

Historical notes on Bomb Disposal

Royal Engineers 1950 to 1959.

Overview.

This document shows the situation within Bomb Disposal in the 1950s.

- a. The organisation of BD Units.
- b. Use of German POW and there recategorisation as civilians.
- c. Figures for bomb and minefield and ammunition clearance tasks.
- d. Casualties.
- e. Army Emergency Reserve Units and Territorial Army Units.
- f. BD Training and Commanding Officers.

The document transcribed below, gives a more in-depth explanation of key points in the overview.

The following information has come from a document held in the Royal Engineers Museum Archives.

1. During the earlier post-war period many BD units were disbanded and a rapid run down of the BD Organisation as a whole and at the same time the Directorate of Bomb Disposal had become a branch of the E in Cs Staff in the War Office. However by April 1948, it was headed by the HQ BD UNIT (UK) RE in London with 9 BD Squadrons under Operational Command.
2. By this time all other BD Units in the UK were disbanded and German POW labour had been brought in as replacements for British Troops. However, in June 1948, POWs were being repatriated or were alternatively permitted to continue BD work as civilians. A ceiling of 500 Civilians was established and this resulted in the disbandment of a further 2 BD Sqns.
3. During August 1949, 3 more BD Sqns were disbanded, and the remaining 4 consisting of 3 Operational and one Plant Sqn based at Broadbridge Heath Camp, Horsham, absorbed the details of all these Squadrons in the form of a large troop. By December 1949 a ceiling of 60 all ranks British Service BD personal was fixed and a rundown of some civilian personnel took place.
4. On 1 January 1950, all remaining BD Squadrons were disbanded and the BD organisation was restructured into a single unit consisting of HQ BD Unit (UK) RE, having 5 operational troops and 1 Plant Troop under command. The troops having a strength of 90 soldiers/civilians. (See ANNEX E for the Operational Deployments).
5. In August 1950 HQ BD Unit (UK) RE moved from its then location in ASHLEY GARDENS, VICTORIA, LONDON to join the remainder of the organisation at HORSHAM. Command at the time was with Lt Col M H MacLagan RE who handed over to Lt Col G V Micklam RE on 15 August 1950. Subsequent Commanding Officers are shown in ANNEX A.
6. Subsequently, the operational elements of HQ BD Unit (UK) RE functioned as an operational Squadron WITH ONLY 2 Troops, one based on WHESTON, LONDON, 1 Troop and the other at FORT WIDLEY, PORSTSMOUTH 2 Troop and between them covered BD requirements for the entire UK.

Bomb/Mine Disposal Workload and Tasks.

7 In order to assess the workload the new unit at BROADBRIDGE HEATH would have to carry out, enquiries were made to the Home Office in November 1949 regarding the estimated number of unexploded bombs (UXBs) dropped by enemy action during the war period. An analysis showed that this figure was assessed as 26/27000. The bomb census showed a percentage of UXBs to exploded bombs XBs of 12.25%. A fair guess had always been taken as 10%. The figure given at this time which included the 2 kg Butterfly type of bomb were:

Year End	Reported	Dealt with	Discredited	Abandoned	Running Total Outstanding
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Nov 1940	8,759	6,383	3,291	-	1,805
1941	14,020	9,695	6,122	-	36
1942	3,329	1,615	1,622	-	125
1943	3,729	2,275	1,511	3	63
1944	4,835	3,726	1,150	-	19
1945	709	265	263	197	190
1946	434	130	247	11	235
1947	345	85	311	7	178
1948	336	95	298	9	95
1949	492	58	489	10	173
Totals	36,988	24,326	15,304	237	-

8. The post war BD task consisted of the clearance of outstanding minefields and bombs, the re-investigation of previously abandoned bombs and the investigation of new reports although the latter seldom resulted in a UXB they had to deal with and made considerable work.
9. The re-organisation and run down presented many problems and much time was necessary in order to prepare a force capable of dealing with the residue of bombs etc left over from the war period and resettlement of German civilian employees and their domestic problems. All records were brought in from disbanded Squadrons in order that the work on minefields, abandoned bombs, etc could be carried on from the new HQ where it had been necessarily left of by the Squadrons closing down. The new unit was fortunate in having at that time a Field Engineer, Major A B Hartley RE, who had been extensively involved with Bomb Disposal prior to its move to HORSHAM, and who was primed in the difficulties normally to be expected in the foundations of the new HQ. This fact, of having a 2 i/c with first-hand knowledge of the unit's history prior to its move to BROADBRIDGE HEATH CAMP, Facilitated re-organisation and resettlement. It became obvious from reports on wireless and later tv, in that, if a hole suddenly appeared in their allotment or garden, it could well contain a bomb. Mine reports were also numerous and even on previously cleared minefields many mines were being washed in by tides and scour. Additionally, the post war boom in building added to the problem, as Contractors rushed to develop sites for housing, factories etc and many suspicious holes were uncovered which warranted immediate investigation. It therefore became increasingly necessary to establish an authentic record of bombs known to have been left abandoned in order to have firsthand information as to what was known of a particular area immediately there was a call for help. Of course there were many cases of bombs which, during heavy raids, had never been reported, these had to be treated on their merit when found.

Bomb Disposal Operations 1959 – 1958.

10. Some 140 German bombs were disposed of in one way or another between 1950 and 1958 and included the following types.

Bomb	Number	Remarks
50 kg	86	
250 kg	25	5 fitted with long delay clockwork or anti disturbance fuzes
500 kg	11	1 fitted as above
1000kg	9	
SD 2 Butterfly	9	

11. During the decade the recovery and disposal of German bombs passed many of the usual expected difficulties. How ticklish some of these could be was illustrated in the case of a 250 kg bomb which was finally dug out at AVONMOUTH in the latter part of 1949. BD Sappers had been working on it off and on for about three years and it was at a depth of some 40 feet in shifting water-logged sand.

12. Every attempt to get at the bomb was frustrated by water and to make things more difficult it appeared to be shifting position. Finally a means was devised to make it stop still. Narrow shafts were drilled on each side of the bomb and liquid cement was pumped in and when this hardened the 250 kg was laying on a firm concrete bed so at least making it accessible for fuze immunisation and recovery.
13. Another bomb excavated for at BOURNEMOUTH in the Spring of 1949 was found ? feet down in chalk and cased endless difficulties. Once again, the enemy was water which poured into the shaft at more than 100,000 gallons a hour. Continual pumping and frantic digging in the clogged chalk eventually won the day but this proved one of the toughest BD shafting tasks ever encountered.
14. Such problems were not uncommon and this had all to be faced and overcome before the main task of dealing with the bomb fuze/s could even begin and of course added very considerably to the time taken to deal with individual bomb situations.
15. For some inexplicable reason a German bomb, probably 250 kg and assumed to be fitted with a 17 long delay clockwork fuze, exploded spontaneously on 8 Aug 1948 in front of Vickers Supermarine Works at SOUTHAMPTON. Considering that it probably fell in Sept 40, its detonation once again illustrated the hazards and uncertainty associated with clockwork fuzes. These are inherently dangerous to deal with and corrosion affecting vital components adds to the difficulties likely to be encountered in bombs which have suffered adverse environmental conditions for a considerable time. At the same time one can never be sure of the condition of the main explosive fillings and that of other explosive components in fuzes and boosters caused by natural deterioration and hastened by the ingress of moisture.

Clearance of Minefields.

16. Clearance of minefields posed a much more complex and difficult task. Most minefields were located on beaches and the problem was always pressing because the danger to the public, particularly during holiday season, was enormous. As at the end of 1948 the mine clearance situation was as follows:

Beach Mines	Up to 1 Jul 45	From 1 July 45 to 31 Dec 48	Totals	Remarks
Fields Cleared	1,200	369	1,589	
Mines Lifted	230,000	60,963	290,963	
Fields Remaining		7	7	4 semi permanently fenced
Mines Remaining		1,037	1,037	

17. The ideal solution for minefield clearance would have been to set up troops at many highly dangerous minefields all over the UK, but with a reduced establishment that was not possible. It was therefore decided to set up a Troop in East Anglia where the bulk of the 2,000 minefields existed, and where reports of 'wash ins' were most frequently received. 1 Minefield Troop was therefor established at MUNDESLEY, Norfolk, and a report of activities of this Troop is given later. With mines as the chief danger demanding immediate attention, it was necessary to collect all available information on the minefields cleared, and uncleared, into one record, in order that before a party was dispatched to deal with a mine, all relevant information on the mines on the area, would be readily available. All possible information was therefore added to one set of minefield records. This showed the number of mines laid, when cleared, and the number recovered. The type of mine was also indicated, of which the preponderance were Beach Type C Mines (BTC) and Anti-Tank mines. Where all mines had been recovered a Type 1 Certificate was issued. This method of having as much information available at one point on all areas where mines were reported, no doubt enhance safety by informing Troop Commanders of the type and condition of mines with which they had to deal. See copy of Certificates in ANNEX C and D. *(not found in the file)*.

Clearance of Ammunition.

18. Ammunition recovery was also an urgent problem when it was found in areas to which the general public had access. Recovery of ammunition was however, subject to a division responsibility between BD Units and RAOC. Home Office Circular 113, laid the responsibility for disposal of all small arm recognisable ammunition, such as mortars, grenades and ammunition etc squarely on RAOC, while beach mines and bombs remained the responsibility of RE BD Units. This however did not preclude the Unit from having to deal with ammunition of all types, unearthed during the course of bomb recovery. Large area, such as Battle Area training grounds, ranges etc were the prerogative of Battle Area Clearance Units originally based at NEWHAVEN, SUSSEX and incorporated into BD Unit later in 1962. By the end of 1948 the ammunition clearance situation stood as follows:

AA Shells	Up to 1 Jul 45	From 1 Jul 45 to 31 Dec 48	Totals
Dealt with (Removed and Abandoned)	6,858	125	6,983
Discredited		122	
Reported		221	
Remaining.		19	19

19. The task remaining to be completed was enormous and though over the years the tempo of work had allowed considerably, many mines and bombs remained which were regarded as a serious threat to public safety. During 1950/51 re-organisation progressed, but it was also necessary to undertake new work as it flowed in. Reports of 382 new incidents were received and from those 72 bombs of all types were recovered and removed after neutralisation. 44 bombs were abandoned with Home Office Authority.
20. Although during 1950 the strength of German civilian employees dropped from 470 to 350, a large minefield task was undertaken at SEATON CAREW near HARTLEPOOL. This minefield was cleared by November 1950 and Type IIA Certificate issued.
21. At the inception of HQ BD Unit (UK) RE at Broadbridge Heath the minefield situation was as follows:

Of the 2000 minefields laid (mostly in East Anglia), this represented some 350,000 mines. During the years 1943/8, 1830 minefields were cleared of 315,000 mines and in February 1948 a further 156 minefields had been cleared of 23,500 mines. In March 1948, 14 minefields remained to be cleared with a total of some 11,500 mines outstanding. During the period 1948 to 1950, while re-organisation was being carried out to prepare the way for the new Unit at Horsham, disbanding Squadrons were completing work on minefield clearance as a matter of urgency, in order to restore beaches to the public for much needed holidays. As a minefield was cleared, the Command concerned was notified, who then arranged for a certificate to be issued and forwarded to HQ BD Unit. However, owing to the hurried manner in which minefields were laid and their position not recorded, the preponderance of the certificates issued were of necessity Type II and IIA which, although giving the minefield as cleared, gave no certainty that all mines laid were recovered. This then was one of the problem faced by HQ BD Unit when it commenced operations at BROADBRIDGE HEATH, HORSHAM.

Mundesley Minefield Troop.

Date Started	24 March 1953 – (Then estimated stay 3 years)
Establishment	1 Officer, Troop Sgt Major, OR and Civilians 40
Mines Cleared 1953- 1958	484 B Type C Mines.

22. On the 6 May 1953 during mine disposal operations at TRIMMINGHAM MINEFIELD an explosion occurred, as a result of which Sgt O'Doherty and Cpl Braddock were killed. The OC Capt R H Hough assisted by WO 2 Thomas crawled over the minefield to recover the bodies. Capt R H Hough

subsequently received the George Medal WO 2 Thomas the British Empire Medal. See ANNEX B for other decorations. Previous casualties on both bomb and mine clearance were as follows:

Casualties	To 1 Jul 1945		From 1 Jul 1945 to 31 Dec 47		Totals		Grand Totals
	Bombs	Mines	Bombs	Mines	Bombs	Mines	
Officer KIA	35	16	-	4	35	20	55
OR KIA	211	102	-	26	211	128	339
POW KIA	-	-	-	3	-	3	3
Totals KIA	246	118	-	33	246	151	397
Officer Inj	24	9	-	-	28	9	37
OR Inj	123	26	-	18	127	44	171
POW Inj	-	-	-	1	-	1	1
Total Inj	147	35	-	19	155	54	209

23. This minefield was laid in 1940 as an anti-invasion measure. The mines laid were on the cliff slopes of sand and clay, the highest point of the cliffs being about 200 ft. The cliff eroded at an average yearly rate of 6 ft. From June 1945 to early 1947 the War Office had been exploring every means of clearance until it was ultimately decided that in each case the risk was too great and in 1947 the mine-field was closed in semi-perpetuity. In 1951 a new danger from the minefield became apparent. Due to erosion mines were reaching the beach and being washed out to sea. Some of these mines were observed to be returning from the sea to beaches further south. BD were finding mines South of TRIMINGHAM in places where clearance of war-time mines had been completed or where mines had not been laid. This then was the task assigned to 1 Minefield Troop now based at MUNDESLEY, NORFOLK. Their task was made even more difficult owing to inaccurate records. The war-time minefield plan appeared to have been plotted on a map surveyed in 1906 and not brought up-to-date. The exact number of mines laid was not known. Also at two or three places along the cliff top the local population had dumped waste and scrap metal and this prevented sweeping in certain areas.
24. Many methods of clearance were tried; these included water jetting, also considerable time was spent in experimenting with a pipe line laid along the cliff top. A steel pipe was driven at right angles to the cliffs out into the sea to enable a pumping station to be established. These methods did not prove practicable. Sweeping with 4A Detectors was then started followed by the ERA Locator. This proved to be the most efficient method. During this period, in order to speed up work of clearing mines, men from 30 Engineer Regiment, Western Command, were attached to the Troop at MUNDESLEY; this increased the strength by 1 Officer and 30 Ors. These reinforcements were housed at WEYBOURNE CAMP and carried out work on the beach at SALTHOUSE.
25. In 1953 freak weather conditions caused high tides and extensive East Coast flooding. At 12 hours' notice the HQ BD Unit RE was able to despatch steel piling and associated equipment to SHOESBURYNESS where a defence wall was erected by round-the-clock working. This storm also produced an enormous crop of mines around the coast so that by the end of 1953 the year's overall total disposed of was something over 400 B Type C beach mines. Under the command of HQ BD Unit, another mixed bag of about 200 mines, mainly Mk IIs were cleared by a troop of 35 Corps Engineer Regiment from a two-mile stretch of shingle banking at CLEY-NEXT-THE-SEA in NORFOLK.

Fairlight Glen Minefield, Hastings.

26. In 1955 the unit was requested to complete clearance of this minefield consequence upon a holidaymaker finding a B Type C mine on the beach. The establishment was temporarily increased for this work by 1 Officer and 25 ORs, and additional vehicles were loaned. Work was started on 7 November 1955 and was completed on 3 October 1958. Ten B Type C mines, and four ML II Anti-Tank mines were recovered.

Corton-Hopton Minefield, Suffolk.

27. During 1955 this minefield was swept from the TRAMPS ALLEY to LEAGUE HOLE. The area swept extended from the ten existing cliff to 100 ft out. In places where the scour was more than 100 ft out the sweep was carried a further 6 ft to seaward of the scour. Instruments used were ERA and 4C Mine Detectors. At least 26 mines B Type C were dealt with.

Formation of Bomb Disposal Army Emergency Reserve (AER).

28. On 1 October 1950 Bomb Disposal (AER) was formed on that day HQ 137 BD Regt RE (AER) and one BD Sqn (346) was formed at HQ/SR RIPON. The Commanding Officer was Lt Col R O St G Marshall OBE, who promptly wrote to the Daily Telegraph inviting ex-BD Officers to rally round as volunteers. The response more than filled the available establishment vacancies.
29. During the first training year in 1951, 137 Regt were pitchforked into the "Z" reserves training melee. The camp was held at HORSHAM because of the availability there of BD Instructors. A branch camp from HORSHAM was held at WOULDHAM to accommodate overflow Sqns which were 'ghosted' into being for Z training purposes. 137 Regt had four Squadrons under command in 1951. In 1951 six independent TA Bomb Disposal Sqns existed. They were:

290 BD Sqn RE (TA)	BIRMINGHAM
272 BD Sqn RE (TA)	SHIPLEY
243 BD Sqn RE (TA)	PAISLEY
572 BD Sqn RE (TA)	CAMBOURNE
583 BD Sqn RE (TA)	DOVER
578 BD Sqn RE (TA)	CHATHAM

30. These TA Units were swollen from war time strength with Z reservists and in that year trained either at HORSHAM or WOULDHAM.
31. Early in 1952, HQ BD Unit RE took over Adm and Trg of AER/BD Units from HQ/SR RIPON. During 1952, 137 Regiment absorbed three newly formed AER Sqns, 347, 348, and 549. The total establishment grew to a Regimental HQ and 4 Sqns. Thus some solidarity of formation was achieved.
32. Towards the end of 1952 it was apparent that some of the TA Sqns were not entirely successful. These Sqns found BD technical Training difficult, if not impossible to achieve successfully without a fully trained BD Officer or Senior NCO being available at their Drill Hall, and such trained personnel were not available to be widely distributed. Secondly Bomb Disposal is not the 'cup of tea' of every would be volunteer, and local recruitment on this account was not successful.
33. It was therefore decided to disband some of them, and reform them as AER Units. In 1953, HQ 142 BD Regt RE (AER) was formed to command:

290 BD Sqn RE (AER).	Converted from 290 Sqn TA
551 BD Sqn RE (AER).	A new unit
547 BD Sqn RE (AER).	A new unit

The first Commander was Lt Col W G Parker MBE GM RE.

34. With two AER Regiments, HQ BD Unit RE now organised training of both AER and TA Units at BROADBRIDGE HEATH and FORT WIDLEY, so that a 4 Sqn Regt such as 137 took a month to complete its training. RHQ always attending with one of the Squadrons.
35. By 1955 the re-organisation was completed. On 1 Jan that year, three new AER Sqns were formed:

546 BD Sqn RE (AER)	From old 243 (TA)
548 BD Sqn RE (AER)	From old 272 (TA)
550 BD Sqn RE (AER)	From old 592 (TA)

36. The numbers of personnel transferred with their BD Units from TA to AER, varied from Unit to Unit. For instance 243 Sqn came over to AER almost 'en bloc' whereas '272, who were in fact changing their role and retaining the Unit number, produced only 1 volunteer transfer to the AER. On 1 Aug that year, 144 BD Regt RE (AER) was formed to command these new Sqns. At the time of disbandment the organisation remained the same.
37. The first Commander of 144 Regt was Lt Col W G Parker MBE GM who moved from 142 to take Command. Simultaneously, Lt Col B S T Archer GC moved from Command of 137 9he having assumed that command upon the retirement of Lt Col Marshall in 1953) to Command 142 Regt.
38. The new Commander of 137 Regt ten became Lt Col P J Hands MBE promoted from 2 i/c of the Regiment.
39. This BD re-organisation left two TA Independent Sqns 583 and 579. These units remained unchanged until the disbandment of TA on 1 Apr 67.
40. Realistic training in BD was planed in 1953. At MARLOW, BUCKS a river meadow was known to contain a number of German UXBs. In 1940 a small formation of Luftwaffe bombers was being chased by RAF fighters. The bombers dived low and ditched their load of bombs in the field. Thus a concentration of UXBs were available there. Throughout the Summer one BD Troop from each AER Sqn was detached to live on site and recover bombs. Apart from the loss of a marquee (set on fire by a petrol cooker) the summer was a great success.
41. Interesting, and enterprising, training undertaken by a BD/AER Unit was done at FAREHAM in 1954. A large UXB had been located by 2 BD Troop RE and the work of recovery was so arranged that 290 BD Sqn would be in in camp at FORT WIDLEY when the excavation was close to the bomb. Personal of 290 Sqn continued the excavation (steel piling) and uncovered a 500 kg German UXB with one fuze. Lieutenant (later Captain Woodbridge successfully dealt with and extracted the fuze. This feat received considerable press coverage.
42. It was in 1955 that the entire BD Regt's trained as a whole. 137 and 142 followed one another at SHORNCLIFFE.
43. Since the cessation of attendance of part-time National Servicemen (NSM) the Regimental strength of volunteers only has been made possible for Regiments to train as a whole at BROADBRIDGE HEATH. It was noticeable, however, that after the publication of the forecast of no more NSM, the volunteer strength grew.
44. During the summer of 1951 the HQ Unit also undertook the task of technically training a succession of BD Sqns of the ST and TA for a period of two weeks each Squadron. The camp at BROADBRIDGE HEATH had to act as a reception and administration as well as a training unit for 6 Squadrons and a nucleus BD Regimental HQ.

Bomb Disposal Training.

45. At the end of the 1939 – 45 war RE BD School was part of SME Ripon. With the re-establishment of SME in its proper home the school moved to GORDON BARRACKS, CHATHAM in autumn of 1949. Subsequently in late 1951, it moved one more and became part of HQ BD Unit organisation at BROADBRIDGE HEATH CAMP, HORSHAM.

46. Its primary task was training on behalf of the RE Operational BD Units and for the RN Clearance Diving organisation. And also provided for Foreign and Commonwealth countries.
47. This was the structure until 1957 when a joint RE and RAF team was set up to investigate the possibility of amalgamating the RE.RAF BD Training Organisation. As a result it was agreed to established at HORSHAM with effect 1 Jan 1959.

Commanding Officers

Bomb Disposal Unit Royal Engineers

1950 to 1958.

Lt Col M G Maclagn RE	1950
Lt Col G V Micklam RE.	1950 – 1952.
Lt Col G S Goode MBE RE.	1952 – 1954.
Lt Col G O H Slade RE	1954 – 1957.
Lt Col H H S Barker RE	1957 – 1959.