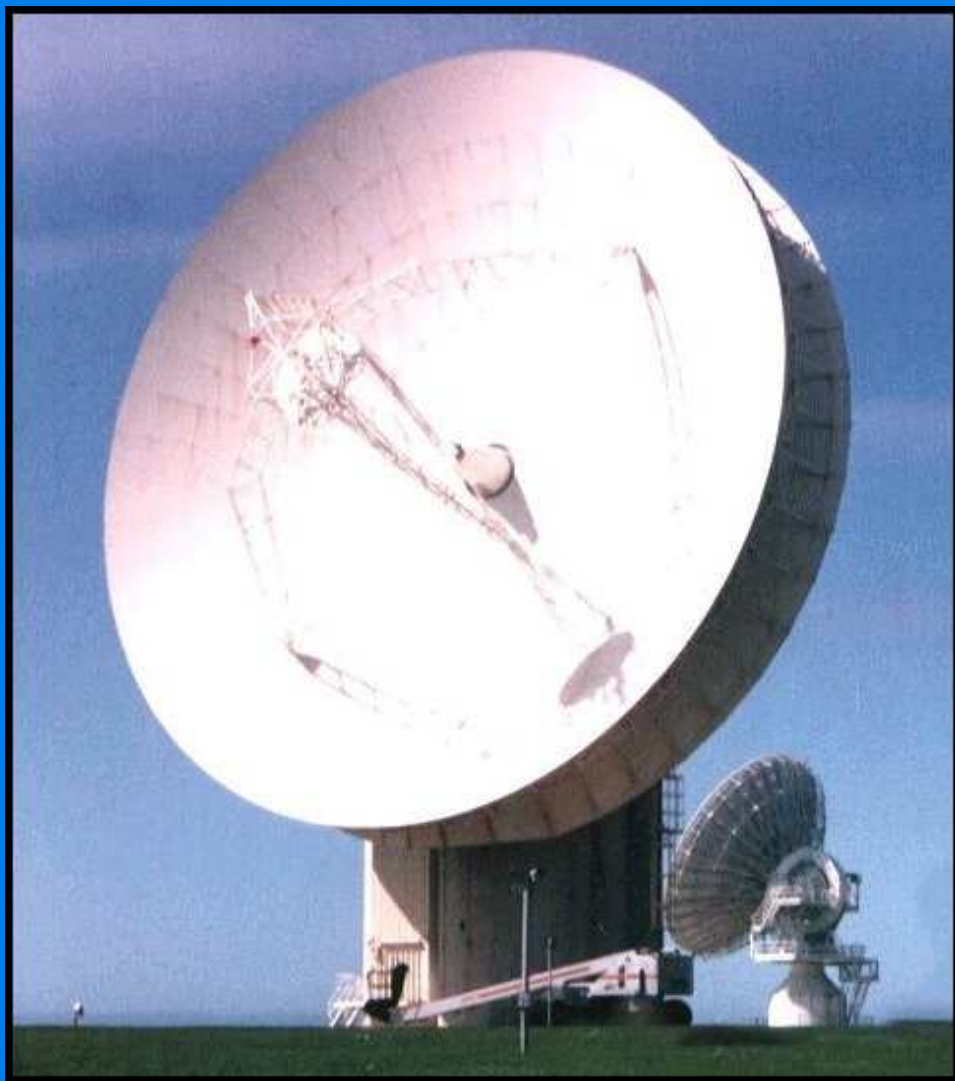
CHALET / VORTEX Data feed



Menwith Hill Station (left) is the largest and most secret civilian overseas base of the giant US National Security Agency. Its 'dragnet' monitoring of international telephone and telex lines depends on a special Post Office network of microwave radio connections, which coverage on the tower at Hunters Stones (right), west of Harrogate, Yorks. From here, a high capacity underground cable (map, centre) runs along the B6451 road, and crosses the Skipton-Harrogate road into the base.



ECHELON starts- 1968



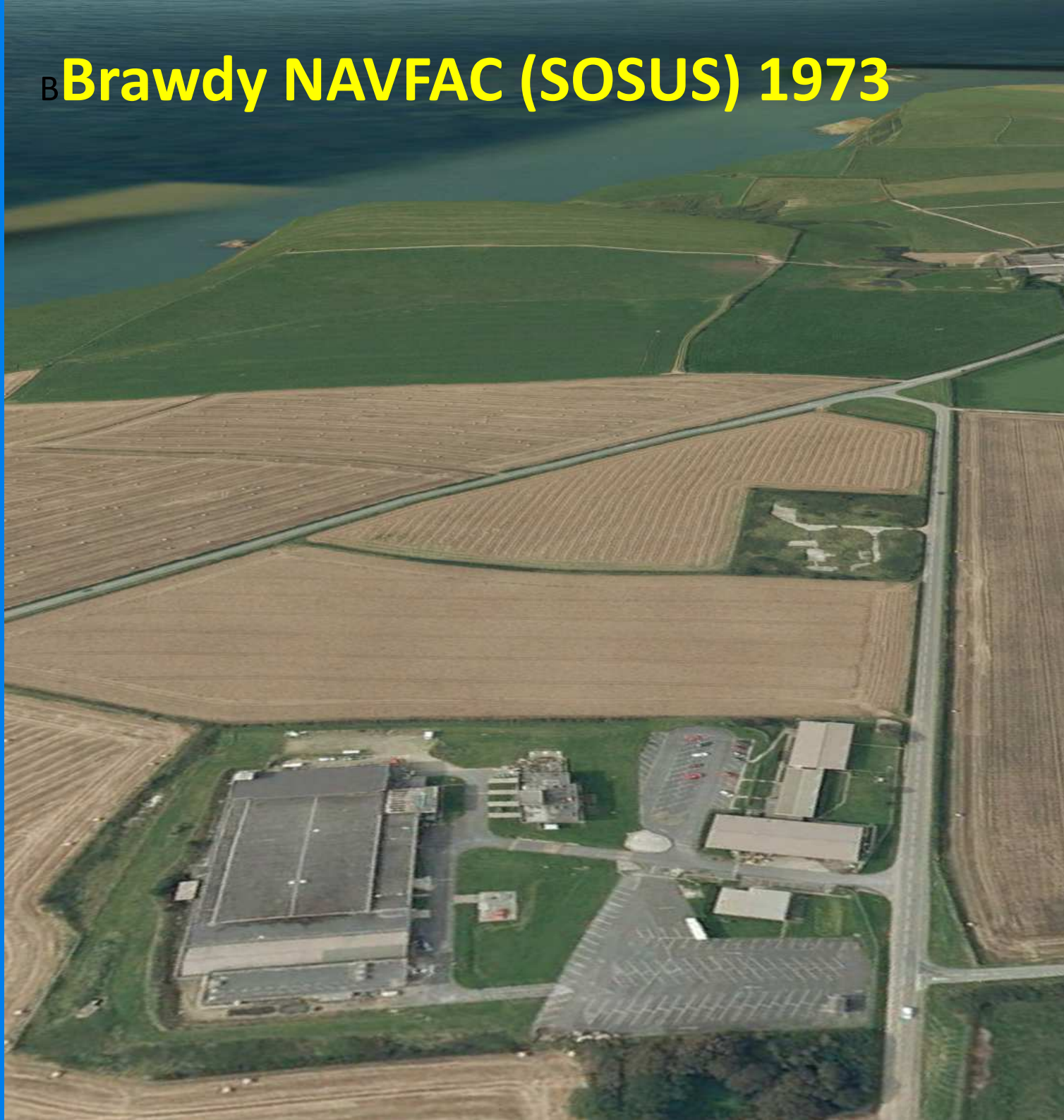
Bude, Cornwall



EHCELON site "CARBOY"



Brawdy NAVFAC (SOSUS) 1973



DUBYA дуга "ARC" 1976 Chernobyl



DUBYA дуга “ARC” 1976 Chernobyl



“””””Woodpecker”



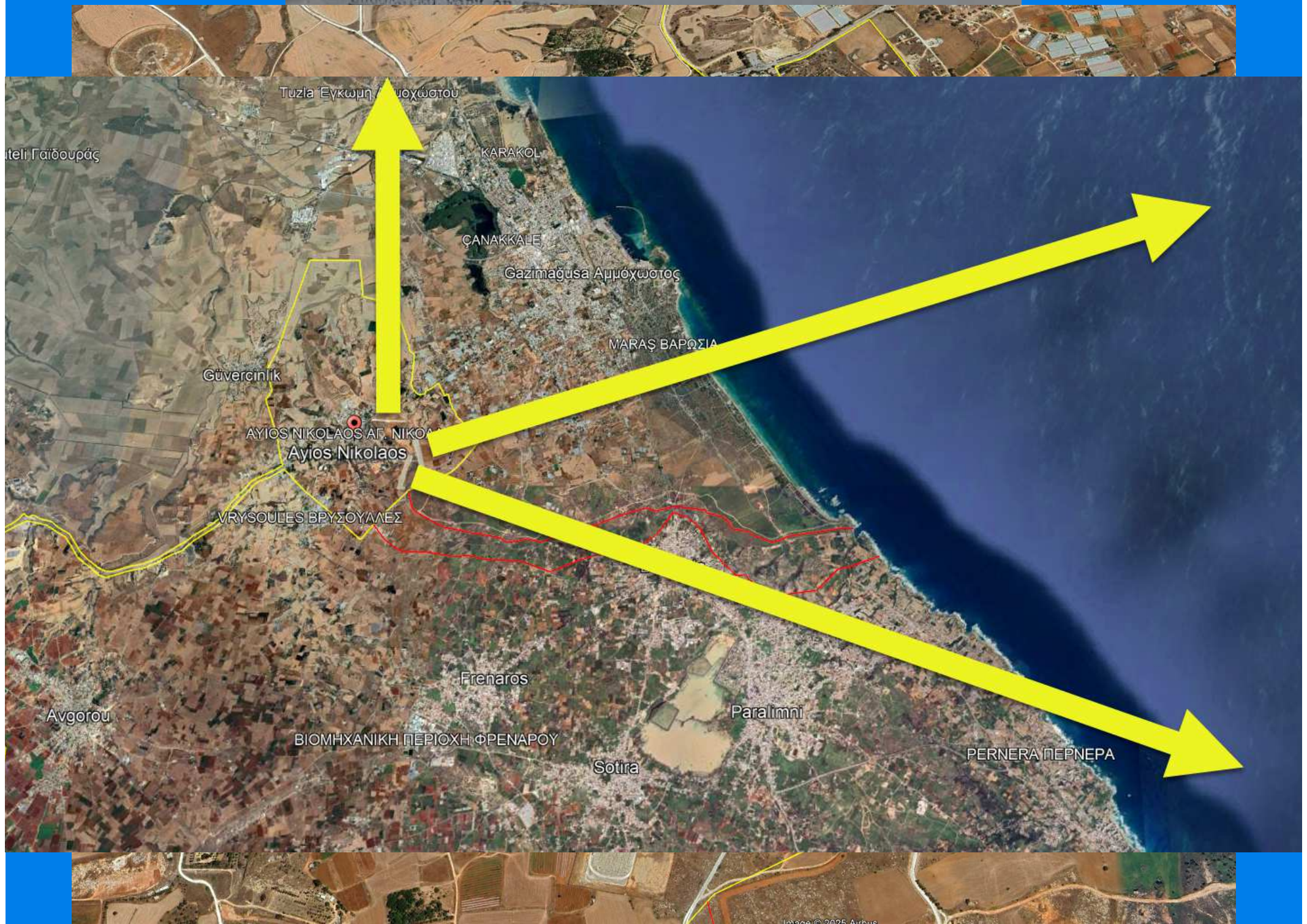
AYIOS NIKOLAOS CYPRUS



AYIOS NIKOLAOS AT. NIKOLAOS
Ayios Nikolaos

STROVILIA STROVILIA

COBRA SHOE



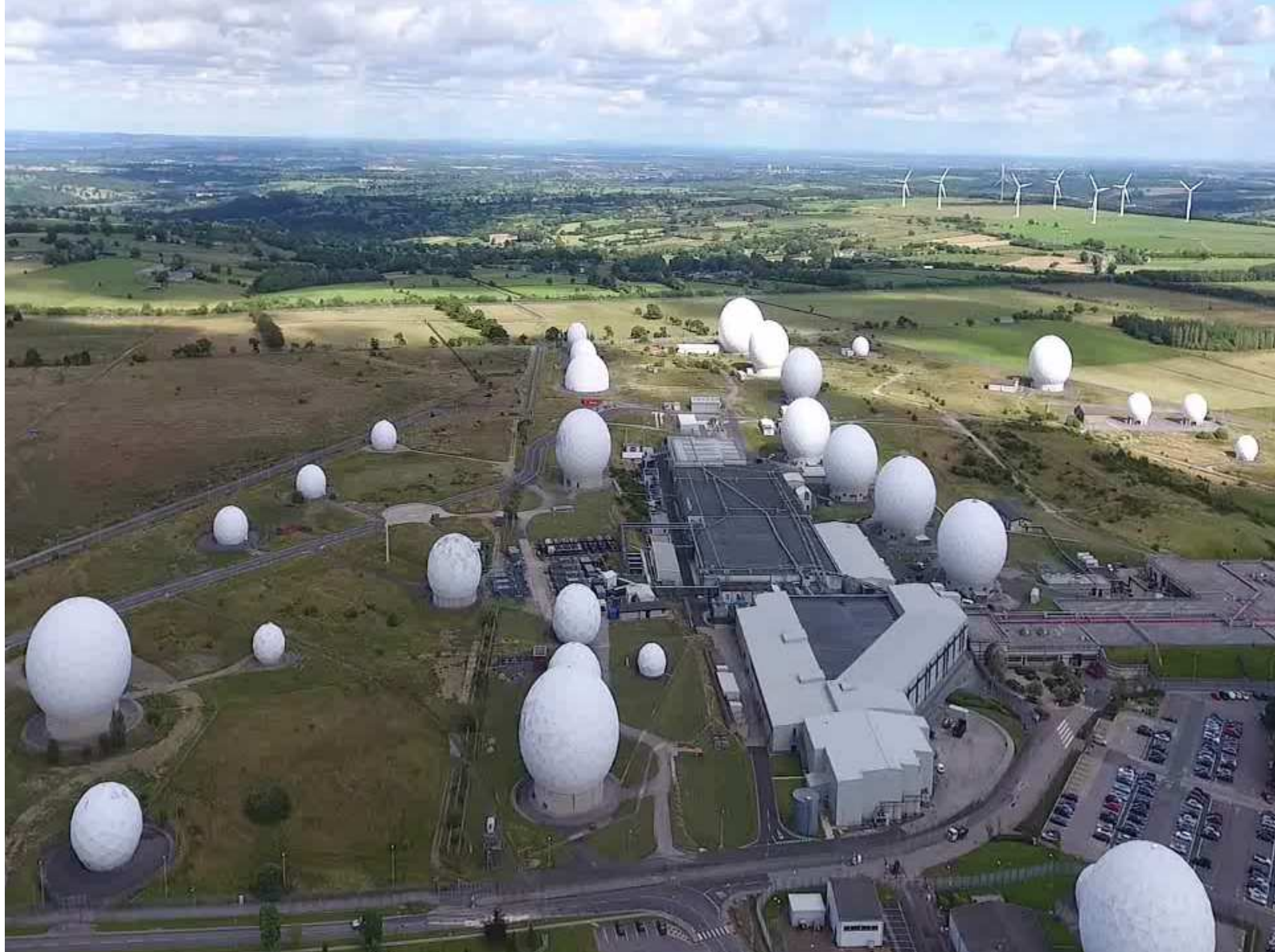


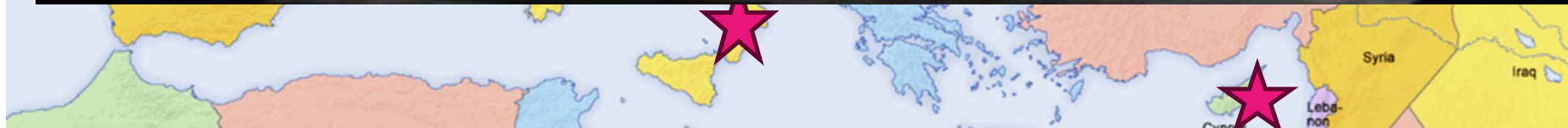
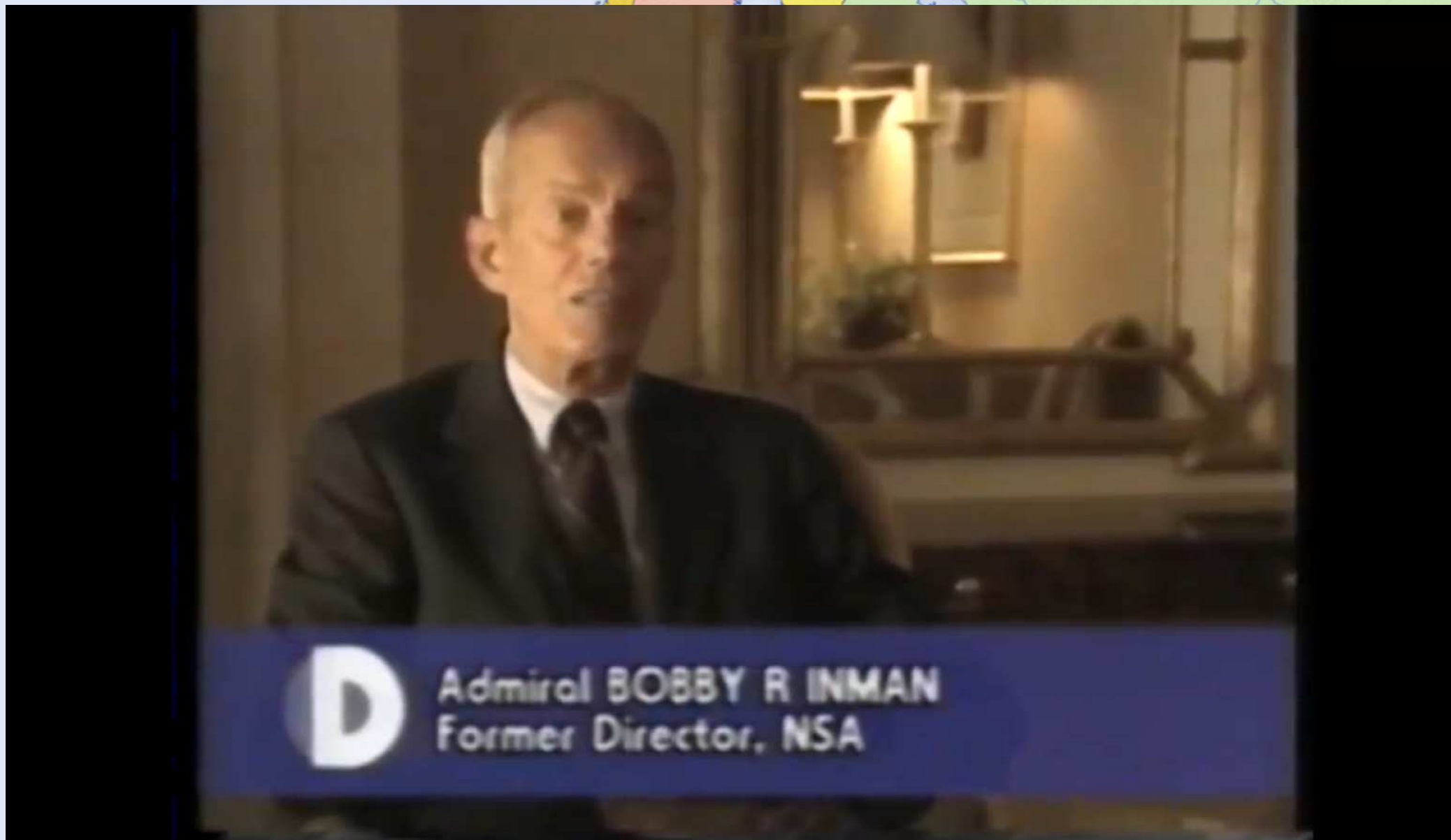
PRIMARY FORNSAT COLLECTION OPERATIONS



Field station F83 **Menwith Hill**







Plannning for Nuclear War

Long range intelligence

Duncan Campbell

**COLD
WAR
NETWORK**

