



LOOSE MINUTE

HB(A)/6/127

27 June 1939

GS Sec 1c

Copy to:
Engr 1(A)
MO2

OP CRABSTICK.

References:

- A. D/GS Sec/53/1 dated 19.6.39. ———— E.3
B. D/EinC(A)/416/2/1(Engr1) dated 22.6.39. ———— E.4

1. Following Reference A we have prepared a historical summary of the wartime pipe-mines programme which includes such detail as survives on the sites concerned. It is hoped that this will provide sufficient information to prepare suitable answers for all likely questions on this aspect.

2. Background to Pipe-Mine scheme.

In mid-1941 there was still felt to be a danger of an invasion of the UK by the Germans. The denial of airfields to an invader was seen as being of great importance in hindering any invasion attempt. It was decided that special steps should be taken to prepare demolition schemes for those airfields that lay within 1 hours' reach of likely coastal invasion points. The different UK Commands were therefore tasked to identify vulnerable sites.

3. Sites Selected for Mining.

Initially 9 airfields were selected. Soon after a number of other airfields were proposed for mining. However scarcity of resources meant that by the end of 1941 only 19 sites in all had been authorised for mining. During 1942 work was slow and only a further 12 sites were added to the earlier 19, giving a total of 31 at which mining was authorised.

MANAGEMENT IN CONFIDENCE

This figure takes into account a decision to extend previous work at 9 sites already mined. The programme of Canadian Pipe-Mining was halted in November 1942 as the threat of invasion receded, in future A.L. airfield mines or the 'Mole Plough' were to be used for airfield denial. When work was halted there were therefore some 30 sites in various stages of completion. These are detailed at Annex A. which is extracted from a contemporary file.

4. Proposed Sites.

At Annex B is a list of those 67 other sites considered but for which we have found no evidence in surviving files of their having been mined.

5. Clearance of Mines: Wartime.

During the war itself as a result of requests from the RAF a number of airfields had the explosive removed from the mines while in some other cases both explosive and mines were removed. As yet we have been unable to trace any definitive details of all 'de-mined' sites; those which are recorded in contemporary documents as having been de-mined or disarmed have been annotated accordingly in Annex A. Instructions issued in mid-1944 stated that only if the explosive within charged pipes was considered to be dangerous should further pipes be unloaded. Apart from such emergency work no maintenance would be carried out and charged pipes would 'be left alone'. This decision was based primarily on a reluctance to allocate scarce specialist manpower resources to carry out the clearance. However there was a suggestion at the same time that sanction be sought for the general removal of all pipe-mines but there is no subsequent correspondence to show that such a step was implemented (Annex C)

6. Post-War Action.

Earlier correspondence has already discussed the extent of surviving records relating to clearances. To summarise this although there is evidence that the existence of pipe-mines was recognised: it appears in lists of general EOD tasks in post-war papers, we have found no evidence of it being added to actual clearance schedules with the exception of the post-accident work at Lympne.

MANAGEMENT IN CONFIDENCE

MANAGEMENT IN CONFIDENCE

7. We have in hand with the help of our RAF colleagues further research to try and identify the disarmed sites mentioned in para 4 as well as to clarify Eastleigh and Grimsta but we are not sanguine that accurate details survive.

8. Pipe-mines were also used at a number of other non-airfield locations to supplement or complement other obstacles. We have no definitive details of these but an example of the type of location considered for such treatment is attached at Annex D.

9. I hope this provides sufficient information, if you have any questions or require the expansion of any points please let me know.

Shoreham*
 Friston
 Lympstone*
 Bradwell*
 Martlesham*
 Gravesend*. Believed mines removed
 Egham church. Believed pipes removed
 Seaton (Shetland)
 Seaton (Cove I of Wight). Believed
 or in part.
 Thorney Island. Believed pipes removed
 Ford*
 Tangmere* Mined area extended, believed pipes in extension
 uncharged.
 West Wymondley
 Linstead*
 Maldon
 Gilling
 Rochester. Believed pipes removed wholly or in part.
 Lee-on-Solent. Believed pipes removed wholly or in part.
 Exe
 Portsmouth = Nilson.
 Ryde
 Dealish
 Burn
 Rolmesley
 Debach. Believed pipes uncharged. (near Wickham Market passed
 to BSAAF control c1943).
 Ludham
 Woolbridge
 Linstead near Aldeburgh on Suffolk coast (authorized by War Office
 1942 just before scheme suspended and therefore not fully
 mined/ or charged)
 EASTLEIGH: airfield found: discussed in winter 1942, no trace of
 any mining before scheme abandoned.



HB(A)
ESY 4/02 4011MB

APPENDIX A: NAMES of 34 Sec/Eng 14

GRIMSTA: No trace, perhaps GRIMSETTER, naval airfield in the
Orkneys? No evidence found of mining.

Command.

Airfields.

ANNEX A TO
HB(A)/6/127
Dated 27.6.89.

AIRFIELD SITES MINED UNDER CANADIAN PIPE-MINE PROGRAMME: BASED ON CONTEMPORARY DOCUMENTS.

(Airfields where the mined area was extended are marked with an *)

- Shoreham*
 - Hawkinge
 - Manston* Believed pipes removed wholly or in part.
 - Southend
 - Friston
 - Lympne*
 - Bradwell*
 - Martlesham*
 - Gravesend*. Believed mines removed wholly or in part.
 - Eastchurch. Believed pipes removed wholly or in part
 - Scatsta (Shetlands)
 - Somerton (Cowes I of Wight). Believed pipes removed wholly or in part.
 - Thorney Island. Believed pipes removed wholly or in part.
 - Ford*
 - Tangmere* Mined area extended, believed pipes in extension uncharged.
 - West Hampnett
 - Merston*
 - Haldon
 - Detling
 - Rochester. Believed pipes removed wholly or in part.
 - Lee-on-Solent. Believed pipes removed wholly or in part.
 - Hamble
 - Portsmouth = Hilsea.
 - Ryde
 - Bealieu
 - Hurn
 - Holmesley
 - Debach. Believed pipes uncharged. (near Wickham Market passed to USAAF control c1943).
 - Ludham
 - Woodbridge
 - Leiston near Aldeburgh on Suffolk coast (authorised in October 1942 just before scheme suspended may therefore not have been mined/ or charged.)
- EASTLEIGH: airfield found: discussed in winter 1942, un clear if any mining before scheme abandoned.

ADDITIONAL NAMES EX GS Sec/Engr 1.

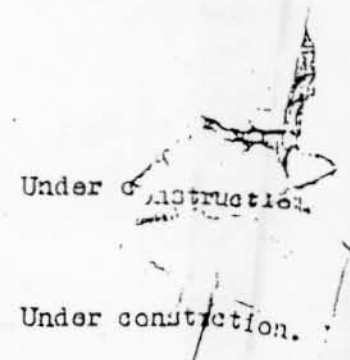
GRIMSTA: No trace, perhaps GRIMSETTER, naval airfield in the Orkneys? No evidence found of mining.

LIST OF AERODROMES BY PRIORITY SUBMITTED BY
COMMANDS FOR DESTRUCTION BY CANADIAN PIPE METHOD.

ANNEX B TO
 HE(A)/6/127
 Dated 26.6.8

<u>Command.</u>	<u>Aerodrome.</u>	<u>Remarks.</u>
SOUTHERN	EXETER	
	EOLTHEAD	
	HARROWBEER	
	ROBOROUGH	
	PREDANNACK	
	PORTREATH	
	PERRANPORTH	
	NEWQUAY	
	ST. EVAL	
	ST. MERRYN	
	EDGEHILL	
	BARFORD ST. JOHN	
	MIDDLE FARM	
	WESTON ON THE GREEN	
	CHIPPING NORTON	
	STARVEALL FARM	
	KIDDINGTON	
	WITNEY	
	STANTON-HARCOURT	
	AKEMAN STREET	
	WINDRUSH	
BIBURY		
SOUTHROP		
KELMSCOT		
EASTERN	IPSWICH	
	WATTISHAM	
	EARLS COLNE	Under construction.
	HORHAM	" "
	BUNGAY	" "
	WEYBOURNE	
	MATLASK	
	COLTISHALL	
	OULTON	
	LANGHAM	
DOCKING		
BIRCHAM NEWTON		
DERSINGHAM	Under construction.	
HORSHAM ST. FAITH		
SWANTON MORLEY		
ATTLEBRIDGE		
FOULSHAM	Under construction.	
WEST RAYNHAM		
GT. MASSINGHAM		
LONDON DISTRICT	No Priority.	

SYTON MILTON
 DORSET WICK
 NORTH COATES
 ACKL DRYTON
 GRAMSTON
 GREATMAN
 DEBURY
 GILBERT
 CATFOLD
 LINDSEY
 MANNY
 WINTON
 MONPEER
 ANGLE
 DALE
 TALEBURY
 BARNHURSTON WEST
 GARDEN CHURTON
 FAIRWOOD GREEN
 PENURRY
 EAST FORTUNE
 KIRKNEWTON
 SCULTHORPE
 TRILICCA
 TOTAL: 67



AVROY 1 TO
1941/5/127
dated 27.8.42.

Command

Aerodrome

Remarks

NORTHERN

- SUTTON BRIDGE
- DONNA NOOK
- NORTH COATES
- ACKLINGTON
- CRANGETOWN
- CREATHAM
- USWORTH
- GRIMSBY
- CATFOSS
- LISSETT
- MANBY
- BRUNTON
- MORPETH

WESTERN

- ANGLE
- DALE
- TALBENNY
- HAROLDSTOWN WEST
- CAREW CHERITON
- FAIRWOOD COLMON
- PEMBREY

SCOTTISH

- EAST FORTUNE
- KIRKNEWTON

- SCULTHORPE
- TRELIGGA

TOTAL: 67

SHIPPING LIST
TEMPORARY
this table where
an "

Shoreham
Saxlinge
Manston believed
Southend
Priston
Lymington
Bradwell
Graveland
Eastchurch
Scotsta (Shetland)
Boserton (Cows
or in part.
Thorney Island
Ford
Sunderland Mined
uncharged.
West Hartlepool
Barnston
Saldon
Holling
Rochester. Believed pipes removed wholly or in part.
Lee-on-Solent. Believed pipes removed wholly or in part.
Hawley
Portsmouth - H
Byde
Bealix
Worm
Belvedere
Hutch. Believed pipes unchanged. (near Nicholas Market passed
to DSAAP control 1943).
Ludham
Woodbridge
Lewish near Aldburgh on Suffolk coast (authorized in October
1942 just before scheme suspended may therefore not have been
mined) or charged.
EASTLITCH (Suffolk) discussed in winter 1942, unclear
any mining before scheme abandoned.

Area was extended and marked with
removed wholly or in part.
Believed pipes removed wholly
removed wholly or in part.
believed pipes in extension
removed wholly or in part.
removed wholly or in part.

194
194
194

X1 (1) 194
X10
X12

(2)
(3)



NO R/

GENERAL STAFF
(OPS)
-6 JUL 1944
716151310

SECRET
HF/4778/RE.
5 Jul 44.

19a

Subject - PIPE MINES.
M.G.G.S.

Action at 24a

1. I suggest the time has now come to consider starting, as the availability of labour permits, the systematic removal of pipe mines throughout the country.
2. Up to the present, pipe mines have been treated under two separate headings, viz :-

A. PIPE MINES IN AIRFIELDS.

The latest policy regarding these is laid down in HF/3676/16 Ops dated 19 Jan 43 and can be summarised as follows :-

Copied/kept

- (a) Pipe mines will not be put into new airfields - nor will empty pipes on any existing airfield be charged.
- (b) Charged pipes on airfields will be left alone. No maintenance will be carried out. If, however, the explosive in any pipe is considered to be dangerous, the pipe may be unloaded.

There are approximately 30 airfields (chiefly in the SOUTH EASTERN coastal belt) that have been prepared for demolition with charged pipe mines - each airfield having an average of some 300 fifty ft (or longer) pipes. However, at the request of the R.A.F. the pipes have been withdrawn completely from a few airfields and in a few others the explosive has been removed from the pipes.

B. PIPE MINES NOT IN AIRFIELDS.

B1A
b14/s107P1

These are chiefly in bridges or are sited so as to form obstacles. There are a large number throughout the country, the majority being charged. The present policy regarding these is laid down in HF/2534/Ops dated 8 Jul 43 and is to the effect that, at the discretion of Commands, charges may be withdrawn from these pipes so as to avoid maintenance. Maintenance will, however, continue to be carried out where charges have not been withdrawn.

3. The result of leaving explosive of the kind used in pipe mines (i.e. of the blasting gelatine group) for long periods in pipes underground is most uncertain. There may come a time when the results of deterioration will render the explosive permanently inert, but there will invariably come an earlier stage when the explosive becomes extremely sensitive. Therefore the long term policy will have to be the ultimate removal of the explosive from all pipe mines in this country.
4. The removal of explosive from pipe mines in the ground is a tedious and long process - especially when the pipes are as long as those in airfields. It is at times apt to be dangerous. On the other hand, the complete withdrawal of a pipe from the ground, using mech eqpt, is comparatively simple and quick. When once the pipe has been withdrawn, it is easy to remove the explosive from it.
5. If it is decided, as it has already been in the case of pipe mines not in airfields, that explosive can be removed from all pipe mines, there is no point in leaving the pipes in the ground. There will never be the labour to fill them in the most unlikely event of their being again required.
6. My recommendations therefore are that steps should now be taken to obtain the necessary sanction to have all charged pipe mines in this country removed by withdrawing the pipes and that if this sanction is obtained Commands should be instructed to carry out this work as far as the labour situation will allow.

C-1 (1.1)

[Signature]
Brigadier,
Chief Engineer.

Suggested programme for 1942.

Priorities.	Work.	Remarks.
1.	Replacement of life-expired explosive. Eastern Command - 90 tons.	
2.	South-Eastern Command. (a) <u>Blasting Gelatine</u> : 3 1/2" - 1,000 lbs 2 1/2" - 12,400 " 2" - 14,820 " 1 1/2" or 1 1/4" - 9,165 " <u>Cordtex</u> : - 883,800 feet. <u>C.E. Primers</u> : 8,070 <u>Blank Detonators 3A</u> 11,080	
3.	<u>Southern Command.</u> Wembury Map Sheet 144 947707 Slipway Seaton Bridge " " 144 7376 Road " " 144 734770 Road " " 144 735765 Road Bantham " " 145 099657) Roads. " " 099656) Thurlstone Hotel " " 145 104640 Road Hellsands " " 145 244807 Road Beesands " " 145 247623 Road Sunnydale " " 145 249831 Road Ilfracombe " " 118 953697 Approach to beach (b) Culver Cliff (I.O.W.) " " 142 066054 Road Dorset Coast " " 139 Between 8 gaps in anti-tank & 000050 ditch (a) 140 920100 (a) Exact location subject to tests of the soil. (b) A small tunnel providing the only approach to the beach.	TOTAL: 318 feet
4.	<u>South-Eastern Command.</u> Nodal Points	12,000 feet
5.	<u>Northern Command.</u> Obstacles (not specified)	3,770 feet
6.	<u>Scottish Command roads etc. as follows:</u> <i>Completion of A1th line Inverness Bay to Scapa Bay</i> Fodderty J. 0482 Naval Ann. Siding 200 feet Duirinish H. 3154 " " " 200 " Almond Junction T. 461980 Ann. Siding 200 " Various exits from beaches in East Lothian 2,360 " <hr/> 2,960 feet	4950 200 feet 200 " 200 " 2,360 " <hr/> 2,960 feet
7.	<u>Western Command roads etc. as follows:-</u> * Between Llangranog N. 7577 and estuary of R. Towy N. 83 " Merthy Tydfil O. 42 and Newport " Brecon O. 45 and Newport " Llandilo O. 04 and Loughor O. 01 " Gurnos O. 2332 and Swansea " Pont Walby O. 3428 and Newport	7910 ft. TOTAL:- 4,300 feet