I(X) K file.

TOP SECRET

Initials_____

Appt._____

Ref. INT/49/3/JIS.

MEMORANDUM TO :

Secretary, J.P.S.

J.P.S. 170.

Since this paper was written, further changes in Japanese dispositions in F.I.C. and SIAM have occurred. As a result, it is now estimated that the minimum opposition in the BANGKOK area will be one division. It is not possible at present to estimate how this division will be disposed. It is possible that this garrison might have been further increased by withdrawals from the MOULMEIN area, but this will mainly depend on the degree of pressure we are able to exert during the next few months. In no case are the forces, within a 50 mile radius of BANGKOK, likely to exceed two divisions. Reinforcements may come from :

			Arrive
(a)	South INDO-CHINA	One weak division	D plus 7 onwards
(b)	Northern SIAM	One division	D plus 7 onwards
(c)	KANCHANABURI	One regiment	D plus 4 onwards
(d)	MOULMEIN area	One regiment	D plus 14 onwards
(e)	KRA	One regiment	D plus 7 onwards.

The maximum build up would, therefore, be three to four division, which would be unlikely to be complete until between D plus 28 to D plus 42.

2. It must be emphasised that until Japanese intentions after the fall of SHACKLE become clear, the above can only be regarded as a likely case, if no further major change in Japanese dispositions occurs.

WINTERBORN,
Lieutenant Colonel, G.S.
Secretary, J.I.S.

26 July 1945.

Copy to : BGS(I) ALFSEA.

WO 203/288,
(32 mdu)

A/Q
GS(i)

28 June 1945

TOP SECRET

Initials: M G L B
Appointment: DPS
Copy No. 34

HEADQUARTERS

SUPREME ALLIED COMMANDER

SOUTH EAST ASIA

Joint Planning Staff

Attached is the fourth draft of JPS Paper 170 - "Operations against BANGKOK", for consideration by the Directors of Plans on Saturday 30 June.

Will Divisions please communicate any comments they wish to make to Secretary J.P.S. as soon as possible and in any case not later than 1200 hours Saturday 30 June.

If any Heads of Divisions particularly wish to raise points verbally with the Directors of Plans will they please inform Secretary J.P.S.

M G L Bridges Major
for Lieutenant Colonel
Secretary J.P.S.

DISTRIBUTION:-

	Copy No.
D of P (N)	1-2
D of P (Army)	3-4
D of P (Air)	5-7

	Copy No.		Copy No.
Ops Div	8	E Plans	32
Int Div	9-10	Ops Main ALFSEA	33-34
HCO	11-12	Air Staff Plans ACSEA	35-36
P Div	13	G Plans Adv ALFSEA	37
D Div	14	FOPS	38
SO-in-C	15	EPS	39-41
HSD	16-17	EPS Delhi	42
HAOD	18-19	Sec JPS	43-45
Sec JLPC	20-31	File & Spare	46-50

Rec'd 1150 hrs 30 Jun

FOURTH DRAFT

TOP SECRET

28 June 1945

HEADQUARTERS

SUPREME ALLIED COMMANDER

SOUTH EAST ASIA

Operations Against BANGKOK

JPS Paper 170

OBJECT

1. To examine the practicability of undertaking operations, in which an airborne assault will be included, against BANGKOK as soon as possible after MAILFIST.

DISCUSSION OF THE OBJECT

2. Although the operations to be considered in this paper are limited to the securing of BANGKOK we assume that they are a prelude to further operations which may entail the clearance of SIAM, the occupation of central SIAM to obtain rice for export, or the use of BANGKOK as a base for further exploitation. To enable any one of these alternatives to be adopted, we consider that operations against BANGKOK must be planned not only to secure the city and any adjacent airfields but also to open the River and the port to shipping.

ASSUMPTIONS

3. We have assumed that :-

(a) SINGAPORE will have been captured and entry into the SOUTH CHINA SEA secured by 1 December.

(b) Clearance of North MALAYA from the PORT SWETTENHAM area begins as soon after ZIPPER as possible.

(c) MOULMEIN will have been captured by mid-December.

(d) Sufficient pressure in the SHAN STATES is maintained to take advantage of any Japanese withdrawal.

FACTORS

Enemy (See Appendix 'B')

4. Enemy Reaction to a direct assault on BANGKOK

(a) Present dispositions of enemy forces in Central SIAM are :-

Area	Div Tps	Non Div Tps	Air	Navy
SARABURI/LOPBURI (70 miles North of BANGKOK)	8000	-	500	-
Greater BANGKOK	2000	4000*	2400*	100
BANPONG/KANBURI (55 miles West of BANGKOK)	4500	800	100	-

* Includes 2400 air and 500 non-Div tps in the DON MUANG airfield area which is 13 miles North of BANGKOK.

(b) It is unlikely that more than one regiment plus non div troops from the BANGKOK area will be deployed against our operations during the first four days. The enemy forces from the BANPONG/KANBURI area can be expected to arrive within 4 to 8 days and those from the SARABURI/LOPBURI area and further North within 7 to 14 days. The maximum enemy build-up of 1-1/3 divisions should therefore be available within 14 days. Subsequent reinforcement is unlilely provided our operations from MOULMEIN and on the MALAYAN Peninsula are pushed vigorously.

(c) The maximum effort from JAF in THAILAND/FIC is unlikely to exceed 7/10 fighter and 3/4 bomber sorties from D plus 1 to D plus 4. The effort would decline by at latest D plus 10 to negligible proportions.

5. Enemy Reaction to an Overland Advance from MOULMEIN

It is considered that the Japanese will make full use of the naturally strong defensive positions on the axis THANBYUZAYAT - BANGKOK to deny us access to SIAM. The country is ideal for cave warfare as practised by the Japanese in SWPA. The enemy force in this area will consist of the remainder of the MOULMEIN garrison and will probably be of the order of one division plus.

Defences

6. (a) It is believed that there are no Japanese CD guns guarding the entrance to the BANGKOK river. The forts on the river banks are at present occupied by Siamese troops only, and it is doubtful whether any guns remain in position.

(b) The BANGKOK area is protected by some 22 heavy and 13 light AA guns with 22AA MG's. Of these, 8 heavy and 6 light AA guns and 7 MG's are at DON MUANG airfield. Prepared sites exist for many more AA weapons.

(c) A large number of Allied aerial mines have been laid in the BANGKOK River and approaches and it must also be assumed that enemy mines will have been laid. This will entail a minesweeping commitment.

Siamese Reaction

7. In the main, the Siamese Government and armed forces are strongly anti-Japanese; they are, however, not fully trained. They are short of equipment and lack direction. The arming of guerillas by OSS is in progress and we hope to be allowed to arm and equip the Siamese forces during the latter part of 1945. We should require at least three months to make good their deficiencies.

8. Provided that sufficient assistance in the form of arms, ammunition and equipment and a number of white officers are flown into SIAM, the Siamese should be able to undertake widespread operations and prolong them for a considerable period.

9. A well organised Siamese revolt in conjunction with our own operations might force the Japanese to evacuate Northern and Central SIAM. It would certainly delay the build-up of enemy forces against us in the BANGKOK area and might succeed in temporarily containing the enemy garrison in the city. Every effort should therefore be made to organise anti-Japanese forces in SIAM, as recommended in JPS Paper No. 158.

Effect of Weather on Operations (See Appendix 'C'.)

10. The latter part of the NE monsoon (December to March) is the best season for all types of operations. During the SW monsoon rains and floods would often preclude airborne operations and it would therefore be unwise to plan such operations after April.

Airfield and Airfield Sites

11. Airfields and possible airfield sites in the vicinity of BANGKOK are discussed at Appendix D.

Topography and Communications

12. Details of the topography and communications in the BANGKOK area and on the route from MOULMEIN to BANGKOK are given at Apprndix E.

Beaches and Landing Possibilities (See Appendix F)

13. Assault Landings.

(a) Assault landings by more than small parties of infantry without vehicles would not be practicable on the coast East and West of the mouth of the BANGKOK River.

(b) Near the entrance to the BANGKOK River it might be possible to mount small scale assaults at several places at high water. The landing of vehicles would be difficult.

(c) A large scale assault inside the river mouth does not appear practicable. Further up the river there are many places where landings could be made by small parties of infantry.

14. Build-up

(a) There are no places outside the river mouth suitable for landing a build up division.

(b) Inside the river it is thought that a build up division could be landed at SMUTPRAKAN in 3 to 4 days provided the current does not exceed 3 knots.

Suitability of areas for Airborne Landings

15. The area in the immediate vicinity of BANGKOK is covered by orchards and market gardens. The nature of this cultivation makes this area undesirable for the landing of gliders and paratroops.

16. The area of the paddy field plain in the vicinity of BANGKOK is practically free from large obstructions and offers a firm surface during the dry season. The area is ideal for paratroop landings but the network of low bunds is likely to cause considerable glider casualties unless strips are prepared. DON MUANG airfield is obviously the most suitable area for glider landings and would enable a high percentage to be recovered. The adjacent country is equally suitable for paratroop landings.

Tide Data and Currents (See Appendix F)

17. (a) In December and January the height over the bar at high water is about 14 feet and decreases to about 12 feet in April.

(b) The average stream throughout the year is up to 2 to 3 knots for both flood and ebb.

POSSIBLE COURSES OF ACTION

18. Three possible methods could be adopted to capture BANGKOK :-

(a) An overland advance from MOULMEIN supported in its final stage by airborne landings.

(b) An airborne assault North of BANGKOK to secure the DON MUANG airfield. An air transported follow up to be flown in with light equipment only. The city to be assaulted from the North-east, and the river banks to be cleared by a minor amphibious operation in conjunction with the advance of airborne forces South from BANGKOK.

(c) An airborne assault near the mouth of the BANGKOK River to secure the East bank and a beach-head at SMUTPRAKAN into which a seaborne follow up with heavy equipment can be introduced. The West bank of the river to be secured by small amphibious operations and neutralised by gunfire. The city to be assaulted from the South

COURSE A

19. If the capture of MOULMEIN is completed by mid-December, an advance towards BANGKOK could not commence before early January. Terrain, probable enemy resistance and the development of the road and rail L of C will result in a slow advance which is unlikely to reach BANGKOK before April at earliest and possibly not until October. For these reasons this course is not considered further.

COURSE B

20. (a) Advantages

(i) The initial assault will secure within 36 hours a limited AW airfield which would facilitate the landing of our airborne troops.

(ii) Fighter Bomber aircraft operating from DON MUANG will be able to support our ground forces soon after the capture of the airfield.

(iii) Complete surprise should be achieved.

(iv) We shall have placed ourselves between our objectives and the main source of enemy reinforcement.

(b) Disadvantages

(i) Our airborne forces will have to operate without assistance from heavy supporting arms throughout the whole operation.

(ii) The opening of the river will be delayed.

(iii) The only L of C available to the force until BANGKOK has been captured and the river cleared will be by air.

COURSE C

21. (a) Advantages

(i) Our assault on BANGKOK will be assisted by heavy supporting arms, including LCG and LCT(R) and will be relatively mobile.

(ii) The opening of the river will commence on D Day and will proceed with our advance on the city.

(iii) We shall have a secure L of C from the commencement of operations.

(iv) The dropping zone should be undefended by A.A. Artillery.

(b) Disadvantages

(i) Surprise may be lost by the detection of our convoys prior to D Day.

(ii) Direct air support can only be provided by carrier-borne aircraft until DON MUANG is captured. With tank support it may be possible to reach this airfield within 48 hours but even this delay will enable the enemy garrison to prepare demolitions and defences.

COURSE SELECTED

22. We select Course C as in our opinion the availability of heavy weapons in support of the assault on BANGKOK and the immediate opening of a secure L of C make it the sounder military operation. The remainder of this paper is therefore based on this course.

23. Should it, however, be found impossible to adopt this course for any reason such as the non-availability of ships or craft we consider Course B to be a practicable operation.

OUTLINE PLAN

24. Concept

(a) Initial assaults.

(i) Two parachute brigade groups to drop in the paddy land East of SMUTPRAKAN to secure the beaches in that area.

(ii) Two parachute brigade groups to drop in the SAM RONG area to secure the airfield sites.

(iii) One Commando Brigade to secure the West bank of the river.

(b) Build-up.

(i) One infantry division with a tank regiment and a medium artillery regiment to be landed at SUMTPRAKAN, commencing D Day.

(ii) The airlanding elements of the two airborne divisions to land on two FW and glider strips in the SAM RONG area. The former to be constructed by Engineers brought in by sea on D Day.

(c) The Advance.

(i) The advance to and the assault on BANGKOK to be carried out as soon as adequate supporting arms have been landed, depending on the scale of enemy resistance.

(ii) DON MUANG Airfield to be secured as soon as possible.

(d) Opening the River.

(i) Amphibious operations by Commandos supported by LCG and LCT(R) to secure the West bank of the river will keep pace with the advance of our forces to BANGKOK.

(ii) Mineswooping operations to proceed up river as the banks are secured.

(e) Air Support.

(i) Fighter escort for our airborne forces and a measure of cover to be provided by long range aircraft based in South BURMA. Close support to be provided by carrier-borne aircraft

(ii) Two SEF (GA) Squadrons with radar equipment to be flown in to DON MUANG after its capture.

Phasing in of Airborne Force

25. Details of the phasing in and the airlift required for the airborne force are shown at Appendix G.

Mounting

26. Airborne Force

(a) The airborne force will be mounted from the RANGOON area, a distance of some 360 miles from the objective. This means that normally only one sortie per aircraft per day will be flown. Aircraft carrying out parachute or supply dropping sorties should be able to fly two sorties per day for a limited period.

(b) By 31 December the following airfields should be available in the RANGOON area for all purposes:-

2 AW Fighter/Bomber airfields)
4 AW Medium Bomber airfields) Including the TOUNGOO area for a maximum of two fields
1 AW Heavy Bomber airfield)

2 FW Medium Bomber airfields

2 FW Heavy Bomber airfields

(c) A minimum of 1 Heavy Bomber and 4 Medium Bomber airfields will be required for mounting the airborne force. Allowing for all other commitments it is considered that the airfields shown in para (b) above will be adequate for this operation.

27. Seaborne Force

The seaborne force will be mounted from SINGAPORE. It is considered that the mounting of an operation of this scope should not affect the development of the South MALAYAN Base.

FORCES REQUIRED

Navy

28. (a) Naval Forces

6 Assault Carriers
2 Cruisers
1 Monitor
8 Destroyers
12 Escorts
6 Fleet Minesweepers
18 Auxiliary Minesweepers
6 LCG(L) or (M)
6 LCT(R)

(b) Assault Shipping and Craft

1 LSH(L)
1 LSH(S)
1 LSF
4 LSI(L)
6 LSP
4 MT/Store
16 LST
18 LCI(L)
40 LCT
1 LCH
1 LCQ
1 LSE
2 LCT(E)

Note No other minor Landing Craft other than those carried in LSI(L) will be used in the operation

(c) Build up and Maintenance Shipping until D plus 30

8 Personnel
18 MT/45 LST
6 LCI(L)
15 'B' type Coasters

Note If MT Ships are used LCT or equivalent craft will be required for lighterage into BANGKOK from outside the BAR.

Army

29. HQ Airborne Corps
Two Airborne Divisions
One Infantry Division
One Commando Brigade
One Tank Regiment
One Medium Artillery Regiment
Airfield Engineers
Administrative Troops
660 Glider Crews

Air

30.

2 LB (RP)	Squadrons	) For ground straffing
4 SEF (LR)	"	)
3 SEF (LR)	"	For escort and protection
2 SEF (GA)	"	To be based at DON MUANG
12 C-47	"	) Minimum lift for two para bde groups
3 Halifax	"	)
180 HORSA	Gliders	) Including a 25% reserve
500 WACO	"	)

AVAILABILITY OF FORCES

31. It will not be possible to assess the availability of forces required for this operation until:-

(a) Our post-MAILFIST theatre strategy has been decided.

(b) The effects of PYTHON have been assessed

(c) Minerva and drafting priorities have been agreed.

(d) The RAF Stage II build up is firm.

The following details can therefore only be regarded at expected overall availabilities.

Navy

32. (a) Naval Forces

EIF should be able to provide adequate Naval Forces for this operation except for minesweepers which may be in short supply.

(b) Assault Shipping & Craft

After MAILFIST an assault lift for about four brigades should be available for further operations including the clearance of MALAYA.

Army

33. (a) 44 Ind Airborne Div is in India and due to be completely trained by 15 Dec.

(b) (i) It is probable that one Para Bde of 6 Airborne Div will have arrived in the theatre and have been used in operation MAILFIST. The availability of this brigade for further operations will depend on the date of its release from MAILFIST, the time required to transport it to the mounting base, and the time required for rehabilitation.

(ii) The balance of 6 Airborne Div will be ready for embarkation in UK, fully trained, by the end of July and could arrive in the theatre by end of Nov, providing it is given an adequate priority for shipment.

(iii) Shortage of vehicles and equipment, due to short shipment in July, August and September, may, however, affect the equipping of this div to an extent which, at present, cannot be forecast.

(c) HQ Airborne Corps will be ready for embarkation in UK by the end of July and could arrive in the theatre during November, providing it is given an adequate priority for shipment.

(d) It should be possible to make one infantry division available ex-MALAYA during January.

(d) No. 1 Cdo Bde will be available for embarkation in UK by mid September and could arrive in the theatre in November, providing it is given an adequate priority for shipment. It would not be ready for operations much before 1 February.

(f) One Tank regiment should be available for the operation but the availability of a medium regiment is doubtful. There is already a shortage of medium artillery in this theatre.

34. Aircraft

(a) Adequate tactical squadrons of the RAF and Naval Air Arm in support of the operation will be available.

(b) A total of 18 C-47 Squadrons and 3 Halifax Squadrons should be available in this theatre by 1 Feb. Of these a minimum of 12 C-47 squadrons and 3 Halifax squadrons will be required for this operation. A balance of 6 C-47 squadrons will thus remain for internal communications and other operations.

35. Gliders

180 Horsas and at least 500 Wacos could be made available and operational in BURMA by 1 January. This availability of gliders, however, depends largely on:

(a) The shipping required to bring them to SEAC. Allocation of shipping for gliders will mean a loss to the R.A.F. of a minimum of 4000 vehicles which are urgently required.

(b) The provision of adequate glider erection and maintenance personnel in the mounting area. Additional personnel can only be provided at the expense of the flow of men required for the forces to be engaged in ZIPPER and MAILFIST.

Glider Pilots

36. It is expected that 750 Glider Crews will be in this theatre by the end of 1945.

ADMINISTRATION

Administrative Considerations (See Appendix A)

37. Entire maintenance by air is not practicable for the following reasons:-

(a) It would require the employment on one operation of a disproportionate number of squadrons;

(b) it would put an additional and heavy burden on the airfields in South BURMA.

(c) it would require the construction of a second AW field in the BANGKOK area

(d) It would entail the use of transport aircraft at an uneconomical range.

38. Neither is maintenance entirely by sea acceptable for the following reasons:-

(a) the availability of sufficient shipping must be in doubt;

(b) sufficient transportation resources could probably only be made available at the expense of other commitments.

(c) Owing to navigational limitations BANGKOK is an uneconomical port to develop.

39. Conclusions on Administration

(a) This operation can only be maintained by a combination of air and sea supply.

(b) The development of the MOULMEIN - BANGKOK railway to a capacity sufficient to maintain forces in SIAM requires further investigation as a long term project.

(c) The development of BANGKOK as a rice exporting port will require the provision of shipping and transportation resources not at present allocated to this theatre.

TIMING OF THE OPERATION

40. Weather conditions alone dictate that this operation must be carried out between December and April.

41. The amphibious force cannot be mounted or maintained from SINGAPORE until 60 days after its capture.

42. (a) Adequate transport aircraft will not be available until 1 February and then only provided that the balance of 6 C-47 Squadrons are sufficient for all other transport aircraft commitments in the theatre during the period of the operation.

(b) These aircraft must be in the mounting base by D minus 15 which precludes a D Day earlier than 15 February.

43. The Army forces could be available for a D Day of 15 February provided that:-

(a) One parachute brigade of 6 Airborne Division is released immediately after the capture of SINGAPORE and has not suffered undue casualties during MAILFIST.

(b) The balance of 6 Airborne Division is given an adequate priority for shipment from the UK and can be made up to strength with vehicles and equipment on arrival in India.

(c) HQ Airborne Corps and 1 Commando Brigade are given an adequate priority for shipment from the UK.

(d) One medium regiment can be made available from MALAYA.

44. The requisite number of gliders will be available in the mounting area for a D Day of 15 February provided that:-

(a) It is decided that their shipment from UK should take priority over a large number of vehicles which are urgently needed by the RAF.

(b) Adequate glider erection and maintenance personnel are provided in the mounting area at the expense of ZIPPER/MAILFIST.

TOP SECRET

Appendix "A"
to JPS 176

ADMINISTRATIVE CONSIDERATIONS

OBJECT

1. To consider the administrative implications of:-

(a) The maintenance of an Airborne Corps (including two Airborne Divisions and one Infantry Division) or equivalent forces for a period of at least six months in the BANGKOK area.

(b) The development of the port of BANGKOK for the export of rice.

ASSUMPTIONS

2. (a) Local labour will be plentiful;

(b) Local lighterage found at BANGKOK must be treated as a bonus.

(c) Initially 1000 tons/day of rice rising to 2500 tons/day will require to be exported.

MAINTENANCE FACTORS

3. General

The size of the maintenance commitment will depend upon whether the Force can be wholly supplied by air or whether it must rely in whole or in part upon maintenance by sea, involving the introduction of Transportation personnel, equipment and stores with the consequent increase in overall tonnages.

4. Mounting of the Operation

(a) Air

Any airborne operation must be mounted from the RANGOON area. Sufficient airfields should be available in the area for the mounting of an operation on this scale.

(b) Sea

One follow up Division could be mounted from SINGAPORE.

5. Alternative methods of maintaining the forces

(a) By air from RANGOON

(i) Build-up required

		Men	Vehs	Stores (in tons)
D to D plus 4	Two Airborne Divs	22,000	600	1,000
D plus 1 to D plus 4	One Inf. Div.	20,000	1000	5,000 (by sea)
D plus 5 to D plus 30	Remaining operational and administrative troops either airlanded or by sea.	28,000	5000	30,000 (by Air)
	Total	70,000	6600	36,000

Thereafter the monthly requirement is likely to be:-

Men	Veh	Stores
4,000	350	30,000 (by air)

A proportion of the men and vehicles of this monthly requirement might be brought in by sea.

(ii) Aircraft required

Based on a rate of effort of 130 flying hours per month up to D plus 30, the following squadrons would be required for the fly-in of the personnel and stores as shown in sub-para (a) (i) above,

3 Halifax squadrons
9 Dakota squadrons.

It is emphasised that aircraft would be operating at the uneconomic range of 360 miles with a consequent reduction in payload. Further it would not be possible to fly in all the vehicles as required during the build up as these are not air-transportable without the use of large gliders, which will not be available. They would, therefore, have to come by sea.

During the monsoon an additional 6 Dakota squadrons would be required; this will entail the commitment to this operation of 15 out of 22 transport squadrons available in S.E.A.C.

(iii) Airfields required

RANGOON

If the operation is entirely supported by air one heavy bomber and two medium bomber airfields in the RANGOON area would be fully committed to air supply operations during the non monsoon periods. When the monsoon starts a third medium bomber airfield would also be required.

As the airfields used during the monsoon will have to be all-weather fields, this will commit the only AW heavy bomber airfields in South BURMA to air supply operations and, in addition, three of the six AW medium bomber fields. This will greatly restrict the operations of other aircraft based on South BURMA.

BANGKOK

The use of DONMUANG airfield (the only AW airfield available) by some 12 squadrons will cause congestion. This congestion will necessitate the construction of another AW airfield which will include the flying-in of additional engineer tonnages.

(iv) Hospitalisation, Recovered Allied Prisoners of War and Civilian Internees (R.A.P.W.I.) and Re-inforcements.

There will be the following requirements:-

Provision of Hospital Bed Cover amounting to 3% of Forces with an additional 200 beds for R.A.P.W.I. (some 2450 beds).

Evacuation of some 130 casualties daily.

Evacuation of R.A.P.W.I. (probably initially some hundreds a day).

Provision of small supervisory staff for R.A.P.W.I.

Fly-in of re-inforcements.

(b) By sea from SINGAPORE

(i) Build-up required

It is estimated that the following build-up would be required up to D plus 30:-

		Men	Vehs	Stores(in tons)
D to D plus 4	Air Landed	27,000	600	1000 (by air)
D plus 1 to D plus 4	Assault Convoy	20,000	1000	5000
D plus 5 to D plus 30	Build-up Convoys	33,000	5400	30000
	Totals	80,000	7000	36000

Thereafter the monthly requirement is likely to be:-

Men	Vehs	Stores(in tons)
5000	350	36,000

(ii) Tonnages

Tonnages are shown as some 1200 tons/day. It is emphasised that this may prove a minimum figure, and that it may be increased by unforeseen requirements.

(iii) Shipping requirements

Only ships of draft 15 ft and lower can go up to BANGKOK. Ships of greater draft have to lighten at GOH SICHANG or at the Bar before proceeding to BANGKOK. Requirements, might therefore, be as follows:-

Personnel
8 Personnel ships (allowing for 10 days turn-round from SINGAPORE)
6 LCI(L) for transhipment purposes)

MT
45 LST
or 18 MT Ships (these would require LCT or equivalent craft for lighterage into BANGKOK).

Stores.
15 'B' Type Coasters.
After D plus 30 the following might be required:-

Personnel	1 Personnel ship	1 LCI(L)
MT	2 MT Ships	15 LCT
Stores	18 "B" Type Coasters.	

(iv) Availability of shipping

It is probable that shipping could be made available from within SEAC resources for the maintenance of the Force but at the expense of the build-up of the South Malayan base. For the export of the rice, a much longer turnround is anticipated thus involving an even larger requirement for shipping. This on present estimates of shipping available would have to come from outside the theatre. It is emphasised, however, that as yet no allocation of shipping has been made to this theatre for 1946, because so far we have not stated our requirements.

(v) Availability of Transportation Resources

At this period all transportation resources will probably be committed in the theatre.

To develop BANGKOK to an import capacity of some 1200 tons/day and an export capacity of 2500 tons/day would require some three docks operating coys together with some 2000 local labour. These coys can probably only be produced at the expense of other S.E.A.C. commitments. Further, BANGKOK is almost entirely a lighterage port and the provision of sufficient lighters is subject to the same limitations unless an equivalent number of naval craft can be provided and retained in BANGKOK.

(vi) Hospitalization and R.A.P.W.I.

Bed cover amounting to 5% of the Force (a total of 3750) will be required. This should be sufficient to include R.A.P.W.I. Casualties would probably be evacuated in hospital ships at the rate of some 50 a day; in addition some 10% of R.A.P.W.I. would also require to be evacuated by this means.

(c) By rail and road

(i) Rail

At the present time, under Japanese operation, the capacity of the MOULMEIN-BANGKOK railway is estimated at 200 tons/day Probable rate of development upon recapture might be:-

X plus 30	400 tons	each way per day
Y plus 60	800	" " " " "
Y plus 90	1200	" " " " "
Y plus 120	1600	" " " " "

The attainment of this target is dependent upon the provision of large numbers of locos and rolling stock (e.g. over 800 wagons), which would necessitate a large requirement for heavy lift shipping into MOULMEIN. The actual reconstruction of the railway should not prove disproportionately expensive in Transportation effort.

(ii) Road

The MOULMEIN-BANGKOK road follows the alignment of the railway and is generally fairweather class 5. It is unlikely that this road could make any considerable contribution to the maintenance of forces in SIAM without disproportionate Engineer effort.

ENGINEER CONSIDERATIONS

6. Airfield Construction

(a) RANGOON

The use of RANGOON as a mounting base for a Corps of two airborne divisions will require the development of airfields to the following standards:-

Heavy Bomber Airfields to accommodate 90 heavy bombers and 180 Horsa gliders.

Transport airfields to accommodate 90 transportation craft and 130 WACO gliders.

Assuming the development of airfields to the standards above it is still doubtful whether maintenance facilities at the South BURMA airfields (e.g. roads, storage accommodation, parking bays, glider aprons etc) will be available unless a further engineer effort is expended.

(b) BANGKOK

(i) The initial requirement will be for the construction of two AW airfields in the SAM RONG area to be completed by D plus 4 to receive 300 sorties. Subsequently DON MUANG airfield will require to be developed to A.W. standard before the monsoon. If maintenance is entirely by air a second AW airfield will certainly be required; even with limited air maintenance it may still be required. As this would have to be sited in paddy fields liable to flooding a large engineer effort would be required.

7. Accommodation

It is not considered that this will present any problem.

8. Storage

Storage will be required in the airfield areas. It is expected that most of this construction can be carried out by local labour with a small supervisory force of engineers.

SUMMARY

9. Entire maintenance by air is not practicable for the following reasons:

(a) it would require the employment of one operation of a disproportionate number of squadrons;

(b) it would put an additional and heavy burden on the airfields in South BURMA.

(c) it would require the construction of a second AW field in the BANGKOK area.

(d) it would entail the use of transport aircraft at an uneconomical range.

10. Neither is maintenance entirely by sea acceptable for the following reasons:-

(a) the availability of sufficient shipping must be in doubt;

(b) sufficient transportation resources could probably only be made available at the expense of other commitments.

(c) owing to navigational limitations BANGKOK is an uneconomical port to develop.

CONCLUSIONS

11. (a) This operation can only be maintained by a combination of air and sea supply.

(b) The development of the MOULMEIN-BANGKOK railway to a capacity sufficient to maintain forces in SIAM requires further investigation as a long term project.

(c) The development of BANGKOK as a rice exporting port will require provision of shipping and Transportation resources not at present allocated to this theatre.

APPENDIX B
to
JPS 170

JAPANESE OPPOSITION AND REACTIONS TO AN ATTACK AGAINST BANGKOK

NAVY

1. The Japanese and Siamese naval forces in S.E. Asia at present consist of:-

Japanese	Two 8-inch Heavy Cruisers under repair One destroyer Two torpedo boats Two- four ex-German U-boats Up to thirty MTBs.
Siamese	Two 8-inch Coast defence ships Two 6-inch Coast defence ships Seven Torpedo boats Three Patrol boats Four submarines.

These forces will not be increased and will be decreased by casualties through air and naval action between now and December. Owing to the sea routes to the Empire having been cut, the Japanese repair and maintenance problem will become increasingly difficult.

2. None of the Japanese sub-chasers, Auxiliary and Special sub-chasers and minesweepers have been included in the above as they are unsuitable for offensive operations against protected convoys. For the same reason minor Siamese war vessels have not been included. The old Siamese destroyer PHRA RUANG (formerly HMS RADIANT - built 1916) has not been included, as she was believed to be in poor condition prior to the outbreak of war and her combatant value is believed to be low.

3. It is unlikely that either of the damaged Japanese heavy cruisers will be fully operational before the assault on SINGAPORE and one appears to be so severely damaged that it is doubtful whether she can be made serviceable again from resources in SINGAPORE.

4. The two Japanese torpedo boats are at present employed in the Eastern N.E.I. At the present rate of air and submarine activity in these waters, it is doubtful whether either of these two vessels will be afloat by the end of the year.

5. The Siamese vessels, though modern, have not been active during the war and, unless they have been taken over, repaired and manned by the Japanese as the result of a coup d'etat, it is considered that their military value would be negligible. The Siamese intend to employ their vessels for the defence of the Inner Gulf of SIAM as soon as an open breach with the Japanese occurs.

6. In view of maintenance difficulties, manning problems and shortage of torpedoes, it is considered that even if the Japanese had decided to use any of the ex-German U-boats in an operational role, they would not present any serious threat.

7. Since the whole of the bases available to the Japanese in INDO-CHINA and SIAM are within easy range of heavy bombers, it is extremely unlikely that the Japanese or Siamese will be in any position to interfere with Allied build-up convoys forming up in the SEAC or SWPA areas for operations in the Gulf of SIAM or INDO-CHINA area.

ARMY

8. On the assumptions in para 1, Japanese dispositions in S.E. Asia on 1 December 1945 may be:-

Area	Strength	Remarks
Northern MALAYA	One to one and a half divs	Fighting strength considerably lower
KRA Isthmus	Up to two regts (from 94 Div)	
MOULMEIN-KANBURI-MERGUI	Two plus equivalent divs	Up to three bns may be in reserve in the KANBURI area.
Central SIAM	One division (4 Div)	Plus non-div units ex BURMA & some troops from N.E.I.
Northern SIAM - SHAN States	One equivalent bde	
F.I.C.	Four divs and two bdes	One div and one bde may not be up to strength

9. After the fall of SINGAPORE, no further withdrawals from the NEI will be possible, and recent operations in CHINA make it clear that the Japanese do not contemplate any withdrawals or reinforcement overland. The Japanese on the mainland will have two main courses of action open to them:

(a) To remain dispersed and fight it out in their existing positions, covering the main lines of communication over a wide area.

(b) In view of their limited resources to concentrate in those areas the retention of which would impose the maximum effective delay in the clearance of S.E. Asia by the Allies.

There is no evidence, nor is there likely to be until after the fall of SINGAPORE, on which course they will adopt.

10. If, after the fall of SINGAPORE, they adopt course (a), they will run a serious risk of having their communications in the KRA Isthmus cut and of being defeated in detail. For this reason it is possible that at this time they might attempt to withdraw their forces from Northern MALAYA and the Southern KRA Isthmus so as to concentrate in the North of the KRA Isthmus. If they adopted this course it is considered that the area which they would decide to hold would include VICTORIA POINT - CHUMPHORN.

But in view of Allied superiority on sea, land and air, the probable paucity of enemy maintenance resorves in any one area, the increased difficulties of movement and an overall inability to effect a major change of plan to meet the new situation which will have arisen, it is considered that they will adopt course (a) above and only withdraw under pressure.

11. By 1 December the operations from the SHAN States, MOULMEIN and North MALAYA area, on present assumptions, unlikely to have progressed sufficiently far either to have produced a direct threat to BANGKOK or to have forced the Japanese to commit 4 Div from Central SIAM. Provided, therefore, that no Siamese revolt has taken place, Japanese dispositions in the BANGKOK area are unlikely to be substantially different from what they are at present, although the number of air ground and administrative troops may have increased by withdrawals from BURMA and up to one regt plus some administrative troops may have arrised from the N.E.I. Present dispositions are:-

Area	Div Tps	Non Div Tps	Air	Navy
SARABURI/LOPBURI	8,000	-	500	-
Greater BANGKOK	2,000	4,000*	2400*	100
BAMPONG/KANBURI	4,500	800	100	-

*Includes 2,400 air and 500 non div tps in DON MUANG area.

12. Japanese reactions to a direct attack on BANGKOK will depend also on the effectiveness and timing of a Siamese revolt.

13. In the worst case, where a revolt has already occurred and been quelled the Japanese should be able to make the whole of 4 Div and two or three bns from the KANBURI area available initially. It is unlikely that more than one regt plus non div tps, would be deployed against our operations during the first four or five days, though the whole force should be available within fourteen days. Subsequent reinforcement might come from:-

(a) The KRA Isthmus	One regt
(b) MOULMEIN area	One regt
(c) F.I.C.	One div.

The first two possibilities above depend entirely on the progress and speed of our operations in these areas. If these are pushed vigorously, it is unlikely that the Japanese will commit any forces from these areas. The last is possible, but unlikely in any case.

14. In the best case, if a Siamese revolt was synchronised with our operations:-

(a) Japanese troops in BANGKOK and LOPBURI are likely to be fully occupied by the Siamese for some days.

(b) The concentration of 4 Div, even if possible, will be delayed and will not be complete.

(c) Troops from KANBURI will probably still be available to reinforce BANGKOK.

(d) Subsequent reinforcement capabilities would remain as before.

15. It is unlikely that the Japanese will have installed any major defences to the BANGKOK river. The Siamese in any case should be able to deal with these.

AIR

16. **Disposition**

	F	TEB	Recce & F/P	Total
THAILAND/F.I.C.	45/50	15/20	20/25	80/95
MALAYA/SUMATRA	15/20	5/10	Nil	20/30
Totals:	60/70	20/30	20/25	100/125

Notes: (a) The force in THAILAND/F.I.C. would be mainly disposed for defensive patrol and liaison duties in F.I.C. Bases in THAILAND would be used more as A.L.Gs than as permanent bases. Little strength, if any, is likely to be based in the BANGKOK area itself except for possibly a few fighters for local defensive patrol.

(b) The force in MALAYA/SUMATRA would consist of remnants only, not likely to be pulled in for the defence of BANGKOK.

17. **Scale of Effort**

Bearing in mind the wide dispersal of the above force and limitations of serviceability, not more than 10/12 fighters and 5 bombers could be made available at any one time from the force in THAILAND/F.I.C. to operate in the defence of BANGKOK. The effort would not exceed 7/10 fighter and 3/4 bomber sorties from D plus 1 to D plus 4. The effort would decline by at latest D plus 10 to negligible proportions.

18. **Trainer Aircraft**

Not included in the above are trainer type aircraft which it is expected will have been thrown in by the Japanese by this stage of the war. Their orthodox fighting value would be very small and their employment would almost certainly be concentrated on occasional suicide attacks against the build up convoys.

APPENDIX 'C'
to JPS 170

WEATHER

1. Rains

SIAM comes under the influence of the N.E. Monsoon from November to January or February, and the S.W. Monsoon from May to October. March and April are inter-monsoon months with hot weather and light winds. The rain falls during the S.W. Monsoon, beginning in May and ending late in October or November; the annual total is 53 inches (c.f. MOULMEIN 192 and SINGAPORE 95 inches). From November to April the amount of rain is very low (3" in November and less than 1" in December and January). Floods which occur in the plains from mid-September to the end of November are usually over in December.

2. Wind

From November to January at BANGKOK winds are mainly northerly to north-easterly, rarely exceeding force 3, and probably weakened in the afternoon by the sea breeze. From February to the end of September or October the winds are mainly southerly, and these winds often raise enough sea to hinder boat work, especially in the late afternoon.

3. Visibility

Inland, visibility less than 2 miles is recorded on about one day in three in the early morning, in November and December, and more often in January and February. This mist clears during the forenoon. On the coast visibility is seldom as bad as this. In February and March visibility from aircraft is often reduced by thick haze; and during the heavy rains in the monsoon months it may be as low as 50-100 yards.

4. Moon

Full moon occurs on 17 January and 15 February 1946.

TOP SECRET

APPENDIX 'D'
to JPS 170

AIRFIELDS AND AIRFIELD SITES

1. (a) There are 15 airfields within 100 miles of BANGKOK 4 of which are limited A.W. and considered capable of operating all types of aircraft.

These are:-

DON MUANG KOKE KATHIEM BAN TAKLI	)	- 13 miles from BANGKOK
NAKORN SAWAN	)	- over 80 miles from BANGKOK

(b) DON MUANG, which is the best airfield in SIAM has three partly metalled runways:-

No. 1 NNE - SSW	2500 x 117 yards
No. 2 NNE - SSW	2000 x 67 "
No. 3 ENE - WSW	670 x 67 "

2. The rapid development of FW airstrips in the BANGKOK area is feasible but due to difficulties of communications, it does not appear that more than six sites could be found. These sites would only be operational during the dry season.

3. The rapid construction of two FW strips in the SAM RONG area, capable of accepting 300 sorties per day is considered feasible. About three days work would be required to complete these strips and their probable rate of acceptance of sorties per day during construction would be:-

1st day of construction	- sorties
2nd " " "	150 "
3rd " " "	200 "

APPENDIX 'B'
to JPS 170

TOPOGRAPHY AND COMMUNICATIONS

1. The BANGKOK Area

(a) The area consists entirely of a deltaic plain which is flat and about 7 feet above high tide level. BANGKOK, the capital and main port of SIAM lies some 25 miles up the BANGKOK river. It has an area of some 25 square miles and lies principally on the east bank of the river.

(b) The area round the city is defined by the cultivation of market gardens and orchards which extend for 12 miles above and below BANGKOK and 4 or 5 miles back from the west bank of the river but little more than 1 mile from the east bank.

(c) From this area of intensive cultivation there is an abrupt transition to what constitutes the bulk of the region, the paddy field plain which is covered every year by the flood waters of the BANGKOK river. These floods are now largely controlled by canals and sluices, dykes and low (1 to 2 feet) earth embankments (bunds). The plain is thus divided into a vast mosaic of little fields, varying greatly in size and shape. In the dry season these fields are baked very hard but water remains in the canals and ditches.

(d) The coastal area, about 7 miles wide consists of mangrove and palm swamp.

2. MOULMEIN to BANGKOK

(a) The road and railway from MOULMEIN to BANGKOK (400 miles) passes for the first 50 miles along the coastal belt through a plain intersected by tidal streams subject to flooding. The plain is generally thick forest but there are large areas of cultivation and rubber plantations, particularly near villages.

(b) The road from THAMBYUZAYAT passes through a range of hills and gradually rises towards the main mountain barrier on the Siamese frontier. The mountain section extends for some 250 miles till the plain of SIAM is reached. It will be impassable to MT in the monsoon and even in dry weather will have a very limited capacity for light MT traffic. The last 80 miles is in open country with a good FW road.

TOP SECRET

APPENDIX F
to JPS 170

LANDING POSSIBILITIES

Ref Map Sheet: HIND 1034
D-47.2/5.

1. Tide Data

Mean higher high water	+ 7.5 ft
Mean lower low water	+ 0.9 ft
Lowest low water near solstices	- 2.2 ft
Mean lower high water	+ 6.5 ft

When the river is at its lowest level, about April, there is sometimes not more than 3 ft over the bar; at the highest tide there will be about 12 ft at this time of the year and about 15 ft in October when the depth is greatest. The depths are also affected by the wind which may cause either an increase or a decrease.

2. CURRENTS

The flood stream sets westward, across the bar channel, and the ebb eastward, changing direction according to the strength of the river stream.

During the months of September to December, owing to freshets, the river stream runs at times at a rate of from 4 to 5 knots off BANGKOK and ships rarely swing to the flood.

Average stream up to 2 to 3 knots either direction flood and ebb.

3. Beaches and Landing Places

(a) Western Bank of the Estuary

(i) From 927864 to 963873 the coast consists of mud and is fringed by a wide dense belt of mangrove.

(ii) From 963873 to the Fort at 965881 the mangroves are sparser and small parties might be landed.

(iii) There is a retaining wall built along the bank north of the fort as far as a T head jetty at 963892. This jetty appears to be fairly substantial and is connected to the fort by road. This road appears to serve the fort only.

(iv) From 963892 to 954923 (limit of photographic cover) the bank is low lying, muddy and fringed with mangrove. North of the village at 959898 there is a small T head jetty from the root of which a narrow road leads inland and apparently fades away to nothing. North of the jetty the mangrove almost disappears and small parties could probably be landed on the mud.

NOTE: The hinterland bordering the west bank of the river is low lying and swampy. The mud does not constitute bearing surface

(b) Eastern bank of the Estuary

(i) The south eastern end of this sector is fringed with dense mangrove and is generally unsuitable for landing operations of any sort.

(ii) At 974900 a track leads almost down to the beach from which access could possibly be obtained through mangrove by infantry only. This track is embanked and becomes a road as it approaches SMUTPRAKAN.

(iii) In the river mouth proper there is a muddy beach bordering the bank backed by mangrove. Small parties could be landed and exit by tracks over marshy land.

(iv) At approx 970930 the southern outskirts of SMUTPRAKAN begin. Innumerable flimsy jetties line the bank in front of godowns. There appear to be no road connections from the godowns over low-lying marshy land to the embanked road.

(v) At SMUTPRAKAN itself the embanked road runs parallel to the river. There are innumerable jetties here too which are of doubtful value for landing even light M.T.; but it is almost certainly possible that LCT could beach at suitable points between the jetties where roads connecting with the main road run down to the river and discharge direct onto the road bank. There is ample water extending for a width of 300 yards off the town of SMUTPRAKAN and LCT could manoeuvre and beach to discharge MT and tanks.

NOTE: The whole of this stretch of river bank is mud and does not constitute a bearing surface.

TOP SECRET

APPENDIX G
to JPS 170

PHASING IN OF AIRBORNE FORCE

A. Airborne Force:-

Headquarters Airborne Corps
6 British Airborne Division
44 Indian Airborne Division

B. D Day (i)a. Two parachute brigade groups of
Serial 1. 6 British Airborne Division land at SMUTPRAKAN

(ii) Airlift:-

DAKOTA	288 sorties
HALIFAX	36 sorties
HORSA	Nil sorties
WACO	Nil sorties

C. D Day (i)a. Two parachute brigade groups
Serial 2. 44 Indian Airborne Division land at SAM RONG

b. Tactical HQ of 6 British Airborne Division land at SMUTPRAKAN

(ii) Airlift:

DAKOTA	288 sorties
HALIFAX	72 sorties
HORSA	72 sorties
WACO	Nil sorties

Note:- All powered aircraft do two sorties on D Day.

D. D + 1 (i)a. Two airlanding battalion groups
Serial 3. 6 British Airborne Division.

b. Headquarters Airlanding Brigade
6 British Airborne Division

c. Tactical Headquarters Airborne Corps land.

d. Tactical HQ of 44 Indian Airborne Division land at SAM RONG.

(ii) Airlift:-

DAKOTA	288 sorties
HALIFAX	72 sorties
HORSA	72 sorties
WACO	354 sorties

E. D + 2 Serial 4 (i)a. One airlanding battalion group 6 British Airborne Division.

b. Main Headquarters 6 British Airborne Division.

c. Main Headquarters 44 Indian Airborne Division land on airstrip and in adjacent area.

(ii) Airlift:-

DAKOTA 288 sorties (150 sorties land on strip
46 tug sorties
92 sorties supply and maintenance dropping)
HALIFAX 72 sorties (Supply and maintenance dropping and 6 tug sorties)

HORSA 6 sorties
WACO 46 sorties

F. D + 3 Serial 5 (i)a. Two airlanding battalions 44 Indian Airborne Division.

b. Headquarters Airlanding Brigade 44 Indian Airborne Division land on airstrips.

(ii) Airlift:-

DAKOTA 288 sorties (200 sorties land on strips
88 sorties supply and maintenance dropping)
HALIFAX 72 sorties (Supply and maintenance dropping)

HORSA Nil sorties
WACO Nil sorties

G. D + 4 Serial 6 (i)a. One airlanding battalion group 44 Indian Airborne Division.

b. Main Headquarters Airborne Corps land on strips.

(ii) Airlift:-

DAKOTA 288 sorties (Land on strips)
HALIFAX 72 sorties (Supply and maintenance dropping)
HORSA Nil sorties
WACO Nil sorties

H. D + 5 Serial 7. (i)a. Completion of build up of Airborne Corps.

b. Fly in of vehicles, guns, stores, munitions, rations, equipment, etc.

(ii) Airlift available:-

DAKOTA 288 (Land on strips)
HALIFAX 72 (Supply and Maintenance dropping).