

PILOTAGE ADVISORY COMMITTEE

Proposed Traffic Arrangement to Enhance Navigation Safety at Ma Wan and Kap Shui Mun Fairways

Purpose

The purpose of this paper is to seek members' endorsement on the proposed traffic arrangement to enhance navigation safety in the areas of the Ma Wan Fairway (MW) and Kap Shui Mun Fairway (KSM).

Background

2. Based on the analysis of the reported collision cases in 1999, KSM has been identified as one of the areas that are having comparatively higher accident rate. This is apparently due to the predominant heavy traffic and the narrowness of the fairway. An in-house study has therefore been conducted to examine the traffic composition and pattern in the areas concerned and to recommend measures for traffic improvement.

The Study

3. In order to obtain more accurate and comprehensive traffic figures for analysis, visual surveys have been conducted at Ma Wan, Kap Shui Mun and North Tsing Yi. A summary of the survey data is contained at Annex I.

4. It is noted that the traffic volume of KSM is even higher than that of MW, despite of the fact that it is much narrower than MW. Majority of vessels using the fairways are river trade cargo vessels and barges, which account for over 50% of the total traffic volume. Barges apparently prefer MW to KSM.

5. In order to enhance the navigation safety at KSM, it is necessary to reduce the amount of traffic and eliminate the head-on encounters in the locality. With a much wider waterway and comparatively lower traffic density, MW should be able to accommodate more traffic. This can be achieved by implementing a single direction traffic scheme at KSM and possibly MW.

The Proposal

6. Three options at Annex II have been suggested for regulation of vessels other than ocean going vessels.

(i) **Option I**

Ma Wan Fairway - ***Westbound only***

Kap Shui Mun Fairway - ***Eastbound only***

The new traffic pattern is compatible with those of the adjoining waterways. The traffic at MW will be increased by 80 vessels per day, representing a 15% increase. However, the traffic at KSM will only be slightly reduced. The new traffic pattern will require vessels to and from North Tsing Yi to take a longer route to enter or leave the respective fairways with the right direction of traffic flow.

As it is impracticable to divert eastbound vessels of all sizes through KSM due to its narrowness, it is suggested that only locally licensed vessels and vessels of 1,000GRT or less should follow this single direction traffic arrangement.

(ii) **Option II**

Ma Wan Fairway - ***Eastbound only***

Kap Shui Mun Fairway - ***Westbound only***

Additional 70 vessels will use MW and the traffic at KSM will be reduced by the same amount. The impact on ocean going vessels will be minimal.

The traffic pattern is however not very compatible with the surrounding traffic. Areas with conflicting traffic have not been reduced. Same categories of vessels mentioned above should follow this traffic arrangement.

(iii) **Option III**

Ma Wan Fairway - ***Westbound and Eastbound***

Kap Shui Mun Fairway - ***Eastbound only***

Eastbound vessels are free to choose between MW and KSM. However, KSM will only allow for eastbound traffic while MW still maintains two way traffic. The traffic pattern is fully compatible with the surrounding traffic including those from north Tsing Yi.

The traffic volume at KSM will be substantially reduced from 700 to 496 vessels per day.

Conversely, the traffic at MW will be increased from 550 to 754 vessels per day, representing a 37% increase. This figure is however only slightly higher than the existing traffic volume at KSM.

7. A table showing the existing average daily traffic volume and the estimated traffic volume when the above options are implemented is appended below:

	Ma Wan				Kap Shui Mun			
	Westbound	Eastbound	Total	Changes	Westbound	Eastbound	Total	Changes
Existing Traffic	302	248	550	--	328	372	700	--
Option I	630	--	630	14.5%	--	620	620	-11.4%
Option II	--	620	620	12.7%	630	--	630	-10.0%
Option III	630	124	754	37.1%	--	496	496	-29.1%

*Note: a) Option I, assuming all Ma Wan eastbound traffic shifts to Kap Shui Mun.
b) Option II, assuming all Ma Wan westbound traffic shifts to Kap Shui Mun
c) Option III, assuming 50% of Ma Wan eastbound traffic shifts to Kap Shui Mun*

From traffic management viewpoint and compatibility with the surrounding traffic, Option III is preferred. The increase in traffic volume at MW should not have significant impact on the ocean going vessel traffic, especially with the operation of the Ma Wan Traffic Control Station and the dedicated patrol launch.

Recommendation

8. Members are recommended to endorse the proposed traffic arrangement. Subsequent legislative amendment and promulgation of notices will be arranged accordingly.

Presentation

9. The paper will be presented by Mr. Steven Lam of Marine Department at the meeting.

Vessel Traffic Centre

Marine Department

June 2000

Summary of Traffic Survey

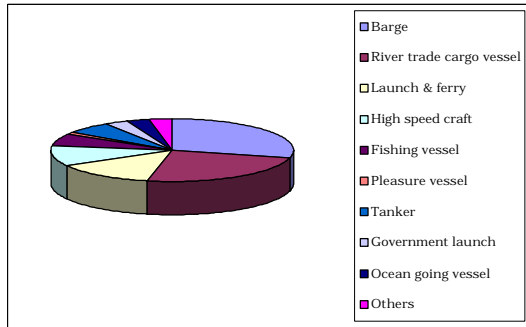
Average Daily Traffic at Ma Wan

Ship Type
Barge
River trade cargo vessel
Launch & ferry
High speed craft
Fishing vessel
Pleasure vessel
Tanker
Government launch
Ocean going vessel
Others

Northbound	Southbound	Total	%
89	69	158	28.81
64	72	136	24.51
31	42	73	13.28
56	2	58	10.54
19	16	35	6.41
3	3	6	1.14
14	20	34	6.23
8	8	16	2.87
9	9	18	3.2
9	7	16	2.97

Total Daily Average
Percentage

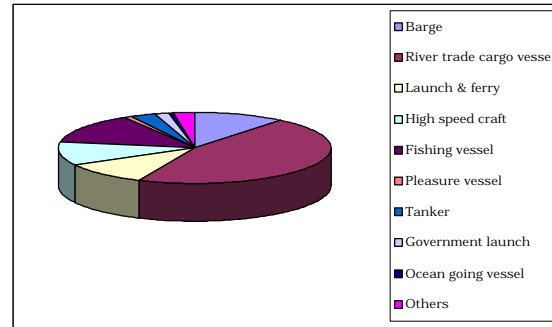
302	248	550
55%	45%	



Average Daily Traffic at Kap Shui Mun

Northbound	Southbound	Total	%
40	35	75	10.76
174	148	322	46.03
33	38	71	10.09
3	72	75	10.76
48	48	96	13.65
1	5	6	0.91
12	9	21	2.94
6	7	13	1.9
1	2	3	0.46
10	8	18	2.5

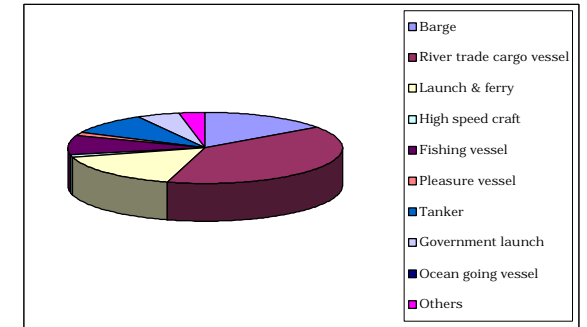
328	372	700
47%	53%	



Average Daily Traffic at North Tsing Yi

Northbound	Southbound	Total	%
10	7	17	15.13
23	22	45	39.47
12	7	19	16.23
1	0	1	1.2
4	6	10	8.55
1	1	2	1.75
3	8	11	9.65
4	2	6	5.04
0	0	0	0
2	1	3	3.07

60	54	114
53%	47%	





Option I 方案 I



Option II 方案 II



Option III 方案 III

■ Eastbound traffic 東行交通
■ Westbound traffic 西行交通