

AWM4

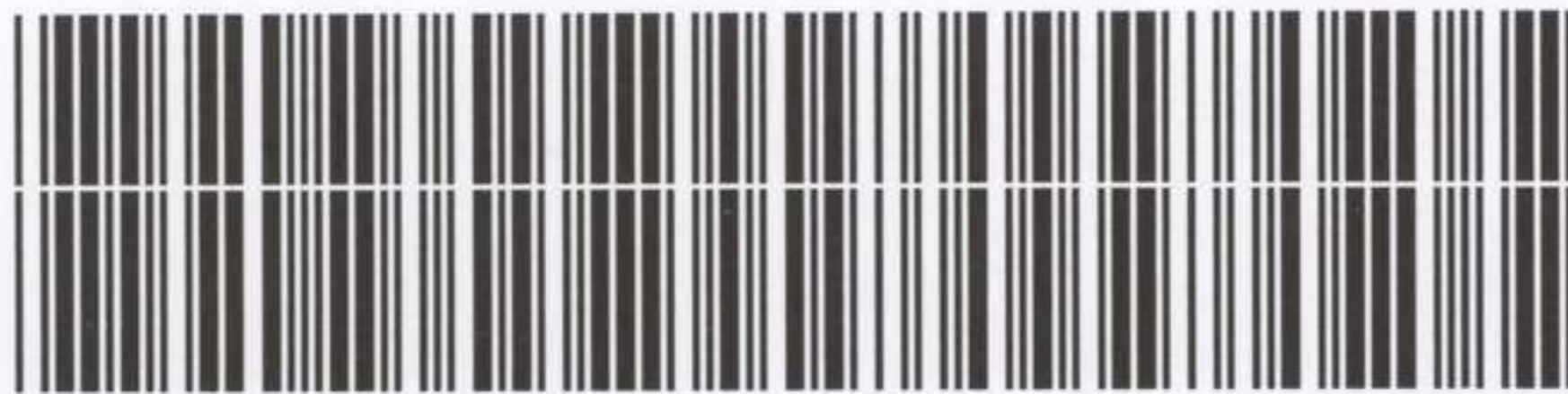
**Australian Imperial Force unit war diaries,
1914-18 War**

Engineers

Item number: 14/27/23

**Title: 8th Field Company, Australian
Engineers**

July 1917



AWM4-14/27/23

~~CONFIDENTIAL~~**EXTRACT**

FROM

WAR DIARY OF 8th Field Coy, Engrs. FOR July, 1917. PAGE 1 & 2.*CORBIE*

Company trained in construction of "D" type of heavy pontoon bridge for motor transport. This bridge to carry 3 ton lorries, i.e. rear axle load of $5\frac{1}{2}$ tons. It was found that this bridge can be fairly quickly made and is considered satisfactory for these loads in streams with slow current. In streams with fairly fast current it is doubtful, owing to small waterway.

WAR DIARY

or

INTELLIGENCE SUMMARY.

(Erase heading not required.)

FIELD COMPANY.

No.

Date.

Army Form C. 2118.

251

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PAGE 1

8th FIELD Coy. AVS. ENGRS.

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices																					
CORBIE MAP AMIENS 17 1:100,000	1/7/17	-	<p>Co. with transport billeted at CORBIE (MAP AMIENS 17 100,000)</p> <p>Company Strength -</p> <table border="1"> <thead> <tr> <th></th> <th>OFF.</th> <th>OR</th> </tr> </thead> <tbody> <tr> <td>Actually with Unit</td> <td>6</td> <td>211</td> </tr> <tr> <td>Sick in Area</td> <td>-</td> <td>2</td> </tr> <tr> <td>On Command</td> <td>* 1</td> <td>16</td> </tr> <tr> <td>TOTAL EFF. STRENGTH</td> <td>7</td> <td>229</td> </tr> </tbody> </table> <p>* Capt R. B. Carr on leave to U.K.</p> <p>Besides Coy. bridging equipment, the following pontoon equipment is being used by Coy. for training purposes -</p> <table border="1"> <tbody> <tr> <td>Pontoons service with superstructure</td> <td>-</td> <td>10</td> </tr> <tr> <td>Weldon Trestles</td> <td>-</td> <td>4</td> </tr> </tbody> </table> <p>This material on loan from 8th Pontoon Park.</p>		OFF.	OR	Actually with Unit	6	211	Sick in Area	-	2	On Command	* 1	16	TOTAL EFF. STRENGTH	7	229	Pontoons service with superstructure	-	10	Weldon Trestles	-	4	
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- do -	3/7/17	-	Holiday. Divisional Engineers Aquatic Sports held during day on River SOMME above CORBIE.																						
"	4/7/17	-	Archdeacon WARD gives lecture to Div. Engrs. All pontoon equipment rafted down stream to site chosen for training in pile driving.																						
	5/7/17 to 7/7/17		<p>Co. training in pontooning and bridging with WELDON trestles. For bridging with Weldon Trestles only, it was found that by launching trestles from raft, time required is about 10 minutes per bay of bridge made.</p> <p>ascemen cutting and preparing piles of approx. following dimensions - length - 21 to 25 ft. Dia. 1 1/8" to 1 1/2". Timber - Poplar. All piles given a fairly long point and about half of upper shod with 2" x 1/4" strap iron.</p> <p>bollars or rings of 2" x 3/8" W.I. of 11" dia</p>																						
	8/7/17 to 9/7/17		<p>Co. trained in construction of "D" type of heavy pontoon bridge for motor transport. This bridge to carry 3 ton lorries i.e. near axle load of 5 1/2 tons.</p>																						

A5834 Wt. W4973/M687 750,000 8/16 D. D. & L. Ltd. Forms/C.2118/13.

W. J. Handman
Engr.

WAR DIARY

or

INTELLIGENCE SUMMARY.

(Erase heading not required.)

AUSTRALIAN ARMY
Army Form C. 2118.
FIELD COMPANY.

No.
Date

251

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PAGE 2

8th Field Co. Aus. Engineers.

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices																		
CORBIE MAP. AMIENS 17 1:100,000	8:7:17		<p>It was found that this bridge can be fairly quickly made and is considered satisfactory for these loads in streams with slow current. In streams with fairly fast current it is doubtful, owing to small waterway.</p> <p>Capt. R. B. CARR returned from furlough U.K.</p> <p>beg. trained in construction of B type of heavy pontoon bridge (7)</p> <p>light pile driving frame to take 8 3/4 cut monkey made, as frame received from base was considered too heavy for quick work.</p> <p>Route March of 9 miles without log transport.</p> <p>Training in bridging expedients commenced. Material being collected.</p> <p>Church Parade.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Company Strength -</th> <th>OFF.</th> <th>OR.</th> </tr> </thead> <tbody> <tr> <td>Actually with Unit</td> <td>7</td> <td>214</td> <td rowspan="3">1 OR Reinforcement arrived from A.G.B.O.</td> </tr> <tr> <td>Sick to Area</td> <td></td> <td>4</td> </tr> <tr> <td>On Command</td> <td></td> <td>12</td> </tr> <tr> <td>TOTAL</td> <td>7</td> <td>230</td> <td></td> </tr> </tbody> </table>	Company Strength -		OFF.	OR.	Actually with Unit	7	214	1 OR Reinforcement arrived from A.G.B.O.	Sick to Area		4	On Command		12	TOTAL	7	230		<p>1) copy of report on this bridge by Capt OLIVER & 2nd Lieut CLARK 15th Co. A.E. attached.</p>
	Company Strength -			OFF.	OR.																	
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To																						
14:7:17																						
15:7:17																						
do	16:7:17		<p>Pile driving commenced at site of old wharf below CORBIE. Frame mounted on pontoons raft and ball driving done from off shore side. Depth of water about 5ft. with 2ft. soft mud & chalk bottom. Piles driven on average about 12 to 13ft; approx. time taken for each pile about one hour. Piles without shoes driven as easily as those that were shod. All sections put through bridging expedients comprising - tarpaulin and straw rafts; ground sheet rafts, light footbridges, brushwood rafts and boats and birds nest.</p>																			
	To																					
	21:7:17																					
	22:7:17		Church Parade and holiday																			
	23:7:17		Pile driving completed and piles finished off with top plate of half squared timber																			
	To		Outer line of piles tied back to shore piles with 9 lb. rails securely spiked.																			
	25/7/17																					

M. J. Langdon
25

WAR DIARY

or

INTELLIGENCE SUMMARY.

(Erase heading not required.)

FIELD COMP. IV.

Army Form C. 2118.

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PAGE 3

8th FIELD Co. AVS. EDGERS

251

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
CORBIE Map AMIENS 17 1/100,000.	23/7/17 to 25/7/17			
			Section and Squad Drill with Route March of 8 miles	

W. J. Langshaw

WAR DIARY

or

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PAGE 4

8 F. Co. Ave. Encores

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices															
CORBIE	26/7/17	-	Old footbridge across River AHERE at CORBIE demolished and new one re-erected 30' girders obtained from standing trees & squared top and bottom. Major W. G. FARQUHAR and Lieut R. A. HOLMES on leave to Paris. Command of Coy. taken over by Capt. R. B. CARR.																
"	27/7/17	-	All stores collected, and equipment vehicles cleaned up.																
"	28/7/17	-	Co. with transport move to SEHLIS via MERICOURT & HENENCOURT.																
SEHLIS	29/7/17	-	Co. & transport billeted at SEHLIS.																
AP LEHS II Edition 2, 100,000	30/7/17	-	Co. & transport leave SEHLIS 4 pm retrain AVELUY 7.30 pm. detrain ST. OMER 7 AM on 31/7/17.																
BELLE CROIX Sheet 36 A Edition 6. B. 13.2	31/7/17	-	Co. and transport march from ST. OMER to BELLE CROIX and billet there. Lieut PATON leaves on furlough to United Kingdom. Company strength:- <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>OFF.</th> <th>OR</th> </tr> </thead> <tbody> <tr> <td>ACTUALLY with Unit.</td> <td>4</td> <td>213</td> </tr> <tr> <td>SICK in Area.</td> <td></td> <td>3</td> </tr> <tr> <td>By Command.</td> <td>3</td> <td>12</td> </tr> <tr> <td>TOTAL E.S.</td> <td>7</td> <td>228</td> </tr> </tbody> </table>		OFF.	OR	ACTUALLY with Unit.	4	213	SICK in Area.		3	By Command.	3	12	TOTAL E.S.	7	228	
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W. G. Farquhar

COPY

251
Chief Engineer
1st ANZAC.

I forward herewith copy of report on heavy Pontoon Bridge as per E in C. Design N^o 30.

Material is to be collected here for the construction and trial of these bridges. In the meanwhile I think the report is a valuable one, and one or two points require special attention drawn to them.

Bridge 'B' para 1; 7" freeboard, though sufficient over a canal, is not considered sufficient over a broad river.

Para 2. Two Field Coys crossing about 300' of bridge broke 2 baulks. In each case it was a loaded Pontoon Wagon that caused the break. It will be seen therefore that the factor of safety on these baulks is on the small side, and that they should, on no account, be stressed up to the same limit where heavy transport is involved.

Bridge 'D' para 2. Special chesses would seem desirable for the heavy bridges.

Para 10. There would be weakners where the longitudinal chesses break joint, and I think the special chess would be a better solution.

Para 11, sub paras 1 to 10. All these details will be gone into practically at Corbie in the next few days.

Subpara 11; these should be cut out of the design.

Para 12. A special Pontoon would be desirable for bridges across broad rivers.

Para 13. The arrangement of double welded nestles is considered unsound and liable to cause disaster. Substitutes should be provided, such as, for instance, one or more pile driven piers with adjustable transoms; or specially long shore girders; or two or three road heads at different levels and 15 or 20 yards apart, so that the whole bridge can be shifted 15 or 20 yards up stream or down stream to suit the particular road which matches the tidal or flood conditions at the moment.

A design for a heavy Pontoon Bridge over broad rivers will be submitted from here if desired.

France
4/7/17.

Signed — Lieut-Col R.E.
C.R.E 5th Aust Division

251
To CRE 5th Aus Dis. A.I.F.

From Lieut OLIVER & 2/Lt CLARK 15th F. Co ME

Sir,

HEAVY PONTON BRIDGES

We have closely examined drawings of above, and have to report as follows.

1. Bridge B. Three tripartite pontoons with 7 inches freeboard will carry 20 tons. Superstructure per bay is nearly 5 tons, giving 15 tons as maximum load per bay. (M.E. Pt. 3 b gives 6" min. freeboard in smooth water, 12" in rough).
2. The 16 baulks and ribands will transfer about one third of this load to each outer pontoon without exceeding stress caused by "Infantry in Fours, Crowded at check" on 'medium bridge'. This stress is however rather excessive.
3. Owing to flexure of baulks, the centre pontoon will sink rather lower than the outer one, but a flexure of 3 inches will only correspond to centre pontoon taking about 1 ton more load than outers.
4. BRIDGE C Will carry $13\frac{1}{4}$ tons per bay with 7" freeboard, and of this superstructure amounts to $3\frac{3}{4}$ tons.
5. BRIDGE D Pontoons also take $13\frac{1}{4}$ tons per bay with 7" freeboard, and superstructure weighs $12\frac{1}{4}$ tons per bay.
6. The 12 x 5 joists on 21' span will safely take $5\frac{3}{4}$ ton dead load concentrated at centre.
7. Girders in Bridges B & C. are ample for pontoon capacity provided they share the load reasonably. But chasses, treble and double respectively, seem light for such heavy traffic.
8. The 18 baulks and ribands in Bridge D should carry 15 tons distributed or $7\frac{1}{2}$ tons concentrated if all could be relied on to take their share. But owing to the light floor, an axle load of 5 tons would reach the limit of safety - say a loaded A.S.C. lorry or 6" howitzer.
9. We therefore regard the limit of Bridge B as 15 tons axle or distributed, and of bridges C & D as 8 tons axle load, though D should carry up to 11 tons per bay if sufficiently distributed.

9. It is to be noted that spans of B & C are 21 ft and of D, 15 ft.
10. We suggest that loading on Bridge B would be better distributed if chess layers are alternately transverse and longitudinal, one chess per bay of the 2nd layer being laid transversely to make up the 21 ft. length of bay.
11. Numerous minor points call for criticism
- (1) Saddle 12 x 12 with rounded edges should certainly be metal capped for seating of 12 x 5 joists
 - (2) Saddle is lashed to baulks and ribands but not otherwise secured against shifting. Buttons might be provided on 4 ribands to prevent transverse motion without interfering with use of ribands for ordinary bridging. This provision with 1 lashing at each end of saddle to throats of pontoon should make saddle secure.
 - (3) The fixing of distance pieces between pairs of 12 x 5 joists on Bridge B looks a very tedious job, owing to small clearance. If claws on distance piece are skewed 2" joists of each pair may be hard up instead of 2" apart, and bolts may be inserted much more easily.
Alternatively, claws might be bolted at end of each joist, joggled to bolt to web, and omitted on distance pieces. Claws on 2 joists per bay are almost essential for holding pontoons at proper spacing while assembling, unless special distance timbers are provided.
 4. Use of 9 x 3 cleat on saddle is not apparent. The 6 spike separators should suffice at ends as
 5. Bars with toggles will be necessary for handling joists which weigh 700 lbs each.
 6. Lashing of pontoons together and of ribands & baulks to saddles will be tedious and unsatisfactory. A metal strap would be preferable.
 7. A four-part saddle on a tripartite pontoon means that joints in saddle are not supported by throats. This cannot be avoided without special saddles which, if provided, might be fitted with straps to hold baulks.
 8. Bridge D is apparently designed for construction of no materials beyond Pontoon equipment and such timber as can be obtained at any RE dump. The skew nailing of such timbers looks objectionable at first sight; but cut may be made in bridge without interfering with nailed timbers, which have only to be pulled adrift when bridge

is totally dismantled as for packing on wagons.

- (9) Shore ramp of bridge D requires transverse sleeper to protect end chasses.
- (10) Arrangement of 9×3 " for Bridge D assumes only short lengths available. If 15' lengths or over can be got, this saddle will be built up of 6 pieces only. If only 12' lengths are available, these should go ^{on} outside so that only two 6' lens. will be required instead of the four shown.
- (11) Shore baulks for Bridges B & C are marked "R.S.J." but these shapes could not be rolled and must be forgings.
- (12) WATERWAY Bridge B pontoons take 15' 9" out of 21'. Bridge C, 10' 6" out of 21'. Bridge D, 10' 6" out of 15 ft. It follows that Bridge C alone is serviceable if there is much current in stream (M.E. specifies $\frac{1}{2}$ water way to be clear if current is over 4 M.P.H.)
- (13) Service Trestles The transoms of the service trestles is too weak to take half of a 15 ton load in Bridge B. This bridge puts on the pair of trestles a load of 4 times as great as one trestle carries in medium bridge, so they can hardly be expected to suffice. They should be about heavy enough for C & D Bridge, but with small factor of safety.
- (a) No tackles are shown on trestles. These will be necessary and at least 1 ton size, or preferably $1\frac{1}{2}$ to raise transom and superstructure.
- (b) Old type of lever strap is shown on trestles. There seems no reason why improved type should not be used.
- (c) No precaution is taken to keep the feet of the two pairs of trestles from separating. If the 7×3 beams were provided with claws or buttons, instead of being lashed to transoms, the trestles would be held apart at proper distance at this level.

(Sgd.) Calder. K. Oliver Lieut.
Edwd. V. Clark 2/Lt.