

AWM4
Australian Imperial Force unit war diaries,
1914-18 War

Engineers

Item number: 14/7/24

Title: Headquarters 1st Australian
Divisional Engineers

December 1917



AWM4-14/7/24

WAR DIARY

or

INTELLIGENCE SUMMARY.

(Erase heading not required.)

H.Q., 1st. Aust. Div. Engineers.
1st. to 31st. December 1917.

Original
Army Form C. 2118.

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Instructions regarding War Diaries and Intelligence Summaries are contained in F. S. Regs., Part II. and the Staff Manual respectively. Title pages will be prepared in manuscript.

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
SAMER.	1st.		Visited 2nd. Field Company and attended parade at which Major MATHER said farewell to his Company on the eve of his departure to take up the command of 3rd. Aust. Pioneer Bn. Strength of Divisional Engineers as per appendix.	Appendix I
SAMER	2nd.		Holiday.	
SAMER	3rd.		Office Work.	
SAMER	4th.		Left in car at 9.30 a.m. with G.S.O I and went through to Army Corps H.Q. at FLETRE. Saw C.E., 1st. Anzac there re work in the area we are about to take over. Went on to 5th. Aust. Div. H.Q. at DRANOUTRE. Drove out with C.R.E. 5th. Aust. Division and Corps Water Supply Officer to WYTSCHAETE and examined the water supply there. Also visited several camps. Camps are in very good order and are well supplied with horse lines etc. Very frosty night. This will necessitate the burying of all water pipes etc.	
DRANOUTRE	5th.		Went out in car with C.R.E. 5th. Aust. Div. to 8th. Brigade H.Q. and visited several dumps, camps etc. and got a general idea of the lay of the country. Returned via FLETRE and CASSEL to SAMER.	
SAMER	6th.		Voting for the Conscription Referendum.	
SAMER	7th.		Inspected transport of 2nd. Field Company. Found the horses well housed in stables and being well cared for and harness in good order.	
SAMER	8th.		Office Work.	
SAMER	9th.		Sunday. Very wet day.	
SAMER	10th.		Office Work. Drafted out "Notes on Engineer and Pioneer work etc. in Sector to be taken over by the Division". These notes were approved by Divisional Commander and issued on 13th.	Appendix II
SAMER	11th.		Office Work.	

WAR DIARY

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1st. Aust. Div. Engineer H.Q.
1st. to 31st. December 1917.

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Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
SAMER	12th.		Complaint received from Divisional Commander about the 2nd. Field Company transport on the march. Apparently only due only to water cart which was the only vehicle with the column.	<i>see</i>
SAMER	13th.		Field Companies on the move north. (With Brigade Groups).	<i>see</i>
SAMER DRANOUTRE	14th.		Word received at 9.a.m. that two lorries available to take personnel of Div. Engineer H.Q. to DRANOUTRE so got everything packed up and away. Went in car to 5th. Div. H.Q. at DRANOUTRE. Remainder of our H.Q. went out to 2nd. Field Company who are already in their quarters near Lindenhoeck. Drove out with C.R.E. 5th. Aust. Division in afternoon and visited 15th. 8th. and 2nd. Field Company and inspected their camps, horse lines etc. Field Company camps are all very good and have good horse standings.	<i>see</i>
DRANOUTRE	15th.		Started out with C.R.E. 5th. Aust. Division and proceeded down VERNE Road via WYTSCHAETE down VERNE Road to RESERVE Line and along the line to the right to Fanny Communication Trench. Reserve Line is in very fair condition and consists mainly of a continuous trench, duckboarded and revetted in most parts. Went up FANNY C.T. to the Support Line which is in good condition at that point. Along the Support Line to HUN'S Walk and back through MESSINES to 8th. Brigade H.Q. The road near MESSINES is in very bad condition and needs a lot of repairing. Mounted personnel of Div. Engr. H.Q. left SAMER by road with 1st. Brigade Group.	<i>see</i>
DRANOUTRE	16th.		Taking over papers etc. from C.R.E. 5th. Aust. Division.	<i>see</i>
DRANOUTRE	17th.		Taking over from C.R.E. 5th. Aust. Division. 1st. Aust. Div. arrived and took up quarters. D.E.H.Q. personnel moved into quarters during the morning.	<i>see</i>
DRANOUTRE	18th.		Office work. Squaring up etc. Divisional Engineer Instructions No. 1 issued. Mounted personnel of D.E.H.Q. arrived.	<i>see</i> Appendix III
DRANOUTRE	19th.		Attended conference at 2nd. Aust. Div. H.Q., consisting of Corps Commander, Divisional Commanders G.S.O's. and C.R.E's. of 1st. 2nd. and 3rd. Divisions re work in new area and general works programme and defence schemes etc.	<i>see</i>

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Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
DRANOUTRE	20th.		Went out in car at 8.a.m. with G.S.O.I, picked up O.C. 1st. Field Company and called in at 2nd. Brigade H.Q. and picked up G.O.C. Brigade. Went on up to WYTSCHAETE and then walked to 8th. Bn. H.Q. and then up in car to 7th. Bn. H.Q. in ONRAET Wood. Then walked up tramline and duckwalk tracks to RESERVE Line. The line at this point needs a lot of work as the posts are practically unformed. Went along the Reserve Line to VERNE Road and back to WYTSCHAETE. Reserve Line is wire and posts exist in parts but needs a lot of work. Very foggy day enabling us to move about anywhere.	
DRANOUTRE	21st.		Went out in car at 9.a.m. to 3rd. Brigade H.Q. where I picked up O.C. 3rd. Field Company and proceeded to Reserve Line via FANNY's C.T., up to Support Line and visited 9th. Bn. H.Q. who have good quarters in an old German Pill box. Discussed work with C.O. Bn. and works officer. Method of working with sappers in this Brigade is not very satisfactory as the works officers appointed are not capable of carrying out the work. Went along the Support Line to HUN's Walk and then along to 10th. Bn. H.Q. where I found the system of work much better as the Bn. is making full use of the Sappers as they should be used to supervise the work. Returned via CURRIE R.E. Dump where the 3rd. Field Company have their advanced billets. Walked across from there to 3rd. Bde. H.Q. and picked up car.	
DRANOUTRE	22nd.		Office work in morning, making out reports etc. Drove Major DYER out to 1st. Field Company's advanced billets in GRAND BOIS in afternoon and inspected the billets. They are in pill boxes and shelters in a deep trench and are fairly safe and comfortable.	
DRANOUTRE	23rd		Went out in car at 9.a.m. to 1st. Field Company. Inspected horse lines and found them satisfactory. Picked up Major DYER and went up to advanced billets, picked up Major MURDOCH and went on up to RESERVE Line and along to the left to DRMM STRASSE. Two new posts are wanted on the flank and instructions given for them to be put in hand.	
DRANOUTRE	24th.		Office work. Issued Divisional Engineer Instructions No. 2. Drafted out and forwarded to D.H.Q. a memorandum on the use of Engineers in the Division. This was adopted with a few minor alterations and was issued by D.H.Q. on 26th. inst.	Appendix IV Appendix V
DRANOUTRE	25th.		Christmas Day. Divisional Commander decides that owing to work being urgent no holiday could be given. A day to be set apart for holiday when relieved from the line.	

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2009

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
DRANOUTRE.	26th.		Office Work. Divisional Engineer Instructions No.3 issued.	Appendix VI
DRANOUTRE	27th.		Visited C.E. at Corps H.Q. re work on defence line, stores etc. Everything satisfactory. <i>Submitted Bi-Monthly Report</i>	Appendix VII
DRANOUTRE	28th.		Went out in car with D.A.Q.M.G. to CURRIE Dump and interviewed Sappers BLEECHMORE and MOFFITT candidates for Cadet School in England. Both very satisfactory. Then drove to WYTSCHAETE to Railway Dump and examined country with a view to extending the tram to VERNE Dump. Consider feasible and a good proposition. A lot of shelling had taken place around RAILWAY Dump but no damage to the dump, but the road was badly damaged in places. Major DYER left for England to take over command of BRIGHTLINGSEA Training Depot. Submitted Bi-monthly Works Report. Engineer Instruction No.4 issued.	Appendix VIII
DRANOUTRE	29th.		Morning in office. 2/Lieut. ROCHESTER arrived from Cadet School and I took him in car to advanced billets of 1st. Field Company where I saw Major MURDOCH re work which seems to be going on all right.	
DRANOUTRE	30th.		Office work.	
DRANOUTRE	31st.		Office work. Instructions issued Field Companies to mark out firing line between posts in Reserve Line and for work to be spitlocked. Strength of Divisional Engineers as shown in Appendix I.	

S. Murray Lieut. Colonel,
C.R.E., 1st. Australian Division.

Appendix I

DAILY STRENGTH RETURN.

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1st. Aust. Divisional Engineers.

1st. December,

1917

UNIT.	STRENGTH.				ATTACHED.				REMARKS.
	Personnel. OFF. O.R. TOTAL	Horses.	Personnel. OFF. O.R. TOTAL	Horses.					
D. E. H. Q.	1 9 10	6	3 28 31	4					
1st. Field Coy.	4 180 184	71	- 2 2	-					
2nd. Field Coy.	6 186 192	74	- 2 2	-					
3rd. Field Coy.	3 188 191	71	- 3 3	2					
Total.	14 563 577	222	3 35 38	6					
1st. Div. Sig. Coy.	13 267 280	130	2 74 76	-					

Attached.	
Officers	27
Other Ranks.	830
Total	857
Horses.	352

Capt. & Adjt.,
1st. Aust. Div. Engineers.

Appendix No 1

Appendix I

2009

DAI.LY STRENGTH RETURN.

1st. Aust. Divisional Engineers.

31st. December, 1917

UNIT.	STRENGTH.				ATTACHED.				REMARKS.
	Personnel. OFF. O.R.	TOTAL	Horses.		Personnel. OFF. O.R.	TOTAL	Horses.		
D. E. H. Q.	3	10	13	6	-	10	10	4	
1st. Field Coy.	4	189	193	74	-	8	8	-	
2nd. Field Coy.	7	182	189	74	-	25	25	2	
3rd. Field Coy.	4	187	191	74	2	43	45	-	
Total.	18	568	586	228	2	86	88	6	
1st. Div. Sig. Coy.	15	323	338	133	1	60	61	-	

Attached.	
Officers	<u>33</u>
Other Ranks.	<u>891</u>
Total.	<u>924</u>
Horses.	<u>361</u>

Capt. & Adjt.,
1st. Aust. Div. Engineers.

Appendix No. 1

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Appendix I

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STATEMENT as to CASUALTIES, REINFORCEMENTS etc.
1st.Australian Divisional Engineers.
December 1917.

Killed.		Wounded.		Sick Evacuated		Rejoined from Hospt.		Reinforce ments.		Transfers.		Remarks.	
Off.	O.R.	Off.	O.R.	Off.	O.R.	Off.	O.R.	Off.	O.R.	Plus.	Minus.		
	1	1	6		11	-	14	2	11		1	2	11

2/Lieut. D.T. CURDIE appointed 2/Lieut. 1/12/17 and posted to 2nd.Field Company.
 Major E.F.S.MATHER DSO O.C.2nd.Field Coy. transferred to command 3rd.Pioneer Bn. 2/12/17.
 2/Lieut. R.O.W.EARLE taken on strength from Cadet Bn. 11/12/17 and posted to 1st.Field Coy.
 2/Lieut. F. ROCHESTER taken on strength from Cadet Bn. 29/12/17 and posted to 1st.Field Coy.
 Major R.J.DYER appointed to command Engineer Training Depot BRIGHTLINGSEA and left on 28/12/17.

The above figures do not include Div.Sig. Company.

Appendix No 1

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SECRET.

FIRST AUSTRALIAN DIVISION.

S/3985.

Headquarters.
13th Decr. 1917.

Instructions and -

Notes on Engineer and Pioneer work etc. in Sector to be taken over by the Division.

1. DIVISION OF AREA. For Engineer work the Divisional Sector is divided into 3 areas corresponding to each two battalions in the line. A Field Company is responsible for the Engineer work in each area.
2. LOCATION OF COMPANIES. (i) The 1st. Field Company will work in the left area and will take over from the 15th. Field Company, with H.Q. at N.28.a.8.4. Two Sections are at forward billets in GRAND BOIS. (ii) The 2nd. Field Company will work in the centre area, and will take over from the 14th. Field Company with H.Q. at N.28.c.2.6. (iii) The 3rd. Field Company will work in the right area with Right Brigade, and will take over from the 8th. Field Company with H.Q. at N.35.d.1.5. (iv) 1st. Pioneer Battalion will take over from 5th. Pioneer Battalion with following locations;-
 - H.Q. and 1 Company at N.28.c.3.6.
 - 1 Company at N.27.c.0.2.
 - 2 Companies N.24.c.8.4.
3. WORK. (i) The work of Field Companies consists chiefly of wiring and improving the support and reserve lines of Defence, and a certain amount of hutting. Except one new communication trench (New Cross) the Field Companies are responsible for all communication trenches in their areas. (ii) The Pioneers are responsible for Tramways, Roads and Screens and the Communication Trench known as New Cross and also a hutting job at DONEGAL CAMP, which however, may be completed before taking over the area. (iii). For the present Field Companies and Pioneer Battalion will take over and continue on all work being done by the units at the time of relief until fresh plans can be made out if found necessary.
4. R.E. DUMPS. (i) The main Corps Dump is at STEENWERCK. (ii) Advanced Corps Dump at DE KENNEBAK, T.3.d.2.9. which is fed by Light Railway from STEENWERCK. (iii) Divisional Dump is at LINDENHOEK, but as it is a very short distance from DE KENNEBAK the latter dump is to be moved still closer; it is not proposed to continue the use of this dump. At present it has 1 circular saw. (iv) Right area dumps. (a) CURRIE DUMP T.12.b.4.4. fed by Light Railway direct from Corps Dump and stores are forwarded from there by Trench Tramway. Lorry road in and out. (b) BELL FARM O.31.c.2.5. fed by Light Railway. Outward stores by Trench Tramway. No road in or out. (v) Centre Area Dump. Railway Dump O.20.c.2.3. Fed by Light Railway or lorry. Out by in road only as there is no trench tramway, but roads are good. (vi) Left Area Dump. PARMA DUMP. N.12.c.5.0. Fed by Light Railway. Broad Gauge and road. Out by Trench Tramway and Road.
5. FORWARDING OF STORES. Indents are forwarded to Corps daily by C.R.R. and the materials are forwarded direct to the Forward Dumps. The Dumps are controlled and manned by the Field Companies in charge of the area and Field Companies will therefore arrange to take over

(P.T.O.).

(2).

their respective dumps and continue on the present system. The Right Brigade arrange pushing parties for the tramways in their area. In Left Brigade - From Railway Dump stores are taken forward under Field Company arrangements to ANZAC Farm and OOSTAVERNE, and are carried forward from there under Brigade arrangements. From PARMA DUMP stores are taken forward by Mule Tramway operated by 8th. Tramway Company, supplemented by 30 Pioneers, to RAVINE WOOD and OOSTAVERNE and thence by carriers under Brigade arrangements.

6. LIAISON. The 2nd. Field Company will arrange for a Liaison Officer to be attached to 2nd. Brigade H.Q. and he will be responsible for arranging for working parties etc. for both Field Companies. The 3rd. Field Company will similarly arrange with the 3rd. Brigade.

7. DEEP DUGOUTS. At present the 177th. Tunnelling Company with H.Q. at T.9.a.4.0. are engaged on tunnelling work as follows;-

- | | | |
|-------|--------------|-------------|
| (i) | RAVINE WOOD. | 0.10.d.2.5. |
| (ii) | HON FARM. | 0.27.b.1.1. |
| (iii) | VERNE ROAD. | 0.21.c. |
| (iv) | GABION FARM. | U.2.d.2.5. |
| (v) | WYTSCHAETE. | |

1 to 4 is to accommodate up to 200 men and 5 is for a Brigade H.Q.

8. TELEPHONES. The Field Companies are at present all connected by telephone as follows;-

8th. Field Company from 8th Brigade.
14th & 15th. Field Companies from Pioneers.
Pioneer Battalion direct to Division.

It will greatly facilitate the work if this service is continued when this Division takes over.

J. A. Blamey

Colonel.
General Staff.
1st Australian Division.

H.Q., Divisional Engineers,
1st. Australian Division,
18th. December, 1917.

Appendix III

DIVISIONAL ENGINEER INSTRUCTIONS No. 1.

1. DIVISION OF AREA. (a) For Engineer work the Divisional Area is divided into three sub-areas corresponding to each two battalions in line.
 (b) These areas will be known as Right, Centre and Left areas and a Field Company is allotted to each.
 1st. Field Company has charge of Left Area.
 2nd. " " " " " Centre Area.
 3rd. Field " " " " " Right Area.
 (c) Each of these areas will be further sub-divided into areas, to be known as A, B, C, D Areas, A being right sub-area and B being left sub-area, each corresponding to Battalion boundaries. These areas will include Front Line, Support Line and Reserve Line.
 (d) Similarly the rear areas behind A & B will be known as C & D areas respectively, and will include all work behind the Reserve Line, and will include Corps Front Line, Corps Support and Corps Reserve.
 The two latter have not yet been sited.
2. REPORTS. A daily report will be furnished on attached form to reach this office by first D.R. in morning. Report to show work done for 24 hours ending 6 p.m. The material used will show the total for each sub-area, and will be the actual material put in to the work.
3. FORWARD BILLETS. Field Companies should arrange for men working in forward areas to live as far forward as possible.
4. RELIEFS. Field Companies will arrange their own internal reliefs. It is suggested that Sections should be changed from forward to back area every week, and the reliefs should be in pairs so that the Sections return to areas that they know. The second relief should coincide as nearly as possible with Battalion reliefs so that a Section which knows the line goes in with the new Battalion.

(Sgd.) A.M. Martyn, Lieut. Colonel.,
C. R. E.,
1st. Australian Division.

DISTRIBUTION:-

- Copy No. 1. C.R.E.
- " No. 2. 1st. Field Company.
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- " No. 4. 3rd. Field Company.
- " No. 5. 1st. Pioneer Battalion.) For information.
- " No. 6. 1st. Aust. Division.)

Field company.

DAILY WORKS REPORT.

.....

Report No. 206

..... Date.

Location of Work.	Sub-Area.	Line of Defence.	Nature of Work.	Work done for 24 Hours.	% Done	Material used.	Working Party.		Hours.		Remarks.
							Engrs	Inf	From	To.	

Appendix No. 3

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Field company.

DAILY WORKS REPORT.

DAILY WORKS REPORT.

Report No....

..... Date.

..... Date.

Location of Work.	Sub-Area.	Line of Defence.	Nature of Work.	Work done for 24 Hours.	% Done	Material used.	Working Party.		Hours.		Remarks.
							Engrs	Inf	From	To	

Appendix No 3

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H.Q., Divisional Engineers,
1st. Australian Division,
24th. December, 1917.

Appendix IV

DIVISIONAL ENGINEER INSTRUCTIONS No. 2.

1. DIVISION OF AREA.

Engineer Instructions No.1. Para 1 (c), 2 (d) are cancelled and the following substituted:-

(a) Each Field Company Area will be divided as shown on attached map. The two forward areas will include the Outpost and Support Systems, and will be known as R1, R2, C1, C2 and L1, L2, according to whether they are in Right, Centre or Left Field Company area. The areas in rear will similarly be known as R3, C3, and L3 respectively and will include the Reserve System.

2. REPORTS.

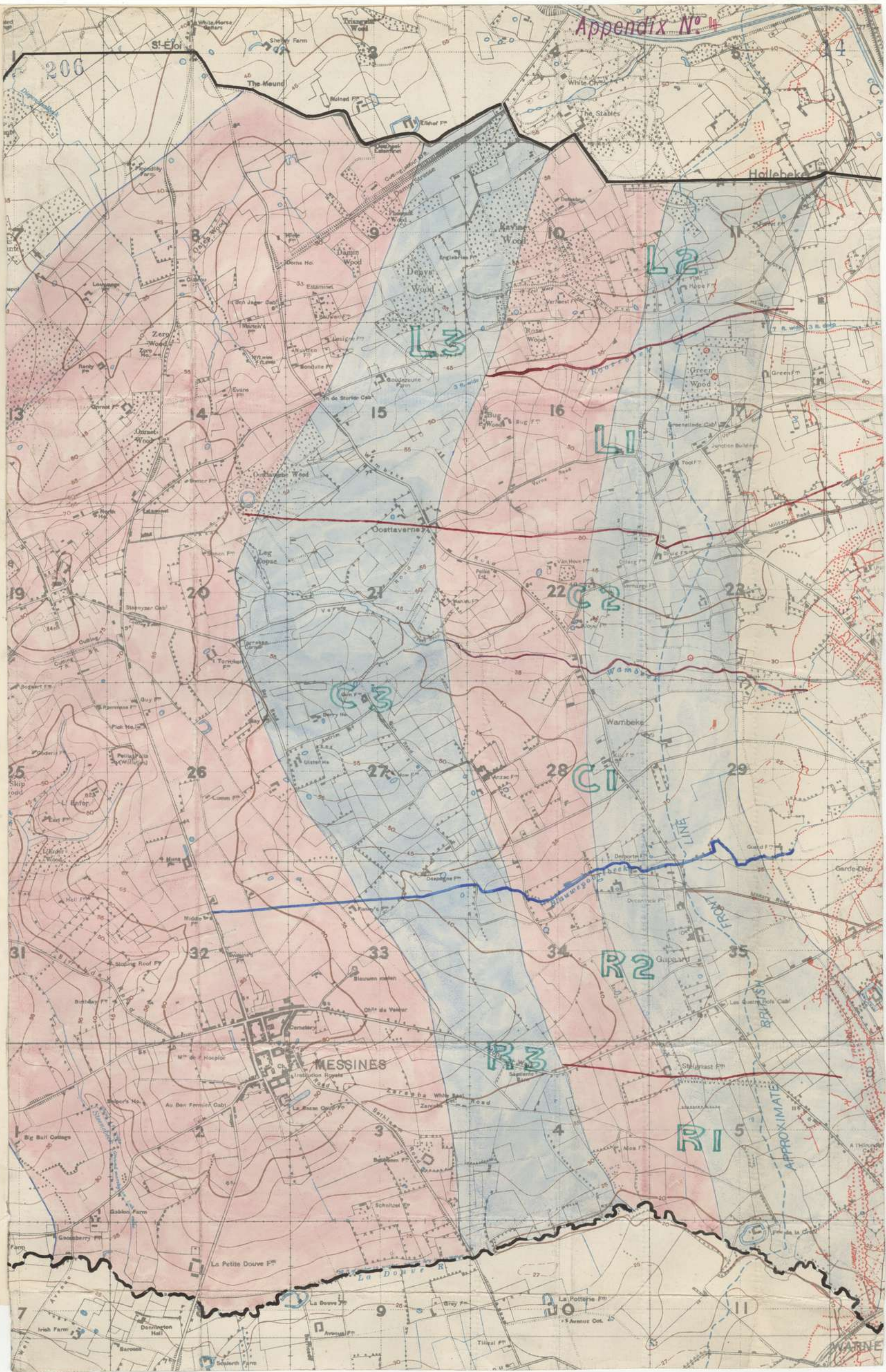
The daily report form will be filled in as follows:-

- (i) First column (Location of work) will be the number of Strong Point, name of Trench or map location of work.
- (ii) Second column (Sub-area) will be L1, L2, etc. in accordance with attached map.
- (iii) Third column (Line of defence) will be Outpost, Support or Reserve System and will include any work within the areas shown on attached map.
- (iv) Column "Material Used" will contain the total amount used in each Sub-Area.
All reports should be made out from front ~~xxx~~ to rear and be in the order L1, L2, L3.
The map Location of all new work such as a new post etc. should be given, attention drawn to the fact that it is new work and a sketch showing particulars should be forwarded.

(Sgd.) A.M. Martyn, Lieut. Colonel.,
C.R.E., 1st. Aust. Division.

DISTRIBUTION:-

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"	No. 2.	1st. Field Company
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"	No. 4.	3rd. Field Company.
"	No. 5.	1st. Australian Division.



Poplar tree.
 Light-house.
 Post.
 Drill ground.
 Pump.
 Culvert.
 Bridge.
 Drawbridge.
 Coast-guard
 station.
 Post.
 Pottery.
 Powder magazine.
 Water supply.
 Pit-head, Shaft, Well.
 Artesian well.
 Ventilating shaft.
 Boring.
 Quay, Platform.
 Cattle platform.
 Goods platform.
 Junction.
 Refinery.
 Sugar refinery
 Beet-root factory.

Sondage
 Source - Spring.
 Sucrerie, Suc^{te} - Sugar factory.
 Tannerie - Tannery.
 Tir à la cible - Rifle range.
 Tissage - Weaving mill.
 Tôlerie - Rolling mill.
 Tombeau - Tomb.
 Tour - Tower.
 Tourbière - Peat-bog, Peat-bed.
 Tourelle - Small tower.
 Tuilerie - Tile works.
 Usine à gaz - Gas works.
 " électrique } Electricity works.
 " d'électricité }
 " métallurgique } Metal works.
 " à agglomérés - Briquette factory.
 Verrerie, Verr^{ie} - Glass works.
 Viaduc - Viaduct.
 Vivier - Fish Pond.
 Voie de chargement -
 " " déchargement }
 " " d'évitement } Siding.
 " " formation -
 " " manoeuvre -
 Zinguerie - Zinc works.

H.Q., Divisional Engineers,
1st. Australian Division,
24th. December, 1917.

Appendix V

1st. Australian Division,

With reference to S/1066 para 4 I recommend as follows:-

1. That 1 Section of each Field Company be allotted to each Battalion area to be responsible for the supervision of all Engineer Work in the Outpost System and Support System.

The Officers Commanding the Sections will act as Liaison Officers with the Battalions in Line and it will be their duty to advise the Battalion Commanders on all Engineer matters and assist in every way possible to get the work done.

2. That 2 Sections of each Field Company be allotted to the Reserve Line of the Front Zone. In each Brigade Sector an Engineer Officer will be detached to supervise the work on the Reserve Line. He will act as Liaison Officer for the Battalion told off for work on the Reserve Line and will advise the Battalion Commander on Engineer Matters and assist in carrying out the work.

3. That the Officer Commanding each Field Company be responsible for the General supervision of the Engineer work in his Sector. He will act as technical adviser to the Brigade Commander and be responsible for the proper distribution of Engineer labour. He should keep in close touch with the Battalion Commanders and see that the Section Officers are carrying out their work correctly.

4. That as far as the strength of the Field Companies permits, all Engineer work should be under Sapper supervision and especially work involving the expenditure of Engineer material.

5. That Battalion works Officers should be instructed to work in close co-operation with the Engineer Officers. The chief duty of the Works Officers should be to arrange for working parties and see that they arrive on the jobs correctly but the actual distribution of the working parties should not be made without consulting the Engineer Officer so that he can arrange for Sapper supervision. The correct distribution of working parties is just as much an Engineer responsibility as the correctness of the work.

6. That full use be made of Engineer personnel and that the Field Companies be encouraged to give advice and assistance to carry out their duties. As a general rule Engineers are ~~used~~ unless they are given Infantry working parties to assist them.

7. That as regards actual work defences should be regarded of first importance. Work on communications should therefore consist of maintenance only. In any case no new work should be done on communication trenches for the present behind the Support Line and only in front of that line when it is certain that the work is really urgently required.

Sullivan

Lieut. Colonel.,
C. R. E.,
1st. Australian Division.

Appendix VI

DIVISIONAL ENGINEER INSTRUCTIONS No. 3.

- No.1. REPORTS. The column "Nature of Work" should state whether the work is wiring, digging, Trench ~~etc.~~
 The column "Work Done" should as a rule contain figures only being ~~stated~~ the amount of wiring etc. done for the 24 hours.
2. NOTICE BOARDS.
- (a) All Strong Points must be clearly marked. The flanks of each Strong Point should be marked and boards showing the exact direction of the next Strong Point on each side should be shown.
 (b) Direction boards are to be placed at the intersection of the Reserve and Support Lines with all Duckboard tracks, tramways, Roads and any other tracks. They should contain the information that it is the Reserve of Support Line and the direction of the nearest Strong Point and its number should also be given.
 (c) In the case of Duckboards and Tramways, notices should be placed at any junction or important points stating the name of the track and to where they lead.
 (d) All dumps and other important points should also contain notice boards and the direction of Battalion and Company Headquarters should also be given.
 N.B. These matters are to be treated as very urgent particularly para (b).
3. RESERVE LINE. Work on the Reserve Line should be carried out as far as labour available permits on every Strong Point simultaneously.
 Wiring is of the utmost importance and it is very important that "defensive" wire should be erected in front of each Strong Point and also across the bases of the triangles of Tactical wire.
4. HOURS OF WORK. As much daylight work should be done as possible consistent with the safety of the men and the observation of the work. Every advantage should be taken of foggy weather and working parties should be warned accordingly so that daylight work can be done instead of night work.
5. SCREW PICKETS. Owing to the shortage of Corkscrew Pickets they should only be used in cases where it is impossible to use angle iron pickets such as Outpost wiring etc.

(Sgd.) A.M. Martyn, Lieut. Colonel.,
 C.R.E., 1st. Aust. Division.

DISTRIBUTION:-

Copy No. 1. C.R.E.
 " No. 2. 1st. Field Company.
 " No. 3. 2nd. Field Company.
 " No. 4. 3rd. Field Company.
 " No. 5. 1st. Australian Division.

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H.Q., 1st. Aust. Div. Engineers,
27th. December 1917.

(a) Defensive Works.

Right Field Company Area.

- (i) The Outpost Line consists of a number of small posts with practically no shelter.
- (ii) Regimental Support Line consists of about eight S.Points capable of holding a platoon each with very little accommodation. Extension of these posts is going on as shown:-

S.P.1.U.5 This was a small strong point between New Cross C.T. and River DOUVE. It only covered the ground directly to its front about S.E. It had no accommodation and no C.Trenches.

To give flanking fire it is proposed (1) To join this S.P. up to two drains which drain New Cross C.T. - One drain is on the right flank and one on the left flank.

- (ii) To duckboard both drains so as to give communication to New Cross C.T.
- (iii) To construct splinter proof accommodation for thirty men.

Work done. 90 yds fire trench excavated on right flank and 10 yds partially revetted.

70 yds C.T. right excavated. 6 yds partially revetted, and duckboarded.



- Existing Strong Point. (circled cross symbol)
- Proposed fire trench. (dashed line)
- Trench excavated. (solid line with cross-hatching)
- Drain to be duckboarded. (line with cross-hatching)

Wiring. A double row of French wire with a forward apron of barbed wire and in places double apron.

S.P.2. U.5.d.2.5.

This is an entirely new trench and it is proposed to do the following:

- (i) To construct a strong point to fire to its front (S.E.) crossfire with S.P.1 on its right and S.P.3 on its left.
- (ii) To connect both flanks with New Cross C.T. by existing drains.
- (iii) Convert drains into C.T.
- (iv) Make accommodation for one platoon.

This work has been marked out.



- Proposed Fire Trench. (dashed line)
- Proposed C.T. (line with cross-hatching)

Wiring.

Double apron on a double row of French wire continued from S.P.1.

S.P.3. U.5.d.5.6.

This is an entirely new work. Proposals as follows:-

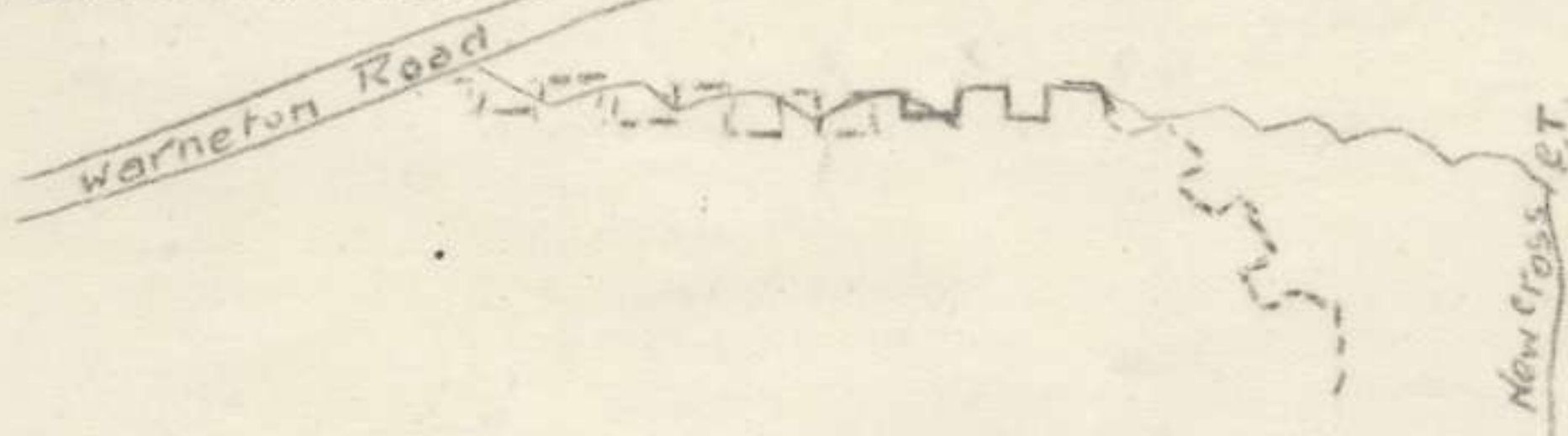
- (i) To construct fire trench to fire S.E. and E giving crossfire with No.2 S.P.
- (ii) Connect left flank back to New Cross Communication Trench.
- (iii) Make accommodation for one platoon.

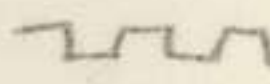
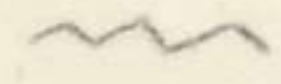
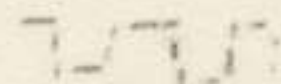
This work has been marked out.

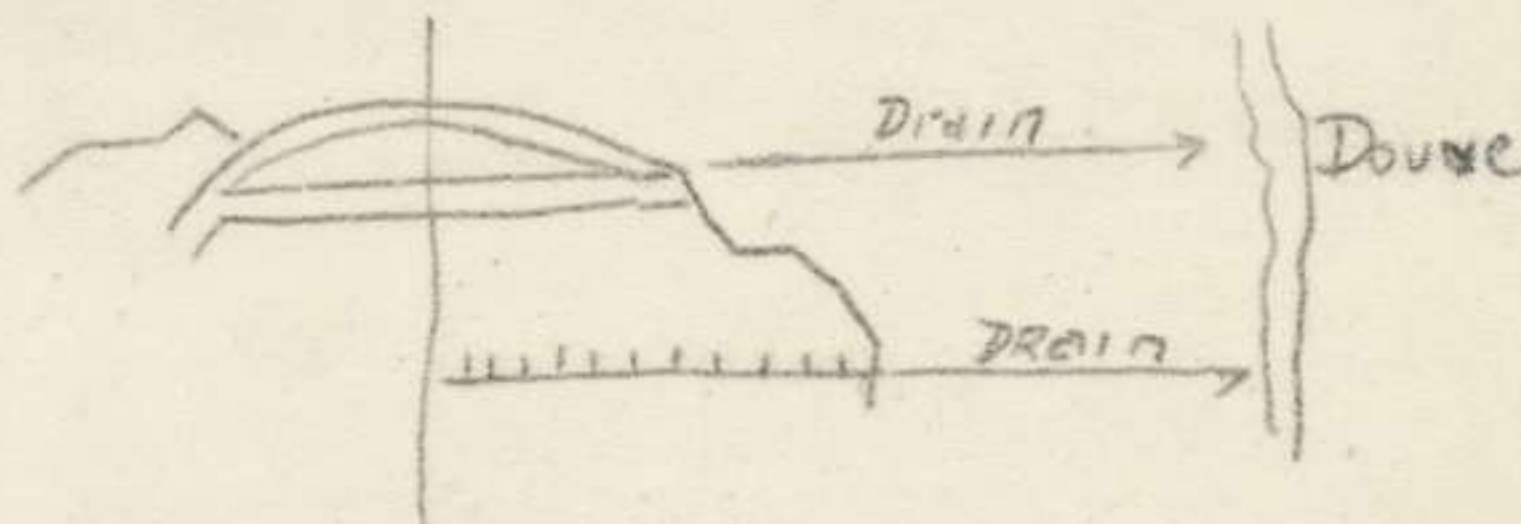


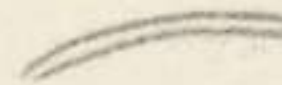

Proposed Fire Trench. (dashed line)

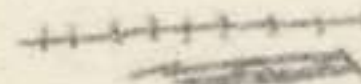
Wiring. Double French with double apron from S.P.2

(a) Defensive works. (Contd.)S.P.5. U.5.b.5.2.Condition when started. This post is a small one in an old trench which is connected up to New Cross U.T. and to the Warneton Road. There is at present accommodation for about ten men.Proposals. (i) To connect the trench to the road and make it into a fire trench and to add a couple of bays to the right to give flanking fire. (ii) Make accommodation for two platoons and a Company H.Q.Work done. 45 yds of present post renovated. 16 yds of trench dug and revetted.

 Present Post.
  Existing trench.
  Proposed Work.

Wiring. Nothing new around this post.S.P.3.U.5.Condition when started. This post was a fairly large one across New Cross C.T. but the flanking fire was bad and it did not have sufficient accommodation.Proposals. (i) To throw back the Right Flank and connect up with drain. (ii) Extend left flank and refuse it. (iii) Convert the drain into a C.T. (iv) Make accommodation for two platoons and Coy.H.Q. fireWork done. 100 yds/trench excavated. 40 yds revetted. 12 yds partially revetted. 5 trench shelters constructed. (2 men shelters)Rough Sketch.

 Existing Strong Point.
  New trench excavated.

 Drain to be duckboarded.

Wiring. Double French with apron.

S.P.5a. U.5.b.4.7.Conditions This post is large enough to hold a platoon but there is very little accommodation and flanking fire to left is not too good.Proposals. (i) Extend to left to make a larger post and to give flanking fire. (ii) Make accommodation for one platoon.Work done. 40 yds fire trench dug. 20 yds fire trench revetted.Wiring. 186 yds double apron strengthened.

S.P.10. 0.35.a.2.1.Condition similar to S.P.5.aProposals do do.Work done. 20 yds revetted. 20 yds duckboarded. 2 shelters constructed.Wiring. 400 yds strengthened.

S.P.12. 0.34.b.8.5.Condition and Proposals similar to S.P.5.Work done. 40 yds trench dug and revetted.Wiring. 400 yds strengthened.

(a) Defensive Works. Contd.

(iii) The Brigade Support Line consists of about 5 Strong Points capable of holding approximately one platoon each.

No work has been done on the Corps or Divisional Line.

Centre Field Company Area.(a) Defensive Works.

S.P.1.0.28. Post consists of 60 yds trench. 50 yds revetted & duckboarded. Accommodation for Garrison of 3 - 5 men dugouts. Concrete shelter capable of holding 30 men adjacent.

S.P.2.0.28. 60 yds revetted. Length of trench 76 yds. Accommodation 3 - 5 men shelters.

S.P.3.0.28. 75 yds trench revetted and duckboarded. 3 shelters completed. (5 men shelters).

S.P.4.0.28. 76 yds trench revetted and duckboarded. 3 shelters completed. All revetting needs filling behind it.

S.P.2.0.28.s Commenced on 24/12/17 and 25% of excavation completed. S.P. is commanded on both flanks by S.P.1.0.28 and S.P.2.0.28.

S.P.1.0.22 Post has no accommodation. About 30% A framing and revetting completed. Post was not in existence with previous division but was sited so as to sweep Wambeke.

S.P.2.0.22. Now connected up with Manchester Trench. All bays firestepped and parapet sandbagged. Accommodation - 3 shelters for 15 men. 2 Pill boxes (Cleaned and pumped out by us) also for 4 men in M.G. position.

S.P.3.0.22. 5 shelters completed. A great deal of filling in and wiring back being done. Drainage being made good, and duckboarding. and A frames put in. Accommodation for 28 men.

S.P.4.0.22. On taking over was least advanced in support line. 4 shelters now completed. Drainage made. Now being revetted.

S.P.6.0.22. Post has no accommodation and is not revetted, nor drained. Post has only been dug to depth of 4'. Pillbox nearly at Polka Estaminet has accommodation for 12 men.

Reserve Line.

S.P.1.0.27. Least advanced in Reserve Line. 50% of revetting and framing complete. Sandbagging and revetting and bunking up required. One shelter excavated.

S.P.2.0.27. Filling in behind frames and thickening parapet. One shelter completed and three under construction.

S.P.3.0.27. Almost completed. Accommodation good. Being cleaned and drained.

S.P.4.0.27 Almost completed. Accommodation good. Thickening parapet and filling behind frames and constructing firestep.

S.P.5.0.27. Parapet and parados wants thickening. Good accommodation/ 80% completed.

S.P.1.0.21. Good condition. Practically completed. Filling and thickening of parapet required.

S.P.2.0.21. Spoilt by original assaulting troops, being one of original trench systems and island traverses were used. Good accommodation. Firestepping, filling in and thickening of parapet required.

S.P.3.0.21. Accommodation for 15 men. One shelter under erection. Duckboarded throughout. Revetting and filling in under way.

S.P.4.0.21. 5 shelters completed and more shelters in trench. Post practically completed on taking over. Filling in and revetting parapet still required.

Outposts. Accommodation for six men and are revetted with Corrugated iron.

Left Field Company Area.

S.P.4.0.10 Total length including traverses of 70 yds, 30 yds of which had been excavated, A framed and partly revetted. It is now wholly complete with the exception of 60' of revetment and parapet thickening, on left extremity. Drainage partially complete. Requires firestepping in 2 bays. No accommodation in trench itself but could be found in Pill boxes 15 yds to rear.

(a) Defensive Works Contd. ~~Right~~ Left Field Coy Area.

S.P. at O.11.a.2.4. This S.P. has been cleared of debris the whole length of 70 yds and made ready for A framing. Drainage good. Accommodation for garrison in Pill boxes alongside trench. Wiring completed.

S.P. at O.11.c.2.9. This is an entirely new work. Excavated to a depth of 3'6" throughout its whole length of 50 yds and ready for A framing and revetting. 14 A frames have already been fixed. Drainage good. No wiring has yet been done. Accommodation for garrison in pill boxes to rear.

S.P.3.0.10. 75 yds long traversed and revetted. 40 yds of this has been constructed since taking over. There still remains 30' of parapet to be strengthened and thickened. Two destroyed trench shelters have been pulled down and reconstructed, and the trench now contains 5 trench shelters 8' x 6' and 2 M.G.positions. Opening off this trench there is also an entrance to deep mined dugouts where accommodation is at present available for 70 men in bunks. There will be accommodation for 150 men. Drainage good.

S.P.2.0.10. Since taking over this S.P. has been completed, with the exception of 6' parapet on its right extremity which requires thickening. It now consists of 90 yds of fire trench, traversed and revetted, and containing 5 trench shelters (8'x 6') also ammunition and bomb recesses and 2 M.G. positions. Drainage good. There is also an entrance to Advanced. Bn.H.Q. dugout from this trench.

S.P. at O.17.c.95.85. A post has been completed at this point giving covering fire across the fronts of No.12 and 13 posts. It has been A Framed and revetted with corrugated iron, duckwalks laid, the parapet sandbagged up and two shelters provided. A Communication trench has been commenced from Post 12a to this point and excavated to a depth of 2'. Work on this, however, has been discontinued to allow of more important work.

S.P. at O.23.a.85.70 A new post has been commenced at this point and has been excavated for 40 yds ready for A frames. 14 A frames and Corr.iron revetment placed in position and 20 yds parapet sandbagged. Work on this post has been suspended to allow of wiring etc.

New Picquet Line at O.17.c.75.70. At this point the formation of the new picquet line has been commenced. The trench has been deepened and widened, two traverses dug, A frames put in, duckboards laid, corr. iron revetment placed in position and sufficient parapet prepared with sandbagging for 40 men. Excavation for trench shelters has been started and cupolas are on job.

(b) Wire.

Right Field Company Area.

There is a continuous belt of ~~XXXXXXXXXXXXXXXXXXXX~~ wire in front of front line, double French wire in places and single French wire in remainder about 50% of each which is being strengthened nightly.

Support Line. There is a double belt of French wire and barbed apron between posts only. In the right sector wire has been placed round the posts.

Centre Field Company Area.

(Outpost line)

In Left of this sector wire is already laid in belts of varying thickness, From Wambeek to Blauwepoortbeek. About 50% of whole completed and improvements are also being made to existing wire and strengthening over creeks, flanks and valleys. Style: Apron and trip then plain or concertina well screwed down. On right when taken over was very patchy but fairly continuous. Has now been strengthened with double concertina and barb also one row of apron and festooned with barb wire.

Support Line. Four rows extend practically right across sector except for about 50 yds at O.22.c.9.2. 100% concertina completed. Apron fence both front and rear proceeding rapidly.

Reserve Line. Wire is continuous throughout except for 100 yd near Blauwepoortbeek which is under construction. Wire requires

(b) Wire. Contd. Centre Fld Coy Area.

thickening. Consists of 2 concertinas and aprons but is irregular and low in places. Wire along Verne Rd. is very thin.

Left Field Company Area.

Front line. New wire has been erected from a point about O.17.d.0.0 and runs through O.17.d.25.50 in front of No.12 Post, thence to O.17.d.5.8. thence along hedge and turns in to a point O.17.a.9.1. This wire consists of a single belt of French wire with barb laced through and over it and fastened back and front to screw posts. Approximate length 650 yds.

(c) Machine Gun Emplacements.Right Field Coy. Area.

There are M.G. emplacements at the following places:-

	U.5.c.15.45.	1 Gun	Splinter proof only.
	U.4.d.65.80	1 Gun	do
	U.5.a.20.75	1 gun	do
	U.5.c.30.85	1 gun	do
	U.4.a.5.7.	4 guns.	(Septême Barn) Pill boxes.
	U.3.a.2.1.	4 guns	do
	0.35.a.15.25.		Splinter proof only.
(0.35)	0.35.c.7.6.		do
	0.34.d.75.65.		do
	0.34.d.80.55.		do

Centre Field Coy. Area.

0.22.c.5.7. M.G. position has been made at head of small trench near Manchester Trench. Communication trench dug and splinter proof shelter for three men erected also main gun position Manchester Trench. Maintaining trench, which badly needed revetting and draining.

(d) Shelters for Troops and Headquarters.Right Field Coy. Area.

There is practically no shelter in front line. In the support line there are a few splinter proof dugouts and more are under construction.

Right.Bn.H.Q. is in an English Cupola with about 18" of concrete over it.

Left.Bn.H.Q. is in an old German pill box.

In Messines a number of German pill boxes have been cleaned out and bunked and there is accommodation there for about 150 men.

Left Field Company Area.

0.10.c.2.8. New Company H.Q. This is an old German Pill box 17' x 15' and is being reconstructed for use as a rear Coy.H.Q. It has now been pumped dry and the walls on two sides which had fallen in have been pulled down and partly reconstructed.

0.17.c.25.50 A dugout with sandbag walls and three double elephant cupolas has been excavated and erected. Also 6 splinter proof dugouts have been cleaned out and repaired.

(e) Communications.Right Field Company Area.

(1) trenches. New Cross C.T. on the right of Bde. Area and Fanny C.T. on the left. Both are partly trench and partly breastwork. New Cross C.T. is in fairly good order but Fanny C.T. is poor.

(2) Buckwalk tracks. Two main duckwalk tracks, one in each Bn area running parallel to the C.Ts.

(e) Communications. Contd. Rt.Fld.Coy.area.

(3) Roads. Huns walk is also used for Communication and it runs up to and through the front line close to the inter Bn. Boundary.

Centre Fld Coy. Area.

- (1) Trenches. BOB Street is under repairs and maintenance.
 (2) DORSET Street. Duckwalked throughout. Drainage good. Requires wire on duckwalks, revetting screens and filling in.

Left.Field Coy.Area.p

Trenches. C.T. between S.P. 3.0.10. and S.P.4.0.10.
Total length. With the exception of 150 yds of excavation and A framing the whole of this trench has been done since taking over. 65 yds on the extreme right has now been revetted and firestepped for use as a fire trench. From thence onwards for 40 yds has been completed - excavated and A framed. The next 300 yds is only in fair condition, parts being bad. Requires deepening and parapet building up. This work has been temporarily suspended in order to push on with strong points at O.11.a.2.4. and O.11.c.2.9. The drainage of this trench is good.

(f) Trench Tramways. No new work has been commenced on trench tramways.

(g) O.Ps. etc. No new work has been commenced on this work.

(h) Sleeping accommodation in 15ft.dugouts.

In Right Field Coy. area nil.

Left.Field Coy.Area.

The dugout system at RAVINE Wood O.10.d.2.8. has been completed for bunking. 80 bunks have been erected and are now being used. On completion there will be accommodation for about 150. A motor has been installed for the pumping of water from dugout.

177th.Tunnelling Coy. Report attached.

(i) No other work has been commenced.

M. Cunningham
 Lt. Colonel,
 C.R.E., 1st. Australian Division.

Appendix VIII

DIVISIONAL ENGINEER INSTRUCTIONS No. 4.

1. RESERVE LINE. The following points require special attention on the Reserve Line.
 - (a) WIRING must be regarded of first importance and wiring parties no matter how small, should be put on at each Strong Point and should wire across the front towards one another so as to get a defensive line of wire across the whole front.
 - (b) Existing wire should be strengthened so as to provide at least two rows of French concertina wire with an apron over it. This should be regarded as the least width of entanglement permissible.

2. REPORTS. In rendering reports insufficient use is made of sketches. Sketches should be freely used and cross sections should be given as well as plans. This is particularly the case as regards wire entanglements.

5. RECONNAISSANCE. REPORTS. A reconnaissance report of the whole of the forward area is urgently required. It should contain information on the following:-
 - (a) A short description of each Strong Point together with plans and cross sections including the wire. The report should also show proposals for improvement.
 - (b) Dugouts, pill boxes and other accommodation. Plans and cross sections should be given and the plans to be of use must give the North Point and the scale and should also contain the Map Location. The report should state also whether bunks exist and how much sleeping accommodation exists. Proposals for improvements should also be given.
 - (c) Full information about trench Tramways and any proposals for extensions.
 - (d) Full information about duckboard tracks and proposals for extension, branches etc.
 - (e) Any other information likely to be of use.

(Sgd.) A.M. Martyn, Lieut. Colonel.,
C.R.E., 1st. Aust. Division.

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