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THE PROPERTY OF HIS BRITANNIC MAJESTY'S GOVERNMENT

SECRET
W.P.(42) 310

21ST JULY, 1942

WAR CABINET
SHIPPING COMMITTEE

SECOND REPORT
SECRET.
S.C. (42) 45 (Final).
July 21, 1942.

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WAR CABINET.
Shipping Committee.

SECOND REPORT.

I.—SUMMARY OF CONCLUSIONS.

IN our first report (S.C. (42) 20) (Final), paragraphs 15 and 19, we referred to economies which might be secured in the use of shipping by the armed forces. We now submit a further report showing the progress which is being made in this direction. The results of our enquiry may be summarised as follows:

Capacity of troopships.

2. The capacity of troopships has recently been increased on an average by 29 per cent, from 129 to 166 men per 1,000 gross registered tons. As a result, 2.24 million gross tons of personnel shipping in service now carries as much as would formerly have been carried by 2.88 million gross tons. (Paragraph 13.)

Shipment of supplies from the most economical source.

3. There remains some possibility for further economies in the use of tonnage by the elimination of imports into and exports from this country of vehicles of broadly similar types, and also of the import into this country of materials for the manufacture of vehicles for export which could be supplied from North America. The general War Office policy is not to import into the United Kingdom any type of vehicle of which the counterpart is exported from the United Kingdom. Every effort should be made to persuade Canadian and United States military authorities to agree to make use of British-made vehicles for their forces in this country. (Paragraphs 18 to 20.)

Trans-African routes.

5. It is estimated that some 130,000 gross tons of shipping could be released permanently for employment elsewhere by the full development of a Trans-African land route as an alternative to shipments via the Cape. Some deduction from this figure must be made to allow for the shipment of materials necessary to develop and maintain the route. (Paragraphs 22 and 23.)
Packing of vehicles.

6. Until recently the majority of vehicles transported from the United Kingdom have been presented in an extremely uneconomical form for shipment. The percentage packed in May, however, was approximately 15 per cent. of the total of War Office and Air Ministry vehicles shipped, which in this instance represented a saving in importing capacity of 80,000 tons. The development of a new type of pack known as the "Delta" pack (estimated to take 3-4 months) should be pressed forward as a matter of urgency. (Paragraphs 24 to 25).

Scope for Further Economies.

7. For the reasons set out in paragraph 16 of our first report, we consider that the use of shipping by the Services bulks so large in the total that any significant reduction which might be effected would permit a substantial increase in United Kingdom imports. It should be remembered, however, that the Service use of shipping includes tonnage required for supplies to Russia and all troopships.

8. Short of a modification of military plans themselves—the imposition of which by reason of scarcity of shipping it is a principal object of policy to avoid—there are two directions in which such economy might be sought (a) by paring down the scales of equipment, reserves and maintenance of forces operating overseas, and (b) by reducing the volume of shipping required to transport a given quantity of warlike stores and personnel. Encouraging results, which we have described above, have already been achieved in this respect.

9. We have not felt competent to examine in detail the present scales of equipment, maintenance and reserves considered necessary for the Services (see paragraphs 15 and 16 below). But if shipping were not available in sufficient quantity to meet all Service demands, it would clearly be for consideration whether such scales could not in some cases be reduced without loss of efficiency rather than that the scope of our military operations themselves should be restricted. We understand that a Committee is now examining the possibility of reducing the scale of vehicles required by the Army.

10. As regards shipping economies of the more technical type, considerable progress has recently been made and substantial economies have been effected. Further investigations are being made by the Shipping Space Economics Committee and these are being rigorously followed up. We cannot emphasise too strongly the importance of this field of economy.

11. The economies already effected or contemplated are very considerable, but we would point out that there must be a limit to the purely "shipping" economies that can be effected item by item and that if, by a reconsideration of establishments and reserves, a cut could be imposed in military cargo shipping requirements considerable relief to our import programme would be rendered possible.

II.—THE MOVEMENT OF PERSONNEL.

Elimination of Unnecessary Moves.

12. There is very little movement of Service personnel of a non-operational character. Leave, and relief on medical grounds, are kept to a minimum, and, wherever possible, naval personnel are given passages on His Majesty's ships.

Increase in Capacity of Troopships.

13. Since the beginning of this year, various steps have been taken, including reduction to the minimum of facilities for exercise and other amenities, to increase the numbers of men carried per ship. The number of men carried per 1,000 gross register tons has risen in the case of "Monsters" by 51 per cent. from 87 to 131, in the case of W.S. ships by 37 per cent., from 128 to 174, and in the case of smaller ships engaged permanently in the Indian Ocean by 2 per cent. from 164 to 167. On the average capacity has been increased by 29 per cent. from 129 to 166 men per 1,000 gross register tons. As a result
of these improvements the 2·24 million gross tons of personnel shipping in 
service at mid-1942 had a trooping capacity which would formerly have required 
an additional 64 million gross tons. No reliable information is available 
regarding the capacity of American troopships. Such information as is 
available would indicate a figure of about 185 men per 1,000 gross register tons, 
but it is not known whether United States capacities are based on long or short 
voyages, tropical conditions or otherwise.

Use of cargo vessels for carrying personnel.

14. The extent to which cargo vessels can be adapted to carry an increased 
number of personnel is limited by the loss of cargo space involved. The following 
steps have, however, been taken:

(i) Four whaling factories and seven cargo liners have already been fitted 
to carry between 56 and 165 personnel.
(ii) Three more cargo liners are now being fitted and three vessels under 
construction will be so fitted. Three vessels released by the Admiralty 
will also be fitted to carry some personnel.
(iii) A number of cargo vessels have had their accommodation increased so 
as to carry up to about 24 personnel.

These increases in passenger carrying capacity will be made at little expense to 
cargo carrying capacity.

In view of the increased carrying capacity of our troopships referred to in 
(b) above, it is not intended at the moment to undertake further work on increasing 
passenger accommodation in any cargo vessels.

III.—The Shipment of Service Supplies.

Scales of initial equipment, maintenance and reserves.

15. We have not had before us any quantitative information regarding 
scales of equipment, maintenance and reserves of army and air force units. These 
vary a great deal according to the nature of the unit and the theatre and character 
of operations and we have not felt it is within our competence to enquire into 
these matters in detail. We understand, however, that Army unit equipment is 
kept under constant review by a Standing Commission. In addition a special 
Committee is now examining the scale of vehicles required by the Army, with a 
view to its reduction. Any such reduction would result in a substantial saving 
in shipping space. As regards maintenance, shipments to established theatres 
of war are made in response to specific demands for items actually deficient and 
not on automatic book allocations. Similarly, the Air Ministry also keep all 
scales of equipment under constant review, and the equipment for each R.A.F. 
unit going overseas is carefully checked to ensure that only essential items are 
included.

Scales of supplies and reserves of food.

16. The aggregate weight of army food rations per man per month equals 
117 lbs. net in the Middle East (of which 55 lbs. is obtained within the area) and 
129 lbs. in India (of which 98 lbs. is obtained locally). These figures apply mainly 
to troops in the base area and slight adjustments would be necessary for forward 
troops. Where circumstances permit, the N.A.A.F.I. Corporation supplies beer, 
spirits, and in suitable climates chocolate, which are together equivalent to some 
25 to 29 lb. per man per month additional to the Army ration. The General Staff 
minimum reserve stock of food is equal to 90 days' supply in the Middle East 
and the same in theatres of operations in India. In addition the Middle East 
has a fluctuating reserve amounting to up to 60 days' supply and the army in 
India has a second-line reserve equivalent to 6 months' supply.

17. Recent progress in the production of foodstuffs in a concentrated form, 
such as dried eggs, dried milk and dehydrated root vegetables, offer a possible 
field for economising shipping space of which the maximum advantage should be 
taken.
Shipment of supplies to theatres of war from the source most economical of shipping.

18. Amongst warlike stores the greatest scope for economy is provided by shipments of vehicles. Efforts have been made to obtain as large a proportion as possible of the vehicles required for Eastern theatres of war from North America rather than from the United Kingdom, thus avoiding any unnecessary import of materials or finished vehicles into this country. The following table shows the success with which these efforts have been attended.

**TABLE I.**

*Number of Vehicles Transported in first half of 1942.*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North America to United Kingdom</td>
<td>2,242</td>
<td>3,673</td>
<td>878</td>
<td>6,793</td>
</tr>
<tr>
<td>United Kingdom to Africa, Middle East, India, Australia and New Zealand</td>
<td>6,574</td>
<td>15,240</td>
<td>1,825</td>
<td>23,640</td>
</tr>
<tr>
<td>Of which in operational moves</td>
<td>3,963</td>
<td>12,820</td>
<td>1,270</td>
<td>18,053</td>
</tr>
<tr>
<td>Remainder</td>
<td>2,611</td>
<td>2,420</td>
<td>556</td>
<td>5,587</td>
</tr>
<tr>
<td>North America to Africa, Middle East, Persian Gulf, India, Australia and New Zealand</td>
<td>2,400</td>
<td>62,214</td>
<td>7,561</td>
<td>92,274</td>
</tr>
<tr>
<td>Total Shipments</td>
<td>11,315</td>
<td>61,127</td>
<td>10,265</td>
<td>102,707</td>
</tr>
</tbody>
</table>

* Excluding armoured fighting vehicles and certain other types.

19. Load carriers, cars and ambulances are practically all shipped from North America, with the exception of those accompanying operational moves of complete units from this country which are still held to require the full complement of vehicles of all types. Technical vehicles are still, in the main, provided from the United Kingdom, but efforts are being made to take as many as possible from North America. The R.A.F. send no load carriers from this country. Only technical vehicles accompany units in operational moves, the load carriers provided from North America being drawn at destination from War Department stocks.

20. It is clear, however, that there remains some possibility of further economies in the use of tonnage through (a) eliminating the import into and export from this country of vehicles of broadly similar types, and (b) eliminating the import into this country of materials for the manufacture of vehicles for export which could be supplied from North America. These considerations apply equally to other types of warlike stores. The War Office policy on vehicles is to avoid importing into the United Kingdom any type of which the counterpart is exported from the United Kingdom. Exceptional circumstances have occasionally been held in the past to necessitate a temporary departure from this policy. Every effort should be made to persuade the Canadian and United States military authorities to agree to make use of British-made vehicles and equipment for their forces in this country. The necessary counterpart of this would be the shipment of a larger quantity of vehicles from North America for the use of British forces in the East.

21. As regards warlike stores other than vehicles, the possibilities of making economies of the kind mentioned at (a) and (b) of paragraph 20 above are under constant examination with the Americans and considerable progress has been made.
22. A considerable saving in tonnage employed on the long haul to the Middle East theatre of war could be achieved by the full utilisation of Trans-African routes. The target figure for the route via the Congo, the development of which is largely a War Office responsibility, is at present 30,000 tons of stores and 800 vehicles per month.

23. It is estimated that, should this figure be achieved for shipments from the United Kingdom to Matadi, as an alternative to shipments via the Cape, some 100,000 gross tons of shipping would be released permanently for employment elsewhere. Against this must be set increased demands on shipping for provision of materials, equipment, &c., to develop and maintain the route.

**Packing of vehicles.**

24. Vehicles are being shipped from North America and the United Kingdom in very large numbers and in various types of pack, with various degrees of breakdown, depending on the destination, type of vehicle, and the source of supply. The following table gives figures for shipments of War Office vehicles to the Eastern theatres of war during the period January to June 1942, according to the type of pack employed:

<table>
<thead>
<tr>
<th>Type of Pack</th>
<th>Cubic Measurements of Pack for 3-ton G.S. Body (cu. ft.)</th>
<th>Number of Vehicles shipped</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Load Carriers, 3 ton, 50 cwt., 15 cwt. and smaller types</td>
<td>Other Types.</td>
<td></td>
</tr>
<tr>
<td>From United Kingdom—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On wheels</td>
<td>1,420</td>
<td>12,589</td>
<td>8,170</td>
</tr>
<tr>
<td>Cased (3 vehicles in 3 cases)</td>
<td>720</td>
<td>2,301</td>
<td>250</td>
</tr>
<tr>
<td>From North America—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alpha (1 vehicle in 1 case)</td>
<td>1,012</td>
<td>201</td>
<td>6,062</td>
</tr>
<tr>
<td>Beta (2 vehicles in 3 cases)</td>
<td>762</td>
<td>36,030</td>
<td>2,450</td>
</tr>
<tr>
<td>C.K.D. (24 vehicles in 47 cases)</td>
<td>836</td>
<td>22,988</td>
<td>1,568</td>
</tr>
<tr>
<td>Total</td>
<td>77,454</td>
<td>18,460</td>
<td>65,014</td>
</tr>
</tbody>
</table>

25. It will be seen that the majority of vehicles from the United Kingdom have been presented in an extremely uneconomical form for shipment, namely fully set up on their wheels. Considerable progress has, however, been made in packing these vehicles in recent months, and the percentage packed in May was about 15 per cent. of the total War Office and Air Ministry vehicles shipped to all destinations as compared with 2 per cent. in April. The proportion packed in June has risen to about 19 per cent. The actual saving in shipping due to the packing of some 1,126 War Office vehicles during May has been estimated as equivalent to about 80,000 tons deadweight of imports on the North Atlantic route; though it cannot of course be assumed that on all occasions circumstances would be similar, or that we could count on a saving of about 70 tons of imports for every vehicle sent packed instead of on wheels from the United Kingdom to the Middle East.* Vehicles shipped from the United Kingdom in a packed form

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* In this particular instance the majority of packaged vehicles were shipped on a divisional move and the actual destination was not definite. Had all the vehicles been shipped unboxed a certain number of additional vessels would undoubtedly have been necessary. The calculation, however, does not allow for any non-divisional cargo which would otherwise have been shipped in the vessels eliminated from the move by reason of the packing of vehicles.
have so far been limited to the larger type load carriers and some semi-technical vehicles, but a new pack for 15-cwt. trucks has recently been developed. All load carriers are to be despatched packed and attention is now being given to the possibility of packing certain types of technical vehicles and smaller types, such as 8-cwt. trucks and cars.

26. Load carriers for the R.A.F. are mainly drawn at destination from War Department stocks, but some success has already been achieved in reducing the height of R.A.F. technical vehicles shipped from the United Kingdom.

27. The greater the number of packages per vehicle the easier it will be to stow them, but against this must be set the higher risk that important components may be lost in transit and the increased difficulty of assembly. For instance, shipments in a C.K.D. form (the most economical type of pack) require complicated assembly facilities and can therefore only be undertaken to areas where suitable plant exists, e.g., India and Australasia.

28. Numerous types of pack are already in use for shipments from United States and Canada. A new type of pack (Delta) has now been adopted as a standard form of pack for shipments to the Middle East from North America and the United Kingdom. Its cubic measurements are 394 cubic feet for the standard 8-ton lorry as compared with 762 cubic feet for the existing Beta pack from North America. While this pack is in course of development (which it is estimated will take 3-4 months), an intermediate type (Gamma) will be utilised. It is understood that this latter pack, which, like the Delta pack, shows a considerable saving over the existing packs used for the Middle East, can be introduced almost immediately for shipments from North America.

Signed on behalf of the Committee:

HARCOURT JOHNSTONE,
Chairman.

Great George Street, S.W.1,
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