

## NOTES ON THE HISTORY OF 521 FIELD SURVEY COMPANY R.E.

### 1. INTRODUCTION.

It is believed that there are no detailed “official” unit histories for the Field Survey Companies raised in the second world war. It is now perhaps doubtful if any will be compiled. For some of the companies, brief anecdotal souvenir histories were produced towards the end of the war using the cartographic and photographic skills and mobile printing resources of the units.

Hopefully, the following notes on various sources of historical material will serve in lieu of a unit history until the compilation of one is addressed, if ever.

There are four obvious sources of historical material : -

- a. Brigadier A.B. Clough’s monograph “Maps and Survey”, H.M.S.O., 1952.
- b. References, mainly war diaries, held in the National Archives at Kew.
- c. Anecdotal souvenir histories produced by the units.
- d. Personal accounts or reminiscences and correspondence regarding the same.

Notes on a-d above are at paragraphs 2-5 below. Anyone wishing to add to these notes or to suggest improvements or corrections is invited to contact the Defence Surveyors’ Association at

[www.defencesurveyors.org.uk](http://www.defencesurveyors.org.uk) or : -

Defence Surveyors’ Association, c/o Royal School of Military Survey, Denison Barracks, Hermitage, Berks, RG18 9TP.

### 2. NOTES FROM “MAPS AND SURVEY” BY BRIGADIER A.B. CLOUGH, H.M.S.O., 1952.

For each theatre of war Brigadier Clough describes the historical background and the strategical and military considerations followed by the survey planning and an account of the phases of the campaign including the survey involvement. These are followed by sections on the maps and map production, triangulation and field surveys, aerial photography and survey and map supply and distribution. For anyone interest in military survey in general or survey unit histories in world war two “Maps and Survey” should be consulted. Notes towards unit histories have been extracted from “Maps and Survey” and these are shown below, sometimes in full, sometimes in brief.

Since these notes were made, “Maps and Survey” has been scanned by DSA and is now available on the DSA website. The notes below may still however provide an “at a glance” summary of the unit’s involvement in world war two.

For 521 Field Survey Company R.E. the index in Brigadier Clough’s “Maps and Survey” gives : -

<b>Theatre</b>	<b>Pages</b>
Home Forces	37-39, 41.

At the beginning of January, 1941 there were nine Field Survey Companies under Home Forces control and they were located in the commands as shown below :-

Southern Command	No. 519 (just formed) No. 516 (with 5 Corps)
Eastern Command	No. 14 (ex B.E.F.) No. 1 Canadian (with Canadian Corps)
Northern Command	No. 13 (ex B.E.F.) <b>No. 521 (just formed)</b>
Western Command	No. 517 No. 520 (just formed)
Southern Command (Clough page 37)	No. 518 (just formed)

During June, 13 (Corps) Field Survey Company went to Middle East, and one topographical section of 521 Field Survey Company was detached to South Eastern Command for special work in connection with the survey fixation of heavy guns, which were then being installed in the Dover area, as an answer to the German “heavies” which were firing across the Channel from the French coast near Calais.

It was necessary to establish accurate cross-Channel observations to connect up the triangulations of Great Britain and France, and this was successfully accomplished.

(Clough 38)

Survey Directorates were assembled for the Allied Planning Headquarters for Operation “Torch” and for the British First Army which was to take part. 518 Field Survey Company R.E. was mobilized for

this operation and ceased to be under Home Forces control. By October, 1942, the Survey organization in Home Forces was as under :-

Director of Survey, with Survey Directorate at G.H.Q. (now Colonel A.B. Clough who replaced Colonel Fryer on his appointment to Middle East in January, 1942).  
 A small Directorate with each of the Home Commands and certain Corps.  
 Field Survey Companies Nos. 14, 516, 519, 520, **521**, 523 (515 in Northern Ireland), 1 Canadian.  
 General Survey Sections Nos. 1, 2, 3, 4, 5, 6.  
 Field Survey Depots Nos. 3, 4, 5, 7, 10 (No. 6 in Northern Ireland).  
 Air (Survey) Liaison Section No. 1.  
 (Clough page 39)

With the formation of Supreme Headquarters Allie Expeditionary Force (S.H.A.E.F.) in January, 1944, the survey organization in preparation for "Overlord" was as under :-

.....  
 British Second Army.  
 D.D. Survey (Colonel A.W. Heap) and Survey Directorate.  
 Nos. 14, 519 and **521** Field Survey Companies R.E.  
 Nos. 1, 2 and 3 General Survey Sections R.E.  
 No. 3 (Army) Field Survey Depot R.E/  
 .....  
 (Clough page 41)

### **3. NOTES FROM REFERENCES, MAINLY WAR DIARIES, IN THE NATIONAL ARCHIVES, KEW.**

As far as possible, the brief notes from unit war diaries listed below are in chronological order. War diaries from world war two are generally foolscap in format. In addition to the war diary proforma which may be in manuscript in pencil or ink, or typescript, the files usually contain the periodic returns of soldier and officer strengths. Some also contain technical diary annexes but many are confined to mundane notes on arrivals and departures and movements and their content as a source for a historical and technical account can be disappointing. The following "shorthand" notes are generally based on initial hasty examinations of the diaries simply to assess their scope and possible worth as sources for a unit history.

#### **521 Corps Field Survey Company War Diary December 1940 - December 1941.**

The War diaries for this unit are in manuscript, ink, but neat and legible and, for a change, quite descriptive of the work done.

##### **December 1940 - January 1941.**

7 Dec Maj W.E. Browne appointed O.C. Location York. Capt A.J.D. Halliday M.C. 2 ic. 2Lt D.H. Haycock Print Officer. A workhouse at Ouseburn, 13 miles west of York was taken over as accommodation.

10 Dec First draft arrived, mainly drivers. 4 15cwt Chevrolet trucks arrived.

18 Dec 2 Lt P.A. Mann joined.

19 Dec CSM Newell and draft from Fort Southwich arrived., nearly all survey personnel.

30.Dec Work commenced at Ben Johnsons Printing Works, York. All tradesmen except Topo Draughtsmen are highly skilled having been in civilian trades pre-war

3 Jan First consignment of tech equipment arrived.

6 Jan Tech personnel at Ben Johnsons are supplementing 13 Fd Svy Coy work.

10 Jan Drawing Cassini grid on OS 1:2500 for AA work.

15 Jan AD Svy Col E.R. Peake and O.C. visit AA Bde HQ Hartlepool and Newcastle.

21 Jan Survey party for Newcastle commence AA surveys.

22 Jan First mobile press collected from makers, Crabtree, Leeds. All 20 1:2500 complete.

25 Jan Two Topo Sects to Grantham and Humber for AA surveys.

30 Jan First photo-mechanical lorry arrives.  
 List of work achieved.

##### **February 1941.**

1 Feb First map spraying job. A cellulose lacquer makes the map waterproof but still possible to write on with chinagraph. Lacquer sprayed by "Aerograph" driven by 2-stroke motor.

4 Feb Photo-mech veh in commission.

19 Feb Second printing lorry collected. Up to 5000 copies per hour per machine, usually 3,500. Max size 19 x 24 inches.

23 Feb Second print lorry taken to Hayes Middx and handed to 14 Company. O.C. discusses possible move to SE District with AD Svy SE Dist Lt Col H. Bagot.  
List of work achieved.

### March 1941.

5 Mar Adv party to go to Dane Court, (a school) Woking on 11 Mar.

8 Mar Coy inspected by Col R.E. Fryer D Svy GHQ.

11 Mar OC and advance party depart.

14 Second party arrive Woking.

21 Mar Arrangements for takeover of survey work in Dover area, Hythe, from 14 Fd Svy Coy.  
2 Lt P.J/. Carmody ic.

29 Mar Lt A.L. Hargrace, 2 Lt E.R. Couradi?, 2 Lt W.P. Smith, 2 Lt E.W. Lawrance arrive.

List of work achieved. Not noted.

“Brief History of the Dover Area Survey detachment RE.”

Early in July 1940 the need for survey for artillery purposes arose when Corps and Divisional artillery were taking up their allotted positions. Coast fixed defences were also increasing the numbers of C.D. Batteries, all of which required surveys of the positions of the guns and their arcs of fire. Heights of the D.R.F. Sets were also required. The long range guns required special surveys. A few surveys had been carried out by surveyors lent by the O.S. Southampton. As the demand grew the responsibility became AD Svy's Eastern Command, Lt Col V.E.H. Sanceau. For this purpose Capt W.E. Browne and 2ic 14 Coy then at Norwich were detached and placed in charge of the O.S. detachment. Surveys in the field commenced 12 Jul 40 and have continued to present date. (There follows a detailed list of surveys and surveyors). Capt Browne left on 1 Dec 40 to take over 521 Coy. 2 Lt Mann then relieved 2 Lt Carmody who left the unit for overseas on 8 Aug 41. Det now under 2 Lt Couradi? The long range gun surveys were on the same grid system as that in France, the Nord de Guerre. A quick extension was made based on the observations for the UK-French connection of 1862 and temporary values were calculated. Simultaneously, a new connection was observed across the channel and when completed the guns were surveyed on this system. The guns on railway mountings were fired from curved railway tracks or “spurs”, these being graduated on the grid bearings of the French grid. See “Report on Cross-Channel Triangulation Conversion by Capt W.E. Browns R.E.” Surveys and computations were also made on behalf of the R.N. when the survey for the bombardment of Calais was being made. Also for Dunkirk. 521 Coy is now responsible for this work. Coast Defence, AA and Long Range Gun surveys are still in progress.

Appendix C is “Star Planisphere and Star Chart for Northern Constellations” by Maj W.E. Browne R.E. Appendix A is a paper on “Future Map Policy Overseas”.

### April 1941.

Names and type of gun of all battery surveys listed. Print tasks listed by name and quantity.

### May 1941

At Pyrford still.

Route surveys for the provision of Route Guides for night convoys.

Tasks listed at end.

### June 1941.

24 Jun Second photo-mechanical lorry delivered.

28 Jun Maj Browne and Lt Carmody to Glynde to discuss survey of 12-inch Railway Howitzers.  
Tasks listed at end.

### July 1941.

17 Jul Maj Robinson OC 1<sup>st</sup> Survey Coy RCE offers transport to assist with move of unit.

21 Jul Unit moves to Tadcaster, Yorks. “Inholmes”

List of tasks.

### August 1941.

GHQ Conf and briefing by Col Browne on Operations in Middle East. The capture of Bardia was materially assisted by the modern Italian plans from aerial photography that we had captured previously. Crossing of the River Juba profited from the good gridded maps prepared from air photos for the operation. List of postings in and out of officers. Carmody for M.E. for instance.

### September 1941.

Just the usual list of tasks.

### October 1941.

Maj Browne ordered to collate all data of his surveys in Persia and Iraq and to report to GSGS W.O.

Tasks listed at end. Mostly Arty and AA surveys.

### November 1941.

17 Nov OC attended lecture by Hotine on Surveys in East Africa. Map-shooting from gridded aerial

surveys of Juba River crossing again described.

26 Nov One repro sect under Lt A.L. Hargrave to GSGS Cheltenham for temp duties.

27 Nov. Maj Browne's method for plotting a perspective grid on an oblique air photo by the Browne Oblique Grid Plotter, description at Appx A.

Tasks listed at end. Mostly Arty and AA surveys.

#### **December 1941.**

Still shown at Tadcaster, Yorks.

13 Dec Photo-mech vehicle and detachment return from Cheltenham.

Tasks listed at end

PRO WO 166/3786

Seen 31-3-09

#### **521 Corps Field Survey Company War Diary 1942.**

The War Diary now contains typed monthly "Training & Progress Reports"

A second paper on Browne's Oblique-Grid Plotter is included.

"Determination of Tilt Errors to Height Measurements in Air Survey", by Browne.

#### **Neat Loading Tables for all unit transport.**

PRO WO 166/8214

Notes on this diary could be expanded.

Seen 31-3-09

#### **521 Corps Field Survey Company War Diary 1943.**

Apart from the diary information, this file contains :-

"Triangulation in Areas where existing Trig Lists are of Doubtful Value" by Maj W.E. Browne RE Dec 1942. 9 pages fooscap.

"Rapid Fixation of Points for Controlling Air Photos. (Where there is an existing triangulation)". Mar 1943, by Maj W.E. Browne MBE RE. 10 pages foolscap.

11 Jan Advance party move from Tadcaster to Ampthill, Bedfordshire.

15 Jan Rear part move to Ampthill.

At Ampthill still in Dec 1943.

PRO WO 166/12155

Notes on this diary could be expanded.

Seen 31-3-09

#### **521 Corps Field Survey Company R.E. War Diary 1944.**

The file contains manuscript war diaries including strength returns and typescript Training & Progress Reports.

##### **January 1944.**

Location, Ampthill. Normal unit routine for much of the month.

Topo - As and when released from Benson individual training in field survey being undertaken.

Nearly all released from Benson work by 24 Jan.

Drawing Section employed continuously on Benson work.

Repro on GSGS 4041, Trg Area Sheets and E.C. Boundaries.

Diary signed by Maj C.S. Barron. O.C.

##### **February 1944.**

Tech report includes 8 Map Photo Section ???

Drawing, Map Photo and Repro Secs on Benson.

##### **March 1944.**

Vehicles shown as HQ & Drawing - 1 utility. 1 3-ton G.S. 1 Water trailer. Repro - 4 x 3-ton G.S. 2 x 3-ton Print. 2 x 3-ton Photo Mechanical. 2 Trailers Gen. 2 Motor Cycles.

Exercise Eagle was a deployment to Doncaster 11 Feb - 25 Feb.

Much on training. 4 x Benson sheets

##### **April 1944.**

Topo Secs on Battle Course at STC RE.

Drawing Sec training in use of parallax bar and air svy plotting, minor control plots.

Repro & 8 Map Photo Sec on 2<sup>nd</sup> Army printing orders.

##### **May 1944.**

Normal unit routine. No tech report.

##### **June 1944.**

6 Recce party to marshalling area.

7 Light scales party to marshalling area.

8 Recce party embarked SS Fort Wrigley.

9 Light scale party embarked LST 524.

11 Light scale party disembarked & to Assy area 2345.

- 13 Recce party disembarked.  
 15 Topo Sec on survey work. No. 2 G.S. Sec arrive.  
 16 Triangulation. This continued .  
 27-28 Recce for Op Epsom.

**July 1944.**

War diary now more detailed, signed by Barr.  
 Typescript paper on Combined Line and Half-Tone Composite Base Maps.  
 Method described is in preference to T.I. No. 6 (21 A. Gp/8543/Svy.  
 Method of Laying Down Stipples Combined With Solids.

**August 1944.**

Topo revision f 37/16SE continued. 1:25,000 print tasks.

**September 1944.**

- 1 No 2 Topo sec detachment to No. 3 Fd Svy Depot to assist in map distribution.  
 6 Recce party to Brussels.  
 7 Coy HQ from Amiens? To Brussels  
 Much "Printing Continued".  
 Unit War Diary Appx A gives log of locations etc.

**October 1944.**

Manuscript diary not very legible. Nothing outstanding noted.

**November 1944.**

Ditto Oct. No tech annexes.

**December 1944.**

Topo at Louvain.  
 WO 171/1636

Seen 5-5-09

**521 Corps Field Survey Company War Diary 1945.**

War diaries are manuscript, sometimes carbon copies. Not easily readable.  
 Strength returns and Location situation proformae included.

**January 1945.**

May 1945.

- 4 May Moved to new loc at Luneberg.  
 8 May VE Day. Printing continued.

**June 1945.**

- 3-9 Topo on bridge surveys.  
 16 Coy moved from Luneberg to Iserlohn  
 25 Maj R.W. Pring Takes over from Maj C.S. Barron as O.C.

**July 1945.**

Little other than postings in and out.

**August 1945.**

Ditto.

**September 1945.**

Ditto.

- 17 Maj A.J. Elsey assumes command.  
 21 Maj Elsey proceeds on release.  
 25 Maj D.E. Gardner arrives to take over.

**October 1945.**

Possibility of unrest in German population initiates Standing order contingency preparations.  
 Plan of camp attached.

**November 1945.**

Reproduction report lists GSGS 4414 and other series produced.

**December 1945.**

No tech report.  
 WO 171/5559

Seen 5-5-09

**521 Corps Field Survey Company R.E. War Diary 1946.**

**January 1946** - Location Iserlohn. O.C. Maj D.E. Gardner.

No war diary but typescript Report on Reproduction 23 Dec - 23 Jan.

Mostly reproduction of GSGS 4414 Germany 1:25,000 and some town plans and admin boundaries maps.

Topo Sections on trig recce work. 1 Topo Sec at Recklinghausen, No. 2 at Dusseldorf.

**February 1946.**

Location Iserlohn.

Topo sections on trig recce of 1:25,000 sheets.

Reproduction of GSGS 4414(A) German Admin Boundaries 1:25,000.

Unit disbanded on 28 Feb 1946.

WO 171/9426

Seen 5-5-09

**4. NOTES FROM SOUVENIR BROCHURES.**

None are known for 521 Field Survey Company R.E.

**5. NOTES FROM PERSONAL ACCOUNTS.**

None are known.