

PLANNING AMPHIBIOUS OPERATIONS

by

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PART III

THROUGH FRANCE AND THE LOW COUNTRIES

In Part II, the technical aspects of the plan for Operation *Neptune*, the invasion of northern France, and the sequence of events during the beach phase, from D-Day, 6th June, 1944, up to September, 1944, were recorded. It is now intended to recount the work of naval engineering personnel in support of the Army as they advanced through north-west Europe. Before finally leaving the beaches of Normandy, however, brief reference must be made to the work performed by the Landing Craft Obstacle Clearance Units (LCOCU) and the U.S. Naval Combat Demolition Units. At most of the beaches the worst difficulty in the assault, which caused a high percentage of casualties, was presented by the mined obstacles set up between low and high water marks. The speed of the assault was such that the LCOCU had insufficient time to neutralise or demolish many of the obstacles; many were breached by the larger and heavier landing craft crashing their way through, whilst the smaller craft threaded their way in between. The damage sustained had to be accepted if the momentum of the assault was not to be lost. Two hundred and ninety-one craft, the majority of which were repairable, were damaged during the assault phase by obstacles, mines, shell fire and the weather. But for the LCOCU, this figure would have been far higher. Subsequently, drifting wreckage presented a hazard, and immobilised many ships and craft. *Scavenging* was instituted and proved of tremendous value.

Reference has been made to the "Gooseberries" and "Mulberries" and much more could be told, but that is another story. One detail is relevant here and shows to what extent detail was considered; arrangements were made to cut off the "tulips" formed on the sides of the block ships by the explosion of the flooding charges, so that craft secured alongside would not be damaged by these sharp tongues of plate protruding under water.

Air Cover

For the fact that our laden convoys were not bombed in their ports of assembly in southern England, nor during their passage to the assault area, that the scale of attack in the assault area and subsequently in the ports was not heavier than it was, we must thank the Allied Air Forces. Due to their efforts the work of the repair parties was lessened, and damage which was sustained was all the more quickly repaired than would have been the case had the Luftwaffe been allowed to interfere with our plans.

Countering the Enemy Minelaying Effort

Nevertheless, the Luftwaffe succeeded in mounting a considerable minelaying effort which subjected our minesweepers to a great strain. The cumulative effect of successive explosions in proximity to the hulls soon called for repairs. It is greatly to the credit of the "far shore" repair organisation that not only an immense fleet of minesweepers, but a host of other craft were kept running without more extensive calls on dockyards in the United Kingdom.



FIG. 1.—DEMOLITION OF BEACH OBSTACLES SHORTLY AFTER H-HOUR

It had not been foreseen that so large a force of auxiliary minesweepers (over 100 BYMS and MMS) would be required to operate for such prolonged periods in the Bay of the Seine, and their maintenance presented an unexpectedly formidable problem. Flotillas spent eleven days out of each fortnight on the job, and three days at their "replenishment" ports (Portsmouth or Portland) where minor repairs and routine maintenance were carried out at the M/S bases. Each flotilla was also allocated a "maintenance" port to which boats were detached, two at a time, for engine overhauls. These ports ranged from Grimsby to Liverpool. This system was continued as the M/S effort shifted gradually eastward. Twenty-five per cent. of each flotilla's maintenance staff accompanied the flotilla and the balance augmented the M/S base staff at the maintenance port. The only real difficulty was delay in distribution of spare engine parts. From this cause alone, flotillas were frequently working at less than half strength.

THE LIBERATION AND REHABILITATION OF PORTS

A seaborne invasion cannot be considered successful until ports have been obtained through which the army can be supplied. The "Mulberry," which had contributed so much during the earlier phases, was only a temporary and partial solution of the problem. The loss of the U.S. "Mulberry A" at St. Laurent, due to the gale, made the capture of big deep water ports the more important, especially when one remembers that much of the *build-up* was by now coming direct from across the Atlantic.

The German plan to deny us the use of the ports, by leaving garrisons to resist to the last moment and to destroy the port facilities as far as possible, was partially successful. It was also inevitable that facilities which we required for our own use were often damaged by Allied air attacks in the process of liberating the ports.

The work performed by the Staff of the Principal Salvage Officer to ANCXF in clearing the ports is worthy of a separate story and cannot be told here. Together with it should be recorded the work of the Military Port Repair Organisation in clearing the quayside obstructions and landward facilities.

It will be recalled that maintenance of the Army over the beaches had been planned for ninety days. By September the fighting fronts had reached the German frontier and we were in possession of Brest, Cherbourg, Le Havre, Dieppe, Ostend and Antwerp.

The Ports

Le Havre was captured on 12th September (D+98) by British forces and later became a U.S. Army supply port, but, as at Cherbourg, all minesweeping was done by the Royal Navy. In *Le Havre* were 165 wrecks and obstructions, and the approaches and lower part of the town had been destroyed by Allied shell fire and bombing.

Cherbourg and Brest had been captured by the U.S. Army and the former operated by and on behalf of the U.S. Army and Navy. The condition of *Brest* would have made it of little use, and in any case it was not needed. Operation *Dragoon*, the invasion of southern France, placed *Marseilles* undamaged into our hands. The Americans advanced so rapidly up the Rhone, securing undamaged, magnificent rail communications to the German frontier, that it was easier and safer for Atlantic shipping to unload at *Marseilles*.

Antwerp was, by far, the most important northern port to fall into our hands, being not only close to the front line, but almost completely undamaged due to the Belgian "underground" movement and the speed of our Armies' advance. But the Germans held the banks of the Scheldt in the *Breskens* area and the island of *Walcheren*, and the port was not open till November.

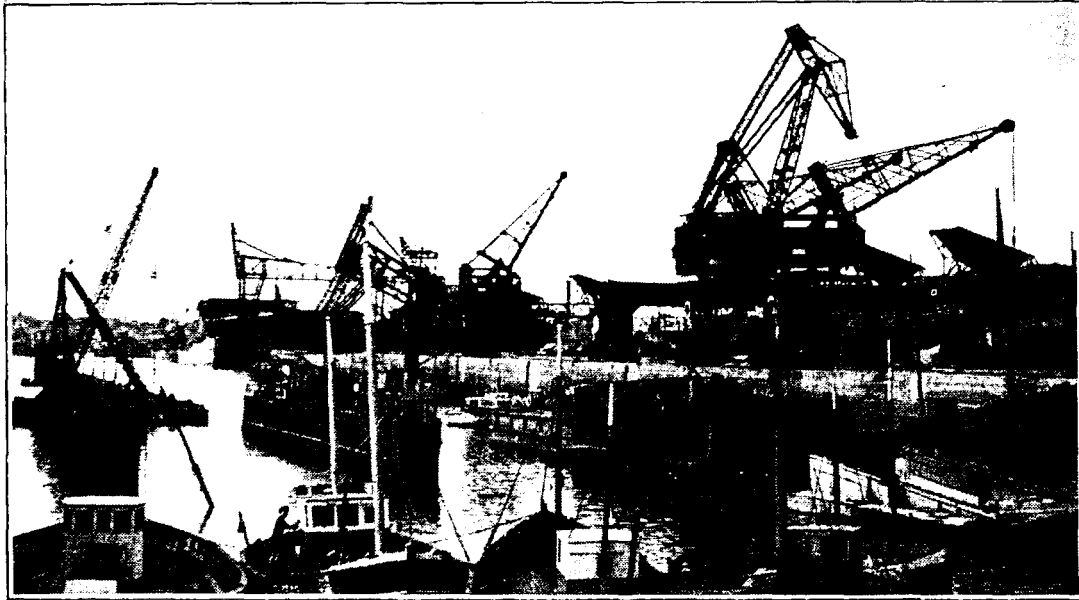


FIG. 2.—DIEPPE, SHORTLY AFTER LIBERATION, SHOWING SCUTTLED DOCK AND OTHER DEMOLITIONS

Ostend was available to us some time before Walcheren was captured, and, therefore, assumed great importance, being for some time the nearest port operating to the front line. Fourteen ships were sunk close together in three lines across the harbour entrance.

Dieppe, apart from Cherbourg, was the first Channel port to receive shipping. It had been severely damaged, but was soon handling 7,000 tons a day.

Boulogne, when liberated, was of great importance, as operation *Pluto* was scheduled to lay no less than sixteen pipe lines to this port. There were twenty-six block ships and twenty-five wrecks to be cleared.

Calais and Zeebrugge were, in due course, cleared of the enemy. The former, although very severely damaged, in time handled a considerable LCT ferry service from Dover, in addition to other traffic. The latter had become badly silted up and was not required by the Army or Navy. *Dunkirk* held out almost to the end.

For a considerable period, therefore, most of the supplies had to go by road along the "Red Ball Route" from Cherbourg and Arranches. The motto to be seen on boards all along this route was "Get on or get off the road."

THE ORGANISATION OF LIBERATED AND CAPTURED PORTS

Preliminary Planning

To ensure that a captured port was brought into operation with the minimum of delay, the problems of individual ports were considered long before they were expected to fall. The probable course of future military operations were taken into account, together with all known intelligence data regarding the capabilities and state of the ports, and difficulties likely to be encountered in opening them up. Plans of the town and harbour had to be studied, and appropriate sites for the various naval and military parties selected and allocated. Claims for sites sometimes clashed and a compromise arranged. The fact that the town might suffer further damage before occupation had always to be borne in mind, and secondary sites selected.

Any last minute change of destination for a party was always to be deprecated, as it would mean insufficient time for previous study. Such changes could not, however, always be avoided. For example, Naval Party 1528 had planned on entering Le Havre. The BEO with the advanced *recce* party had been landed through Courseulles and was waiting for some days outside Le Havre, when it became necessary to divert them on to Antwerp, which they entered on time, but they had no opportunity to study the city in advance.

Advanced Naval Forces

The first necessity in any port was the provision of minesweepers and dan-layers, to be followed by Trinity House buoy-laying vessels and surveying vessels. Even before a port fell, the channel in had to be swept as far as the remaining shore defences allowed ; after the port was captured, this sweeping had to be completed immediately and an anchorage off the port cleared. The first minesweepers to enter were usually specially fitted M.L.s., accompanied by the advanced surveying party in MLs or DUKWs. The information provided by the surveying party enabled the salvage parties to get to work clearing wrecks.

Advanced Repair Facilities

All the advanced naval forces were especially subject to damage by enemy action. Hence, the vital necessity for advanced naval repair parties to be present from the start. To be there, ahead of the ships and craft they were to repair, meant that their entry overland with the first Army formations was essential. This was the function of the Mobile Land Repair Unit (MLRU). An advanced element of the port repair parties preferably came in overland, the main party coming in by sea *after* the port was open, or overland in phases as army motor transport lift could be made available. The party's own transport was sufficient only for the advanced section. On arrival, the MLRU could be fully operational within a few hours. The port repair party required days to rehabilitate suitable workshop and storage accommodation, and settle in. Once settled, the scope of their work exceeded that of the MLRU.

The MLRU was entirely self-supporting for fourteen days or more, the port repair party was dependent on the port party to whom they were attached for food, water, M.T. fuel and other day-to-day expendable items. The MLRU was allocated to a NOIC and subsequently available for other ports. The repair party was attached to the NOIC's party for as long as there was a need for British repair facilities in the port. Whenever possible, local facilities were fully utilised to supplement the repair party and at times, in due course, release it for duty in ports further up the coast.

The Port Executive Committee

The NOIC was Chairman of the Port Executive Committee (PEC) on which all Services and the Ministry of War Transport (MWT) or, in an American port, the Warshipping Administration (WSA), were represented. All problems associated with the working of the port were considered by the PEC and it was most desirable that the BEO should have access to their meetings to put his problems (and advice) before them, and to keep himself informed. They forecast berths available at estimated dates. It was the duty of the Build-up Control Organisation (BUCO) to see that loaded ships and craft were ready in time.

It was when discharge through the port started that the repair party's real job began, and the arrival of the first convoy was the " D Day " of their plans. Merchant Ship repairs were arranged jointly with MWT representatives.



FIG. 3.—BOULOGNE. SHIP REPAIR SHOPS AND SLIPWAY DAMAGED BY R.A.F. RAIDS

MOVEMENT OF REPAIR PARTIES

The military situation was so fluid at this time that one could not plan too far ahead, without risk of subsequent developments causing changes and cancellation of earlier orders. But one had to look ahead and be ready to implement one of the several alternative plans at short notice. Once it was settled that a given plan was to be implemented, no time could be lost.

Liaison with Army

The movement of a MLRU by road entailed informing Army Movements through the Liaison Officer (Q. Mov.) so that they could be routed at a time and date that not only suited the naval plan, but fitted the Army's movement programme. A number of vehicles moving independently and unheralded might cause confusion on roads already carrying a peak load. Further, if "staging" accommodation was required en route, it had to be provided by the Army.

The same applied to a mobile advanced section of a port repair party moving overland in its own transport. To move the main section of a port repair party overland with its several hundred tons of stores and equipment, required a "bid" to be placed through L.O. (Q. Mov.) for MT lift to be made available; any "awkward lifts" had to be specified in detail so that appropriate vehicles, such as transporters, could be laid on. The routing of this convoy was an Army responsibility, including arrangements for accommodation and feeding in staging camps as necessary en route.

To arrange any movement by sea other than in a naval vessel, a bid had to be made on BUCO for shipping "lift." The movement of the party was then entirely in the hands of the Army, subject to any last-minute variations caused by changes in the military plan over which the Navy had no control. The late arrival of N.P. 1710 in Dieppe was due to such causes, and would have had serious repercussions had not No. 4 MLRU been present to carry on meanwhile.

The speed with which parties moved into new ports is well illustrated by an incident in which No. 4 MLRU was involved. It was entering Antwerp from

the south-west, and approaching the tunnel under the Scheldt, when it was met by an armoured vehicle who warned them to go no further as a German "pocket" holding out in the tunnel was still being mopped up. At Antwerp it was not possible to visit the north-east side of the docks for some time after capture owing to enemy small arms fire. At Zeebrugge a reconnaissance party examining the mole and the harbour was continually sniped at from the adjacent sand dunes. The same thing happened in several other ports.

FUEL AND WATER SUPPLIES AND DISTRIBUTION

It may be thought by some that Operation *Pluto* assisted the Navy in the problem of supplying its vessels with fuel, but it must be pointed out that the supplies made by the "Pipe Line Under the Ocean" were entirely for military purposes ashore. Naval supplies continued to come by tanker.

In general it may be said that fuels and lubricants were not required by the "shuttle" ships and craft discharging in the ports. Ships sailing direct from or to North America, and coasters from or to north coast ports in the United Kingdom were often exceptions.

There was, however, a big demand by locally based landing craft and barges, tugs, salvage and survey vessels, minesweepers, coastal force craft, harbour craft, work boats, etc., involving all grades of petrol, Diesel and furnace oil, and coal. Tankage for all the former and dumps for the latter had to be organised jointly with the Army. Often the only suitable coaling berth was also needed for unloading of stores. Coal hoists (if any) and pumping plant were usually demolished, and had to be repaired, or improvised means of handling organised.

All this, its subsequent operation, replenishment of stocks and distribution locally, was a full-time job for one assistant BEO, or the Fuelling Officer, if one was specially provided. It also involved the employment of ratings urgently required for repair duties on ships.

The organisation of supply and distribution of M.T. spirit and lubricants for all naval transport in the port was a smaller, but no less important, duty that fell on the BEO. Supply was made from army sources.

Water, at any rate after the initial phase, was to be had from shore supplies. These were in the hands of the Army and arrangements had to be made through them. Provision of it at the quayside, assuming the existing system was destroyed, was to varying extents the BEO's responsibility. On occasions, the rate of supply was so slow that a small water tanker was required which could afford to take all night to fill, and be ready to supply ships and craft by day,

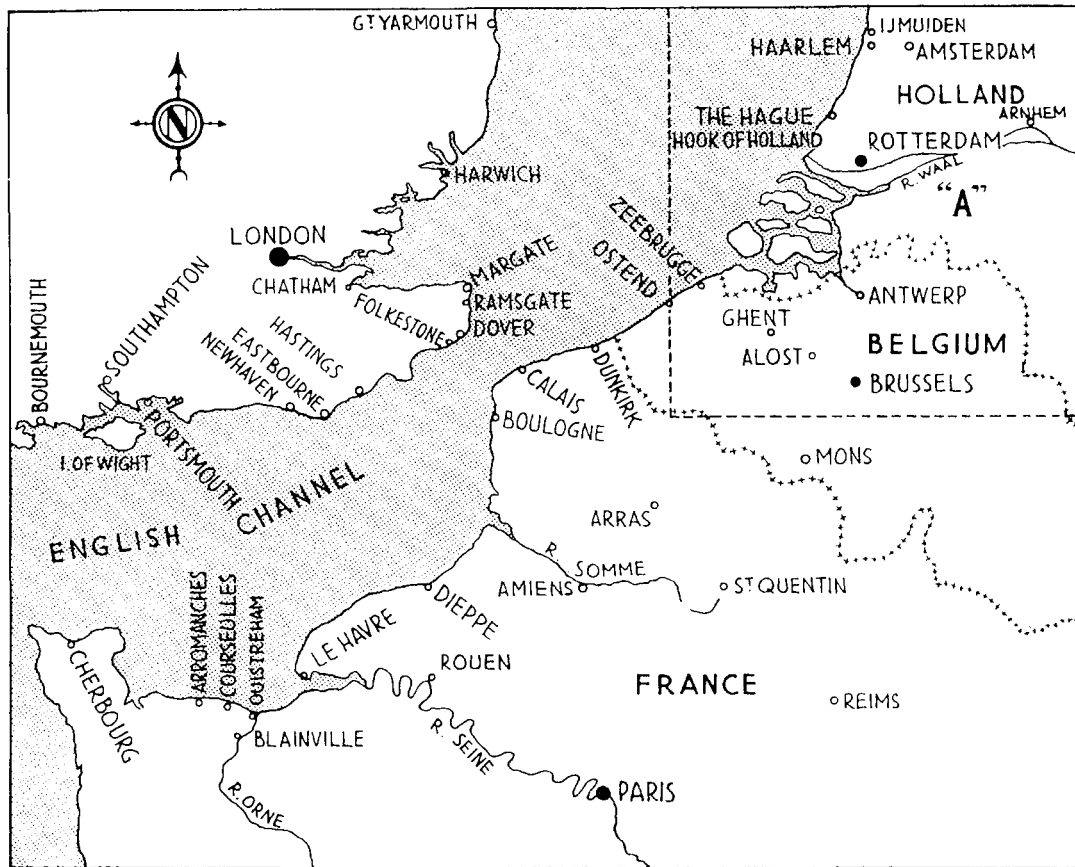
THE DISPOSITION OF NAVAL PARTIES IN SEPTEMBER, 1944

The need to maintain personal contact with the parties on the spot and the advantages to be gained by both sides by those at the top having seen for themselves what the local conditions were cannot be too highly stressed.

Staff of ANCXF

ANCXF's staff, reduced somewhat from its D-Day immensity, transferred its headquarters from Southwick Park, near Portsmouth, where it had resided since leaving London in April, to Granville on the north-west coast of France whither SHAEF had also moved. Being on the same side of the water as the parties it was responsible for and, facilitated personal contact, and improved communications with them.

ANCXF's technical staff now comprised one Commander (E) as SEO (Plans), one electrical officer and a constructor officer. Assistants in the office were provided by WRNS officers who proved to be as capable and efficient in their technical duties as most young naval officers could have been.



FOBAA

FOBAA, established at Courseulles, shortly moved to Rouen, admirably situated to control the British ports in France and to maintain contact with ANCXF, who, in early October, followed SHAEF to the vicinity of Paris.

Travel by road or, for longer distances, by air, was the only practicable means of transport, although in time some main line rail services operated after a fashion. A reliable vehicle and Royal Marine or Stoker driver and a good army map were essential. Local knowledge had to be acquired, as, often, the most direct route was not passable owing to demolished and bombed bridges, and, in some cases, enemy "pockets" round those ports which were still in German hands. Knowledge of army route sign posting procedure was necessary and adherence to this often saved much time, and avoided getting lost. Original signposts were frequently misleading.

Repair Parties

One large party (N.P. 1526) embarked in H.M.S. *Adventure* was still employed in *Mulberry B* at Arromanches. The second large party (N.P. 1528) was held in the United Kingdom ready for Le Havre. Of the small parties, N.P. 1531 was employed at Courseulles, 1529 was at Blainville and 1530 (now reformed in U.K. as N.P. 1710) was waiting to be shipped by LCT to Dieppe. Both MLRU were standing by in the British Assault Area to move forward into the ports. The special C.F. and LST parties, except for those in *Adventure*, were disbanded. CFMU No. 1, was at Arromanches preparing to move forward. A second CFMU (No. 2) had by now been formed in U.K., but was not employed by ANCXF until after the fall of Germany.

All except one LCRU, retained for the time being in Arromanches, had been returned to U.K. ANCXF stipulated, however, that one or more might be required again later for operations in Holland.

Fuelling Craft and Tankers

The majority of LBE, LBO and LBW were released, but sufficient were retained at short notice in U.K. to meet the anticipated but as yet unknown requirements in the Channel ports and in any subsequent landing operations that might materialise. A comparatively large number of fuelling trawlers were still employed, or held available in U.K. Although suitable only for Diesel oil, and this was one of the major requirements, or furnace oil in emergency, their relatively greater seaworthiness and mobility over barges made them more useful than the latter. Their poor state of repair, however, necessitated over 50% reserve to allow for maintenance and repair, which was continually in hand by Portsmouth and Devonport.

Except for a few small distributing tankers employed in Arromanches, no tankers were retained exclusively for ANCXF. Supplies were shipped by Admiralty as and when demanded by FOBAA.

Administration of Port Parties

ANCXF exercised operational control only over the French, Belgian and, later, the Dutch ports: administrative responsibility was in the hands of the C.-in-C. of Home Commands; Portsmouth for Arromanches, Le Havre (M/S Base) and Dieppe, Dover for Boulogne and Calais, and Nore for Ostend and Antwerp, and, later, the Dutch ports. This arrangement left ANCXF free to plan and operate naval matters and avoided the necessity for an ungainly increase in his staff. C.-in-Cs. of Home Commands, especially Nore, had considerable operational responsibilities that had to be closely co-ordinated with those of ANCXF, mainly associated with minesweeping and C.F. patrols. The deployment and as necessary, from time to time, the redistribution of repair facilities in continental ports was always the responsibility of ANCXF.

DEPLOYMENT OF REPAIR PARTIES TO MEET THE RAPIDLY DEVELOPING MILITARY SITUATION

The rapid and complete breakout of the armies from the Normandy bridgehead called for considerable modification to the original plans. The development of Blainville, never completed, was no longer a requirement, Courseulles lost its importance, and the original intention of opening up the several small Seine river ports was abandoned. Le Havre was now destined to become a U.S. Army supply port, since the British had the channel ports and Antwerp. The sequence of events which at this time was confused, to say the least of it, due in the main to the rapidity with which the military situation was developing, can probably best be described by considering each port in turn.

Arromanches. The scale of work was reducing rapidly, and by the autumn the weather was deteriorating, which necessitated the withdrawal of *Adventure* to Portsmouth. A section of N.P. 1526 was landed to complete the remaining commitments. A small mobile section had earlier been formed and transferred to the M/S base at Le Havre.

Le Havre. A British Commander (M/S) set up his headquarters in the partly demolished E-boat shelters. The section of N.P. 1526 augmented his M/S flotilla maintenance staffs and assisted in the maintenance of the British M/S based there.

Portsmouth. The remainder of N.P. 1526 was temporarily employed in Portsmouth, restoring and repairing its equipment, and as a reserve for unforeseen commitments until required in Holland or Germany. *Adventure* was held at one month's notice with reduced complement. The BEO subsequently devoted much of his time to planning in London with the Staffs of the two Flag Officers designated for western Germany and Schleswig-Holstein.



FIG. 4.—BOULOGNE. WRECKED HARBOUR INSTALLATIONS, DEMOLISHED E-BOAT PENS ARE IN THE FOREGROUND

Cherbourg. A small British M/S base was set up, where the flotilla maintenance parties of the British flotillas maintained their own craft.

Dieppe. No. 4 MLRU moved in with the advanced army formations ; they assisted in opening up the port and provided emergency repair facilities until N.P. 1710 had arrived from U.K. and were able to take over.

Local firms were encouraged to start business again. A graving dock was sufficiently repaired for docking ships. In due course, it was possible to transfer the party to Calais. A Lieutenant (E) and a few ratings from N.P. 1526 took over in Dieppe to supervise the French and to control the supply and distribution of fuel and water.

Boulogne was opened up by No. 3 MLRU, which turned over to NP 1529 as soon as the latter had moved forward from Blainville. N.P. 1529 found good living and workshop accommodation in the partly demolished E-boat shelters. Except for drawing rations, etc., through the NOIC, they lived and worked as a self-contained unit, which arrangement had much to commend it over the more normal arrangement whereby the repair party was accommodated in the naval barracks along with the port party. Although this arrangement gave the repair party much greater freedom to concentrate on its technical duties without interference from the daily domestic duties associated with barrack life, it did involve it in rather more self-administration and called for greater effort on the part of the BEO to keep himself "in the general picture."

Calais. No. 3 MLRU transferred to Calais, immediately the town had been liberated, and in due course was relieved by N.P. 1710, as soon as their commitments in Dieppe permitted.

N.P. 1710 worked under a severe handicap in Calais initially, owing to the almost complete absence of any accommodation. The electrical section continued to function throughout with extemporised and lorry-borne facilities in a park in the town ; in time the remainder established good workshop and storage facilities partly in an ex-German air raid "bunker," and partly in wooden huts erected in the dock area by the Army. Local facilities were almost non-existent.



FIG. 5.—CALAIS. DEMOLISHED DOCK AREA

Ostend. There was no MLRU available at the time for Ostend, and N.P. 1531, which was transferred from Courseulles, did its own "tin-opening," which it was well suited to do, since, to enable it to fulfil its original rôle in Courseulles, it had been supplemented by the addition of some extra personnel and vehicles.

N.P. 1531 found Ostend less severely damaged than had been expected and ample accommodation was found in a local garage near the harbour. Ostend, until the Scheldt was open, was the most important supply port for the British and Canadian Armies; in addition, a large minesweeping force was based on it and CFMU No. 1 moved in from Arromanches and established a major C.F. base. In November, it formed the advanced base for mounting the assault on Walcheren.

N.P. 1531 and CFMU No. 1 therefore found all their resources stretched to the limit. The volume of repair work on minesweepers at Ostend mounted and remained at a high level for a long time; subsequently a similar situation arose at Terneuzen on the Scheldt, and later a considerable amount of major repairs and refits were undertaken at Antwerp and in other Belgian yards. Ostend was a convenient terminal for a ferry service from U.K. and handled all the minesweepers' spare gear requirements for the area. An additional Lieutenant (E), with M/S experience, was appointed as M/S spare gear officer. Unfortunately, this need was not met until the situation had become so desperate that an unacceptable number of ships were immobilised, awaiting vital spare parts.

No. 3 MLRU, on being relieved in Calais by N.P. 1710, moved up near Ostend and was held in reserve and accommodated at Blankenburg. It carried out a brief self-refit and assisted with minor work in the area. The intention to employ it in Zeebrugge never materialised as the port was found to be unsuitable and was not required by the Army, nor by the Navy as a C.F. base.

Antwerp. As soon as it had been decided that Le Havre was to be operated by the Americans, the Commander (E) of N.P. 1528, who had been landed through Courseulles to enter Le Havre with NOIC, was diverted with NOIC to Antwerp. By this time, the constructor and electrical officers with five ratings and two vehicles of N.P. 1528 had also entered through Courseulles, and acted in a liaison and supervisory capacity with the Belgian ship repair firms. Local facilities were fully available by the time the minesweepers had



FIG. 6.—A STREET SCENE IN A FRENCH TOWN, ILLUSTRATING THE PROBLEM OF ACCOMMODATION

cleared the approach channels. The main body of N.P. 1528 was held in U.K. ready to move forward to Antwerp district if, and when, the need arose.

No. 4 MLRU, on being relieved in Dieppe by N.P. 1710, was sent to assist the BEO and advance section of N.P. 1528. No. 4 MLRU found Antwerp almost completely undamaged, with ship repair facilities on a scale far in excess of our operational needs, and ready for work, so it settled down for a brief "self-refit" period and assisted the naval parties with minor work. Subsequently, a mobile diving party was sent to assist the BEO temporarily in Boulogne.

The fuelling problems in Antwerp were far in excess of other ports, especially as they had to be co-ordinated with those of Ostend and later Terneuzen, Flushing and Ghent. The Fuelling Officer was transferred from Arromanches. His rank of Sub-lieutenant, RNVR, was not commensurate with the responsibilities of his duties and handicapped him considerably in his frequent dealings with army officers who were never below the rank of major. It proved impossible to get a second stripe for him, but he found his position somewhat improved by always wearing his Burberry when calling on his army opposite numbers !

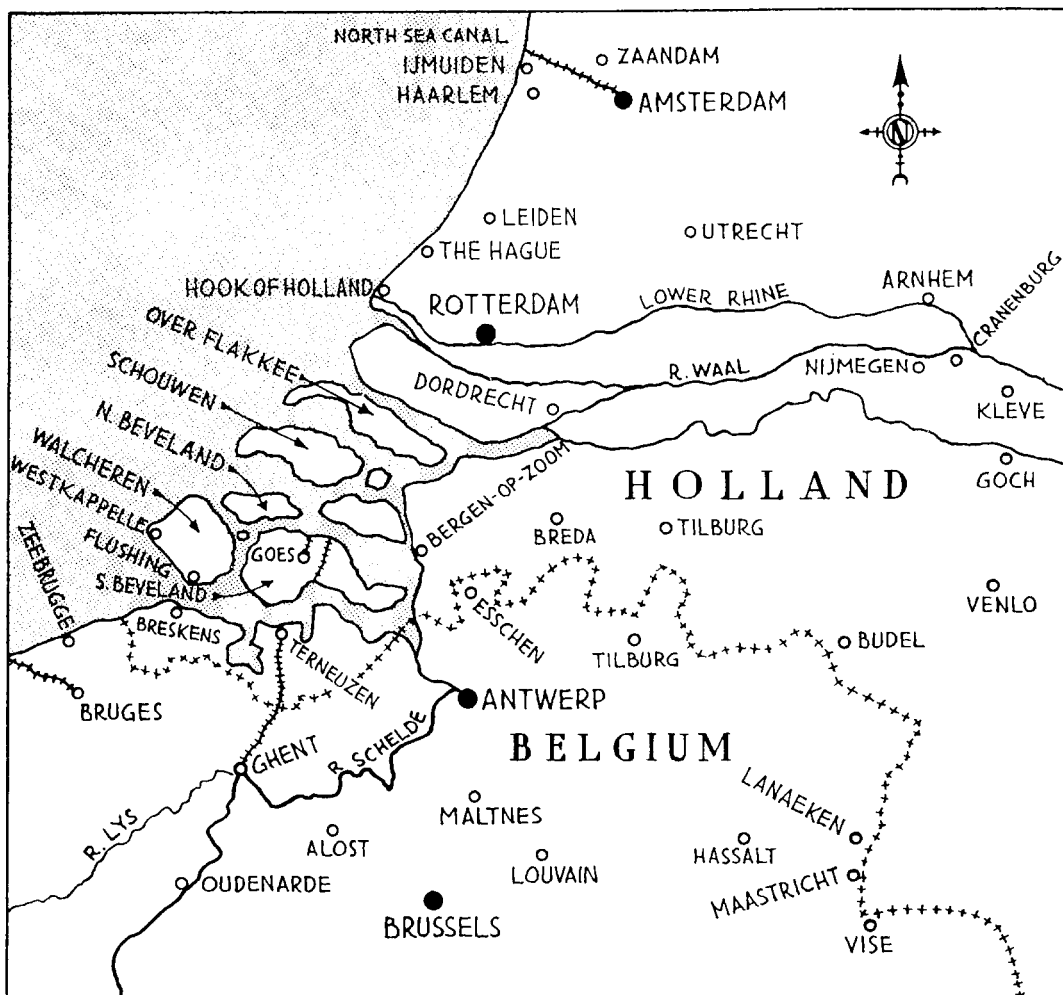
REORGANISATION OF THE NAVAL SUB-COMMAND

As the British naval responsibilities in French ports became concentrated in Calais, and to a lesser extent in Le Havre (the M/S base), Dieppe, and Boulogne, and as soon as Arromanches finally closed down, NOIC Calais became SNO British Operated Ports (France), SNOBOPF for short, and FOBAA was liquidated. One of FOBAA's assistant engineer officers was transferred to SNOBOPF for a time, but finally BEO Calais performed the dual duties.

Commodore (Belgium) established his headquarters in Brussels, and drew on the services of NOIC Antwerp's technical staff to handle his technical problems.

THE CLEARANCE OF THE SCHELDT

The capture of Antwerp undamaged was an incomplete success for it lies more than 70 miles from the sea. The Germans clung tenaciously to both banks of the Scheldt, in the Breskens area to the south, whilst to the north they were strongly defended in South Beveland and Walcheren. A captured German order stated "The defence of the approaches to Antwerp represents a task which



is decisive for the further conduct of the war.....
 After overrunning the Scheldt fortifications the English..... might
 deliver a death blow at the north German Plateau and at Berlin . . . For this
 reason we must hold the Scheldt fortifications to the end.”

By the end of October, the Canadians had captured Breskens and cleared the south bank, and after a grim struggle were clearing South Beveland. There remained Walcheren; Bomber Command breached the great dyke near Westkapelle and flooded the greater part of the island including much of the port of Flushing. Capture of the island was essential to enable the mine-sweepers to clear the Scheldt.

The Capture of Walcheren

Planning had begun in mid-September. The naval side of the assault was in the hands of the Naval Commander, Force *T*. Overall command was exercised by the Commanding General First Canadian Army. The plan envisaged a three-fold attack along the causeway linking Walcheren with South Beveland, across the Scheldt from Breskens at Flushing and from seaward in the Westkapelle area.

Force *T*'s rear headquarters was at Southampton, and here it was that the Force *E.O.* prepared his craft for what was to be the most strongly opposed landing yet experienced.

The Force assembled at Ostend on 27th October. A LCRU was brought over from U.K., not that there was any likelihood of its operating in an orthodox fashion on the steep, stony, muddy foreshore of the island, which was closely

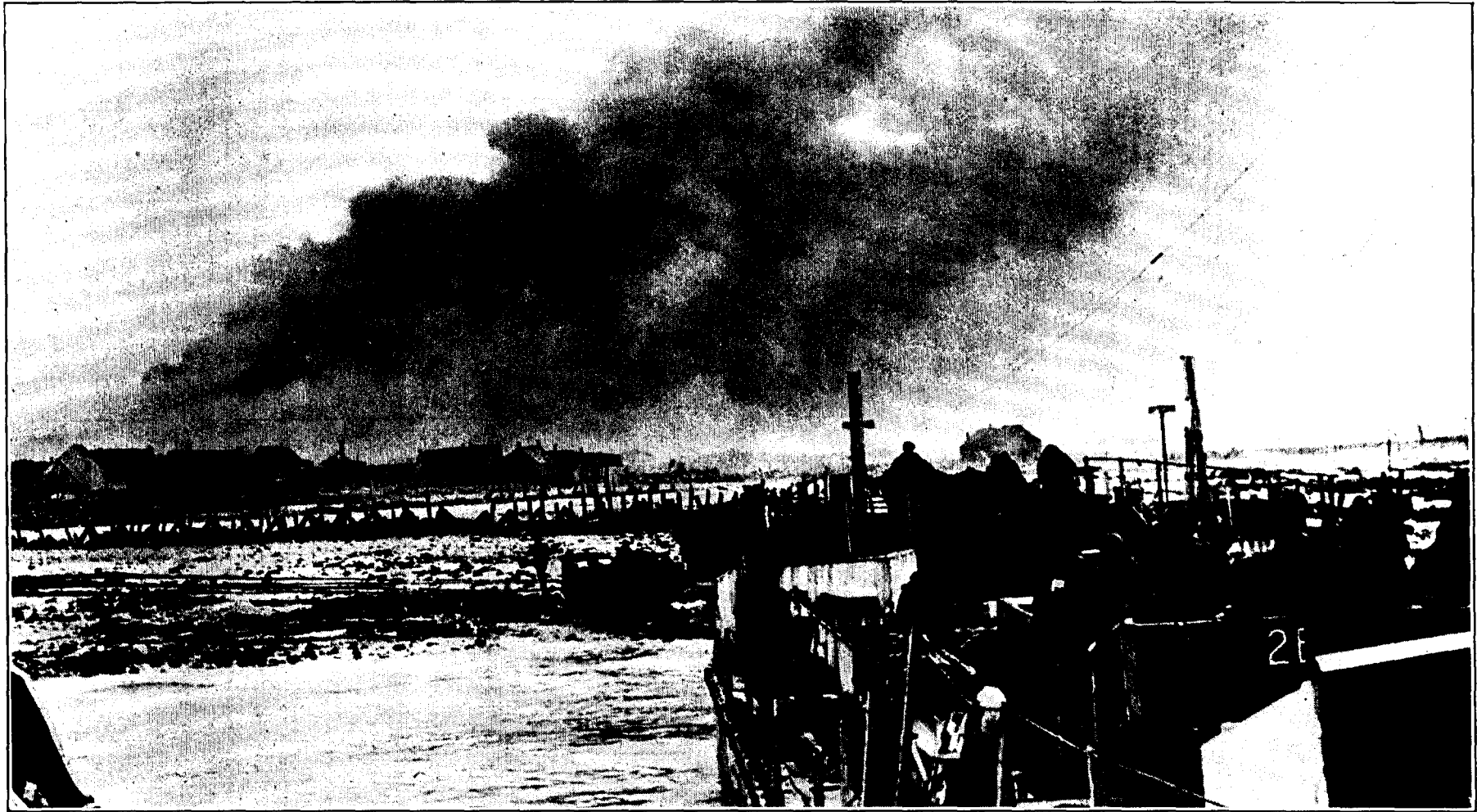


FIG. 7.—WALCHEREN. L.C.T. DISCHARGING AMPHIBIOUS VEHICLES NEAR FLUSHING

divided up by groins. Further, there was to be no lengthy subsequent build-up. There was, however, the possibility that men could work without heavy recovery equipment, and there would be "recovery" work in the form of emergency repairs to hulls, etc., to be performed at Ostend and Breskens on returning craft.

A section of No. 4 MLRU was stationed at Terneuzen and another section at Breskens to provide advanced repair facilities and support for the craft carrying supplies to the forces fighting bitterly in mopping up, and evacuating the wounded, during the days subsequent to the assault.

Ostend was the advanced fuelling base for tankers and fuelling trawlers.

The circumstances of this operation were such that repair and "recovery" work was confined to the mounting phase of the operation, and to patching up those craft that got back. The fighting was so intense, the weather so rough, and the beaches so completely unsuited for recovery work, even if other factors had been favourable, that no repair or recovery parties were landed, except subsequently a section of No. 4 MLRU to salvage some engines. Credit for all that was achieved by engineering personnel during this brief but valiant operation must go to those who manned the assault and support craft. To quote but two cases: in one small support craft, hit by shell fire and with its engine room and fuel compartment on fire, the motor mechanic, having extinguished the engine room fire, sat in the shell hole in the ship's side to play a hose on the second fire although 2,600 gallons of petrol remained in the compartment. In another craft, the engine room hatches were battened down to form an air lock over the flooding in an effort to keep the craft afloat so that the guns could continue firing.

Walcheren had fallen, but 73 miles of river remained to be swept of mines. One group of small minesweepers was at work before the last battery was silenced. Altogether nearly 200 minesweepers took part, and Antwerp was open to shipping on 28th November.

The M/S Base at Terneuzen

To maintain this vast fleet of minesweepers, special plans were made. The whole of N.P. 1528 was called forward from U.K. and landed through Ostend. Meanwhile, No. 4 MLRU was installed at the small village of Terneuzen on the south side of the Scheldt, at the entrance to the Ghent Canal. Covered accommodation was available, but there were no local repair facilities in this desolate spot amidst mud flats, dykes and canals. The minesweepers under repair secured to a line of piles in the largest of the three canal entrances, the only possible berths, which unfortunately were most inaccessible, for the repair party.

The main party of N.P. 1528 was installed just before the arrival of the first minesweepers, and started work whilst still getting settled in and arranging workshops and stores. A section of the party, surplus to immediate needs, was sent to Alost with the NOIC designate for Rotterdam, to await developments. No. 4 MLRU was withdrawn, ready for duty elsewhere in Holland. Fuelling duties were carried out by the Dutch BEO in conjunction with NOIC Antwerp.

The administrative position at Terneuzen was most complex and unsatisfactory. Although south of the river the town is in Dutch territory, and a Dutch NOIC's party was installed, responsible to Flag Officer Holland, now temporarily located in Brussels, planning to occupy Amsterdam, Rotterdam, etc., when liberated. The minesweepers based on Terneuzen were working in the interests of NOIC Antwerp, and therefore under Commodore Belgium. Under these circumstances the BEO of N.P. 1528 did what was probably the only practicable thing to do, and made his party into a self-contained, self-supporting and independent unit, and administered to all their own needs,

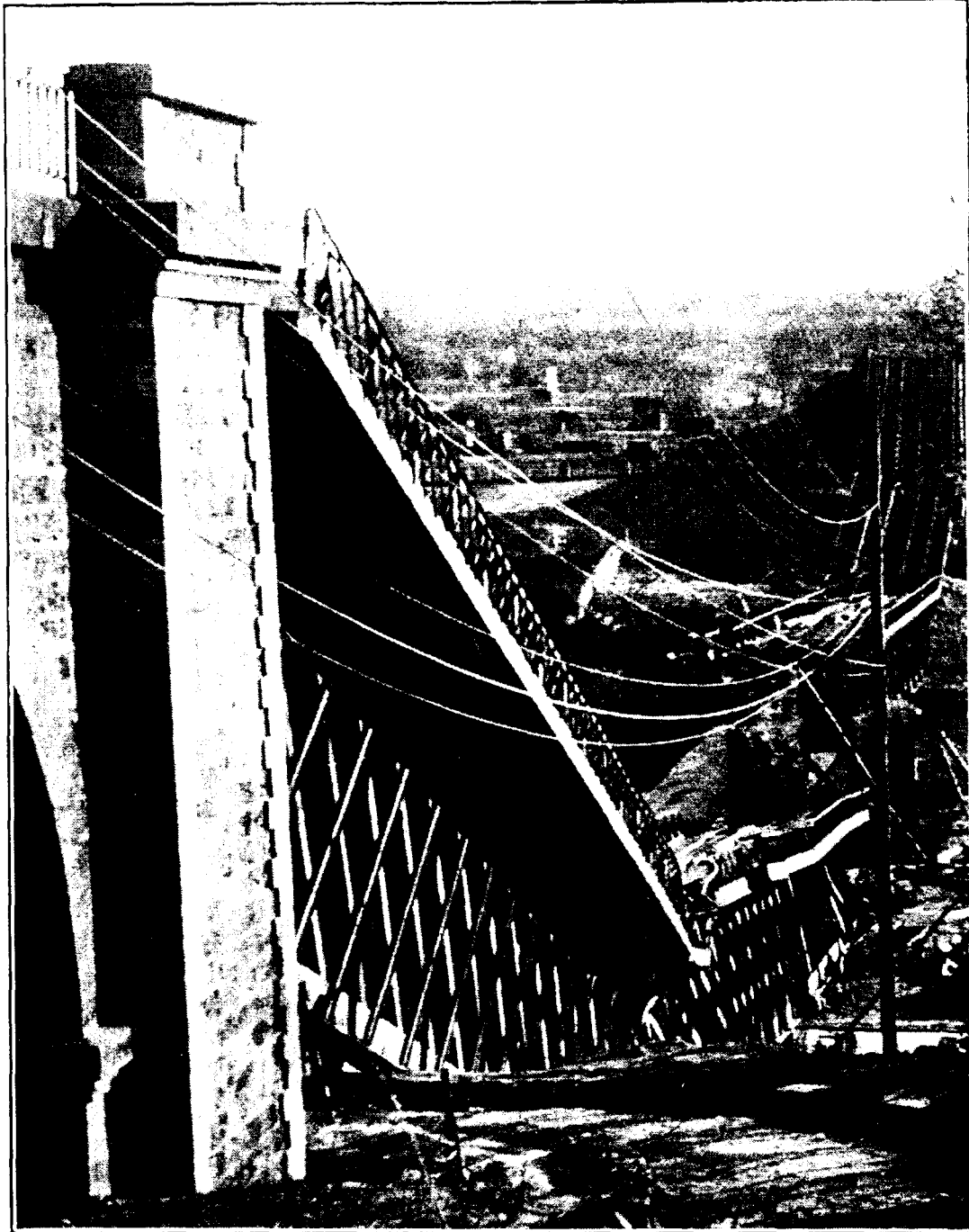


FIG. 8.—NEAR PARIS. DEMOLISHED RAIL BRIDGE. ILLUSTRATING DIFFICULTIES OF COMMUNICATION

by-passed all legal and political red tape and got on with the job of repairing the minesweepers. The required results were obtained, but only at the expense of considerable division of effort both in personnel and vehicles that might better have been employed technically. The "party" spirit luckily avoided any serious disciplinary complications, but much time and effort was expended on domestic duties which would not have been their responsibility could a British NOIC under Commodore Belgium have been present.

Whilst at Terneuzen, the BEO was not only administratively responsible for that section of N.P. 1528 and the section at Alost, but was also responsible for carrying out minesweeper and ML maintenance work, repairs to Army

dredgers, emergency defects on merchant ships passing to Ghent or Antwerp, and various odd jobs for local naval, army and R.A.F. units.

In addition, for a short time, N.P. 1528 supervised work by local firms at Ghent. Subsequently the BEO was planning for the move into Holland with NOIC Rotterdam and F.O. Holland. Fortunately, his various jobs were not far apart and the car provided was reliable.

REPAIR WORK IN ANTWERP

The scale of local repair yards in and around Antwerp and at Ghent far exceeded operational needs, and it was not long before a large number of ships and craft were under repair and conversion on behalf of the Admiralty for purposes quite unconnected with ANCXF's plans. Many ships were prepared for the Far East in Belgian yards.

Although badly devastated, and partly flooded, Flushing in due course was also undertaking such work, which was all co-ordinated in Antwerp. When N.P. 1528 moved to Terneuzen, a Commander (E) and assistants were appointed to NOIC Antwerp's staff and the Constructor and Electrical Officers and a small section of N.P. 1526 were sent from U.K. with some transport. ANCXF's Constructor Officer made Antwerp his temporary Headquarters and a Belgian Ship Repair Committee was set up there to handle the work.

SOME UNUSUAL JOBS

The need for flexibility in planning has been stressed. The following summary of special jobs undertaken by No. 4 MLRU illustrates how this need was equally vital on the "party level"; a repair party must always be prepared to tackle an unexpected job, even though it may often not fall within the intended scope of their work.

The party entered Dieppe with the advanced troops and found the harbour entrance blocked by a sunken 2,500 ton tanker. At low tide the hull was patched by welding. A large capacity air compressor was borrowed from REME and the tanker blown out and floated on the rising tide, to be towed away by a French harbour craft. This work was completed long before the salvage vessels had arrived, or could have entered from seaward.

Between September and November, 1944, the unit's electrical staff, with 5-ton lorry mounted crane and 9 k.w. generator, assisted the minesweeping staff by operating portable pulsing units and acoustic hammers for clearing magnetic and acoustic mines in Antwerp docks, in the course of which they swept three million six hundred thousand square yards.

The mobile diving section sent to Boulogne in October carried out underwater repairs to a sunken 100 ft. lighter, surveyed dock walls, assisted in recovering mines, depth charges, sweep wires, etc., relics of unsuccessful attempts by the Germans at demolition.

Whilst at Terneuzen and Breskens the party gave material assistance to the Assault R.Es. "Alligators," amphibious armoured fighting vehicles, were to be used, for the first time, to assault south Beveland. Last minute modifications were found to be necessary and beyond the local resources of the Army. A large number of lugs were welded onto the tracks of these vehicles, thus enabling them to be ready by the appointed time.

A section of the unit at Breskens constructed piers, landing stages, loading ramps and ladders.

Later, with Force T in south Beveland, a diving party assisted R.Es. in clearing caisson slide and sill of a wrecked lock gate at Hansweert, and in removing four unexploded charges. At Goes, a scuttled tug, sunk across the lock gates of the canal, was patched, pumped out, and removed clear of the channel required by the landing craft based there. The channel was also cleared of fallen masonry,

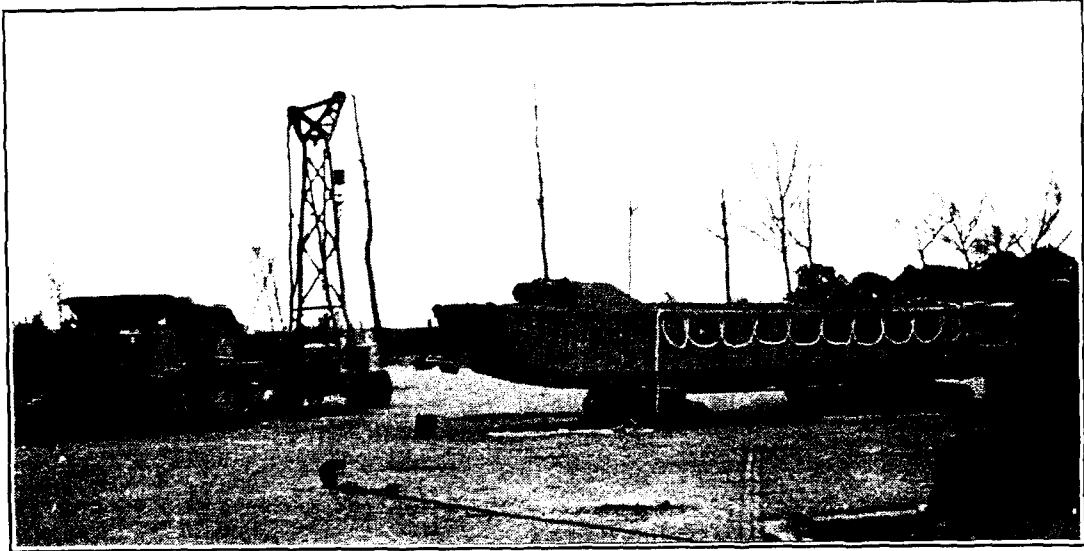


FIG. 9.—CRAFT REPAIRS ON A DUTCH CANAL. D8 TRACTOR AND LE TOURNEAU CRANE ARE ON THE LEFT

The above were undertaken in addition to repairs to several hundred landing craft between D-Day (6th June, 1944) and the Spring of 1945.

A similar impressive record of work tackled by all other parties could also be given.

THE WINTER OF 1944-1945 IN THE DUTCH WATERWAYS

The Navy's contribution to the liberation of Europe did not end with the opening of Antwerp. On the last day of 1944 a SHAEF statement concluded with the words "The enemy will make every effort he can to interfere with the smooth movement of supplies into Antwerp. So long as Allied armies are fighting on the Continent of Europe a great maritime effort will be required and many calls made on the seamen of the United Nations."

A considerable effort to interrupt the flow of supplies was made by launching large numbers of V1 and V2 weapons against Antwerp. Although these badly damaged the town, the dock area suffered only a little. Owing to this failure, the German High Command embarked upon a more ambitious plan in the New Year. It was intended that the enemy's Ardennes offensive should swing north to Antwerp, and be co-ordinated with a southward attack from the islands of Schouwen and Overflakkee and the Dordrecht area. Although, initially successful in the Ardennes, the German move was held and the rest of the plan never matured.

It was at this time that the tragic aircraft accident occurred in which Admiral Sir Bertram Ramsay, ANCXF, was killed. His place was taken by Admiral Sir Harold Burrough.

The defence of the Scheldt provided a most interesting and novel form of amphibious and naval warfare. Our object was to obtain information of the enemy's intentions and to keep him guessing as to our own. After successfully landing the Royal Marine Commandos at Westkappelle, Force *T* became the guardian of the northern flank of the Scheldt.

In addition to the E-boat threat from IJmuiden and Den Helder to our sea routes, which was countered by convoy escorts and Coastal Force patrols from Ostend and South East England, the Germans employed midget submarines and explosive motor boats from the large islands to the north of the Scheldt. The numerous narrow channels and canal entrances made ideal "hide-outs." Patrols in the waterways had to be done by the small craft of Force *T*.

The Royal Marine Commandos and Force *T* also had to keep constant watch on enemy troop movements ashore. From one raid we learnt that the German garrison in Schouwen had suddenly increased from 700 to 6,000 men, thus confirming our suspicions that north and south Beveland and Walcheren were threatened. Our men had to operate in gales, rain and snow, and live in small isolated villages where craft could lie up in canals and creeks, with no local facilities.

The western reaches of the Maas and Waal also had to be patrolled, as had many of the canals in this "no man's land" of the left flank of the army.

Force *T* set up its operational Headquarters at Bergen-op-Zoom; its rear maintenance base was still at Southampton; a forward maintenance base was established at Goes in south Beveland. Goes was a small isolated village at the inland end of a canal running out opposite Schouwen.

Force T Advanced Headquarters

The craft in use by Force *T* at this time comprised mostly LCA and LCS (M)—assault and support craft, and a few specially fitted M.Ls. were also employed. The minor craft were berthed and maintained in the canal at Goes. Such major craft as were required were mainly berthed and maintained in the southern end of the larger south Beveland canal a few miles away.

No. 4 MLRU, together with craft crews and flotilla staffs were accommodated in Goes. The scale of maintenance provided covered all needs except for engine overhauls and such major items. The condition of the craft in time was markedly better than it had been when they first arrived, somewhat worn out by earlier operations.

Initially, no slipping or lifting facilities were available, and the hulls were suffering accordingly. One LCRU was sent over from U.K. and the Le Tourneau crane and D.8 tractor provided the means whereby minor craft could be lifted out onto the canal bank, scraped, painted, repaired, and refloated. Propellers, shafting, and rudders also were in need of attention. The remainder of the LCRU was established on the South Beveland canal at a local barge repair yard where they modified some existing gear to enable major craft to be hauled out of the water for repairs.

The senior resident officer in Goes was the Lt.-Cdr. (E) in charge of No. 4 MLRU and "unofficially" he became the commanding officer of the advanced base there.

The supply and distribution of spare gear to craft scattered over widely dispersed and isolated areas was a major problem, and fell to the lot of the Force E.O., who was also well occupied with major repairs to craft back in Southampton. Antwerp played its part as a forward supply base which also undertook repair work.

Some supply and repair barges (LBO, LBW and LBE) and fuel trawlers were available to Force *T*, and acted as distributors for supplies made through Antwerp.

During the Spring of 1945, Force *T* played its part in the second battle of Arnhem, and its LCA landed troops at the intersection of the lower Rhine and the Ijssel.

THE LIBERATION OF HOLLAND

Apart from that small part of Holland immediately adjacent to the Scheldt, the remainder was still occupied by the Germans. Early in 1945, it became necessary to make plans for the time when Rotterdam, Amsterdam, Den Helder, and other minor Dutch ports should fall into our hands.

Flag Officer, Holland, had his planning headquarters in Brussels. It was decided to allocate him one large Port Repair Party and at least one MLRU.

Naval Party No. 1526 was scattered at that time between Portsmouth, Le Havre, Dieppe and Antwerp and was intended in due course for Cuxhaven in Germany, which was to be our principal minesweeping base. N.P. 1528 was, therefore, relieved at Terneuzen by N.P. 1529 from Boulogne. This latter had no longer any need for a Port Repair Party of its own. N.P. 1710 at Calais was capable of looking after both places and the work at Terneuzen had sufficiently reduced to be handled by a small party. N.P. 1528 joined up with NOIC Rotterdam's party, with its main stores at Alost (near Brussels) and sections at Bergen-op-Zoom and Breda. The BEO lived at Alost but also planned with F.O. Holland's staff in Brussels.

In the event, Holland did not fall till Germany herself collapsed. Instead of a military operation, it became one of supplying food, etc., to the country and of getting shipyards working on ships preparing for the Far East.

Both MLRU were required for Germany and N.P. 1528 was the only Port Repair Party to enter Holland. Their plan envisaged being split to cover :—

- (i) *Ijmuiden* for a M/S Base at the entrance to the North Sea canal leading to Amsterdam.
- (ii) *The Hook of Holland* for an M/S Base at the entrance to the "New Waterway" to Rotterdam.
- (iii) *Rotterdam* and adjacent shipyards for liaison duties with Dutch repair firms, to co-ordinate fuelling for Holland and for technical staff work with F.O. Holland at The Hague.

The Royal Netherlands Navy had their own Flag Officer working in conjunction with F.O. Holland and their own NOICs. From the start it was intended that the Royal Netherland Navy would enter Amsterdam and Den Helder, and at a later date, as their own officers and men became available by training liberated recruits, etc., they would take over all the places originally occupied by R.N. Parties.

A Landing Barge Flotilla of LBO and LBW with its own LBEs and maintenance staff to work under BEO N.P. 1528 was allocated for Fuelling Duties in Holland.

After about three months, the M/S Base at Ijmuiden was turned over to the Royal Netherland Navy, and that section of N.P. 1528, which had again been living on its own, was withdrawn to Rotterdam.

During this time the temporary M/S maintenance base at the Hook of Holland was first transferred to Maassluis, halfway up the New Waterway to Rotterdam, and later to Hellevoetsluis on a Waterway leading to Dordrecht (at each of these places living as a self-contained unit) and finally to Rotterdam.

At Rotterdam, N.P. 1528 ratings lived in the R.N. Barracks and, as they became surplus to local requirements, were released to U.K.

The BEO N.P. 1528 at Rotterdam, with a Warrant Engineer, as Fuelling Officer, gradually turned over the local duties to the Royal Netherlands Navy Commander (E) and his staff and, with the Constructor Officer, acted as liaison officer and co-ordinated as far as possible all the work with local firms for R.N., R. Neth. N., MWT, WSA and helped with liaison between Rotterdam and Amsterdam repair work.

The Royal Netherland Navy Commander (E) took over the fuelling duties as soon as the Dutch manned local small tank vessels and local fuel companies were handling all requirements for naval fuel. The R.N. Landing Barge Flotilla was withdrawn.

From the start, all available local facilities were used to the utmost under R.N. direction, to release R.N. craft and to hasten the return to life of local facilities. This policy that the R.N. was only there to help the Dutch till they could take over with their own people worked very well, as "liberators" were rather unwelcome after a short time.

With the collapse of Japan in August, the whole policy of fitting out ships for the Far East changed suddenly. All R.N. work was cancelled, or completed sufficiently for the ships to return to U.K., and the Dutch firms continued to work on Merchant Ships, and for Royal Netherland Navy only. N.P. 1528 returned to U.K. in September, 1945, for dispersal, leaving the Constructor Lieutenant and a few ratings with NOIC Rotterdam, to work with the seven Admiralty Emergency Repair Officers, who were sent to oversee the final R.N. work.

THE COLLAPSE OF GERMANY

The above account of events in Holland has rather anticipated the march of events on other fronts. The crossing of the Rhine and the entry into and occupation of Germany will be recounted in the next and final article.
