

MALAYSIA

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CIVIL AVIATION AUTHORITY OF MALAYSIA
AERONAUTICAL INFORMATION SERVICES
AIR TRAFFIC CONTROL TOWER (TOWER WEST)
JALAN KLIA 2/4,
64000 KLIA,
SELANGOR DARUL EHSAN
MALAYSIA.

AIRAC AIP AMDT
03/26
Effective Date: 06 AUG 2026
Publication Date: 28 MAY 2026

This AIRAC AIP AMDT 03/26 contains:

GEN 0.4-1 To 13	Checklist Of AIP Pages
GEN 3.2-3,12 &15,	List Of Aeronautical Charts Available
ENR 1.1-21 To 22 ENR 1.1-23,24 & 26	Updating Implementation Of Performance-based Communication And Surveillance (PBCS) Re-indexing pages
ENR 1.8-12 To13 ENR 1.8-14 To 15 ENR 1.8-16 ENR 1.8-17 To 22 ENR 1.8-23 ENR 1.8-24 To 25 ENR 1.8-26 To 28 ENR 1.8-29 ENR 1.8-30 To 32 ENR 1.8-33 To 50	Updating RNP 10, RNP 4 Or RNP 2 Navigation Requirements Re-indexing pages Direct Route Operations within KL FIR Re-indexing pages Updating Flights to Destination Outside Kuala Lumpur FIR Re-indexing pages Updating Flights Entering Kuala Lumpur FIR from Adjacent FIR Updating paragraph 1.8.6.6.1.4 DROs available for flights overflying Kuala Lumpur FIR Updating paragraph 1.8.6.6.2 Flights not eligible for DRO operations Re-indexing pages
ENR 2.1-25	Amend FIR Boundary - WMKC
AD 2-WMKP-1-2 To 4 AD 2-WMKP-1-5 To 10 AD 2-WMKP-1-11 AD 2-WMKP-1-12 To 13	Updating AD 2.8, AD 2.9 Re-indexing pages Pilot to exercise caution on the aerodrome non-conforming issues Updating Charts Related To An Aerodrome
AD 2-WMKP-2-1 To 5	Updating Charts
AD 2-WMPR-1-1 AD 2-WMPR-1-2 AD 2-WMPR-1-3 AD 2-WMPR-1-4 AD 2-WMPR-1-5 AD 2-WMPR-1-6 AD 2-WMPR-1-7	Updating MAG VAR/Annual change Updating AD 2.6, 2.8 and AD 2.9 Updating AD 2.10 Updating AD 2.12 Updating AD 2.15 Re-indexing pages Updating AD 2.23
AD 2-WMPR-2-1 To 5	Updating Charts
AD 2-WBGB-1-10 AD 2-WBGB-1-11 To 12	Updating HTML Format Updating Charts Related To An Aerodrome
AD 2-WBGB-8-3 To 5	Updating Charts and Tabular
AD 2-WBGG-1-2 To 5 AD 2-WBGG-1-6 To 7 AD 2-WBGG-1-8 AD 2-WBGG-1-9 AD 2-WBGG-1-10 AD 2-WBGG-1-11 AD 2-WBGG-1-12 AD 2-WBGG-1-13 To 14	Updating AD 2.8 & AD 2.9 Re-indexing pages Updating AD 2.12 Updating AD 2.14 & AD 2.15 Re-indexing pages Updating Arriving Aircraft Parking Arrangement Re-indexing pages Updating Charts and Tabular
AD 2-WBGG-2-3 To 5	Updating Charts
AD 2-WBGS-1-11 To 12	Updating Charts Related To An Aerodrome
AD 2-WBGS-8-5 To 6	Updating Charts and Tabular

AD 2-WBKD-1-1 Replacing ATC Service word to ATS
AD 2-WBKD-1-4 Updating AD 2.11
AD 2-WBKD-1-6 Updating AD 2.17
AD 2-WBKD-1-7 Updating AD 2.20
AD 2-WBKD-1-8 Re-indexing pages

AD 2-WBKW-1-1 Updating Elevation
AD 2-WBKW-1-2 To 3 Updating AD 2.8 & AD 2.9
AD 2-WBKW-1-4 To 5 Re-indexing pages
AD 2-WBKW-1-6 Updating AD 2.15

AD 2-WBKW-2-1 To 5 Updating Charts

AD 2-WBGM-1-1 Updating email.
AD 2-WBGM-1-2 To 3 Updating HTML Format
AD 2-WBGM-1-4 Updating AD 2.11
AD 2-WBGM-1-5 Updating AD 2.17
AD 2-WBGM-1-6 Updating AD 2.18 & AD 2.20

AD 2-WBGQ-1-1 Updating Aerodrome elevation and annual change
AD 2-WBGQ-1-2 Updating AD 2.6, AD 2.8 & AD 2.9
AD 2-WBGQ-1-3 Updating AD 2.12
AD 2-WBGQ-1-4 Updating AD 2.15
AD 2-WBGQ-1-5 Updating AD 2.23
AD 2-WBGQ-1-6 Updating Charts Related To An Aerodrome

AD 2-WBGQ-2-1 To 3 Updating charts

AD 2-WBGW-1-1 Updating email
AD 2-WBGW-1-4 Updating AD 2.11
AD 2-WBGW-1-5 Updating AD 2.17
AD 2-WBGW-1-6 Updating AD 2.18 & AD 2.20
AD 2-WBGW-1-7 Updating Charts Related To An Aerodrome

DESTROY			INSERT		
GEN	0.3-3	19 MAY 2026	GEN	0.3-3	06 AUG 2026
	0.3-4	19 MAY 2026		0.3-4	06 AUG 2026
	0.4-1	19 MAY 2026		0.4-1	06 AUG 2026
	0.4-2	19 MAY 2026		0.4-2	06 AUG 2026
	0.4-3	19 MAY 2026		0.4-3	06 AUG 2026
	0.4-4	19 MAY 2026		0.4-4	06 AUG 2026
	0.4-5	19 MAY 2026		0.4-5	06 AUG 2026
	0.4-6	19 MAY 2026		0.4-6	06 AUG 2026
	0.4-7	19 MAY 2026		0.4-7	06 AUG 2026
	0.4-8	19 MAY 2026		0.4-8	06 AUG 2026
	0.4-9	19 MAY 2026		0.4-9	06 AUG 2026
	0.4-10	19 MAY 2026		0.4-10	06 AUG 2026
	0.4-11	19 MAY 2026		0.4-11	06 AUG 2026
	0.4-12	19 MAY 2026		0.4-12	06 AUG 2026
	0.4-13	19 MAY 2026		0.4-13	06 AUG 2026
	0.4-14	19 MAY 2026		0.4-14	06 AUG 2026
	3.2-3	19 MAY 2026		3.2-3	06 AUG 2026
	3.2-12	14 MAY 2026		3.2-12	06 AUG 2026
	3.2-15	24 FEB 2026		3.2-15	06 AUG 2026

DESTROY			INSERT		
ENR	1.1-21	03 OCT 2024	ENR	1.1-21	06 AUG 2026
	1.1-22	03 OCT 2024		1.1-22	06 AUG 2026
	1.1-23	03 OCT 2024		1.1-23	06 AUG 2026
	1.1-24	03 OCT 2024		1.1-24	06 AUG 2026
	1.1-26	09 SEP 2025		1.1-26	06 AUG 2026
	1.1-27	09 SEP 2025		-	-
	1.1-28	09 SEP 2025		-	-
	1.8-12	23 APR 2024		1.8-12	06 AUG 2026
	1.8-13	23 APR 2024		1.8-13	06 AUG 2026
	1.8-14	23 APR 2024		1.8-14	06 AUG 2026
	1.8-15	04 SEP 2025		1.8-15	06 AUG 2026
	1.8-16	14 MAY 2026		1.8-16	06 AUG 2026
	1.8-17	27 NOV 2025		1.8-17	06 AUG 2026
	1.8-18	27 NOV 2025		1.8-18	06 AUG 2026
	1.8-19	19 FEB 2026		1.8-19	06 AUG 2026
	1.8-20	19 FEB 2026		1.8-20	06 AUG 2026
	1.8-21	19 FEB 2026		1.8-21	06 AUG 2026
	1.8-22	27 NOV 2025		1.8-22	06 AUG 2026
	1.8-23	27 NOV 2025		1.8-23	06 AUG 2026
	1.8-24	27 NOV 2025		1.8-24	06 AUG 2026
	1.8-25	19 FEB 2026		1.8-25	06 AUG 2026
	1.8-26	19 FEB 2026		1.8-26	06 AUG 2026
	1.8-27	19 FEB 2026		1.8-27	06 AUG 2026
	1.8-28	27 NOV 2025		1.8-28	06 AUG 2026
	1.8-29	14 MAY 2026		1.8-29	06 AUG 2026
	1.8-30	27 NOV 2025		1.8-30	06 AUG 2026
	1.8-31	27 NOV 2025		1.8-31	06 AUG 2026
	1.8-32	27 NOV 2025		1.8-32	06 AUG 2026
	1.8-33	27 NOV 2025		1.8-33	06 AUG 2026
	1.8-34	27 NOV 2025		1.8-34	06 AUG 2026
	1.8-35	27 NOV 2025		1.8-35	06 AUG 2026
	1.8-36	08 OCT 2024		1.8-36	06 AUG 2026
	1.8-37	03 MAR 2022		1.8-37	06 AUG 2026
	1.8-38	03 MAR 2022		1.8-38	06 AUG 2026
	1.8-39	03 MAR 2022		1.8-39	06 AUG 2026
	1.8-40	04 SEP 2025		1.8-40	06 AUG 2026
	1.8-41	04 SEP 2025		1.8-41	06 AUG 2026
	1.8-42	08 OCT 2024		1.8-42	06 AUG 2026
	1.8-43	03 MAR 2022		1.8-43	06 AUG 2026

DESTROY			INSERT		
	1.8-44	04 SEP 2025		1.8-44	06 AUG 2026
	1.8-45	04 SEP 2025		1.8-45	06 AUG 2026
	1.8-46	03 MAR 2022		1.8-46	06 AUG 2026
	1.8-47	03 MAR 2022		1.8-47	06 AUG 2026
	1.8-48	14 MAY 2026		1.8-48	06 AUG 2026
	1.8-49	14 MAY 2026		1.8-49	06 AUG 2026
	1.8-50	14 MAY 2026		1.8-50	06 AUG 2026
	1.8-51	14 MAY 2026		-	-
	1.8-52	14 MAY 2026		-	-
	2.1-25	16 JUL 2024		2.1-25	06 AUG 2026
AD	2-WMKP-1-2	16 JUL 2024	AD	2-WMKP-1-2	06 AUG 2026
	2-WMKP-1-3	02 DEC 2025		2-WMKP-1-3	06 AUG 2026
	2-WMKP-1-4	19 MAY 2026		2-WMKP-1-4	06 AUG 2026
	2-WMKP-1-5	02 DEC 2025		2-WMKP-1-5	06 AUG 2026
	2-WMKP-1-6	02 DEC 2025		2-WMKP-1-6	06 AUG 2026
	2-WMKP-1-8	19 MAY 2026		2-WMKP-1-8	06 AUG 2026
	2-WMKP-1-9	19 MAY 2026		2-WMKP-1-9	06 AUG 2026
	2-WMKP-1-10	19 MAY 2026		2-WMKP-1-10	06 AUG 2026
	2-WMKP-1-11	19 MAY 2026		2-WMKP-1-11	06 AUG 2026
	2-WMKP-1-12	19 MAY 2026		2-WMKP-1-12	06 AUG 2026
	2-WMKP-1-13	19 MAY 2026		2-WMKP-1-13	06 AUG 2026
	2-WMKP-1-14	19 MAY 2026		2-WMKP-1-14	06 AUG 2026
	2-WMKP-1-15	19 MAY 2026		-	-
	2-WMKP-1-16	19 MAY 2026		-	-
	2-WMKP-2-1	19 MAY 2026		2-WMKP-2-1	06 AUG 2026
	2-WMKP-2-3	19 MAY 2026		2-WMKP-2-3	06 AUG 2026
	2-WMKP-2-4	19 MAY 2026		2-WMKP-2-4	06 AUG 2026
	2-WMKP-2-5	19 MAY 2026		2-WMKP-2-5	06 AUG 2026
	2-WMPR-1-1	15 AUG 2023		2-WMPR-1-1	06 AUG 2026
	2-WMPR-1-2	04 SEP 2025		2-WMPR-1-2	06 AUG 2026
	2-WMPR-1-3	25 MAR 2025		2-WMPR-1-3	06 AUG 2026
	2-WMPR-1-4	04 SEP 2025		2-WMPR-1-4	06 AUG 2026
	2-WMPR-1-5	25 MAR 2025		2-WMPR-1-5	06 AUG 2026
	2-WMPR-1-6	25 MAR 2025		2-WMPR-1-6	06 AUG 2026
	2-WMPR-1-7	25 MAR 2025		2-WMPR-1-7	06 AUG 2026
	2-WMPR-2-1	04 SEP 2025		2-WMPR-2-1	06 AUG 2026
	2-WMPR-2-3	04 SEP 2025		2-WMPR-2-3	06 AUG 2026
	2-WMPR-2-5	04 SEP 2025		2-WMPR-2-5	06 AUG 2026
	2-WBGB-1-10	19 MAY 2026		2-WBGB-1-10	06 AUG 2026

DESTROY		INSERT	
2-WBGB-1-11	19 MAY 2026	2-WBGB-1-11	06 AUG 2026
2-WBGB-1-12	12 JUN 2025	2-WBGB-1-12	06 AUG 2026
2-WBGB-8-3	12 JUN 2025	2-WBGB-8-3	06 AUG 2026
2-WBGB-8-4	19 MAY 2026	2-WBGB-8-4	06 AUG 2026
2-WBGB-8-5	12 JUN 2025	2-WBGB-8-5	06 AUG 2026
2-WBGG-1-2	28 NOV 2024	2-WBGG-1-2	06 AUG 2026
2-WBGG-1-3	28 NOV 2024	2-WBGG-1-3	06 AUG 2026
2-WBGG-1-4	28 NOV 2024	2-WBGG-1-4	06 AUG 2026
2-WBGG-1-5	28 NOV 2024	2-WBGG-1-5	06 AUG 2026
2-WBGG-1-6	15 AUG 2023	2-WBGG-1-6	06 AUG 2026
2-WBGG-1-7	28 NOV 2024	2-WBGG-1-7	06 AUG 2026
2-WBGG-1-8	28 NOV 2024	2-WBGG-1-8	06 AUG 2026
2-WBGG-1-9	28 NOV 2024	2-WBGG-1-9	06 AUG 2026
2-WBGG-1-10	08 OCT 2024	2-WBGG-1-10	06 AUG 2026
2-WBGG-1-11	15 AUG 2023	2-WBGG-1-11	06 AUG 2026
2-WBGG-1-12	01 DEC 2022	2-WBGG-1-12	06 AUG 2026
2-WBGG-1-13	28 NOV 2024	2-WBGG-1-13	06 AUG 2026
2-WBGG-2-1	28 NOV 2024	2-WBGG-2-1	06 AUG 2026
2-WBGG-2-3	28 NOV 2024	2-WBGG-2-3	06 AUG 2026
2-WBGG-2-5	28 NOV 2024	2-WBGG-2-5	06 AUG 2026
2-WBGS-1-11	02 DEC 2025	2-WBGS-1-11	06 AUG 2026
2-WBGS-8-5	04 SEP 2025	2-WBGS-8-5	06 AUG 2026
2-WBGS-8-6	04 SEP 2025	2-WBGS-8-6	06 AUG 2026
2-WBKD-1-1	28 FEB 2023	2-WBKD-1-1	06 AUG 2026
2-WBKD-1-4	25 MAR 2025	2-WBKD-1-4	06 AUG 2026
2-WBKD-1-6	25 MAR 2025	2-WBKD-1-6	06 AUG 2026
2-WBKD-1-7	25 MAR 2025	2-WBKD-1-7	06 AUG 2026
2-WBKD-1-8	25 MAR 2025	2-WBKD-1-8	06 AUG 2026
2-WBKW-1-1	16 JUL 2024	2-WBKW-1-1	06 AUG 2026
2-WBKW-1-2	15 AUG 2023	2-WBKW-1-2	06 AUG 2026
2-WBKW-1-3	17 JUN 2025	2-WBKW-1-3	06 AUG 2026
2-WBKW-1-4	07 NOV 2023	2-WBKW-1-4	06 AUG 2026
2-WBKW-1-5	28 NOV 2024	2-WBKW-1-5	06 AUG 2026
2-WBKW-1-6	07 NOV 2023	2-WBKW-1-6	06 AUG 2026
2-WBKW-1-8	15 AUG 2023	2-WBKW-1-8	06 AUG 2026
2-WBKW-2-1	28 NOV 2024	2-WBKW-2-1	06 AUG 2026
2-WBKW-2-3	28 NOV 2024	2-WBKW-2-3	06 AUG 2026
2-WBKW-2-5	28 NOV 2024	2-WBKW-2-5	06 AUG 2026
2-WBGM-1-1	23 MAY 2023	2-WBGM-1-1	06 AUG 2026

DESTROY		INSERT	
2-WBGM-1-2	20 MAR 2025	2-WBGM-1-2	06 AUG 2026
2-WBGM-1-3	25 MAR 2025	2-WBGM-1-3	06 AUG 2026
2-WBGM-1-4	25 MAR 2025	2-WBGM-1-4	06 AUG 2026
2-WBGM-1-5	25 MAR 2025	2-WBGM-1-5	06 AUG 2026
2-WBGM-1-6	25 MAR 2025	2-WBGM-1-6	06 AUG 2026
2-WBGQ-1-1	26 MAR 2020	2-WBGQ-1-1	06 AUG 2026
2-WBGQ-1-2	26 MAR 2020	2-WBGQ-1-2	06 AUG 2026
2-WBGQ-1-3	26 MAR 2020	2-WBGQ-1-3	06 AUG 2026
2-WBGQ-1-4	26 MAR 2020	2-WBGQ-1-4	06 AUG 2026
2-WBGQ-1-5	26 MAR 2020	2-WBGQ-1-5	06 AUG 2026
2-WBGQ-1-6	26 MAR 2020	2-WBGQ-1-6	06 AUG 2026
2-WBGQ-2-1	26 MAR 2020	2-WBGQ-2-1	06 AUG 2026
2-WBGQ-2-3	26 MAR 2020	2-WBGQ-2-3	06 AUG 2026
2-WBGW-1-1	31 DEC 2024	2-WBGW-1-1	06 AUG 2026
2-WBGW-1-4	19 FEB 2026	2-WBGW-1-4	06 AUG 2026
2-WBGW-1-5	19 FEB 2026	2-WBGW-1-5	06 AUG 2026
2-WBGW-1-6	19 FEB 2026	2-WBGW-1-6	06 AUG 2026
-	-	2-WBGW-1-7	06 AUG 2026
-	-	2-WBGW-1-8	06 AUG 2026

1. Hand amendments

NIL

2. Record entry of AIRAC AMDT on the page GEN 0.2-1.

3. The following publications have been incorporated in this AIRAC AMDT:

AIP SUP NIL

AIC NIL

NOTAM NIL

- END -

NR / Year	Subject	AIP section(s) affected	Period of validity	Cancellation record
61/25	KUANTAN AIRPORT (WMKD) ATIS U/S	AD	25 DEC 2025 - UFN	
63/25	LIMBANG AIRPORT (WBGJ) TEMPORARY CHANGES OF AERODROME OPERATIONS HOURS	AD	25 DEC 2025 - 24 DEC 2026	
02/26	IPOH / SULTAN AZLAN SHAH AIRPORT (WMKI) RESTRICTED OPERATIONS OF TWY C	AD	22 JAN 2026 - UFN	
03/26	LIMBANG AIRPORT (WBGJ) PROPOSED LIMBANG AIRPORT RUNWAY EXTENSION CHANGES TO RUNWAY DECLARED DISTANCES	AD	22 JAN 2026 - 24 DEC 2026	
05/26	KUANTAN AIRPORT (WMKD) KUANTAN DVOR/TAC VKN UNSERVICEABLE	AD	22 JAN 2026 - 19 NOV 2026	
08/26	LIMBANG AIRPORT (WBGJ) TEMPORARY CLOSURE OF PARKING BAY 3 FOR UPGRADE WORKS	AD	22 JAN 2026 - 30 NOV 2026	
09/26	PENANG INTERNATIONAL AIRPORT (WMKP) RESTRICTION OF FLYING TRAINING SCHOOL AIRCRAFT OPERATIONS	AD	22 JAN 2026 - 31 DEC 2028	
10/26	UNMANNED AIRCRAFT SYSTEM (UAS) ACTIVITY FOR NESTED UAS OPERATION AT BINTULU PORT	AD	22 JAN 2026 - 31 DEC 2026	
12/26	KUALA LUMPUR FLIGHT INFORMATION REGION TRIAL OF RESTRICTED AREA WMR416D	ENR	19 MAR 2026 - 18 MAR 2029	
13/26	KUANTAN AIRPORT (WMKD) ARRESTOR BARRIER RWY 18 U/S	AD	19 FEB 2026 - 19 FEB 2027	
15/26	JOHOR BAHRU / SENAI INTERNATIONAL AIRPORT (WMKJ) TAXIWAY SHOULDER UPGRADING WORKS AND CONSTRUCTION OF NEW VVIP APRON, VVIP HANGAR AND ANNEX BUILDING	AD	16 APR 2026 - 27 JAN 2027	
16/26	PENANG INTERNATIONAL AIRPORT (WMKP) UPGRADING AND EXPANSION OF PENANG INTERNATIONAL AIRPORT, AIRSIDE FACILITIES - PAVEMENT WORKS AND OTHER ASSOCIATED WORKS. WORK SCHEDULE AND MOVEMENT AREAS RESTRICTIONS.	AD	16 APR 2026 - 01 JUL 2027	
17/26	KUALA LUMPUR INTERNATIONAL AIRPORT (WMKK) PAVEMENT CLASSIFICATION RATING (PCR) REVISION	AD	19 MAR 2026 - PERM	
18/26	KUANTAN AIRPORT (WMKD) KUANTAN GND FREQ 120.400 MHz U/S	AD	19 MAR 2026 - 19 MAR 2027	
20/26	PENANG INTERNATIONAL AIRPORT (WMKP) UPGRADING AND EXPANSION OF PENANG INTERNATIONAL AIRPORT, AIRSIDE FACILITIES - PAVEMENT WORKS AND OTHER ASSOCIATED WORKS WORK SCHEDULE AND MOVEMENT AREAS RESTRICTIONS (This AIP Supplement replaces AIRAC AIP Supplement 16/26)	AD	16 APR 2026 - 01 JUL 2027	
21/26	BINTULU AIRPORT (WBGB) CONSTRUCTION OF THE NEW TAXIWAY CHARLIE AND TAXIWAY DELTA	AD	14 MAY 2026 - 03 MAY 2028	
23/26	PENANG INTERNATIONAL AIRPORT (WMKP) PROPOSED DESIGN AND CONSTRUCT THE PAVEMENT REHABILITATION WORKS OF TAXIWAY C, TAXIWAY A AND ITS ASSOCIATED WORKS	AD	14 MAY 2026 - 14 NOV 2026	
28/26	LABUAN AIRPORT (WBKL) CRANE ERECTED NEAR LABUAN AIRFIELD	AD	09 JUL 2026 - 09 JUL 2027	
29/26	MALAYSIA'S NATIONAL DAY FLYPAST 2026	ENR	09 JUL 2026 - 31 AUG 2026	
30/26	MUKAH AIRPORT (WBGK) MUKAH DVOR/DME VMH UNSERVICEABLE	AD	09 JUL 2026 - 06 AUG 2027	

NR / Year	Subject	AIP section(s) affected	Period of validity	Cancellation record
31/26	LUMUT HELIPORT (WMLH) ATIS FREQ UNSERVICEABLE	AD	09 JUL 2026 - 18 MAY 2027	
32/26	PENANG INTERNATIONAL AIRPORT (WMKP) UPGRADING AND EXPANSION OF PENANG INTERNATIONAL AIRPORT, AIRSIDE FACILITIES - PAVEMENT WORKS AND OTHER ASSOCIATED WORKS, WORK SCHEDULE AND MOVEMENT AREAS RESTRICTIONS	AD	09 JUL 2026 - 06 AUG 2027	

GEN 0.4 CHECKLIST OF AIP PAGES

Page	Date	Page	Date	Page	Date
PART 1 - GENERAL (GEN)					
GEN 0.					
0.1-1	12 AUG 2021	1.7-3	20 MAY 2021	2.7-35	02 DEC 2025
0.1-2	02 DEC 2025	1.7-4	25 MAR 2021	2.7-36	02 DEC 2025
0.1-3	02 DEC 2025	1.7-5	29 OCT 2021	2.7-37	02 DEC 2025
0.1-4	25 MAR 2021	1.7-6	25 MAR 2021	2.7-38	02 DEC 2025
0.2-1	24 FEB 2022	GEN 2.			
0.2-2	16 AUG 2018	2.1-1	16 AUG 2018	2.7-39	02 DEC 2025
0.3-1	14 MAY 2026	2.1-2	02 DEC 2025	2.7-40	02 DEC 2025
0.3-2	19 MAY 2026	2.2-1	25 MAR 2021	2.7-41	02 DEC 2025
0.3-3	06 AUG 2026*	2.2-2	25 MAR 2021	2.7-42	02 DEC 2025
0.3-4	06 AUG 2026*	2.2-3	25 MAR 2021	2.7-43	02 DEC 2025
0.4-1	06 AUG 2026*	2.2-4	25 MAR 2021	2.7-44	02 DEC 2025
0.4-2	06 AUG 2026*	2.2-5	25 MAR 2021	2.7-45	02 DEC 2025
0.4-3	06 AUG 2026*	2.2-6	25 MAR 2021	2.7-46	02 DEC 2025
0.4-4	06 AUG 2026*	2.2-7	05 NOV 2020	2.7-47	02 DEC 2025
0.4-5	06 AUG 2026*	2.2-8	16 AUG 2018	2.7-48	02 DEC 2025
0.4-6	06 AUG 2026*	2.2-9	20 MAY 2021	2.7-49	02 DEC 2025
0.4-7	06 AUG 2026*	2.2-10	16 AUG 2018	2.7-50	02 DEC 2025
0.4-8	06 AUG 2026*	2.3-1	16 AUG 2018	2.7-51	02 DEC 2025
0.4-9	06 AUG 2026*	2.3-2	16 AUG 2018	2.7-52	02 DEC 2025
0.4-10	06 AUG 2026*	2.3-3	20 MAY 2021	2.7-53	02 DEC 2025
0.4-11	06 AUG 2026*	2.3-4	16 AUG 2018	2.7-54	02 DEC 2025
0.4-12	06 AUG 2026*	2.3-5	16 AUG 2018	2.7-55	02 DEC 2025
0.4-13	06 AUG 2026*	2.3-6	16 AUG 2018	2.7-56	02 DEC 2025
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2-WMKM-8-6	09 SEP 2025	2-WMKN-8-13	25 MAR 2025	2-WMKP-8-13	01 DEC 2022
2-WMKM-8-7	09 SEP 2025	2-WMKN-8-14	30 JAN 2024	2-WMKP-8-14	01 DEC 2022
2-WMKM-8-8	09 SEP 2025	2-WMKN-8-15	30 JAN 2024	2-WMKP-8-15	01 DEC 2022
2-WMKM-8-9	09 SEP 2025	2-WMKN-8-16	20 MAY 2021	2-WMKP-8-16	01 DEC 2022
2-WMKM-8-10	09 SEP 2025	2-WMKN-8-17	25 MAR 2025	2-WMKP-8-17	02 DEC 2025
2-WMKM-8-11	09 SEP 2025	2-WMKN-8-18	30 JAN 2024	2-WMKP-8-18	01 DEC 2022
2-WMKM-8-12	09 SEP 2025	2-WMKN-8-19	30 JAN 2024	2-WMKP-8-19	01 DEC 2022
2-WMKM-8-13	09 SEP 2025	2-WMKN-8-20	20 MAY 2021	2-WMKP-8-20	01 DEC 2022
2-WMKM-8-14	09 SEP 2025	2-WMKN-8-21	25 MAR 2025	2-WMKP-8-21	02 DEC 2025
2-WMKM-8-15	09 SEP 2025	2-WMKN-8-22	30 JAN 2024	2-WMKP-8-22	01 DEC 2022
2-WMKM-8-16	09 SEP 2025	2-WMKN-8-23	25 MAR 2025	2-WMKP-8-23	01 DEC 2022
2-WMKM-8-17	09 SEP 2025	2-WMKN-8-24	19 MAY 2026	2-WMKP-8-24	01 DEC 2022
2-WMKM-8-18	09 SEP 2025				
2-WMKM-8-19	09 SEP 2025				
2-WMKM-8-20	09 SEP 2025				
KUALA TERENGGANU/SULTAN MAHMUD		PENANG INTERNATIONAL AIRPORT		SUBANG/SULTAN ABDUL AZIZ SHAH	
2-WMKN-1-1	27 NOV 2025	2-WMKP-1-1	16 JUL 2024	2-WMSA-1-1	19 FEB 2026
2-WMKN-1-2	27 NOV 2025	2-WMKP-1-2	06 AUG 2026*	2-WMSA-1-2	19 FEB 2026
2-WMKN-1-3	27 NOV 2025	2-WMKP-1-3	06 AUG 2026*	2-WMSA-1-3	19 FEB 2026
2-WMKN-1-4	27 NOV 2025	2-WMKP-1-4	06 AUG 2026*	2-WMSA-1-4	28 NOV 2024
2-WMKN-1-5	07 NOV 2023	2-WMKP-1-5	06 AUG 2026*	2-WMSA-1-5	28 NOV 2024
2-WMKN-1-6	28 NOV 2024	2-WMKP-1-6	06 AUG 2026*	2-WMSA-1-6	19 FEB 2026
2-WMKN-1-7	27 NOV 2025	2-WMKP-1-7	19 MAY 2026	2-WMSA-1-7	28 NOV 2024
2-WMKN-1-8	27 NOV 2025	2-WMKP-1-8	06 AUG 2026*	2-WMSA-1-8	28 NOV 2024
2-WMKN-1-9	25 MAR 2025	2-WMKP-1-9	06 AUG 2026*	2-WMSA-1-9	12 JUN 2025
2-WMKN-1-10	28 NOV 2024	2-WMKP-1-10	06 AUG 2026*	2-WMSA-1-10	28 NOV 2024
2-WMKN-1-11	27 NOV 2025	2-WMKP-1-11	06 AUG 2026*	2-WMSA-1-11	28 NOV 2024
2-WMKN-1-12	28 NOV 2024	2-WMKP-1-12	06 AUG 2026*	2-WMSA-1-12	24 FEB 2026
2-WMKN-2-1	27 NOV 2025	2-WMKP-1-13	06 AUG 2026*	2-WMSA-1-13	24 FEB 2026
2-WMKN-2-2	16 AUG 2018	2-WMKP-1-14	06 AUG 2026*	2-WMSA-1-14	14 MAY 2026
2-WMKN-2-3	27 NOV 2025	2-WMKP-2-1	06 AUG 2026*	2-WMSA-1-15	19 MAY 2026
2-WMKN-2-4	16 AUG 2018	2-WMKP-2-2	16 AUG 2018	2-WMSA-1-16	19 MAY 2026
2-WMKN-2-5	27 NOV 2025	2-WMKP-2-3	06 AUG 2026*	2-WMSA-1-17	19 MAY 2026
2-WMKN-2-6	16 AUG 2018	2-WMKP-2-4	06 AUG 2026*	2-WMSA-2-1	28 NOV 2024
2-WMKN-3-1	16 AUG 2018	2-WMKP-2-5	06 AUG 2026*	2-WMSA-2-2	16 AUG 2018
2-WMKN-3-2	16 AUG 2018	2-WMKP-2-6	16 AUG 2018	2-WMSA-2-3	16 AUG 2018
2-WMKN-4-1	19 MAY 2022	2-WMKP-3-1	25 MAR 2021	2-WMSA-2-4	16 AUG 2018
2-WMKN-4-2	16 AUG 2018	2-WMKP-3-2	16 AUG 2018	2-WMSA-2-5	19 FEB 2026
2-WMKN-6-1	25 MAR 2025	2-WMKP-6-1	02 DEC 2025	2-WMSA-2-6	16 AUG 2018
2-WMKN-6-2	19 MAY 2022	2-WMKP-6-2	16 AUG 2018	2-WMSA-2-7	19 FEB 2026
2-WMKN-6-3	25 MAR 2025	2-WMKP-6-3	02 DEC 2025	2-WMSA-2-8	16 AUG 2018
2-WMKN-6-4	26 MAY 2022	2-WMKP-6-4	10 SEP 2021	2-WMSA-3-1	28 MAR 2019
2-WMKN-6-5	25 MAR 2025	2-WMKP-6-5	10 SEP 2021	2-WMSA-3-2	16 AUG 2018
2-WMKN-6-6	19 MAY 2022	2-WMKP-6-6	10 SEP 2021	2-WMSA-6-1	08 OCT 2024
2-WMKN-6-7	25 MAR 2025	2-WMKP-6-7	02 DEC 2025	2-WMSA-6-2	16 AUG 2018
2-WMKN-6-8	19 MAY 2022	2-WMKP-6-8	10 SEP 2021	2-WMSA-6-3	08 OCT 2024
2-WMKN-7-1	25 MAR 2025	2-WMKP-6-9	02 DEC 2025	2-WMSA-6-4	08 OCT 2024
2-WMKN-7-2	19 MAY 2022	2-WMKP-6-10	10 SEP 2021	2-WMSA-6-5	08 OCT 2024
2-WMKN-7-3	25 MAR 2025	2-WMKP-6-11	10 SEP 2021	2-WMSA-6-6	08 OCT 2024
2-WMKN-7-4	08 SEP 2022	2-WMKP-6-12	10 SEP 2021	2-WMSA-6-7	08 OCT 2024
2-WMKN-7-5	08 SEP 2022	2-WMKP-6-13	02 DEC 2025	2-WMSA-6-8	08 OCT 2024
2-WMKN-7-6	19 MAY 2022	2-WMKP-6-14	10 SEP 2021	2-WMSA-6-9	08 OCT 2024
2-WMKN-7-7	25 MAR 2025	2-WMKP-7-1	02 DEC 2025	2-WMSA-6-10	08 OCT 2024
		2-WMKP-7-2	10 SEP 2021	2-WMSA-7-1	03 MAR 2022
		2-WMKP-7-3	10 SEP 2021	2-WMSA-7-2	16 AUG 2018
		2-WMKP-7-4	16 AUG 2018	2-WMSA-7-3	08 OCT 2024
		2-WMKP-7-5	02 DEC 2025	2-WMSA-7-4	08 OCT 2024

Page	Date	Page	Date	Page	Date
2-WMSA-7-5	08 OCT 2024	2-WMPA-1-4	08 SEP 2022	2-WBGB-8-14	12 JUN 2025
2-WMSA-7-6	08 OCT 2024	2-WMPA-1-5	08 SEP 2022	2-WBGB-8-15	12 JUN 2025
2-WMSA-7-7	08 OCT 2024	2-WMPA-1-6	08 SEP 2022	2-WBGB-8-16	12 JUN 2025
2-WMSA-7-8	08 OCT 2024	2-WMPA-2-1	08 SEP 2022	2-WBGB-8-17	12 JUN 2025
2-WMSA-8-1	08 OCT 2024	2-WMPA-2-2	26 MAR 2020	2-WBGB-8-18	12 JUN 2025
2-WMSA-8-2	08 OCT 2024	2-WMPA-2-3	08 SEP 2022		
2-WMSA-8-3	08 OCT 2024	2-WMPA-2-4	26 MAR 2020	KUCHING INTERNATIONAL	
2-WMSA-8-4	08 OCT 2024	2-WMPA-2-5	08 SEP 2022	2-WBGG-1-1	28 NOV 2024
2-WMSA-8-5	08 OCT 2024	2-WMPA-2-6	26 MAR 2020	2-WBGG-1-2	06 AUG 2026*
2-WMSA-8-6	08 OCT 2024			2-WBGG-1-3	06 AUG 2026*
2-WMSA-8-7	08 OCT 2024	BINTULU		2-WBGG-1-4	06 AUG 2026*
2-WMSA-8-8	08 OCT 2024	2-WBGB-1-1	19 MAY 2026	2-WBGG-1-5	06 AUG 2026*
		2-WBGB-1-2	19 MAY 2026	2-WBGG-1-6	06 AUG 2026*
PULAU TIOMAN		2-WBGB-1-3	19 FEB 2026	2-WBGG-1-7	06 AUG 2026*
2-WMBT-1-1	15 SEP 2022	2-WBGB-1-4	19 FEB 2026	2-WBGG-1-8	06 AUG 2026*
2-WMBT-1-2	15 SEP 2022	2-WBGB-1-5	08 DEC 2022	2-WBGG-1-9	06 AUG 2026*
2-WMBT-1-3	25 MAR 2025	2-WBGB-1-6	19 FEB 2026	2-WBGG-1-10	06 AUG 2026*
2-WMBT-1-4	25 MAR 2025	2-WBGB-1-7	19 FEB 2026	2-WBGG-1-11	06 AUG 2026*
2-WMBT-1-5	25 MAR 2025	2-WBGB-1-8	28 NOV 2024	2-WBGG-1-12	06 AUG 2026*
2-WMBT-1-6	25 MAR 2025	2-WBGB-1-9	19 FEB 2026	2-WBGG-1-13	06 AUG 2026*
2-WMBT-1-7	16 AUG 2018	2-WBGB-1-10	06 AUG 2026*	2-WBGG-1-14	08 OCT 2024
2-WMBT-1-8	26 MAR 2020	2-WBGB-1-11	06 AUG 2026*	2-WBGG-2-1	06 AUG 2026*
2-WMBT-2-1	15 SEP 2022	2-WBGB-1-12	06 AUG 2026*	2-WBGG-2-2	16 AUG 2018
2-WMBT-2-2	16 AUG 2018	2-WBGB-2-1	19 FEB 2026	2-WBGG-2-3	06 AUG 2026*
2-WMBT-2-3	26 MAR 2020	2-WBGB-2-2	16 AUG 2018	2-WBGG-2-4	16 AUG 2018
2-WMBT-2-4	26 MAR 2020	2-WBGB-2-3	19 FEB 2026	2-WBGG-2-5	06 AUG 2026*
2-WMBT-2-5	26 MAR 2020	2-WBGB-2-4	16 AUG 2018	2-WBGG-2-6	16 AUG 2018
2-WMBT-2-6	26 MAR 2020	2-WBGB-2-5	19 FEB 2026	2-WBGG-3-1	20 MAY 2021
		2-WBGB-2-6	16 AUG 2018	2-WBGG-3-2	16 AUG 2018
KLUANG		2-WBGB-3-1	26 MAR 2020	2-WBGG-4-1	15 AUG 2023
2-WMAP-1-1	08 OCT 2024	2-WBGB-3-2	16 AUG 2018	2-WBGG-4-2	16 AUG 2018
2-WMAP-1-2	08 OCT 2024	2-WBGB-4-1	04 SEP 2025	2-WBGG-4-3	15 AUG 2023
2-WMAP-1-3	25 MAR 2025	2-WBGB-4-2	16 AUG 2018	2-WBGG-4-4	16 AUG 2018
2-WMAP-1-4	16 AUG 2018	2-WBGB-6-1	12 JUN 2025	2-WBGG-4-5	15 AUG 2023
2-WMAP-1-5	08 OCT 2024	2-WBGB-6-2	12 JUN 2025	2-WBGG-4-6	16 AUG 2018
2-WMAP-1-6	05 NOV 2020	2-WBGB-6-3	12 JUN 2025	2-WBGG-6-1	15 AUG 2023
		2-WBGB-6-4	01 DEC 2022	2-WBGG-6-2	16 AUG 2018
GONG KEDAK		2-WBGB-6-5	12 JUN 2025	2-WBGG-6-3	08 OCT 2024
2-WMGK-1-1	29 OCT 2021	2-WBGB-6-6	12 JUN 2025	2-WBGG-6-4	08 OCT 2024
2-WMGK-1-2	29 OCT 2021	2-WBGB-6-7	12 JUN 2025	2-WBGG-6-5	08 OCT 2024
2-WMGK-1-3	29 OCT 2021	2-WBGB-6-8	12 JUN 2025	2-WBGG-6-6	08 OCT 2024
2-WMGK-1-4	29 OCT 2021	2-WBGB-6-9	12 JUN 2025	2-WBGG-6-7	08 OCT 2024
2-WMGK-1-5	29 OCT 2021	2-WBGB-6-10	01 DEC 2022	2-WBGG-6-8	08 OCT 2024
2-WMGK-1-6	29 OCT 2021	2-WBGB-6-11	12 JUN 2025	2-WBGG-6-9	08 OCT 2024
2-WMGK-1-7	29 OCT 2021	2-WBGB-6-12	12 JUN 2025	2-WBGG-6-10	16 AUG 2018
2-WMGK-1-8	16 AUG 2018	2-WBGB-7-1	12 JUN 2025	2-WBGG-6-11	08 OCT 2024
2-WMGK-2-1	29 OCT 2021	2-WBGB-7-2	12 JUN 2025	2-WBGG-6-12	08 OCT 2024
2-WMGK-2-2	16 AUG 2018	2-WBGB-7-3	12 JUN 2025	2-WBGG-6-13	08 OCT 2024
		2-WBGB-7-4	16 AUG 2018	2-WBGG-6-14	16 AUG 2018
PULAU REDANG		2-WBGB-7-5	12 JUN 2025	2-WBGG-6-15	08 OCT 2024
2-WMPR-1-1	06 AUG 2026*	2-WBGB-7-6	12 JUN 2025	2-WBGG-6-16	16 AUG 2018
2-WMPR-1-2	06 AUG 2026*	2-WBGB-7-7	02 DEC 2025	2-WBGG-6-17	08 OCT 2024
2-WMPR-1-3	06 AUG 2026*	2-WBGB-7-8	02 DEC 2025	2-WBGG-6-18	08 OCT 2024
2-WMPR-1-4	06 AUG 2026*	2-WBGB-7-9	02 DEC 2025	2-WBGG-6-19	08 OCT 2024
2-WMPR-1-5	06 AUG 2026*	2-WBGB-7-10	12 JUN 2025	2-WBGG-6-20	16 AUG 2018
2-WMPR-1-6	06 AUG 2026*	2-WBGB-7-11	02 DEC 2025	2-WBGG-7-1	08 OCT 2024
2-WMPR-1-7	06 AUG 2026*	2-WBGB-7-12	12 JUN 2025	2-WBGG-7-2	08 OCT 2024
2-WMPR-1-8	04 SEP 2025	2-WBGB-8-1	12 JUN 2025	2-WBGG-7-3	08 OCT 2024
2-WMPR-2-1	06 AUG 2026*	2-WBGB-8-2	12 JUN 2025	2-WBGG-7-4	08 OCT 2024
2-WMPR-2-2	16 AUG 2018	2-WBGB-8-3	06 AUG 2026*	2-WBGG-7-5	08 OCT 2024
2-WMPR-2-3	06 AUG 2026*	2-WBGB-8-4	06 AUG 2026*	2-WBGG-7-6	08 OCT 2024
2-WMPR-2-4	26 MAR 2020	2-WBGB-8-5	06 AUG 2026*	2-WBGG-7-7	08 OCT 2024
2-WMPR-2-5	06 AUG 2026*	2-WBGB-8-6	12 JUN 2025	2-WBGG-7-8	16 AUG 2018
2-WMPR-2-6	26 MAR 2020	2-WBGB-8-7	12 JUN 2025	2-WBGG-7-9	08 OCT 2024
		2-WBGB-8-8	09 SEP 2025	2-WBGG-7-10	16 AUG 2018
PULAU PANGKOR		2-WBGB-8-9	12 JUN 2025	2-WBGG-7-11	08 OCT 2024
2-WMPA-1-1	08 SEP 2022	2-WBGB-8-10	12 JUN 2025	2-WBGG-7-12	08 OCT 2024
2-WMPA-1-2	08 SEP 2022	2-WBGB-8-11	17 JUN 2025	2-WBGG-7-13	08 OCT 2024
2-WMPA-1-3	08 SEP 2022	2-WBGB-8-12	02 DEC 2025	2-WBGG-7-14	08 OCT 2024
		2-WBGB-8-13	17 JUN 2025	2-WBGG-7-15	08 OCT 2024

Page	Date	Page	Date
2-WBGK-8-4	08 DEC 2022	2-WBGW-2-1	19 FEB 2026
2-WBGK-8-5	04 SEP 2025	2-WBGW-2-2	28 MAR 2019
2-WBGK-8-6	08 SEP 2022	2-WBGW-2-3	19 FEB 2026
2-WBGK-8-7	04 SEP 2025	2-WBGW-2-4	28 MAR 2019
2-WBGK-8-8	08 SEP 2022		
2-WBGK-8-9	04 SEP 2025	BARIO	
2-WBGK-8-10	08 SEP 2022	2-WBGZ-1-1	12 JUN 2025
2-WBGK-8-11	04 SEP 2025	2-WBGZ-1-2	12 JUN 2025
2-WBGK-8-12	08 SEP 2022	2-WBGZ-1-3	12 JUN 2025
		2-WBGZ-1-4	12 JUN 2025
LONG AKAH		2-WBGZ-1-5	25 MAR 2025
2-WBGA-1-1	26 MAR 2020	2-WBGZ-1-6	25 MAR 2025
2-WBGA-1-2	26 MAR 2020	2-WBGZ-1-7	25 MAR 2025
2-WBGA-1-3	25 MAR 2025	2-WBGZ-1-8	25 MAR 2025
2-WBGA-1-4	26 MAR 2020	2-WBGZ-2-1	12 JUN 2025
2-WBGA-1-5	26 MAR 2020	2-WBGZ-2-2	26 MAR 2020
2-WBGA-1-6	26 MAR 2020	2-WBGZ-2-3	12 JUN 2025
2-WBGA-2-1	26 MAR 2020	2-WBGZ-2-4	26 MAR 2020
2-WBGA-2-2	26 MAR 2020		
2-WBGA-2-3	26 MAR 2020	KUDAT	
2-WBGA-2-4	26 MAR 2020	2-WBKT-1-1	14 MAY 2026
		2-WBKT-1-2	16 AUG 2018
LONG BANGA		2-WBKT-1-3	25 MAR 2025
2-WBGL-1-1	16 AUG 2018	2-WBKT-1-4	28 MAR 2019
2-WBGL-1-2	26 MAR 2020	2-WBKT-1-5	25 MAR 2021
2-WBGL-1-3	26 MAR 2020	2-WBKT-1-6	28 MAR 2019
2-WBGL-1-4	26 MAR 2020	2-WBKT-2-1	05 NOV 2020
2-WBGL-1-5	26 MAR 2020	2-WBKT-2-2	28 MAR 2019
2-WBGL-1-6	26 MAR 2020	2-WBKT-2-3	05 NOV 2020
2-WBGL-2-1	26 MAR 2020	2-WBKT-2-4	28 MAR 2019
2-WBGL-2-2	26 MAR 2020		
2-WBGL-2-3	26 MAR 2020	TANJUNG MANIS	
2-WBGL-2-4	26 MAR 2020	2-WBTM-1-1	04 SEP 2025
		2-WBTM-1-2	27 NOV 2025
MARUDI		2-WBTM-1-3	27 NOV 2025
2-WBGM-1-1	06 AUG 2026*	2-WBTM-1-4	27 NOV 2025
2-WBGM-1-2	06 AUG 2026*	2-WBTM-1-5	27 NOV 2025
2-WBGM-1-3	06 AUG 2026*	2-WBTM-1-6	19 FEB 2026
2-WBGM-1-4	06 AUG 2026*	2-WBTM-2-1	25 MAR 2025
2-WBGM-1-5	06 AUG 2026*	2-WBTM-2-2	08 SEP 2022
2-WBGM-1-6	06 AUG 2026*		
2-WBGM-1-7	28 FEB 2023	AD 4.	
2-WBGM-1-8	28 FEB 2023	4.1-1	08 DEC 2022
2-WBGM-2-1	20 MAR 2025	4.1-2	08 DEC 2022
2-WBGM-2-2	28 MAR 2019	4.1-3	08 DEC 2022
2-WBGM-2-3	20 MAR 2025	4.1-4	08 DEC 2022
2-WBGM-2-4	28 MAR 2019	4.1-5	15 AUG 2023
		4.1-6	08 DEC 2022
BAKELALAN			
2-WBGQ-1-1	06 AUG 2026*		
2-WBGQ-1-2	06 AUG 2026*		
2-WBGQ-1-3	06 AUG 2026*		
2-WBGQ-1-4	06 AUG 2026*		
2-WBGQ-1-5	06 AUG 2026*		
2-WBGQ-1-6	06 AUG 2026*		
2-WBGQ-2-1	06 AUG 2026*		
2-WBGQ-2-2	26 MAR 2020		
2-WBGQ-2-3	06 AUG 2026*		
2-WBGQ-2-4	26 MAR 2020		
LAWAS			
2-WBGW-1-1	06 AUG 2026*		
2-WBGW-1-2	19 FEB 2026		
2-WBGW-1-3	19 FEB 2026		
2-WBGW-1-4	06 AUG 2026*		
2-WBGW-1-5	06 AUG 2026*		
2-WBGW-1-6	06 AUG 2026*		
2-WBGW-1-7	06 AUG 2026*		
2-WBGW-1-8	06 AUG 2026*		

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3.2.5 List of Aeronautical Charts Available

3.2.5.1 Aerodrome Chart - ICAO (AC)

Title of series	Name of Chart	Reference	Date
Aerodrome Charts - ICAO (AC)	ALOR SETAR	AD 2-WMKA-2-1	27 NOV 2025
	BINTULU	AD 2-WBGB-2-1	04 SEP 2025
	GONG KEDAK	AD 2-WMGK-2-1	29 OCT 2021
	IPOH	AD 2-WMKI-2-1	28 NOV 2024
	JOHOR BAHRU	AD 2-WMKJ-2-1	04 SEP 2025
	KERTEH	AD 2-WMKE-2-1	26 MAR 2020
	KL INTERNATIONAL	AD 2-WMCK-2-1	19 MAY 2026
	KOTA BHARU	AD 2-WMKC-2-1	14 MAY 2026
	KOTA KINABALU	AD 2-WBKK-2-1	28 NOV 2024
	KUALA TERENGGANU	AD 2-WMKN-2-1	27 NOV 2025
	KUANTAN	AD 2-WMKD-2-1	14 MAY 2026
	KUCHING	AD 2-WBGG-2-1	06 AUG 2026
	KUDAT	AD 2-WBKT-2-1	05 NOV 2020
	LAHAD DATU	AD 2-WBKD-2-1	28 NOV 2024
	LABUAN	AD 2-WBKL-2-1	27 NOV 2025
	LANGKAWI	AD 2-WMKL-2-1	28 NOV 2024
	LAWAS	AD 2-WBGW-2-1	08 OCT 2024
	LIMBANG	AD 2-WBGJ-2-1	31 DEC 2024
	MALACCA	AD 2-WMKM-2-1	09 SEP 2025
	MARUDI	AD 2-WBGM-2-1	20 MAR 2025
	MIRI	AD 2-WBGR-2-1	14 MAY 2026
	MUKAH	AD 2-WBGK-2-1	27 NOV 2025
	PENANG	AD 2-WMKP-2-1	06 AUG 2026
	PULAU REDANG	AD 2-WMPR-2-1	06 AUG 2026
	PULAU TIOMAN	AD 2-WMBT-2-1	15 SEP 2022
	SANDAKAN	AD 2-WBKS-2-1	20 MAR 2025
	SIBU	AD 2-WBGS-2-1	04 SEP 2025
	SUBANG	AD 2-WMSA-2-1	28 NOV 2024
	TAWAU	AD 2-WBKW-2-1	06 AUG 2026
	MULU	AD 2-WBMU-2-1	28 NOV 2024
	PULAU PANGKOR	AD 2-WMPA-2-1	08 SEP 2022
	LONG AKAH	AD 2-WBGA-2-1	26 MAR 2020
	LONG LELLANG	AD 2-WBGF-2-1	26 MAR 2020
LONG SERIDAN	AD 2-WBGI-2-1	26 MAR 2020	
LONG BANGA	AD 2-WBGL-2-1	26 MAR 2020	
BAKELALAN	AD 2-WBGQ-2-1	06 AUG 2026	
BARIO	AD 2-WBGZ-2-1	12 JUN 2025	
TANJUNG MANIS	AD 2-WBTM-2-1	25 MAR 2025	

3.2.5.2 Aerodrome Obstacle Charts - ICAO - TYPE A (AOC)

Title of series	Name of Chart	Reference	Date
Aerodrome Obstacle Charts - ICAO - TYPE A (AOC)	BINTULU	AD 2-WBGB-3-1	26 MAR 2020
	JOHOR BAHRU	AD 2-WMKJ-3-1	28 MAR 2019
	KL INTERNATIONAL (RWY 14L/32R)	AD 2-WMCK-3-1	28 MAR 2019
	KL INTERNATIONAL (RWY 14R/32L)	AD 2-WMCK-3-3	28 MAR 2019
	KL INTERNATIONAL (RWY 15/33)	AD 2-WMCK-3-5	07 NOV 2019
	KOTA BHARU	AD 2-WMCK-3-1	13 AUG 2020
	KOTA KINABALU	AD 2-WBKK-3-1	03 OCT 2024
	KUCHING	AD 2-WBGG-3-1	20 MAY 2021
	LANGKAWI	AD 2-WMKL-3-1	07 NOV 2019
	LIMBANG	AD 2-WBGJ-3-1	16 AUG 2018
	LABUAN	AD 2-WBKL-3-1	16 AUG 2018
	MALACCA	AD 2-WMKM-3-1	09 SEP 2025
	MIRI	AD 2-WBGR-3-1	08 SEP 2022
	PENANG	AD 2-WMKP-3-1	25 MAR 2021
	SUBANG	AD 2-WMSA-3-1	28 MAR 2019
	ALOR SETAR	AD 2-WMKA-3-1	31 DEC 2024
	TAWAU	AD 2-WBKW-3-1	07 NOV 2019
	SIBU	AD 2-WBGS-3-1	28 MAR 2019
	KUALA TERENGGANU	AD 2-WMKN-3-1	16 AUG 2018
KERTEH	AD 2-WMKE-3-1	16 AUG 2018	
MULU	AD 2-WBMU-3-1	13 AUG 2020	

3.2.5.3 Precision Approach Terrain Charts - ICAO

Title of series	Name of Chart	Reference	Date
Precision Approach Terrain Chart - ICAO	RWY 14L	AD 2-WMCK-5-1	23 MAY 2019
	RWY 14R	AD 2-WMCK-5-3	23 MAY 2019
	RWY 32L	AD 2-WMCK-5-5	23 MAY 2019
	RWY 32R	AD 2-WMCK-5-7	23 MAY 2019

3.2.5.4 Standard Departure Chart - Instrument - ICAO (SID)

Title of series	Name of Chart	Reference	Date
Standard Departure Chart - Instrument - ICAO -SID	ALOR SETAR		
	RWY 22 TAMOS 1D RIGTO 1D DUBAX 1D SAGEL 1D GUTEB 1D OMBUL 1D AKMIS 1D	AD 2-WMKA-6-1	14 MAY 2026
	RWY 22 RNAV (GNSS) TAMOS 1B RIGTO 1B DUBAX 1B SAGEL 1B GUTEB 1B OMBUL 1B AKMIS 1B	AD 2-WMKA-6-3	14 MAY 2026
	BINTULU		
	RWY 17 RNAV (GNSS) EKETO 1A DUNAS 1A NOKER 1A BENLI 1A BASUV 1A ADGAB 1A	AD 2-WBGB-6-1	12 JUN 2025
	RWY 17 EKETO 1B DUNAS 1B NOKER 1B BENLI 1B BASUV 1B ADGAB 1B	AD 2-WBGB-6-5	12 JUN 2025
	RWY 35 RNAV (GNSS) – EKETO 2C DUNAS 2C NOKER 2C BENLI 2C BASUV 2C ADGAB 2C	AD 2-WBGB-6-7	12 JUN 2025
	RWY 35 EKETO 2D DUNAS 2D NOKER 2D BENLI 2D BASUV 2D ADGAB 2D	AD 2-WBGB-6-11	12 JUN 2025

Title of series	Name of Chart	Reference	Date
	PENANG		
	RWY 04 RNAV (GNSS) OMBOK 1E LUNTU 1E BETNU 1E GORVU 1E MADUM 1E	AD 2-WMKP-7-1	02 DEC 2025
	RWY 22 RNAV (GNSS) OMBOK 1F BETNU 1F MADUM 1F LUNTU 1F GORVU 1F	AD 2-WMKP-7-5	02 DEC 2025
	SUBANG		
	CALEDONIAN ONE ARRIVAL	AD 2-WMSA-7-1	03 MAR 2022
	RWY 15 RNAV 1 (GNSS) PUGER 2M NIREN 2M KAKAK 2M PULIP 2M SAROX 2M GUPTA 2M SALAX 2M	AD 2-WMSA-7-3	08 OCT 2024
	SIBU		
	RWY 13 RNAV (GNSS) NOLUS 1E REDUK 1E LENTU 1E ELNAL 1E BIPIB 1E ANKUP 1E PILAX 1E	AD 2-WBGS-7-1	04 SEP 2025
	RWY 13 NOLUS 1F REDUK 1F LENTU 1F ELNAL 1F BIPIB 1F ANKUP 1F PILAX 1F	AD 2-WBGS-7-5	04 SEP 2025
	RWY 31 RNAV (GNSS) NOLUS 1G REDUK 1G LENTU 1G ELNAL 1G BIPIB 1G ANKUP 1G PILAX 1G	AD 2-WBGS-7-9	04 SEP 2025
	RWY 31 NOLUS 1H REDUK 1H LENTU 1H ELNAL 1H BIPIB 1H ANKUP 1H PILAX 1H	AD 2-WBGS-7-13	04 SEP 2025
	SANDAKAN		
	RWY 08 VOR/DME ARC KUDAT 1H BELDA 1H AKMAR 1H ANKOB 1H LAHAD 1H	AD 2-WBKS-7-1	08 DEC 2022
	RWY 08 RNAV KUDAT 1F BELDA 1F AKMAR 1F ANKOD 1F LAHAD 1F	AD 2-WBKS-7-3	08 DEC 2022
	KOTA BHARU		
	RWY 10 RNAV(GNSS) GUGIT 1E RUPOS 1E OPOMO 1E	AD 2-WMKC-7-1	28 FEB 2023
	RWY 28 RNAV(GNSS) GUGIT 1F RUPOS 1F OPOMO 1F	AD 2-WMKC-7-5	28 FEB 2023
	KERTEH		
	RWY 34 VOR/DME APATU 1A	AD 2-WMKE-7-1	16 JUL 2024
	HELICOPTER ARRIVAL GATES / ROUTES	AD 2-WMKE-7-3	28 FEB 2023
	IPOH		
	RWY 04 RNAV (GNSS) GUMDA 2E NITIS 2E SOTRO 2E MINOP 2E TEPUS 2E DUDAD 1E	AD 2-WMKI-7-1	08 OCT 2024
	RWY 04 (VOR/DME ARC) GUMDA 2G NITIS 2G SOTRO 2G MINOP 2G TEPUS 2G DUDAD 1G	AD 2-WMKI-7-5	08 OCT 2024
	LABUAN		
	RWY 14 (RNAV 1) LAVED 1P	AD 2-WBKL-7-1	08 DEC 2022
	RWY 32 (RNAV 1) LAVED 1T	AD 2-WBKL-7-5	08 DEC 2022

3.2.5.6 Instrument Approach Chart - ICAO (IAC)

Title of series	Name of Chart	Reference	Date
Instrument Approach Chart - ICAO (IAC)	ALOR SETAR		
	RWY 04 VOR Z (13 DME ARC)	AD 2-WMKA-8-1	14 MAY 2026
	RWY 04 VOR Y (FROM OVERHEAD VAS VOR)	AD 2-WMKA-8-3	14 MAY 2026
	RWY 04 ILS Z OR LOC Z	AD 2-WMKA-8-5	14 MAY 2026
	RWY 04 ILS Y OR LOC Y (FROM OVERHEAD VAS VOR)	AD 2-WMKA-8-7	14 MAY 2026
	RWY 04 RNP Z (AR)	AD 2-WMKA-8-9	14 MAY 2026
	RWY 04 RNP Y	AD 2-WMKA-8-13	14 MAY 2026
	BINTULU		
	RWY 17 IKS OR LOC	AD 2-WBGB-8-1	12 JUN 2025
	RWY 17 RNP Z (AR)	AD 2-WBGB-8-3	06 AUG 2026
	RWY 17 RNP Y	AD 2-WBGB-8-7	12 JUN 2025
	RWY 17 VOR	AD 2-WBGB-8-9	12 JUN 2025
	RWY 35 RNP Z (AR)	AD 2-WBGB-8-11	17 JUN 2025
	RWY 35 RNP Y	AD 2-WBGB-8-15	12 JUN 2025
	RWY 35 VOR	AD 2-WBGB-8-17	12 JUN 2025
	IPOH		
	RWY 04 ILS Z / LOC Z	AD 2-WMKI-8-1	08 OCT 2024
	RWY 04 ILS Y / LOC Y	AD 2-WMKI-8-3	08 OCT 2024
	RWY 04 RNP Z	AD 2-WMKI-8-5	08 OCT 2024
	RWY 04 RNP Y	AD 2-WMKI-8-9	08 OCT 2024
	RWY 04 VOR Z (VOR/DME ARC)	AD 2-WMKI-8-13	08 OCT 2024
	RWY 04 VOR Y	AD 2-WMKI-8-15	08 OCT 2024
	JOHOR BAHRU		
	RWY 16 ILS Z OR LOC Z	AD 2-WMKJ-8-1	08 DEC 2022
	RWY 16 ILS Y OR LOC Y	AD 2-WMKJ-8-3	08 DEC 2022
	RWY 16 ILS X OR LOC X	AD 2-WMKJ-8-5	08 DEC 2022
	RWY 16 ILS W OR LOC W	AD 2-WMKJ-8-7	08 DEC 2022
	RWY 16 VOR Z	AD 2-WMKJ-8-9	08 DEC 2022
	RWY 16 VOR Y	AD 2-WMKJ-8-11	08 DEC 2022
	RWY 16 VOR X	AD 2-WMKJ-8-13	08 DEC 2022
	RWY 16 VOR W	AD 2-WMKJ-8-15	08 DEC 2022
	RWY 16 RNP Y	AD 2-WMKJ-8-17	08 DEC 2022
	RWY 16 RNP X	AD 2-WMKJ-8-21	08 DEC 2022
	RWY 16 RNP Z (AR)	AD 2-WMKJ-8-25	08 DEC 2022
	RWY 34 RNP Z (AR)	AD 2-WMKJ-8-29	08 DEC 2022
	KERTEH		
	RWY 34 ILS Z OR LOC Z	AD 2-WMKE-8-1	31 DEC 2024
	RWY 34 ILS Y OR LOC Y	AD 2-WMKE-8-3	28 FEB 2023
	RWY 34 VOR Z	AD 2-WMKE-8-5	28 FEB 2023
	RWY 34 VOR Y	AD 2-WMKE-8-7	28 FEB 2023
	RWY 34 ILS X OR LOC X (CAT H)	AD 2-WMKE-8-9	16 JUL 2024
	RWY 34 VOR X (CAT H)	AD 2-WMKE-8-11	28 FEB 2023
RWY 16 VOR Z	AD 2-WMKE-8-13	28 FEB 2023	
RWY 16 VOR Y	AD 2-WMKE-8-15	28 FEB 2023	
RWY 16 VOR X (CAT H)	AD 2-WMKE-8-17	31 DEC 2024	
KL INTERNATIONAL			
RWY 14L ILS OR LOC	AD 2-WMCK-8-1	10 SEP 2021	
RWY 14L RNP Y	AD 2-WMCK-8-3	16 JUL 2024	

Title of series	Name of Chart	Reference	Date
	RWY 03 VOR Z (13 DME ARC)	AD 2-WMKM-8-9	09 SEP 2025
	RWY 03 VOR Y	AD 2-WMKM-8-11	09 SEP 2025
	RWY 21 RNP Y	AD 2-WMKM-8-13	09 SEP 2025
	RWY 21 VOR Z (15 DME ARC)	AD 2-WMKM-8-15	09 SEP 2025
	RWY 21 VOR Y	AD 2-WMKM-8-17	09 SEP 2025
	RWY 21 VOR X (CAT A & B)	AD 2-WMKM-8-19	09 SEP 2025
MIRI			
	RWY 02 ILS Z OR LOC Z	AD 2-WBGR-8-1	08 SEP 2022
	RWY 02 ILS Y OR LOC Y	AD 2-WBGR-8-3	08 SEP 2022
	RWY 02 VOR Z	AD 2-WBGR-8-5	02 DEC 2021
	RWY 02 VOR Y	AD 2-WBGR-8-7	08 SEP 2022
	RWY 20 VOR Z	AD 2-WBGR-8-9	08 SEP 2022
	RWY 20 VOR Y	AD 2-WBGR-8-11	08 SEP 2022
	RWY 02 RNP Y	AD 2-WBGR-8-13	01 DEC 2022
	RWY 20 RNP Y	AD 2-WBGR-8-15	01 DEC 2022
	RWY 02 VOR CAT H (HELICOPTER)	AD 2-WBGR-8-17	23 APR 2024
	RWY 20 VOR CAT H (HELICOPTER)	AD 2-WBGR-8-19	08 SEP 2022
	RWY 02 RNP Z (AR)	AD 2-WBGR-8-21	01 DEC 2022
	RWY 20 RNP Z (AR)	AD 2-WBGR-8-25	01 DEC 2022
MUKAH			
	RWY 15 RNP Z	AD 2-WBGK-8-1	08 DEC 2022
	RWY 33 RNP Z	AD 2-WBGK-8-3	08 DEC 2022
	RWY 15 VOR Z	AD 2-WBGK-8-5	04 SEP 2025
	RWY 33 VOR Z	AD 2-WBGK-8-7	04 SEP 2025
	RWY 15 VOR Y	AD 2-WBGK-8-9	04 SEP 2025
	RWY 33 VOR Y	AD 2-WBGK-8-11	04 SEP 2025
PENANG			
	RWY 04 VOR Z (12 DME ARC)	AD 2-WMKP-8-1	02 DEC 2025
	RWY 22 VOR Z (15 DME & 17 DME ARC)	AD 2-WMKP-8-3	02 DEC 2025
	RWY 04 ILS Z OR LOC Z (12 DME ARC)	AD 2-WMKP-8-5	02 DEC 2025
	RWY 04 RNP Z (AR)	AD 2-WMKP-8-7	02 DEC 2025
	RWY 22 RNP Z (AR)	AD 2-WMKP-8-11	02 DEC 2025
	RWY 04 RNP Y	AD 2-WMKP-8-17	02 DEC 2025
	RWY 22 RNP Y	AD 2-WMKP-8-21	02 DEC 2025
SANDAKAN			
	RWY 08 ILS Z OR LOC Z	AD 2-WBKS-8-1	08 DEC 2022
	RWY 08 ILS Y OR LOC Y	AD 2-WBKS-8-3	16 JUL 2024
	RWY 08 VOR/DME Z	AD 2-WBKS-8-5	08 DEC 2022
	RWY 08 VOR/DME Y	AD 2-WBKS-8-7	08 DEC 2022
	RWY 08 RNP Y	AD 2-WBKS-8-9	08 DEC 2022
	RWY 26 VOR/DME	AD 2-WBKS-8-13	15 SEP 2022
	RWY 26 VOR (CAT A & B)	AD 2-WBKS-8-15	15 SEP 2022
	RWY 26 VOR (CAT C & D)	AD 2-WBKS-8-17	15 SEP 2022
	RWY 26 RNP Z (AR)	AD 2-WBKS-8-19	30 JAN 2024
	RWY 26 RNAV (RNP) Z	AD 2-WBKS-8-23	08 SEP 2022
SIBU			
	RWY 13 ILS Z OR LOC Z	AD 2-WBGS-8-1	12 JUN 2025
	RWY 13 ILS Y OR LOC Y	AD 2-WBGS-8-3	02 DEC 2025
	RWY 13 RNP Z (AR)	AD 2-WBGS-8-5	06 AUG 2026
	RWY 13 RNP Y	AD 2-WBGS-8-9	12 JUN 2025
	RWY 13 VOR Z	AD 2-WBGS-8-11	02 DEC 2025

Title of series	Name of Chart	Reference	Date	
	RWY 13 VOR Y	AD 2-WBGS-8-13	12 JUN 2025	
	RWY 31 RNP Z (AR)	AD 2-WBGS-8-15	12 JUN 2025	
	RWY 31 RNP Y	AD 2-WBGS-8-19	12 JUN 2025	
	RWY 31 VOR Z	AD 2-WBGS-8-21	04 SEP 2025	
	RWY 31 VOR Y	AD 2-WBGS-8-23	12 JUN 2025	
	SUBANG			
	RWY 15 ILS OR LOC	AD 2-WMSA-8-1	08 OCT 2024	
	RWY 15 NDB	AD 2-WMSA-8-3	08 OCT 2024	
	RWY 15 RNP Y	AD 2-WMSA-8-5	08 OCT 2024	
	RWY 33 RNP Y	AD 2-WMSA-8-7	08 OCT 2024	
	TAWAU			
	RWY 06 VOR	AD 2-WBKW-8-1	29 OCT 2021	
	RWY 24 VOR	AD 2-WBKW-8-3	08 DEC 2022	
	RWY 24 ILS OR LOC	AD 2-WBKW-8-5	16 JUL 2024	
	RWY 06 RNP Z (AR)	AD 2-WBKW-8-7	01 DEC 2022	
RWY 24 RNP Z (AR)	AD 2-WBKW-8-11	01 DEC 2022		

3.2.5.7 Enroute Chart - ICAO

Title of series	Name of Chart	Reference	Date
Enroute Chart - ICAO	ENROUTE CHART- MALAYSIAN AIRSPACE - ICAO	ENR 6-3	09 SEP 2025

3.2.5.8 World Aeronautical Chart - ICAO

Title of series	Name of Chart	Reference	Date
World Aeronautical Chart	WORLD AERONAUTICAL CHART - WAC 2858 - NORTH NATUNA ISLAND	ENR 6-19	04 SEP 2025
	WORLD AERONAUTICAL CHART - WAC 2859 - PENANG ISLAND	ENR 6-21	16 AUG 2018
	WORLD AERONAUTICAL CHART - WAC 2861 - CAPE SIRIK	ENR 6-23	16 AUG 2018

1.1.14 IMPLEMENTATION OF PERFORMANCE-BASED COMMUNICATION AND SURVEILLANCE (PBCS)**1.1.14.1 INTRODUCTION**

1.1.14.1.1 PBCS is a concept that enables the management of communication and surveillance capabilities by prescription of Required Communication Performance (RCP) and Required Surveillance Performance (RSP) specifications in Future Air Navigation System (FANS 1/A) data link operations using the Automatic Dependent Surveillance-Contract (ADS-C) and Controller Pilot Data-link Communications (CPDLC).

1.1.14.1.2 Pursuant to the ICAO Provisions and amendments to Annexes 4, 6 (Parts I, II, III), 10 (Volumes II, III), 11, 15, PANS-ATM (Doc 4444) and PANS-ABC (Doc 8400) on PBCS, including new Standards and Recommended Practices (SARPS) and related guidance material, Performance-Based Communication and Surveillance (PBCS) Manual (Doc 9869 2nd Edition) and Global Operational Data Link (GOLD) Manual (Doc 10037 1st Edition), are applicable from 10 November 2016.

1.1.14.2 PBCS FRAMEWORK

1.1.14.2.1 The PBCS concept provides a framework to apply RCP and RSP specifications to ensure the acceptable communication and surveillance capabilities and performance of an operational system.

1.1.14.2.2 The main components that involve the joint participation from States, ANSPs and aircraft operators under the PBCS implementation framework consists of the following:

- a) To prescribe RCP and RSP specifications, for aircraft operators, aircraft systems and infrastructure supporting data link operations, when applying separations predicated on such performance;
- b) Operational approval of aircraft operators for a communication and / or surveillance capability including aircraft equipage for operations where RCP and / or RSP specifications will have to be prescribed;
- c) Indication of an aircraft's communication and surveillance performance capability in the form of RCP / RSP Specifications in the flight plan; and
- d) Monitoring programmes to assess actual communication and surveillance performance against RCP and RSP specifications and to determine corrective action to report, analyse and resolve problems.

1.1.14.3 OPERATOR AND AIRCRAFT SYSTEMS

1.1.14.3.1 Operator should continue to use CPDLC and ADS-C in accordance with policies established by the State of Registry or State of the Operator.

1.1.14.3.2 Operator obtaining approval in accordance with National regulations (State of the Operator or State of Registry) should ensure that the procedures, system and services in operations and maintenance programs meet the allocated criteria interoperability standards and RCP / RSP specifications.

1.1.14.3.3 Establish the necessary training and qualification programs for flight crews and flight operations officers / dispatchers in preparation for PBCS implementation that is consistent with ICAO Annex 1 and Annex 6.

1.1.14.3.4 Initial compliance to the PBCS requirements would be beneficial to establish the confidence that Air Traffic Management (ATM) operations could be provided only to eligible aircraft. The PBCS concept will enhance the safety on Performance-Based reduced horizontal separation minima application using data link in Air Traffic Service (ATS) operations.

1.1.14.4 SEPARATION MINIMA

1.1.14.4.1 A Performance-Based Longitudinal Separation minima may be applied as follows:

- a) A separation minimum of 50NM may be applied between RNP10 approved aircraft on ATS routes N571, P574, P627, L645, P628 and L510 which either LOGON to CPDLC or are within VHF radio range as the primary means of communication.
- b) A separation minimum of 30NM may be applied between RNP4 or RNP2 approved aircraft on ATS routes N571 equipped with ADS-C and CPDLC.

1.1.14.4.2 RCP240 and RSP180 performance specifications shall be required for the application of the Performance-Based Longitudinal Separation minima in Para 4.1 which is in accordance with PANS-ATM (Doc 4444) paragraph 5.4.2.9.2

1.1.14.4.3 Otherwise, longitudinal separation of 10 minutes between RNAV equipped aircraft applying Mach Number Technique (MNT) separation minima may be applied between aircraft in situation where RCP240 / RSP180 performance requirement could not be complied.

1.1.14.5 FLIGHT PLAN REQUIREMENTS

1.1.14.5.1 Existing requirement for aircraft using data link communications to annotate in their ICAO flight plan according to AIP Malaysia page ENR 1.1.13.8 paragraph 1.1.13.8.1 remain unchanged.

1.1.14.5.2 Operators conducting flights in airspace where separations are dependent on PBCS should start using RCP / RSP indicators in the flight plan and to adhere to the provisions stated in Appendix 2 of PANS-ATM (Doc 4444).

1.1.14.5.3 Aircraft planning to utilise PBCS operation within the designated area stipulated in this AIP Supplement must annotate in their ICAO flight plan as follows:

- i. In Item 10a of the flight plan, the operator should insert one or more of the CPDLC equipment and capabilities descriptors, as appropriate, listed in Table 1 to identify an aircraft's data link equipment and capabilities:

CPDLC Equipment and Capabilities	Descriptor
CPDLC ATN VDL Mode 2 (ATN B1)	J1
CPDLC FANS 1/A HFDL	J2
CPDLC FANS 1/A VDL Mode 0/A	J3
CPDLC FANS 1/A VDL Mode 2	J4
CPDLC FANS 1/A SATCOM (INMARSAT)	J5
CPDLC FANS 1/A SATCOM (MTSAT)	J6
CPDLC FANS 1/A SATCOM (Iridium)	J7

Table 1: CPDLC equipment and capabilities descriptor

- ii. In Item 10a of the flight plan also, the aircraft operator should insert one or more descriptors, as appropriate, listed in Table 2, to identify an aircraft's RCP capability:

Aircraft's RCP capability	Descriptor
CPDLC RCP 400	P1
CPDLC RCP 240	P2
SATVOICE RCP 400	P3

Table 2: Aircraft's RCP capability descriptor

- iii. In Item 10b of the flight plan, the operator should insert one or more of the ADS-C equipment and capabilities descriptors, as appropriate, listed in Table 3 to identify an aircraft's data link equipment and capabilities:

ADS-C equipment and capabilities	Descriptor
ADS-C with FANS 1/A capabilities	D1
ADS-C with ATN capabilities	G1

Table 3: ADS-C equipment and capabilities descriptor

- iv. In Item 18 of the flight plan, the aircraft operator should file the RSP capability by inserting the indicator SUR/ followed by the appropriate designator, WITH NO SPACES, for the RSP specification (e.g. SUR/RSP400 or SUR/RSP180).

- v. In Item 18 of the flight plan also, the operator should insert the following other information relevant to CPDLC and ADS-C equipment and capabilities:

- a) the indicator REG/ followed by the aircraft registration, WITH NO SPACES; and
- b) the indicator CODE/ followed by the aircraft address, WITH NO SPACES expressed in the form of an alphanumeric code of six hexadecimal characters

- vi. In Item 18 of the flight plan, the aircraft operator shall insert one or more descriptors, as appropriate, listed in Table 4, to identify an aircraft's RNP specification:

Aircraft's RCP capability	Descriptor
RNP 4	PBN/L1
RNP 2	NAV/RNP 2

Table 4: Aircraft's RNP capability descriptor

1.1.14.5.4 Guidance material on the application of performance-based communication and performance based surveillance, which prescribes RCP / RSP to an air traffic service in a specific area, is contained in the Performance-Based Communication and Surveillance (PBCS) Manual (Doc 9869 2nd Edition).

- 1.1.15 AUTOMATIC DEPENDANT SURVEILLANCE – BROADCAST (ADS-B) OUT SERVICE IN OCEANIC AIRSPACE OF KUALA LUMPUR FLIGHT INFORMATION REGION.**
- 1.1.15.1 INTRODUCTION**
- 1.1.15.1.1 ADS-B is an acronym for Automatic Dependant Surveillance - Broadcast. An ADS-B capable aircraft uses GPS receiver to derive its precise position from GNSS constellation and then combines its identity, velocity and other information to broadcast to ADS-B ground stations which receives and distribute the data to ATS automation systems.
- 1.1.15.1.2 The ADS-B transmission on 1090 MHz Extended Squitter data link will be used ultimately for the provision of Air Traffic Services.
- 1.1.15.1.3 The ADS-B OUT implementation is aimed to extend the ATC surveillance for Category R and Category S en-route airspace not covered by conventional surveillance services and to provide redundancy where radar surveillance is already available.
- 1.1.15.1.4 Three ADS-B ground stations are currently in operation in Kuala Lumpur FIR namely Kuala Terengganu, Pulau Langkawi and Genting Highland.
- 1.1.15.2 ADS-B BASED SURVEILLANCE AIRSPACE**
- 1.1.15.2.1 The ADS-B Out surveillance services for ATS routes in Oceanic Airspace of Kuala Lumpur Flight Information Region (FIR) will involve the portion of airspace bounded by coordinates from 071500N 0983000E to 100000N 0963000E to 100000N 0942500E to 060000N 0942500E to 060000N 0973000E and thence along a straight line to point 071500N 0983000E. It encompasses the ATS routes of N571, P628, L510, P627, L645 and P574 from FL 290 or above (See page ENR 1.1-26 – hatched area).
- 1.1.15.3 AIRCRAFT EQUIPAGE APPROVAL**
- 1.1.15.3.1 ADS-B transmitting equipment is defined as that has been certified as meeting:
- European Aviation Safety Agency - Certification Considerations for the Enhanced ATS in Non-Radar Areas using ADS-B Surveillance (ADS-B-NRA) Application via 1090MHz Extended Squitter (AMC 20-24); or
 - European Aviation Safety Agency (EASA) - Certification Specifications and Acceptable Means of Compliance for Airborne Communications, Navigation and Surveillance (CS-ACNS (Subpart D - Surveillance - SUR); or
 - Federal Aviation Administration - Advisory Circular No: 20-165A (or later versions) Airworthiness Approval of Automatic Dependent Surveillance - Broadcast (ADS-B) Out Systems; or
 - The equipment configuration standards in Appendix XI of Civil Aviation Order 20.18 of the Civil Aviation Safety Authority of Australia.
- 1.1.15.3.2 Aircraft that does not comply with the requirements stipulated in paragraph 1.1.15.3.1 will not be accorded priority in the delineated airspace and flight level assignments will be on opportunity basis subject to air traffic conditions
- 1.1.15.3.3 If an aircraft carries ADS-B transmitting equipment but does not comply with the requirements stipulated in paragraph 1.1.15.3.1, the aircraft must not fly in the delineated airspace unless the equipment is:
- deactivated; or
 - Set to transmit only a value of 'zero' for the Navigation Uncertainty Category for Position (NUCp), Navigation Integrity Category (NIC), Navigation Accuracy Category for Position (NACp) and Source Integrity Limit (SIL).
- Note:**
- All aircraft meeting certification standards as specified in para 1.1.15.3.1 above must be RTCA DO-260, DO-260A or DO-260B compliant.
 - The requirement is met if the ADS-B OUT Transmission equipment has a cockpit control that enables the pilot to turn the ADS-B transmissions on and off without disabling the ATC transponder.
 - Deactivation of the ADS-B transmissions must not affect the continued operation of the Mode S transponder responses to interrogations.
 - It is considered equivalent to deactivation if one or more of the position quality indicators NUCp, NIC, NACp or SIL is set to continually transmit only a value of 'zero'.
- 1.1.15.4 FLIGHT PLANNING REQUIREMENTS**
- 1.1.15.4.1 An appropriate ADS-B designator shall be entered in item 10 of the ICAO flight plan:
- B1 ADS-B with dedicated 1090 MHz ADS-B “out “capability, or**
 - B2 ADS-B with dedicated 1090 MHz ADS-B “out “and “in” capability**

- c) **E – Transponder — Mode S, including aircraft identification, pressure altitude and extended squitter (ADS-B) capability, OR**
- d) **L – Transponder — Mode S, including aircraft identification, pressure altitude extended squitter (ADS-B) and enhanced surveillance capability,**

1.1.15.4.2 The aircraft address (24 Bit Code) in hexadecimal format must be entered in item 18 of ICAO flight plan as per the following example:

CODE/751234

1.1.15.4.3 The Aircraft Identification (ACID), not exceeding 7 characters must be accurately indicated in item 7 of ICAO flight plan and replicated exactly when set in the aircraft avionics for transmission as Flight ID as follows:

either

- a) The three-letter ICAO designator of the aircraft operator followed by flight identification number (e.g. MAS123, BAW123) when in radiotelephony the callsign used consists of the associated ICAO telephony designator for the aircraft operator followed by the flight number (e.g. MALAYSIAN ONE TWO THREE, SPEEDBIRD ONE TWO THREE)

or

- b) The aircraft registration (e.g., 9MDCA, VHSBM) when the radiotelephony callsign consists of the aircraft registration.

Note: ACID entered should not have any leading zeros unless it is part of the flight number as indicated in Item 7 of the ICAO flight plan. Hyphens, dashes, or spaces are NOT to be used.

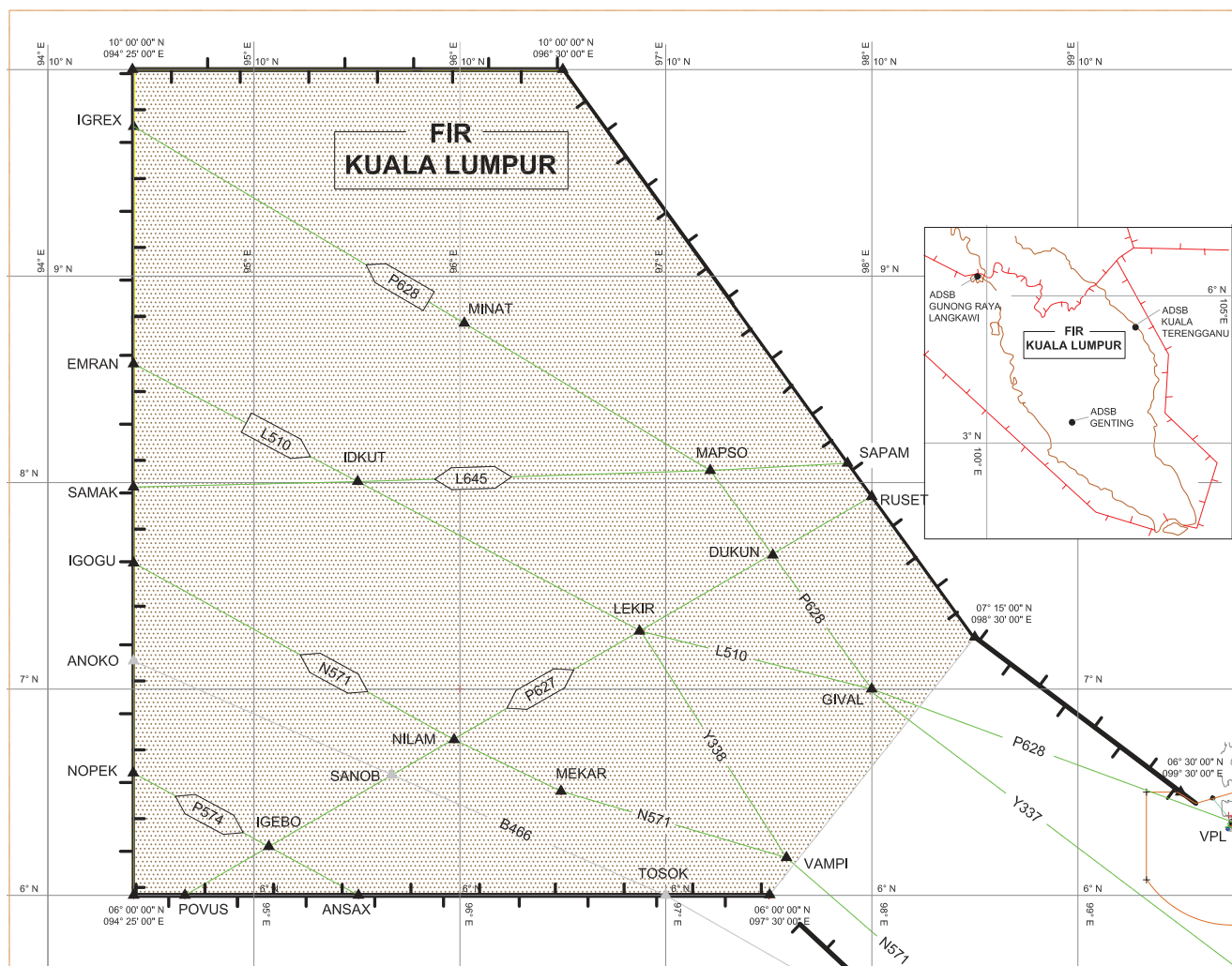
1.1.15.5 IN FLIGHT CONTINGENCY

1.1.15.5.1 If the pilot in command detects failure of on-board ADS-B equipment, he shall immediately inform ATC for appropriate clearances/instructions to ensure essential separation with other flights operating in the delineated airspace.

1.1.15.6 PHRASEOLOGY STANDARD

1.1.15.6.1 Phraseology as mentioned in PANS ATM, Doc 4444 shall be applied for ATC-Pilot communication.

No	Circumstances	Phraseologies
1	To request the capability of the ADS-B equipment	a) ADVISE ADS-B CAPABILITY *b) ADS-B TRANSMITTER (data link) *c) ADS-B RECEIVER (data link) *d) NEGATIVE ADS-B *Denotes pilot transmission
2	To request reselection of aircraft identification	RE-ENTER ADS-B AIRSPACE IDENTIFICATION
3	To request the operation of the IDENT feature	TRANSMIT ADS-B IDENT
4	To request transmission of pressure-altitude	TRANSMIT ADS-B ALTITUDE
5	To request termination of transponder and / or ADS-B transmitter operation	a) STOP SQUAWK [TRANSMIT ADS-B ONLY] b) STOP ADS-B TRANSMISSION [SQUAWK (code) ONLY]
6	To request termination of pressure-altitude transmission because of faulty operation	STOP ADS-B ALTITUDE TRANSMISSION [WRONG INDICATION, or reason]
7	Confirmation of ADS-B operations	ADS-B TRANSMISSION NOT RECEIVED, CONFIRM ADS-B OPERATIONAL
8	To inform an aircraft that its ADS-B transmitter appears to be inoperative or malfunctioning	ADS-B TRANSMITTER APPEARS TO BE INOPERATIVE / MALFUNCTION
9	ATS ADS-B surveillance system ground equipment unserviceability	ADS-B OUT OF SERVICE (Appropriate information as necessary)



1.1.16 SATELLITE VOICE (SATVOICE) FOR ATS COMMUNICATIONS IN THE OCEANIC AIRSPACE OF THE KUALA LUMPUR FLIGHT INFORMATION REGION.

1.1.16.1 INTRODUCTION TO SATVOICE

1.1.16.1.1 SATCOM voice or SATVOICE is a satellite-based voice communication system. It enables secure and high-quality ground-to-air communication through global satellite networks such as INMARSAT and IRIDIUM ensuring clear contact between air traffic controllers and pilots during flight.

Note: According to ICAO Doc 9869, the term SATCOM refers to satellite communication involving both voice and data, or data alone. The term SATVOICE is specifically used to refer to satellite voice communication.

1.1.16.1.2 SATVOICE provides a means of reducing the risk of communication failures, improving safety and efficiency of operations and alleviating HF/VHF channel congestion. SATVOICE can improve current ATS communications via a radio operator and provide direct controller-pilot communications (DCPC) for more efficient ATS communications, such as in processing negotiations or requests from the flight crew.

1.1.16.2 SATVOICE USE IN KUALA LUMPUR FIR (OCEANIC AIRSPACE)

1.1.16.2.1 Within the Oceanic Airspace of the Kuala Lumpur Flight Information Region (FIR), SATVOICE may be used for ATS communications on the following routes: N571, P628, L510, P627, L645 and P574.

1.1.16.2.2 SATVOICE is intended to enhance communication availability for both pilots and controllers. However, it is not a replacement for CPDLC or HF/VHF voice as the main communication means. It may be used in the event of a communication failure with ATC via VHF, HF or CPDLC.

1.1.16.2.3 The one-stage dialling of the SATVOICE system, which is integrated into the existing Voice Communication System at the Kuala Lumpur FIR ATS facility, enables Air Traffic Controllers to quickly establish voice communication with aircraft. ATC personnel can dial a single SATVOICE short code to connect with appropriately equipped aircraft.

1.1.16.2.4 It is essential for operators to ensure that accurate information is entered in Item 18 of the ICAO flight plan. Important details such as the aircraft registration number and Mode-S address must be included to facilitate the automated establishment of SATVOICE communications between the aircraft and the ATS unit (ATSU).

1.1.16.2.5 Priority Levels for SATVOICE Calls

Priority level	Application category	Examples
1 / EMG / Q15 Emergency (highest) Safety of Flight	Distress and urgency.	Rapid descent. Urgent weather deviation.
2 / HGH / Q12 Operational High (second highest) Safety of Flight	Flight safety. Typically Assigned to calls for ANSP.	Altitude request.
3 / LOW / Q10 Operational Low (third highest) Safety of Flight	Regularity of flight, meteorological, administrative. Typically assigned to calls for aeronautical operational control (AOC).	Air traffic information service. Redispatch. Maintenance.
4 / PUB / Q9 Non-operational (lowest) Nonsafety	Public correspondence.	Public phone calls.

1.1.16.2.6 Safety-level priority (priority level 2) has been assigned to ATS communications by satellite service providers (SSP). When accepting an incoming call from ATC, the pilot shall visually confirm and verify that it is an ATS safety-level (level 2) priority call.

1.1.16.2.7 The flight crew should act only on air traffic control (ATC) clearances or instructions from SATVOICE calls with priority level 2 / HGH / Q12. (Priority level 1 / EMG / Q15 is reserved for outbound calls from aircraft.). If in doubt terminate the call and initiate a new call for confirmation.

1.1.16.2.8 The flight crew should initiate calls to the ATSU using the appropriate priority level 2 / HGH / Q12 or priority level 1 / EMG / Q15.

1.1.16.2.9 Aircraft equipped with SATVOICE may contact the appropriate ATS unit using either the short code or public switched telephone network (PSTN) number as follows:

ATS Unit	Short Code	PSTN Number (Long Code)
Kuala Lumpur FIR	453302	+60387878670

Note: Short codes should always be used. The long code (PSTN number) should be used only if necessary. Call routing automation in the voice switching system is available only when the short code is used.

1.1.16.3 FLIGHT PLANNING

1.1.16.3.1 When filing SATVOICE capability in the ICAO flight plan, aircraft operators should include the appropriate indicator(s), as follows:

- In item 10a, as appropriate, insert:
 - “M1” for ATC RTF INMARSAT capability; and/or
 - “M3” for ATC RTF IRIDIUM capability; and
 - “P3” for SATVOICE RCP 400.
- in Item 18, insert:
 - the indicator REG/ followed by the aircraft registration; and
 - the indicator CODE/ followed by the aircraft address expressed in the form of an alphanumeric code of six hexadecimal characters.

Note: The inclusion of SATVOICE capability in the ICAO flight plan indicates to air traffic controllers that the aircraft is properly equipped and that the flight crew is qualified and trained to use it.

1.1.16.4 PHRASEOLOGY STANDARDS

1.1.16.4.1 Phraseology for SATVOICE communication between ATC and pilots shall follow the standards outlined in PANS-ATM, ICAO Doc 4444, using the same procedures applied for other voice communication media (HF/VHF).

The Pilot should	ATC can be expected to
c) executing the contingency manoeuvre shown in paragraphs 5.6 and 5.7 to offset from the assigned track and FL, if ATC clearance cannot be obtained and the aircraft cannot maintain CFL.	c) Notify other aircraft in the vicinity and monitor the situation.
	d) Notify adjoining ATC facilities/ sectors of the situation.

PHRASEOLOGY RELATED TO RVSM OPERATIONS

Controller-Pilot Phraseology:

Phraseology	Message
(call sign) CONFIRMRVSM APPROVED	For a controller to ascertain the RVSM approval status of an aircraft.
NEGATIVE RVSM*	For a pilot to report non-RVSM approval status: a) On the initial call on any frequency within the RVSM airspace (controllers shall provide a read-back with this same phrase), and b) In all requests for flight level changes pertaining to flight levels within the RVSM airspace; and c) In all read-backs of flight level clearances pertaining to flight levels within the RVSM airspace. Additionally, except for State aircraft, pilots shall include this RTF phrase to read-back flight level clearances involving the vertical transit through FL 290 or FL 410.
AFFIRM RVSM*	For a pilot to report RVSM approval status.
NEGATIVE RVSM STATE AIRCRAFT*	For a pilot of a non-RVSM approved State aircraft to report non-RVSM approval status in response to the RTF phrase (call sign) CONFIRM RVSM APPROVED.
(call sign) UNABLE CLEARANCE INTO RVSM AIRSPACE, MAINTAIN [or DESCEND TO, or CLIMB TO] FLIGHT LEVEL(number)	Denial of clearance into the RVSM airspace.
UNABLE RVSM DUE TURBULENCE*	For a pilot to report when severe turbulence affects the aircraft's capability to maintain the height-keeping requirements for RVSM.
UNABLE RVSM DUE EQUIPMENT*	For a pilot to report that the aircraft's equipment has degraded below that required for flight within the RVSM airspace. (This phrase is to be used to convey both the initial indication of the non-MASPS compliance, and henceforth, on initial contact on all frequencies within the lateral limits of the RVSM airspace until such time as the problem ceases to exist, or the aircraft has exited the RVSM airspace.)
READY TO RESUME RVSM*	For a pilot to report the ability to resume operations within the RVSM airspace after an equipment or weather-related contingency.
REPORT ABLE TO RESUME RVSM	For a controller to confirm that an aircraft has regained its RVSM approval status or to confirm that the pilot is ready to resume RVSM operations.

* indicates a pilot transmission

Example 1: A non-RVSM approved aircraft, maintaining FL 260, subsequently requests a climb to FL 320.

Pilot: (call sign) REQUEST FL 320, NEGATIVE RVSM

Controller: (call sign) CLIMB TO FL 320

Pilot: (call sign) CLIMB TO FL 320, NEGATIVE RVSM

Example 2: A non-RVSM approved aircraft, maintaining FL 260, subsequently requests a climb to FL 430.

Pilot: (call sign) REQUEST FL 430, NEGATIVE RVSM

Controller: (call sign) CLIMB TO FL 430

Pilot: (call sign) CLIMB TO FL 430, NEGATIVE RVSM

Example 3: A non-RVSM approved aircraft, maintaining FL 360, subsequently requests a climb to FL 380.

Pilot: (call sign) REQUEST FL 380, NEGATIVE RVSM

Controller: (call sign) CLIMB TO FL 380

Pilot: (call sign) CLIMB TO FL 380, NEGATIVE RVSM

Example 4: A non-RVSM approved civil aircraft maintaining FL 280, subsequently requests a climb to FL 320.

Pilot: (call sign) REQUEST FL 320, NEGATIVE RVSM

Controller: (call sign) UNABLE CLEARANCE INTO RVSM AIRSPACE, MAINTAIN FL 280

Coordination between ATS units:

Message	Phraseology
To verbally supplement an automated estimate message exchange which does not automatically transfer Item 18 flight plan information.	NEGATIVE RVSM orNEGATIVE RVSM STATEAIRCRAFT [as applicable]
To verbally supplement estimate messages of non-RVSM approved aircraft.	NEGATIVE RVSM orNEGATIVE RVSM STATEAIRCRAFT [as applicable]
To communicate the cause of a contingency relating to an aircraft that is unable to conduct RVSM operations due to severe turbulence or other severe weather-related phenomenon [or equipment failure, as applicable].	UNABLE RVSM DUE TURBULENCE [or EQUIPMENT, as applicable]

1.8.4 RNP 10, RNP 4 OR RNP 2 NAVIGATION REQUIREMENTS

1.8.4.1 INTRODUCTION

1.8.4.1.1 ATC will apply longitudinal separation minima as follows between suitably equipped aircraft operating on RNAV routes within the Kuala Lumpur FIR and Kota Kinabalu FIR:

- a) A longitudinal separation minimum of 50 NM will be applied between aircraft approved for RNP 10 operations and FANS 1/A compatible aircraft (which are compliant to RCTA DO-258A or ED EUROCAE 100A) on the following routes and segments:
 - i. L510 - between EMRAN and GIVAL
 - ii. N571 - between IGOGU and VAMPI
 - iii. P574 - between NOPEK and ANSAX
 - iv. P628 - between IGREX and GIVAL
 - v. M768 - between MAMOK and ASISU
- b) A longitudinal separation minimum of 30 NM will be applied between aircraft approved for RNP 4 or RNP 2 operations on ATS routes N571 between GUNIP and IGOGU, provided that the aircraft are equipped with and utilizing ADS-C and CPDLC.

1.8.4.1.2 Pilots are to advise ATC of any deterioration or failure of the navigation system below the navigation requirements for RNP 10, RNP 4, or RNP 2, or failure of its data link airborne equipment. ATC shall, where appropriate, provide alternate separation and/or alternative routing.

1.8.4.1.3 Pilots of aircraft meeting RNP 10, RNP 4 or RNP 2 navigation requirements shall indicate the appropriate capability by insertion of "R" in Item 10 and the applicable PBN descriptors in Item 18 of the ICAO Flight Plan. The following descriptors shall be used to indicate the aircraft's RNP capability:

- a) RNP 10 – PBN/A1
- b) RNP 4 – PBN/L1
- c) RNP 2 – PBN/L2

1.8.4.2 LONGITUDINAL SEPARATION MINIMA

1.8.4.2.1 10 minutes or 80 NM RNAV distance-based separation based on Mach Number Technique (MNT) between RNP 10-equipped aircraft shall be applied between aircraft.

1.8.4.2.2 50 NM longitudinal separation will be applied only between RNP 10 approved aircraft equipped with FANS 1/A which successfully able to LOGON to Kuala Lumpur CPDLC (WMFC) when outside VHF coverage; or where a direct controller pilot communication (DCPC) exists.

- 1.8.4.2.3 30 NM longitudinal separation will be applied between RNP4 or RNP2 approved aircraft equipped with ADS-C and CPDLC.
- 1.8.4.2.4 Differential Mach Number Technique (MNT) separation minima shall not be applied for RNAV distance based 80/50/30 NM.
- 1.8.4.2.5 The mixed mode of 80 NM and 50 NM RNAV distance-based longitudinal separation and 10 minutes time-based separation minima shall be in practice until such time the DCPC requirements are fully met in the area under consideration.
- 1.8.4.2.6 A 15-minutes time-based separation shall apply between aircraft on crossing tracks.

1.8.4.3 OPERATIONS BY AIRCRAFT NOT MEETING RNP 10 REQUIREMENTS

- 1.8.4.3.1 An aircraft that is unable to meet the minimum navigational requirements for RNP 10 must file flight plan at or below the minimum flight level of the route. However operations of these aircraft above the minimum level will be subject to ATC approval, and in accordance with the provisions of paragraph 1.8.5.3.2 and if not approved, will be required to file a flight plan to operate via alternate route.
- 1.8.4.3.2 ATC units receiving a request for a non-RNP 10 approved aircraft to operate on ATS routes specified in paragraph 1.8.5.1.1(i), 1.8.5.1.1(ii), 1.8.5.1.1(iii) and 1.8.5.1.1 (iv) at or above FL280, will coordinate with adjacent ATC units affected by the flight. In deciding whether or not to approve the flight, each ATC unit will take into consideration:
- Traffic density;
 - Communications, including non-availability of normal communication facilities;
 - Weather conditions en-route;
 - Restrictions notified from time to time for the route;
 - Other factors pertinent at that time.

1.8.4.4 MONITORING OF AIRCRAFT NAVIGATION PERFORMANCE

- 1.8.4.4.1 Monitoring of aircraft navigation performance is a joint responsibility between Operators, States of Registry or States of Operators (as applicable), regulatory authorities and the ATS providers. The detection and reporting of non-conformance with the navigation requirements against the following parameters will rely primarily on monitoring by ATC units.
- 1.8.4.4.2 Large Lateral Deviation (LLD):
- LLD is classified as any deviation of 15 NM or more to the left or right of the current flight-plan track.
- 1.8.4.4.3 Large Longitudinal Error (LLE):
- 1.8.4.4.3.1 Any unexpected change in longitudinal separation between an aircraft pair, or for an individual aircraft the difference between an estimate for a given fix and the actual time of arrival over that fix, as applicable, in accordance with the criteria set out below:

Type of Error	Category of Error	Criterion for Reporting
Lateral Deviation	Individual-aircraft error	15 NM or greater magnitude
Longitudinal Deviation	Aircraft-pair (Time-based separation applied)	Infringement of longitudinal separation standard based on routine position reports
Longitudinal Deviation	Aircraft-pair (Time-based separation applied)	Expected time between two aircraft varies by 3 minutes or more based on routine position reports
Longitudinal Deviation	Individual aircraft (Time-based separation applied)	Pilot estimate varies by 3 minutes or more from that advise in a routing position report
Longitudinal Deviation	Aircraft-pair (Distance-based separation applied)	Infringement of longitudinal separation Deviation (Distance-based separation applied) standard, based on ADS, radar measurement or special request for RNAV position report
Longitudinal Deviation	Aircraft-pair (Distance-based separation applied)	Expected distance between an aircraft Deviation (Distance-based separation applied) pair varies by 10 NM or more, even if separation standard is not infringed, based on ADS, radar measurement or special request for RNAV position report

1.8.4.5 OPERATORS PROCEDURES

- 1.8.4.5.1 The operator shall ensure that in-flight procedures, crew manuals and training programmes are established in accordance with RNP 10 navigation requirements.

1.8.5 No Pre-Departure Coordination (No PDC) Procedure

1.8.5.1 INTRODUCTION

1.8.5.1.1 No Pre-Departure Coordination (No PDC) procedures apply to flights departing from airports within the Bali, Bangkok, Hanoi, Ho Chi Minh, Hong Kong, Jakarta, Kota Kinabalu (including Brunei), Kuala Lumpur, Manila, Phnom Penh, Singapore, Taipei and Vientiane FIRs, as well as Sanyo AOR on RNAV and ATS routes.

1.8.5.2 NO PDC FLIGHT LEVEL ALLOCATION IN KUALA LUMPUR FIR

1.8.5.2.1 Flights participating in the No PDC arrangement will be allocated specific flight levels depending on the flight planned route as indicated in the table below:

Route	Allocated No PDC Flight Levels	Remarks
A464	FL290	For south bound traffic up to ATVIX
A576	FL290	For south bound traffic up to AKTOD
B470	FL290	For south bound traffic up to ANITO
G334	FL250, FL270	For east bound traffic
	FL260, FL280	For west bound traffic
L625	FL310, FL320, FL350, FL360, FL390, FL400	Uni-directional eastbound
L642	FL310, FL320, FL350, FL360, FL390, FL400	Uni-directional westbound
L759	FL280	Aircraft requesting FL280 and FL300 will be cleared for FL280. Succeeding aircraft on the same route will be cleared to FL280 with 10 min longitudinal separation provided there is no closing speed with the preceding aircraft. Additional longitudinal separation as appropriate shall be provided by ATC for the faster aircraft following a slower aircraft on the same route. The first aircraft from either Singapore or Kuala Lumpur to be over Kuala Lumpur/Bangkok FIR boundry can expect its requested level.
M751	All flight levels	For flights to / from airports within Bangkok FIR
M758	FL270, FL290, FL330	For east bound traffic
	FL280, FL300, FL340	For west bound traffic
M761	FL270, FL290, FL330	For east bound traffic
	FL280, FL300, FL340	For west bound traffic
M765	FL290, FL370	For east bound traffic
	FL280, FL340	For west bound traffic
M770	FL280	Aircraft requesting FL280 and FL300 will be cleared to FL280. Succeeding aircraft on the same route will be cleared to FL280 with 10 min longitudinal separation provided there is no closing speed with the preceding aircraft. Additional longitudinal separation as appropriate shall be provided by ATC for the faster aircraft following a slower aircraft on the same route. The first aircraft from either Singapore or Kuala Lumpur/ Bangkok FIR boundary can expect its requested level.
M771	FL310, FL320, FL350, FL360, FL390, FL400	Uni-directional eastbound

Route	Allocated No PDC Flight Levels	Remarks
N571	FL280	Aircraft requesting FL280 and FL300 will be cleared to FL280. Succeeding aircraft on the same route will be cleared to FL280 with 10 min longitudinal separation provided there is no closing speed with the preceding aircraft. Additional longitudinal separation as appropriate shall be provided by ATC for the faster aircraft following a slower aircraft on the same route. The first aircraft from either Singapore or Kuala Lumpur to be over GUNIP can expect its requested level.
N884	FL310, FL320, FL350, FL360, FL390, FL400	Uni-directional eastbound
N891	FL330	For south bound traffic
	FL260, FL300, FL380	For north bound traffic
N892	FL310, FL320, FL350, FL360, FL390, F400	Uni-directional westbound
P628	FL280	Aircraft requesting FL280 and FL300 will be cleared to FL280. Succeeding aircraft on the same route will be cleared to FL280 with 10 min longitudinal separation provided there is no closing speed with the preceding aircraft. Additional longitudinal separation as appropriate shall be provided by ATC for the faster aircraft following a slower aircraft on the same route. The first aircraft from either Singapore or Kuala Lumpur to be over GIVAL can expect its requested level.
L510	FL280	Aircraft requesting FL280 and FL300 will be cleared to FL280. Succeeding aircraft on the same route will be cleared to FL280 with 10 min longitudinal separation provided there is no closing speed with the preceding aircraft. Additional longitudinal separation as appropriate shall be provided by ATC for the faster aircraft following a slower aircraft on the same route. The first aircraft from either Singapore or Kuala Lumpur to be over GUNP (FPL via N571 Y338 and L510) can expect its requested level.

1.8.5.2.2 The flight levels indicated in the table above are intended to facilitate initial departure only. Flight level allocation once airborne is still subject to normal ATC requirements.

1.8.5.3 NO PDC FLIGHT LEVEL ALLOCATION IN KOTA KINABALU FIR

1.8.5.3.1 Flights participating in the No PDC arrangement will be allocated specific flight levels depending on the flight planned route as indicated in the table below:

Route	Allocated No PDC Flight Levels	Remarks
A341	FL310, FL370	For east bound traffic
	FL320, FL360, FL400	For west bound traffic
M646	FL310, FL350, FL390	For north east bound traffic
	FL320, FL360, FL400	For south west bound traffic
M768 (BRU-MAMOK)	FL290, FL330, FL370, FL410	For east bound traffic
	FL300, FL340, FL380	For west bound traffic
M522 (VJN MAMOK)/ R223	FL310, FL350, FL390	For north east bound traffic
	FL320, FL360, FL400	For south west bound traffic
B592	FL310, FL350, FL390	For north east bound traffic
	FL320, FL360, FL380, FL400	For south west bound traffic

Route	Allocated No PDC Flight Levels	Remarks
G334	FL250, FL270	For east bound traffic
	FL260, FL280	For west bound traffic
G580(VKG-ATETI) M646 M761(VKG-AGOBA)	FL270, FL290, FL330	For east bound traffic
	FL280, FL300, FL340	For west bound traffic
M754 / M522 (VJN-VINIK)	FL300, FL340, FL380	For north east bound traffic
	FL290, FL330, FL370, FL410	For south west bound traffic
M758 / M759	FL270, FL290, FL330	For east bound traffic
	FL280, FL300, FL340	For west bound traffic
M768 (BRU-ASISU)	FL270, FL330, FL410	For east bound traffic
	FL300, FL380	For west bound traffic
M772	FL300, FL380	For north bound traffic

1.8.5.3.2 The flight levels indicated in the table above are intended to facilitate initial departure only. Flight level allocation once airborne is still subject to normal ATC requirements.

1.8.6 Flight Planning Requirement for Aircraft Operating in Kuala Lumpur FIR

1.8.6.1 Direct Route Operations within KL FIR

1.8.6.1.1 Following the success implementation of DRO for overflights, the scope of DRO is expanded to include additional routes applicable to all RVSM-approved flights on specified segments of ATS routes within radar coverage of Kuala Lumpur FIR, as specified in the table below:

Segments of Conventional Flight Planning on ATS Routes	Flight Planning for DRO (24-hours)	Remarks	Reduction in Distance Flown (NM)
... VPL Y503 RINBA Y507 VPL DCT ANBIK Y507 ...	Applicable to Eastbound flights	7
... BOGUK Y507 VBA G582 VPK ...	BOGUK DCT ANBIK DCT ADNUT G582 VPK		22.8
... VPK G582 BILIK Y506 GORVU...	... VPK DCT ATIMU Y506 GORVU...	Applicable to Westbound flights	12
SALAX Y340 BATAR A464	SALAX DCT TOPOR A464		1
IGARI R208 VKR Y346 PULIP...	IGARI R208 IKUKO DCT LASOB Y346 PULIP...		10

1.8.6.1.2 The DRO applicability for the segments of ATS routes are reflected accordingly in the Flight Planning Requirements List.

1.8.6.1.3 The details of DROs for flights overflying Kuala Lumpur FIR (except departure/destination from/to WSSS, WSSL and WIDD) on specified segments of ATS routes and flight levels (within radar coverage of KL FIR) are provided in Paragraph 1.8.6.6.

1.8.6.2 Flights Departing and Landing at Airports Within Kuala Lumpur FIR

From	To	FPL Route
WMGK	WMKA	OPOMO W546 VPG DCT OMBUL
	WMKB	OPOMO W546 RINBA DCT VBT
	WMKD	GUGIT W540 GUNBO DCT VKN
	WMKE	GUGIT W540 GUNBO DCT VKP
	WMKI	OPOMO W546 RINBA Y501 NITIS
	WMKJ	LERKA Y514 NUFFA DCT BIKTA B469 VMR DCT ADLOV
	WMKK	RUPOS G466 PULIP
	WMKL	OPOMO W546 VPG W525 KAPKO
	WMKM	RUPOS G466 VKL A464 DUMOK
	WMKN / WMPR	GUGIT W540 PALNO
	WMKP	OPOMO W546 BETNU
	WMSA	EMPUR G466 PULIP
WMKA	WMGK	GUTEB Y502 RINBA W546 OPOMO DCT VGK
	WMKB	OMBUL DCT VBT
	WMKC	GUTEB Y502 RINBA W546 OPOMO
	WMKD	GUTEB Y502 RINBA W546 OPOMO DCT GUGIT W540 GUNBO DCT VKN
	WMKE	GUTEB Y502 RINBA W546 OPOMO DCT GUGIT W540 GUNBO DCT VKP
	WMKI	GUTEB Y502 RINBA DCT NITIS
	WMKJ	GUTEB Y502 RINBA Y507 MAKNA Y511 TOPOR W534 EMTUV
	WMKK	GUTEB Y502 RINBA Y507 KAKAK
		AKMIS Y508 NIREN
	WMKL	SAGEL W541 VPL
	WMKM	GUTEB Y502 RINBA Y507 VKL A464 DUMOK
	WMKN / WMPR	GUTEB Y502 RINBA W546 OPOMO DCT GUGIT W540 PALNO
	WMKP	OMBUL DCT VPG
WMSA	RINBA R325 VIH A464 DAKUS (FOR NON-RNAV FLIGHTS)	
	GUTEB Y502 RINBA Y507 KAKAK	
WMKB	WMGK	BETNU W546 OPOMO DCT VGK
	WMKA	LUNTU DCT OMBUL
	WMKC	BETNU W546 OPOMO
	WMKD	BETNU W546 OPOMO DCT GUGIT W540 GUNBO DCT VKN
	WMKE	BETNU W546 OPOMO DCT GUGIT W540 GUNBO DCT VKP
	WMKI	VPG W530 MINOP
	WMKJ	BOGUK Y507 MAKNA Y511 TOPOR W534 EMTUV
		KABOT W530 VIH A464 TOPOR W534 EMTUV (FOR NON-RNAV FLIGHTS)
	WMKK	BOGUK Y507 KAKAK
		KABOT W530 VIH A464 DAKUS (FOR NON-RNAV FLIGHTS)
WMKL	OMBOK W525 KAPKO	

From	To	FPL Route
	WMKM	BOGUK Y507 VKL Y507 VELTU
		KABOT W530 VIH A464 DUMOK (FOR NON-RNAV FLIGHTS)
	WMKN / WMPR	BETNU W546 OPOMO DCT GUGIT W540 PALNO
	WMSA	BOGUK Y507 KAKAK
KABOT W530 VIH A464 DAKUS		
WMKC	WMKA	OPOMO W546 VPG DCT OMBUL
	WMKB	OPOMO W546 RINBA DCT VBT
	WMKD	GUGIT W540 GUNBO DCT VKN
	WMKE	GUGIT W540 GUNBO DCT VKP
	WMKI	OPOMO W546 RINBA Y501 NITIS
	WMKJ	DUBMU Y514 NUFFA DCT BIKTA B469 VMR DCT ADLOV
	WMKK	EMPUR G466 PULIP
	WMKL	OPOMO W546 VPG W525 KAPKO
	WMKM	EMPUR G466 VKL A464 DUMOK
	WMKN / WMPR	GUGIT W540 PALNO
	WMKP	OPOMO W546 BETNU
	WMSA	EMPUR G466 PULIP
WMKD	WMGK	W540 GUGIT DCT VGK
	WMKA	VKN DCT PULIP Y346 VBA B466 SUKAT A457 VPG DCT OMBUL
	WMKB	W533 ADNUT G582 VBA B466 SUKAT A457 VPG DCT VBT
	WMKC	W540 GUGIT
	WMKE	W533 VKP
	WMKI	VKN DCT PULIP Y346 VBA B466 SUKAT A457 TEPUS
	WMKJ	VPK B469 VMR DCT ADLOV
	WMKK	VPK B469 PADLI Y343 SAROX
	WMKL	DCT PULIP Y346 VBA B466 SUKAT A457 VPG W525 KAPKO
	WMKM	ADNUT W533 VKL A464 DUMOK
	WMKN	W540 GUNBO
	WMKP	DCT PULIP Y346 VBA B466 SUKAT A457 TEPUS Y506 GORVU
WMSA	VPK B469 PADLI Y343 SAROX	
WMKE	WMGK	GUNBO W540 GUGIT DCT VGK
	WMKA	GUNBO W540 GUGIT DCT OPOMO W546 VPG DCT OMBUL
	WMKB	GUNBO DCT OPOMO W546 VPG DCT VBT
	WMKC	GUNBO W540 GUGIT
	WMKD	W533 VKN
	WMKI	W533 VKN DCT PULIP Y346 VBA B466 SUKAT A457 TEPUS
	WMKJ	W533 VKN DCT VPK B469 VMR DCT ADLOV
	WMKK	W533 VKN DCT BEKSO Y349 PULIP
	WMKL	GUNBO DCT OPOMO W546 VPG W525 KAPKO

From	To	FPL Route
	WMKM	W533 VKL A464 DUMOK
	WMKP	GUNBO B469 GUGIT DCT OPOMO W546 BETNU
	WMSA	W533 VKN DCT PULIP
WMKI	WMGK	AGRES Y506 VPG W546 OPOMO DCT VGK
	WMKA	AGRES Y506 VPG DCT OMBUL
	WMKB	AGRES Y506 GORVU DCT VBT
	WMKC	AGRES Y506 VPG W546 OPOMO
	WMKD	DUDAD Y507 VBA G582 ADNUT
	WMKE	DUDAD Y507 VBA G582 ADNUT W533 VKP
	WMKJ	DUDAD Y507 MAKNA Y511 TOPOR W534 EMTUV
	WMKK	DUDAD Y507 KAKAK
	WMKL	AGRES Y506 VPG W525 KAPKO
	WMKM	DUDAD Y507 VELTU
	WMKN / WMPR	AGRES Y506 VPG W546 OPOMO DCT GUGIT W540 PALNO
	WMKP	AGRES Y506 GORVU
	WMSA	DUDAD Y507 KAKAK
		LUTMI DCT DAKUS (APPLICABLE FOR NON-RNAV FLIGHTS)
WMKJ	WMGK	ADLOV DCT VMR B469 VPK M751 GUGIT DCT VGK
		ADLOV DCT VMR B469 VPK W540 GUGIT DCT VGK (FOR FL230 AND BELOW)
	WMKA	AROSO Y513 KALIL Y504 BILIK Y506 VPG DCT OMBUL
		SABKA A457 VPG DCT OMBUL (FOR FL230 AND BELOW)
	WMKB	AROSO Y513 KALIL Y504 BILIK Y506 GORVU DCT VBT
		SABKA A457 VPG Y506 GORVU DCT VBT (FOR FL230 AND BELOW)
	WMKC	ADLOV DCT VMR B469 VPK M751 GUGIT
		ADLOV DCT VMR B469 VPK W540 GUGIT (FOR FL230 AND BELOW)
	WMKD	ADLOV DCT VMR B469 VPK DCT VKN
	WMKE	ADLOV DCT VMR B469 VPK DCT VKP
	WMKI	AROSO Y513 KALIL Y504 BILIK Y506 TEPUS
		SABKA A457 TEPUS (FOR FL230 AND BELOW)
	WMKK	SABKA A457 GUPTA
	WMKL	AROSO Y513 KALIL Y504 BILIK Y506 VPG W525 KAPKO
		SABKA A457 VPG W525 KAPKO (FOR FL230 AND BELOW)
	WMKM	SABKA A457 GUPTA
	WMKN / WMPR	ADLOV DCT VMR B469 VPK M751 GUNBO
		ADLOV DCT VMR B469 VPK W540 GUNBO (FOR FL230 AND BELOW)
	WMKP	AROSO Y513 KALIL Y504 BILIK Y506 GORVU
		SABKA A457 TEPUS Y506 GORVU (FOR FL230 AND BELOW)
	WMSA	SABKA A457 GUPTA

From	To	FPL Route	
WMKK	WMGK	PIBOS R208 MATSU Y345 GUGIT DCT VGK	
	WMKA	ATIMU Y506 VPG DCT OMBUL	
	WMKB	ATIMU Y506 GORVU DCT VBT	
	WMKC	PIBOS R208 MATSU Y345 GUGIT	
	WMKD	KIMAT W533 ADNUT	
	WMKJ	RUSBU Y511 TOPOR W534 EMTUV	
	WMKE	KIMAT W533 VKP	
	WMKI	ATIMU Y506 TEPUS	
	WMKL	ATIMU Y506 VPG W525 KAPKO	
	WMKN / WMPR	PIBOS R208 GUNBO	
	WMKP	ATIMU Y506 GORVU	
WMKL	WMGK	KAPKO W525 VPG W546 OPOMO DCT VGK	
	WMKA	MULOT W542 VAS	
	WMKB	KAPKO DCT VBT	
	WMKC	ISTEL Y503 RINBA W546 OPOMO	
	WMKD	ISTEL Y503 RINBA W546 OPOMO DCT GUGIT W540 GUNBO DCT VKN	
	WMKE	ISTEL Y503 RINBA W546 OPOMO DCT GUGIT W540 GUNBO DCT VKP	
	WMKI	ANDOK W531 SOTRO	
	WMKJ	ISTEL Y503 RINBA Y507 MAKNA Y511 TOPOR W534 EMTUV	
	WMKK		ISTEL Y503 RINBA Y507 KAKAK
			RUVTO Y509 ANGUN Y508 NIREN
	WMKM	ISTEL Y503 RINBA Y507 VKL Y507 VELTU	
	WMKN / WMPR	ISTEL Y503 RINBA W546 OPOMO DCT GUGIT W540 PALNO	
	WMKP	KAPKO W525 OMBOK	
WMSA		ISTEL Y503 RINBA Y507 KAKAK	
		ANDOK W531 VIH A464 DAKUS (FOR NON-RNAV FLIGHTS)	
WMKM	WMGK	SAPAT A457 VKL R208 MATSU Y345 GUGIT DCT VGK	
	WMKA	SAPAT A457 VPG DCT OMBUL	
	WMKB	SAPAT A457 TEPUS Y506 GORVU DCT VBT	
	WMKC	SAPAT A457 VKL R208 MATSU Y345 GUGIT	
	WMKD	SAPAT A457 VKL W533 ADNUT	
	WMKE	SAPAT A457 VKL W533 VKP	
	WMKI	SAPAT A457 TEPUS	
	WMKJ	OGAKO A464 TOPOR W534 EMTUV	
	WMKL	SAPAT A457 VPG W525 KAPKO	
	WMKN / WMPR	SAPAT A457 VKL R208 GUNBO	
	WMKP	SAPAT A457 TEPUS Y506 GORVU	
WMKN	WMGK	LASOB W540 GUGIT DCT VGK	
	WMKA	LASOB W540 GUGIT DCT OPOMO W546 VPG DCT OMBUL	

From	To	FPL Route
	WMKB	LASOB W540 GUGIT DCT OPOMO W546 VPG DCT VBT
	WMKC	LASOB W540 GUGIT
	WMKD	LASOB W540 GUNBO DCT VKN
	WMKE	LASOB W540 GUNBO DCT VKP
	WMKI	LASOB W540 GUGIT DCT OPOMO W546 RINBA Y501 NITIS
	WMKJ	LASOB Y346 LATER Y514 NUFFA DCT BIKTA B469 VMR DCT ADLOV
	WMKK	LASOB Y346 PULIP
	WMKL	LASOB W540 GUGIT DCT OPOMO W546 VPG W525 KAPKO
	WMKM	LASOB Y346 PULIP VKL A464 DUMOK
	WMKP	LASOB W540 GUGIT DCT OPOMO W546 BETNU
	WMSA	LASOB Y346 PULIP
WMKP	WMGK	BETNU W546 OPOMO DCT VGK
	WMKA	LUNTU DCT OMBUL
	WMKC	BETNU W546 OPOMO
	WMKD	BETNU W546 OPOMO DCT GUGIT W540 GUNBO DCT VKN
	WMKE	BETNU W546 OPOMO DCT GUGIT W540 GUNBO DCT VKP
	WMKI	KABOT W530 MINOP
	WMKJ	BOGUK Y507 MAKNA Y511 TOPOR W534 EMTUV
	WMKK	BOGUK Y507 KAKAK
		UDIKO Y508 NIREN
	WMKL	OMBOK W525 KAPKO
	WMKM	BOGUK Y507 VKL Y507 VELTU
	WMKN / WMPR	BETNU W546 OPOMO DCT GUGIT W540 PALNO
	WMSA	BOGUK Y507 KAKAK
KABOT W530 VIH A464 DAKUS (FOR NON-RNAV FLIGHTS)		
WMSA	WMGK	PIBOS R208 MATSU Y345 GUGIT DCT VGK
	WMKA	ATIMU Y506 VPG DCT OMBUL
	WMKB	ATIMU Y506 GORVU DCT VBT
	WMKC	PIBOS R208 MATSU Y345 GUGIT
	WMKD	PIBOS G582 ADNUT
	WMKE	PIBOS G582 ADNUT W533 VKP
	WMKI	ATIMU Y506 TEPUS
	WMKJ	RUSBU Y511 TOPOR W534 EMTUV
	WMKL	ATIMU Y506 VPG W525 KAPKO
	WMKN / WMPR	PIBOS R208 GUNBO
	WMKP	ATIMU Y506 GORVU

1.8.6.3 Flights destination WMKK shall refer to AIP AD 2.22.11 for detailed information pertaining to the Point Merge Systems (PMS) and runway mode operation for arrivals to WMKK

1.8.6.4 Flights to Destination Outside Kuala Lumpur FIR

From	Entering Adjacent FIR	Joining Airways or Waypoint	FPL Route
WMKA	BANGKOK FIR	DUBAX	R325 DUBAX
		RIGTO	M769 RIGTO
		TAMOS	A457 TAMOS
WMKC / WMGK		PASVA	DCT PASVA
		KADAX	DCT KADAX
WMKD		ABTOK	GUNBO M751 VKB M644 ABTOK
		GOLUD	GUNBO M751 GOLUD
		KADAX	GUNBO M751 VKB M626 KADAX
		PASVA	GUNBO M751 VKB A334 PASVA
WMKI		DUBAX	AGRES Y506 VPG Y351 DUBAX
		RIGTO	AGRES Y506 VPG Y350 RIGTO
		TAMOS	AGRES Y506 VPG A457 TAMOS
WMKJ		ABTOK	ADLOV DCT VMR B469 VPK M751 VKB M644 ABTOK
		DUBAX	AROSO Y513 KALIL Y501 RINBA Y502 DUBAX
		GOLUD	ADLOV DCT VMR B469 VPK M751 GOLUD
	KADAX	ADLOV DCT VMR B469 VPK M751 VKB M626 KADAX	
	PASVA	ADLOV DCT VMR B469 VPK M751 VKB A334 PASVA	
	RIGTO	AROSO Y513 KALIL Y501 RIGTO	
WMKK	TAMOS	AROSO Y513 KALIL Y501 RINBA R325 VAS A457 TAMOS	
	ABTOK	PIBOS R208 MATSU Y345 GUGIT M751 VKB M644 ABTOK	
	DUBAX	BIKDU Y501 RINBA Y502 DUBAX	
	GOLUD	PIBOS R208 MATSU Y345 GUGIT M751 GOLUD	
	KADAX	PIBOS R208 MATSU Y345 GUGIT M751 VKB M626 KADAX	
	PASVA	PIBOS R208 MATSU Y345 GUGIT M751 VKB A334 PASVA	
	RIGTO	BIKDU Y501 RIGTO	
	TAMOS	ATIMU Y506 VPG A457 TAMOS (FOR DESTINATION VTSS) BIKDU Y501 RINBA R325 VAS A457 TAMOS	
WMKL	DUBAX	MULOT W542 VAS R325 DUBAX	
	RIGTO	MULOT W542 VAS M769 RIGTO	
	TAMOS	MULOT W542 VAS A457 TAMOS	
WMKM	DUBAX	IRMIB Y501 RINBA Y502 DUBAX	
	RIGTO	IRMIB Y501 RIGTO	
	TAMOS	IRMIB Y501 RINBA R325 VAS A457 TAMOS	
WMKN	ABTOK	LASOB W540 VKB M644 ABTOK	
	GOLUD	LASOB W540 VKB M751 GOLUD	
	KADAX	LASOB W540 VKB M626 KADAX	
	PASVA	LASOB W540 VKB A334 PASVA	

From	Entering Adjacent FIR	Joining Airways or Waypoint	FPL Route
WMKP / WMKB		DUBAX	GOGOM Y351 DUBAX
		RIGTO	LUNTU VAS M769 RIGTO
		TAMOS	LUNTU DCT VAS A457 TAMOS
WMSA		ABTOK	PIBOS R208 MATSU Y345 GUGIT M751 VKB M644 ABTOK
		DUBAX	ATIMU Y506 VPG Y351 DUBAX
		GOLUD	PIBOS R208 MATSU Y345 GUGIT M751 GOLUD
		KADAX	PIBOS R208 MATSU Y345 GUGIT M751 VKB M626 KADAX
		PASVA	PIBOS R208 MATSU Y345 GUGIT M751 VKB A334 PASVA
		RIGTO	ATIMU Y506 VPG Y350 RIGTO
		TAMOS	ATIMU Y506 VPG A457 TAMOS
WMKC	IDSEL	DUBMU Y514 BEKSO Y512 VPK M758 IDSEL	
	KETOD	DUBMU Y514 BEKSO Y512 VPK M761 KETOD	
	VMR	DUBMU Y514 NUFFA B469 VMR	
WMKD	BUVAL	VPK L629 BUVAL	
	IDSEL	VPK M758 IDSEL	
	KETOD	VPK M761 KETOD	
WMKK	BUVAL	KIMAT Y344 VPK L629 BUVAL	
	IDSEL	KIMAT Y344 VPK M758 IDSEL	
	KETOD	KIMAT Y344 VPK M761 KETOD	
WMKL	IDSEL	ISTEL Y503 RINBA Y507 VBA G582 VPK M758 IDSEL	
	KETOD	ISTEL Y503 RINBA Y507 VBA G582 VPK M761 KETOD	
WMKP	IDSEL	BOGUK DCT ANBIK DCT ADNUT G582 VPK M758 IDSEL	
	KETOD	BOGUK DCT ANBIK DCT ADNUT G582 VPK M761 KETOD	
WMSA	BUVAL	PIBOS G582 VPK L629 BUVAL	
	IDSEL	PIBOS G582 VPK M758 IDSEL	
	KETOD	PIBOS G582 VPK M761 KETOD	
WMKC / WMGK	CHENNAI FIR	ANOKO	OPOMO W546 VPG G468 GUNIP B466 ANOKO (FL270 AND BELOW)
		EMRAN	OPOMO W546 VPG G468 GUNIP N571 VAMPI Y338 LEKIR L510 EMRAN
		IGOGU	OPOMO W546 VPG G468 GUNIP N571 IGOGU
		IGREX	OPOMO W546 VPG B579 VPL P628 IGREX
WMKJ		ANOKO	SABKA A457 SUKAT B466 ANOKO (FL270 AND BELOW)
		EMRAN	AROSO Y513 KALIL Y504 GUNIP N571 VAMPI Y338 LEKIR L510 EMRAN
		IGOGU	AROSO Y513 KALIL Y504 GUNIP N571 IGOGU
		IGREX	AROSO Y513 KALIL Y504 BILIK Y506 VPG B579 VPL P628 IGREX
		NOPEK	AROSO Y513 KALIL Y504 BILIK G582 PUGER P574 NOPEK

From	Entering Adjacent FIR	Joining Airways or Waypoint	FPL Route
WMKK		ANOKO	IBUKU Y504 GUNIP B466 ANOKO (FL270 AND BELOW)
		EMRAN	IBUKU Y504 GUNIP N571 VAMPI Y338 LEKIR L510 EMRAN
		IGOGU	IBUKU Y504 GUNIP N571 IGOGU
		IGREX	ATIMU Y506 VPG B579 VPL P628 IGREX
		NOPEK	PUGER P574 NOPEK
WMKL		ANOKO	KAPKO W525 VPG G468 GUNIP B466 ANOKO (FL270 AND BELOW)
		EMRAN	RUVTO Y509 ANGUN G468 GUNIP N571 VAMPI Y338 LEKIR L510 EMRAN
		IGOGU	RUVTO Y509 ANGUN G468 GUNIP N571 IGOGU
		IGREX	AKRAB DCT GIVAL P628 IGREX
WMKM		ANOKO	SAPAT A457 AGOSA R467 GUNIP B466 ANOKO (FL270 AND BELOW)
		EMRAN	SAPAT A457 AGOSA R467 GUNIP N571 VAMPI Y338 LEKIR L510 EMRAN
		IGOGU	SAPAT A457 AGOSA R467 GUNIP N571 IGOGU
		IGREX	SAPAT A457 VPG B579 VPL P628 IGREX
		NOPEK	SAPAT A457 VKL R461 PUGER P574 NOPEK
WMKN	CHENNAI FIRDestination WSSS/ WSSL/ WIDD	ANOKO	LASOB W540 GUGIT DCT OPOMO W546 VPG G468 GUNIP B466 ANOKO (FL270 AND BELOW)
		EMRAN	LASOB W540 GUGIT DCT OPOMO W546 VPG G468 GUNIP N571 VAMPI Y338 LEKIR L510 EMRAN
		IGOGU	LASOB W540 GUGIT DCT OPOMO W546 VPG G468 GUNIP N571 IGOGU
		IGREX	LASOB W540 GUGIT DCT OPOMO W546 VPG B579 VPL P628 IGREX
WMKP / WMKB		ANOKO	MADUM DCT GUNIP B466 ANOKO (FL270 AND BELOW)
		EMRAN	MADUM DCT GUNIP N571 VAMPI Y338 LEKIR L510 EMRAN
		IGOGU	MADUM DCT GUNIP N571 IGOGU
		IGREX	OMBOK W525 KAPKO W525/B579 VPL P628 IGREX
WMSA		ANOKO	SUKAT B466 ANOKO (FL270 AND BELOW)
		EMRAN	IBUKU Y504 GUNIP N571 VAMPI Y338 LEKIR L510 EMRAN
		IGOGU	IBUKU Y504 GUNIP N571 IGOGU
		IGREX	ATIMU Y506 VPG B579 VPL P628 IGREX
		NOPEK	PUGER P574 NOPEK
WMKA		ARAMA	GUTEB Y502 RINBA Y507 MAKNA Y511 TOPOR A464 ARAMA
WMKB			BOGUK Y507 MAKNA Y511 TOPOR A464 ARAMA
WMKI			DUDAD DCT KAKAK Y507 MAKNA Y511 TOPOR A464 ARAMA
WMKK			RUSBU Y511 TOPOR A464 ARAMA
WMKL			ISTEL Y503 RINBA Y507 MAKNA Y511 TOPOR A464 ARAMA
WMKM			OGAKO A464 ARAMA

From	Entering Adjacent FIR	Joining Airways or Waypoint	FPL Route
WMKP			BOGUK Y507 MAKNA Y511 TOPOR A464 ARAMA
WMSA			RUSBU Y511 TOPOR A464 ARAMA
WMGK		NUFFA	VGK DCT LERKA Y514 NUFFA
WMKC			DUBMU Y514 NUFFA
WMKD			VPK B469 NUFFA
WMKE			W533 VKN DCT VPK B469 NUFFA
WMKN			LASOB Y346 LATER Y514 NUFFA
WMKC	JAKARTA FIR	GOTLA	OPOMO W546 VPG G468 GOTLA
		SALAX	RUPOS G466 VKL N633 SALAX
WMKI		GOTLA	AGRES Y506 VPG G468 GOTLA
WMKJ		PUGER	AROSO Y513 KALIL Y504 BILIK G582 PUGER
WMKK		PUGER	R461 PUGER
		SALAX	N633 SALAX
		SUKRI	MITOS M630 SUKRI
WMKL		GOTLA	RUVTO Y509 ANGUN G468 GOTLA
		SUKRI	ISTEL Y503 RINBA Y507 MITOS M630 SUKRI
WMKM		DOSIK	R579 DOSIK
WMKP/WMKB		GOTLA	MADUM DCT GUNIP G468 GOTLA
		SUKRI	BOGUK Y507 MITOS M630 SUKRI
WMSA		PUGER	R461 PUGER
		SALAX	N633 SALAX
		SUKRI	MITOS M630 SUKRI
WMKC	HO CHI MINH FIR	IGARI	VENLI M765 IGARI
WMKK/WMSA			PIBOS R208 IGARI
WMKL			ISTEL Y503 RINBA W546 VKB M765 IGARI
WMKP			BETNU W546 VKB M765 IGARI

1.8.6.5 Flights Entering Kuala Lumpur FIR from Adjacent FIR

From Adjacent FIR	To	From Airways or Waypoints	FPL Route
Departures from WSSS/ WSSL/ WIDD	WMGK	VMR	B469 VPK M751 GUGIT DCT VGK
			B469 VPK W540 GUGIT DCT VGK (FOR FL230 AND BELOW)
	WMKA	AROSO	AROSO Y513 KALIL Y504 BILIK Y506 VPG DCT OMBUL
		A457	A457 VPG DCT OMBUL (FOR FL220 AND BELOW)
	WMKB	AROSO	AROSO Y513 KALIL Y504 BILIK Y506 GORVU DCT VBT
		A457	A457 TEPUS Y506 GORVU DCT VBT (FOR FL220 AND BELOW)
	WMKC	VMR	B469 VPK M751 GUGIT
			B469 VPK W540 GUGIT (FOR FL230 AND BELOW)
	WMKD	VMR	B469 VPK DCT VKN
	WMKE	VMR	B469 VPK DCT VKN W533 VKP
WMKI	AROSO	AROSO Y513 KALIL Y504 BILIK Y506 TEPUS	
	A457	A457 TEPUS (FOR FL220 AND BELOW)	
WMKK	A457	A457 GUPTA	
	WMKL	AROSO	AROSO Y513 KALIL Y504 BILIK Y506 VPG W525 KAPKO
		A457	A457 VPG W525 KAPKO (FOR FL220 AND BELOW)
	WMKM	A457	A457 GUPTA
	WMKN / WMPR	VMR	B469 VPK M751 GUNBO
			B469 VPK W540 GUNBO (FOR FL230 AND BELOW)
	WMKP	AROSO	AROSO Y513 KALIL Y504 BILIK Y506 GORVU
		A457	A457 TEPUS Y506 GORVU (FOR FL220 AND BELOW)
WMSA	A457	A457 GUPTA	
Beyond Singapore FIR	WMKC	VMR	B469 VPK M751 GUGIT
		DOVOL	DOVOL L635 VPK M751 GUGIT
		IDSEL	IDSEL M758 VPK M751 GUGIT
		KETOD	KETOD M761 VPK M751 GUGIT
Bangkok FIR	WMKI	DALAN	DALAN B579 VPL W531 VILAT DCT SOTRO
		KARMI	KARMI A464 VIH
Beyond Singapore FIR		AROSO	Y339 AROSO Y513 KALIL Y504 BILIK Y506 TEPUS
		GUMPU	GUMPU G579 VJB A457 TEPUS (FOR FL220 AND BELOW)
Jakarta FIR		GOTLA	GOTLA G468 VPG W530 MINOP
Bangkok FIR	WMKJ	DALAN	DALAN B579 VPL DCT ANBIK Y507 MAKNA Y511 TOPOR W534 EMTUV
		KARMI	KARMI Y507 MAKNA Y511 TOPOR W534 EMTUV
		PASVA	PASVA Y514 NUFFA DCT BIKTA B469 VMR DCT ADLOV
Chennai FIR		EMRAN	EMRAN L510 GIVAL P628 VPL DCT ANBIK Y507 MAKNA Y511 TOPOR W534 EMTUV
		ANOKO	ANOKO B466 GUNIP R467 VKL A464 TOPOR W534 EMTUV
		IGOGU	IGOGU N571 GUNIP M630 NIREN Y511 TOPOR W534 EMTUV

From Adjacent FIR	To	From Airways or Waypoints	FPL Route
Jakarta FIR		PUGER	PUGER R461 VINDEX Y511 TOPOR W534 EMTUV
		SALAX	SALAX DCT TOPOR W534 EMTUV
Bangkok FIR		DALAN	DALAN B579 VPL Y509 ANGUN Y508 NIREN
			DALAN B579 VPL DCT ANBIK Y507 KAKAK
		KARMI	KARMI Y507 KAKAK
			KARMI Y508 NIREN
PASVA	PASVA Y514 EMPUR G466 PULIP		
Beyond Singapore FIR	WMKK	DOVOL	DOVOL Y334 PADLI Y343 SAROX
		GUMPU	GUMPU G579 VJB A457 GUPTA
		IDSEL	IDSEL Y335 PADLI Y343 SAROX
		KETOD	KETOD Y336 PADLI Y343 SAROX
		TAXUL	TAXUL Y349 PULIP
Chennai FIR		ANOKO	ANOKO B466 GUNIP R467 VKL
			EMRAN
		IGOGU	IGOGU N571 GUNIP Y347 KAKAK
			IGOGU N571 GUNIP M630 NIREN
Jakarta FIR		PUGER	PUGER
Jakarta FIR		SALAX	SALAX
Ho Chi Minh FIR		IGARI	IGARI R208 IKUKO DCT LASOB Y346 PULIP
Bangkok FIR		DALAN	DALAN B579 VPL
			KARMI M757 VAS W541 SAGEL
Beyond Singapore FIR	WMKL	DOVOL	DOVOL L635 VPK G582 BILIK Y506 VPG W525 KAPKO
		GUMPU	GUMPU G579 VJB A457 VPG W525 KAPKO (FOR FL220 AND BELOW)
		IDSEL	IDSEL M758 VPK G582 BILIK Y506 VPG W525 KAPKO
		KETOD	KETOD M761 VPK G582 BILIK Y506 VPG W525 KAPKO
Chennai FIR		ANOKO	ANOKO B466 GUNIP G468 VPG W525 KAPKO
		EMRAN	EMRAN L510 GIVAL DCT AKRAB
		IGOGU	IGOGU N571 GUNIP G468 VPG W525 KAPKO
Jakarta FIR		GOTLA	GOTLA G468 VPG W525 KAPKO
Ho Chi Minh FIR		IGARI	IGARI M765 VKB W546 VPG W525 KAPKO
Bangkok FIR		DALAN	DALAN B579 VPL DCT ANBIK Y507 VKL A464 DUMOK
		KARMI	KARMI Y507 VKL A464 DUMOK
Beyond Singapore FIR	WMKM	GUMPU	G579 VJB A457 GUPTA
Jakarta FIR		DOSIK	DOSIK
Jakarta FIR		PUGER	PUGER R461 VKL A464 DUMOK
Ho Chi Minh FIR		IGARI	IGARI R208 IKUKO DCT LASOB Y346 PULIP G466 VKL A464 DUMOK

From Adjacent FIR	To	From Airways or Waypoints	FPL Route	
Bangkok FIR	WMKP	DALAN	DALAN B579 VPL W525 OMBOK	
		KARMI	KARMI M757 VAS DCT LUNTU	
Beyond Singapore FIR		AROSO	Y339 AROSO Y513 KALIL Y504 BILIK Y506 GORVU	
		DOVOL	DOVOL L635 VPK G582 BILIK Y506 GORVU	
		GUMPU	GUMPU G579 VJB A457 TEPUS Y506 GORVU (FOR FL220 AND BELOW)	
		IDSEL	IDSEL M758 VPK DCT ATIMU Y506 GORVU	
		KETOD	KETOD M761 VPK DCT ATIMU Y506 GORVU	
		ANOKO	ANOKO B466 GUNIP DCT MADUM	
Chennai FIR		EMRAN	EMRAN L510 GIVAL P628 VPL W525 KAPKO DCT OMBOK	
		IGOGU	IGOGU N571 GUNIP DCT MADUM	
Jakarta FIR		GOTLA	GOTLA G468 GUNIP DCT MADUM	
Ho Chi Minh FIR		IGARI	IGARI M765 VKB W546 BETNU	
Bangkok FIR		WMSA	DALAN	DALAN B579 VPL Y503 RINBA Y507 KAKAK
				DALAN B579 VPL W531 VIH A464 DAKUS (FOR NON-RNAV FLIGHTS)
KARMI	KARMI Y507 KAKAK			
	KARMI A464 DAKUS (FOR NON-RNAV FLIGHTS)			
PASVA	PASVA Y514 EMPUR G466 PULIP			
Beyond Singapore FIR	KIBOL		KIBOL DCT VPK G582 PIBOS (FOR NON-RNAV FLIGHTS)	
	DOVOL		DOVOL Y334 PADLI Y343 SAROX	
	IDSEL		IDSEL Y335 PADLI Y343 SAROX	
	KETOD		KETOD Y336 PADLI Y343 SAROX	
	TAXUL		TAXUL Y349 PULIP	
	GUMPU		GUMPU G579 VJB A457 GUPTA	
	Chennai FIR		ANOKO	ANOKO B466 GUNIP R467 GOBAS
EMRAN			EMRAN L510 GIVAL P628 VPL Y503 RINBA Y507 KAKAK	
IGOGU			IGOGU N571 GUNIP Y347 KAKAK	
Jakarta FIR	PUGER	PUGER G582 GOBAS		
	SALAX	N633		
Ho Chi Minh FIR	IGARI	IGARI R208 IKUKO DCT LASOB Y346 PULIP		

1.8.6.6 Flights Overflying Kuala Lumpur FIR

1.8.6.6.1 Flight Planning Requirements for Direct Route Operations (DROs) within Kuala Lumpur FIR.

1.8.6.6.1.1 DROs are only applicable for aircraft filing Flight Levels (FL) listed in 1.8.6.5.1.4 equipped with RNP 2 and RVSM approved. Aircraft shall annotate their flight plan with the following:

Descriptor (Item 10)	Item 18	Description
W		RVSM-approved aircraft
RNP2	NAV/RNP 2	RNP 2 approved aircraft

- 1.8.6.6.1.2 Failure to indicate the above FPL descriptors in their flight plan may result in the air traffic controller re-routing aircraft via the conventional fixed ATS network in Kuala Lumpur FIR and/or Kota Kinabalu FIR.
- 1.8.6.6.1.3 The indication of Flight Levels (FL) shall be accurately filed in accordance with the applicable flight levels. Failure to comply may necessitate the air traffic controller to reroute the aircraft utilising the conventional ATS route network as indicated in AIP ENR 1.8.6.5.2.
- 1.8.6.6.1.4 DROs are available for flights overflying Kuala Lumpur FIR (except departure/destination from/to WSSS, WSSL and WIDD) on specified segments of ATS routes and flight levels (within radar coverage of KL FIR) as listed in the table below where applicable:

Flight Planning on ATS Routes	Flight Planning for DRO (24-hours)	Applicable Flight Levels	Remarks	Reduction in Distance Flown (NM)
IGOGU N571 GUNIP M630 SUKRI	IGOGU N571 GUNIP DCT SUKRI	FL350 and above	Applicable to Southbound flights	0.8
PUGER R461 VESIS M630 SUKRI	PUGER DCT VESIS DCT SUKRI			0.7
AROSO Y513 KALIL Y501 RINBA Y502 DUBAX	AROSO DCT VIH DCT DUBAX	FL360 and above	Applicable to Northbound flights	14.3
AROSO Y513 KALIL Y501 RGITO	AROSO DCT VIH DCT RIGTO			14.1
AROSO Y513 KALIL Y501 RINBA R325 VAS A457 TAMOS	AROSO DCT VIH DCT TAMOS			15.6
AROSO Y513 KALIL Y504 GUNIP N571	*AROSO DCT GUNIP N571	FL340 and above	Applicable to Westbound flights	3
AROSO Y513 KALIL Y504 BILIK G582 PUGER	AROSO DCT PUGER			5.6
AROSO Y513 KALIL Y501 RINBA Y503 VPL P628	**AROSO DCT VIH DCT VPL P628			FL380 and above
SALAX Y340 BATAR A464 ARAMA	SALAX DCT TOPOR A464 ARAMA	All Eastbound Levels within limits of ATS route.	Applicable to Eastbound flights.	1
IGARI R208 VKR Y346 PULIP	IGARI R208 IKUKO DCT LASOB Y346 PULIP	All Westbound Levels within limits of ATS route.	Applicable to Westbound flights.	10

*Note: Flight planning for DRO is not applicable within the Bay of Bengal area inside Kuala Lumpur FIR. Aircraft are to file Flight Plan using the conventional route network after WPT GUNIP.

**Note: Flight planning for DRO is not applicable within the Bay of Bengal area inside Kuala Lumpur FIR. Aircraft are to file Flight Plan using the conventional route network after WPT VPL.

- 1.8.6.6.1.5 Suspension
- NOTAMs may be issued 48 hours in advance if the unavailability of DRO provision is sufficiently foreseeable. This is to ensure safe and efficient fuel management for aircraft.
- 1.8.6.6.1.6 Contingency Event
- DRO is not available during the activation of Malaysia ATM Contingency Level 2.
 - Upon activation, either published by NOTAM or informed by the transferring ATC unit, all participating DRO aircraft shall follow the applicable Contingency Route (CR) and Flight Level Allocation Scheme (FLAS) to ensure the safety of the flight and to facilitate limited flight operations commensurate with the prevailing conditions.

1.8.6.6.2 Flights not eligible for DRO operations (see ENR 1.8.6.4.1) shall use conventional flight planning requirements within Kuala Lumpur FIR listed as below:

Adjacent FIR	To	From Airways or Waypoints	FPL Route
Bangkok FIR	Beyond Singapore FIR	PASVA	PASVA Y514 NUFFA DCT BIKTA B469 PU
			PASVA Y514 BEKSO Y512 VPK L629 BUVAL
			PASVA Y514 BEKSO Y512 VPK M758 IDSEL
			PASVA Y514 BEKSO Y512 VPK M761 KETOD
	Chennai FIR	SAPAM	SAPAM L645 SAMAK
			SAPAM L645 MAPSO P628 IGREX
			SAPAM L645 IDKUT L510 EMRAN
	Destination WSSS/ WSSL/ WIDD	DALAN	DALAN B579 VPL DCT ANBIK Y507 MAKNA Y511 TOPOR A464 ARAMA
		KARMI	KARMI Y507 MAKNA Y511 TOPOR A464 ARAMA
		PASVA	PASVA Y514 NUFFA
	Jakarta FIR	DALAN	DALAN B579 VPL Y509 ANGUN G468 GOTLA
			DALAN B579 VPL DCT ANBIK Y507 MITOS M630 SUKRI
		KARMI	KARMI Y508 ANGUN G468 GOTLA
			KARMI Y507 MITOS M630 SUKRI
		RUSET	RUSET P627 POVUS
	Beyond Singapore FIR	Bangkok FIR	B469
VMR B469 VPK M751 VKB M626 KADAX			
VMR B469 VPK M751 VKB M644 ABTOK			
VMR B469 VPK M751 VKB A334 PASVA			
G579			GUMPU G579 VJB Y342 AROSO Y513 KALIL Y501 RINBA Y502 DUBAX
			GUMPU G579 VJB Y342 AROSO Y513 KALIL Y501 RIGTO
			GUMPU G579 VJB Y342 AROSO Y513 KALIL Y501 RINBA R325 VAS A457 TAMOS
			GUMPU G579 VJB Y342 AROSO Y513 KALIL Y504 BILIK Y506 VPG A457 TAMOS (For all aircraft destination to VTSS and Non-RNAV5 flights)
TIDAR		M904	
Chennai FIR		G579	GUMPU G579 VJB Y342 AROSO Y513 KALIL Y504 GUNIP N571 IGOGU
			GUMPU G579 VJB Y342 AROSO Y513 KALIL Y504 GUNIP N571 VAMPI Y338 LEKIR L510 EMRAN
			GUMPU G579 VJB Y342 AROSO Y513 KALIL Y501 RINBA Y503 VPL P628 IGREX
			GUMPU G579 VJB A457 SUKAT B466 ANOKO (FOR NON-RNAV FLT ONLY)

Adjacent FIR	To	From Airways or Waypoints	FPL Route
Beyond Singapore FIR	Jakarta FIR	G579	GUMPU G579 VJB Y342 AROSO Y513 KALIL Y504 BILIK G582 PUGER
	Ho Chi Minh FIR	ENREP	N891 IGARI
Chennai FIR	Bangkok FIR	EMRAN	EMRAN L510 IDKUT L645 SAPAM
		SAMAK	SAMAK L645 SAPAM
	Destination WSSS/ WSSL/ WIDD	ANOKO	ANOKO B466 GUNIP R467 VKL A464 ARAMA (FOR NON-RNAV FLT ONLY)
		EMRAN	EMRAN L510 GIVAL P628 VPL DCT ANBIK Y507 MAKNA Y511 TOPOR A464 ARAMA
		IGOGU	IGOGU N571 GUNIP M630 NIREN Y511 TOPOR A464 ARAMA
	Jakarta FIR	EMRAN	EMRAN L510 GIVAL P628 VPL DCT ANBIK Y507 MITOS M630 SUKRI
		IGOGU	IGOGU N571 GUNIP M630 SUKRI
		NOPEK	NOPEK P574 ANSAX
	Ho Chi Minh FIR	EMRAN	EMRAN L510 GIVAL P628 VPL Y503 RINBA W546 VKB M765 IGARI
		IGOGU	IGOGU N571 GUNIP G468 VPG W546 VKB M765 IGARI
Departures WSSS/ WSSL/ WIDD	Bangkok FIR	B469	VMR B469 VPK M751 VKB M751 GOLUD
			VMR B469 VPK M751 VKB M626 KADAX
			VMR B469 VPK M751 VKB M644 ABTOK
			VMR B469 VPK M751 VKB A334 PASVA
	Bangkok FIR	TIDAR	M904
		Y339	AROSO Y513 KALIL Y501 RINBA Y502 DUBAX
			AROSO Y513 KALIL Y501 RIGTO
			AROSO Y513 KALIL Y501 RINBA R325 VAS A457 TAMOS
	AROSO Y513 KALIL Y504 BILIK Y506 VPG A457 TAMOS (For all aircraft destination to VTSS and Non-RNAV5 flights)		
	Chennai FIR	Y339	AROSO Y513 KALIL Y504 GUNIP N571 VAMPI Y338 LEKIR L510 EMRAN
			AROSO Y513 KALIL Y501 RINBA Y503 VPL P628 IGREX
			AROSO Y513 KALIL Y504 GUNIP N571 IGOGU
	SABKA	A457 SUKAT B466 ANOKO (FOR NON-RNAV FLT ONLY)	
	Jakarta FIR	Y339	AROSO Y513 KALIL Y504 BILIK G582 PUGER
	Ho Chi Minh FIR	ENREP	N891
Jakarta FIR	Bangkok FIR	POVUS	POVUS P627 RUSET
		GOTLA	GOTLA G468 VPG Y350 RIGTO
			GOTLA G468 VPG Y351 DUBAX
			GOTLA G468 VPG A457 TAMOS

Adjacent FIR	To	From Airways or Waypoints	FPL Route
Jakarta FIR	Destination WSSS/ WSSL/ WIDD	PUGER	PUGER R461 VIDEX Y511 TOPOR A464 ARAMA
		SALAX	SALAX DCT TOPOR A464 ARAMA
	Ho Chi Minh FIR	GOTLA	GOTLA G468 VPG W546 VKB M765 IGARI
		SALAX	SALAX N633 VKL R208 IGARI
	Jakarta FIR	PUGER	PUGER R461 VESIS M630 SUKRI
Ho Chi Minh FIR	Chennai FIR	IGARI	IGARI M765 VKB W546 VPG G468 GUNIP N571 IGOGU
			IGARI M765 VKB W546 RINBA Y503 VPL P628 IGREX
			IGARI M765 VKB W546 VPG G468 GUNIP N571 VAMPI Y338 LEKIR L510 EMRAN
	Jakarta FIR	IGARI	IGARI R208 IKUKO DCT LASOB Y346 VBA G582 PUGER
			IGARI R208 IKUKO DCT LASOB PULIP G466 VKL N633 SALAX
			IGARI M765 VKB W546 VPG G468 GOTLA
	Singapore FIR and beyond	IGARI	N891

1.8.7 Cruising Level Restrictions

1.8.7.1 Flights on following sector and routes shall observe the below specified cruising level restrictions.

1. WMKK A457 WMKP : FL320 Or Below
2. WMKK A457 WMKA : FL320 Or Below
3. WMKK A457 VPG/ W525 Or B579 WMKL : FL320 Or Below
4. WMKP W530 VIH A464 WMKK : FL310 Or Below
5. WMKL W531 VIH A464 WMKK : FL310 Or Below

1.8.7.2 Given the complexity of airspace structure in the Kuala Lumpur TMA, separation requirements between VFR and IFR class C airspace, density of air traffic as well as the controller's workload, applicable procedures for VFR flights transiting through Kuala Lumpur TMA are as follows:

1. VFR aircraft shall not submit flight plan transiting Kuala Lumpur TMA from 3000 ft to FL 145.
2. VFR aircraft transiting Kuala Lumpur TMA below 3000 ft shall file flight plan according to the VFR lanes.

1.8.8 Flight planning route for Non RNAV aircraft.

From	To	FPL Route
WMKA / WMKL / WMKP / WMKI	WMKM / WMKJ	A464
WMKM / WMKJ	WMKA / WMKL / WMKP / WMKI	A457
WMKC / WMKN / WMPR / WMKE / WMKD	WMKJ / WMBT	W540 VPK B469 (BELOW FL235)
WMKJ / WMBT	WMKC / WMKN / WMPR / WMKE / WMKD	B469 VPK W540 (BELOW FL235)

1.8.9 Flight Planning Requirement for Aircraft Operating in Kota Kinabalu FIR

1.8.9.1 Flights Departing And Landing At Airports Within Kota Kinabalu FIR

From	To	FPL Route
WBGB	WBGG	G460 VKG
	WBGM	W422 VMY DCT WBGM
	WBGR	W422 VMY
	WBGS	G460 VSI
	WBGW	W422 VMY DCT WBGW
	WBKD	G460 BRU M646 VJN W460 LHD
	WBKK	G460 BRU M646 VJN
	WBKL	G460 VLB
	WBKS	G460 BRU W461 VSN
		G460 BRU M646 VJN A341 VSN (FL165 AND ABOVE)
	WBKT	G460 BRU M646 VJN W420 KABDU DCT WBKT
	WBKW	G460 BRU W453 LATIL W441 VTW
	WBGJ	W422 VMY W450 VLG
	WBMU	W448 VZU
WBSB	G460 BRU	
WBGG	WBGB	G460 VBU
	WBGM	G580 VMY DCT WBGM
	WBGR	G580 VMY
	WBGS	LUTMO DCT BIPIB
		OROMA W457 ELNAL (FL245 AND BELOW)
	WBGW	G580 VMY DCT WBGW
	WBKD	G580 BRU W453 LATIL W441 VTW W424 LHD
		G580 BRU M646 VJN A341 VSN (FL165 AND ABOVE)
	WBKK	G580 BRU M646 VJN
	WBKL	G580 BRU G460 VLB
	WBKS	G580 BRU W461 VSN
		G580 BRU M646 VJN A341 VSN (FL165 AND ABOVE)
	WBKT	G580 BRU M646 VJN W420 KABDU DCT WBKT
	WBKW	G580 BRU W453 LATIL W441 VTW
WBGJ	G580 VMY W450 VLG	
WBMU	G460 VBU W448 VZU	
WBSB	G580 BRU	

From	To	FPL Route
WBGM	WBGB	DCT VMY W422 VBU
	WBGG	DCT VMY G580 VKG
	WBGR	DCT VMY
	WBGS	DCT VMY W422 VBU G460 VSI
	WBGW	DCT VMY DCT WBGW
	WBKD	DCT VMY G580 BRU M646 VJN W460 LHD
	WBKK	DCT VMY G580 BRU M646 VJN
	WBKL	DCT VMY G580 BRU G460 VLB
	WBKS	DCT VMY G580 BRU W461 VSN
	WBKT	DCT VMY G580 BRU M646 VJN W420 KABDU DCT WBKT
	WBKW	DCT VMY G580 BRU W453 LATIL W441 VTW
	WBGJ	DCT VMY W450 VLG
	WBMU	DCT VZU
	WBSB	DCT VMY G580 BRU
WBGR	WBGB	W422 VBU
	WBGG	G580 VKG
	WBGM	DCT VMY DCT WBGM
	WBGS	DOXES W422 VBU G460 VSI
		DOXES W422 VBU W458 LENTU (FL245 AND BELOW)
	WBGW	DCT VMY DCT WBGW
	WBKD	G580 BRU W453 LATIL W441 VTW W424 LHD
		G580 BRU M646 VJN W460 LHD
	WBKK	G580 BRU M646 VJN
	WBKL	G580 BRU G460 VLB
	WBKS	G580 BRU W461 VSN
		G580 BRU M646 VJN A341 VSN (FL165 AND ABOVE)
		G580 BRU M646 VJN W420 VSN
	WBKT	G580 BRU M646 VJN W420 DCT WBKT
	WBKW	G580 BRU W453 LATIL W441 VTW
	WBGJ	DCT VMY W450 VLG
	WBMU	DCT VMY W449 VZU
	WBSB	G580 BRU
	WBGZ	DCT VMY DCT WBGZ
	WBGK	G580 SARVO DCT WBGK
WBGF	DCT VMY DCT WBGF	
WBGA	DCT VMY DCT WBGA	
WBGJ	DCT VMY DCT WBGJ	

From	To	FPL Route
WBGS	WBGB	G460 VBU
		LENTU W458 VBU (FL245 AND BELOW)
	WBGG	G460 VKG
		ELNAL W457 VKG (FL245 AND BELOW)
	WBGW	G460 VBU W422 VMY DCT WBGW
	WBGR	G460 VBU W422 VMY
	WBGW	G460 VBU W422 VMY DCT WBGW
	WBKD	G460 BRU M646 VJN W460 LHD
	WBKK	G460 BRU M646 VJN
	WBKL	G460 BRU G460 VLB
	WBKS	G460 BRU W461 VSN
	WBKT	G460 BRU M646 VJN W420 DCT WBKT
	WBKW	G460 BRU W453 LATIL W441 VTW
	WBGJ	G460 VBU W422 VMY W450 VLG
	WBMU	G460 VBU W448
WBSB	G460 BRU	
WBGW	WBGB	DCT VMY W422 VBU
	WBGG	DCT VMY G580 VKG
	WBGW	DCT VMY DCT WBGW
	WBGR	DCT VMY
	WBGS	DCT VMY W422 VBU G460 VSI
	WBKD	DCT VJN W460 LHD
	WBKK	DCT VJN
	WBKL	DCT BRU G460 VLB
	WBKS	DCT BRU W461 VSN
	WBKT	DCT BRU M646 VJN W420 KABDU DCT WBKT
	WBKW	DCT BRU W443 LATIL W441 VTW
	WBGJ	DCT VLG
	WBMU	DCT VZU
WBSB	DCT BRU	
WBKD	WBGB	W460 VJN M646 BRU G460 VBU
		W460 VJN G460 VBU
		W424 VTW W441 LATIL W453 BRU G460 VBU
	WBGG	LHD W460 VJN M646 BRU G580 PILAX DCT KIKAK
		W460 VJN M646 BRU G460 VKG
		W460 VJN G460 VKG
		W424 VTW W441 LATIL W453 BRU G460 VKG
	WBGW	W460 VJN M646 BRU DCT WBGW
		W460 VJN G460 BRU DCT WBGW

From	To	FPL Route
	WBGR	W460 VJN M646 BRU G580 VMY
		W460 VJN G460 BRU G580 VMY
	WBGS	W460 VJN M646 BRU G460 VSI
		W460 VJN G460 VSI
		W424 VTW W441 LATIL W453 BRU G460 VSI
	WBGW	W460 VJN DCT WBGW
	WBKK	W460 VJN
	WBKL	W460 VJN G460 VLB
		W424 VTW W441 VLB
	WBKS	W421 VSN
	WBKT	LHD W421 VSN W420 KUDAT
	WBKW	W424 VTW
	WBGJ	W460 VJN W451 VLG
	WBMU	W460 VJN M646 BRU R223 BUTAX W452 VZU
		W424 VTW W441 LATIL W453 BRU R223 BUTAX W452 VZU
WBSB	W424 VTW W441 LATIL W453 BRU	
WBKK	WBGB	M646 BRU G460 VBU
		G460 VBU
	WBGG	M646 BRU G580 VKG
		G460 BRU G460 VKG
	WBGM	DCT WBGM
	WBGR	M646 BRU G580 VMY
		G460 BRU G580 VMY
	WBGS	M646 BRU G460 VSI
		G460 VSI
	WBGW	DCT WBGW
	WBKD	W460 LHD
	WBKL	G460 VLB
	WBKS	A341 VSN (FL165 AND ABOVE)
		W420 KABDU W463 VSN
		W420 VSN
WBKT	W420 DCT WBKT	
WBKW	W425 VTW	
WBGJ	W451 VLG	
WBMU	M646 BRU R223 BUTAX W452 VZU	
WBSB	M646 BRU	
WBKL	WBGB	G460 VBU
	WBGG	G460 BRU G580 VKG
		G460 VKG

From	To	FPL Route
	WBGM	DCT WBGM
	WBGR	G460 BRU G580 VMY
	WBGS	G460 VSI
	WBGW	DCT WBGW
	WBKD	LATIL W441 VTW W424 LHD
		G460 VJN W420 LHD
	WBKK	G460 VJN
	WBKS	IDATU DCT REKOS W461 ANKOB
		G460 VJN A341 VSN (FL165 AND ABOVE)
	WBKT	G460 VJN W420 DCT WBKT
	WBKW	W441 VTW
	WBGJ	DCT VLG
WBMU	G460 BRU R223 BUTAX W452 VZU	
WBSB	G460 VLB	
WBKS	WBGB	A341 VJN G460 VBU (FL165 AND ABOVE)
		A341 VJN M646 BRU G460 VBU (FL165 AND ABOVE)
		W461 BRU G460 VBU
	WBGG	A341 VJN G460 BRU G580 VKG (FL165 AND ABOVE)
		A341 VJN M646 BRU G460 VKG (FL165 AND ABOVE)
		W461 BRU G580 VKG
		W461 BRU G460 VKG
	WBGM	A341 VJN G460 BRU DCT WBGM (FL165 AND ABOVE)
		A341 VJN M646 BRU DCT WBGM (FL165 AND ABOVE)
		W461 BRU DCT WBGM
	WBGR	A341 VJN G460 BRU G580 VMY (FL165 AND ABOVE)
		A341 VJN M646 BRU G580 VMY (FL165 AND ABOVE)
		W461 BRU G580 VMY
	WBGS	A341 VJN G460 VSI (FL165 AND ABOVE)
		A341 VJN M646 BRU G460 VSI (FL165 AND ABOVE)
		W461 BRU G460 VSI
	WBGW	A341 VJN DCT WBGW (FL165 AND ABOVE)
	WBKD	W421 LHD
	WBKK	A341 VJN (FL165 AND ABOVE)
		W420 VJN
		W463 KABDU W420 VJN
	WBKL	A341 VJN G460 VLB (FL165 AND ABOVE)
		W461 REKOS W441 VLB
	WBKT	W420 DCT WBKT
	WBKW	W421 LHD W424 VTW

From	To	FPL Route
	WBGJ	A341 VJN W451 VLG (FL165 AND ABOVE)
		W461 BRU DCT VLG
	WBMU	A341 VJN M646 BRU R223 BUTAX W452 VZU (FL165 AND ABOVE)
		W461 BRU R223 BUTAX W452 VZU
	WBSB	W461 BRU
WBKT	WBGB	W420 VJN G460 VBU
	WBGG	W420 VJN G460 VKG
	WBGM	W420 VJN G460 BRU DCT WBGM
	WBGR	W420 VJN G460 BRU G580 VMY
	WBGS	W420 VJN G460 VSI
	WBGW	W420 VJN DCT WBGW
	WBKD	W420 VSN W421 LHD
	WBKK	W420 VJN
	WBKL	W420 VJN G460 VLB
	WBKS	W420 VSN
	WBKW	W420 VSN W421 LHD W424 VTW
	WBGJ	W420 VJN W451 VLG
	WBMU	W420 VJN M646 BRU R223 BUTAX W452 VZU
	WBSB	W420 VJN M646 BRU
WBKW	WBGB	W441 LATIL W453 BRU G460 VBU
	WBGG	W441 LATIL W453 BRU G460 VKG
	WBGM	W441 LATIL W453 BRU DCT WBGM
	WBGR	W441 LATIL W453 BRU G580 VMY
	WBGS	W441 LATIL W453 BRU G460 VSI
	WBGW	W441 LATIL DCT WBGW
	WBKD	W424 LHD
	WBKK	W425 VJN
	WBKL	W441 VLB
	WBKS	W424 LHD W421 VSN
	WBKT	W425 VJN W420 DCT WBKT
	WBGJ	W441 LATIL DCT VLG
	WBMU	W441 LATIL W453 BRU R223 BUTAX W452 VZU
	WBSB	W441 LATIL W453 BRU
WBGJ	WBGB	W450 VMY W422 VBU
	WBGG	W450 VMY G580 VKG
	WBGM	W450 VMY DCT WBGM
	WBGR	W450 VMY
	WBGS	W450 VMY W422 VBU G460 VSI
	WBGW	DCT WBGW

From	To	FPL Route
	WBKD	W451 VJN W460 LHD
	WBKK	W451
	WBKL	DCT VLB
	WBKS	DCT BRU W461 VSN
	WBKT	DCT BRU M646 VJN W420 KABDU DCT WBKT
	WBKW	DCT BRU W453 LATIL W441 VTW
	WBMU	DCT BUTAX W452
	WBSB	DCT BRU
WBMU	WBGB	W448
	WBGG	W448 VBU G460 VKG
	WBGM	DCT WBGM
	WBGR	W449
	WBGS	W448 VBU G460 VSI
	WBGW	DCT WBGW
	WBKD	W452 BUTAX R223 BRU M646 VJN W460 LHD
	WBKK	W452 BUTAX R223 BRU M646 VJN
	WBKL	W452 BUTAX R223 BRU G460 VLB
	WBKS	W452 BUTAX R223 BRU W461 VSN
	WBKT	W452 BUTAX R223 BRU M646 VJN W420 KABDU DCT WBKT
	WBKW	W452 BUTAX R223 BRU W453 LATIL W441 VTW
	WBGJ	W452 BUTAX DCT VLG
WBSB	W452 BUTAX R223 BRU	
WBSB	WBGB	G460 VBU
	WBGG	G580 VKG
		G460 VKG
	WBGM	DCT WBGM
	WBGR	G580 VMY
	WBGS	G460 VSI
	WBGW	DCT WBGW
	WBKD	W453 LATIL W441 VTW W424 LHD
		M646 VJN W460
	WBKK	M646 VJN
	WBKL	G460 VLB
	WBKS	W461 VSN
		M646 VJN A341 VSN (FL165 AND ABOVE)
	WBKT	M646 VJN W420 DCT WBKT
	WBKW	W453 LATIL W441 VTW
WBGJ	DCT VLG	
WBMU	R223 BUTAX W452 VZU	

1.8.9.2 Flights To Destination Outside Kota Kinabalu FIR

From	Entering Adjacent FIR	Joining Airways or Waypoint	FPL Route
WBGB	SINGAPORE FIR	KAMIN	W447 KAMIN
		AGOBA	G460 VKG M761 AGOBA
		ATETI	G460 VKG G580 ATETI
		OLKIT	W422 VMY W442 OLKIT
		ASISU	G460 BRU M768 ASISU
	MANILA FIR	VINIK	G460 BRU M646 VJN M522 VINIK
		OSANU	G460 BRU M646 VJN M646 OSANU
		VIMAG	G460 BRU M646 VJN A341 VIMAG
	JAKARTA FIR	PAPSA	G460 VKG R455 PAPSA
	UJUNG FIR	AGSON	G460 BRU R223 AGSON
MAMOK		G460 BRU M768 MAMOK	
BAXAL		G460 BRU W453 LATIL W441 VTW A211 BAXAL	
WBGG	JAKARTA FIR	AGOBA	M761 AGOBA
		ATETI	G580 ATETI
		KAMIN	W443 KAMIN
		PAPSA	R455 PAPSA
	MANILA FIR	VINIK	G580 BRU M646 VJN M522 VINIK
		OSANU	G580 BRU M646 OSANU
		VIMAG	G580 BRU M646 VJN A341 VIMAG
SINGAPORE FIR	ASISU	G580 BRU M768 ASISU	
WBGR	JAKARTA FIR	AGOBA	G580 VKG M761 AGOBA
		ATETI	G580 ATETI
		KAMIN	W455 DARMU M646 KAMIN
		OKADA	G580 BRU R223 BUTAX P648 OKADA
		PAPSA	G580 VKG R455 PAPSA
	MANILA FIR	OSANU	G460 BRU M646 OSANU
		VIMAG	G460 BRU M646 VJN A341 VIMAG
		VINIK	G460 BRU M646 VJN M522 VINIK
	SINGAPORE FIR	ASISU	G580 BRU M768 ASISU
		DAKIX	G580 BRU L649 DAKIX
		GULIB	L517 GULIB
		OLKIT	W442 OLKIT
	UJUNG FIR	AGSON	G580 BRU R223 AGSON
		MAMOK	G580 BRU M768 MAMOK
		BAXAL	G580 BRU W453 LATIL W441 VTW A211 BAXAL

From	Entering Adjacent FIR	Joining Airways or Waypoint	FPL Route
WBGS	JAKARTA FIR	AGOBA	ANKUP W459 AGOBA
		ATETI	G460 VKG G580 ATETI
		KAMIN	G334 KAMIN
		PAPSA	G460 VKG R455 PAPSA
	MANILA FIR	OSANU	G460 BRU M646 OSANU
		VIMAG	G460 BRU M646 VJN A341 VIMAG
		VINIK	G460 BRU M646 VJN M522 VINIK
	SINGAPORE FIR	ASISU	G460 BRU M768 ASISU
	UJUNG FIR	MAMOK	G460 BRU M768 MAMOK
WBKK	SINGAPORE FIR	KAMIN	M646 KAMIN
		AGOBA	M646 BRU G580 VKG M761 AGOBA
		ATETI	G460 VKG G580 ATETI
			M646 BRU G580 ATETI
		OLKIT	M758 OLKIT
		ASISU	Y446 ASISU
	MANILA FIR	VINIK	M522 VINIK
		OSANU	VETAG DCT OSANU
		VIMAG	A341 VSN VIMAG
	JAKARTA FIR	PAPSA	M646 BRU G580 VKG R455 PAPSA
			M646 BRU G460 VKG R455 PAPSA
		OKADA	P648 OKADA
	UJUNG FIR	AGSON	M646 BRU R223 AGSON
		MAMOK	M522 MAMOK
		BAXAL	W425 VTW A211 BAXAL
WBKL	SINGAPORE FIR	KAMIN	G460 BRU M646 KAMIN
		AGOBA	G460 BRU G580 VKG M761 AGOBA
		ATETI	G460 BRU G580 ATETI
		OLKIT	W441 DOGOG M758 OLKIT
		ASISU	W441 DOGOG M768 ASISU
		DAKIX	W441 AROBO L649 DAKIX
	MANILA FIR	VINIK	W441 UKIBA M754 VINIK
		OSANU	G460 VJN M646 OSANU
		VIMAG	G460 VJN A341 VIMAG
	W441 W461 VSN A341 VIMAG		
	JAKARTA FIR	PAPSA	G460 BRU G580 VKG R455 PAPSA
			G460 BRU G460 VKG R455 PAPSA
		OKADA	G460 BRU R223 BUTAX P648 OKADA

From	Entering Adjacent FIR	Joining Airways or Waypoint	FPL Route
	UJUNG FIR	AGSON	G460 BRU R223 AGSON
		MAMOK	G460 BRU M768 MAMOK
		BAXAL	W441 VTW A211 BAXAL
WBKS	SINGAPORE FIR	KAMIN	W461 BRU M646 KAMIN
			A341 VJN M646 KAMIN
		AGOBA	W461 BRU G580 VKG M761 AGOBA
			A341 VJN G580 VKG M761 AGOBA
		ATETI	W461 BRU G580 ATETI
			A341 VJN M646 BRU G580 ATETI
		OLKIT	A341 VJN M758 OLKIT
			W461 VJN M759 OLKIT
	ASISU	A341 VJN Y446 ASISU	
	MANILA FIR	VINIK	A341 VJN M522 VINIK
		OSANU	A341 VJN M646 OSANU
		VIMAG	A341 VIMAG
	JAKARTA FIR	PAPSA	A341 VJN W461 BRU G460 VKG R455 PAPSA
		OKADA	A341 VJN P648 OKADA
	UJUNG FIR	AGSON	W461 BRU R223 AGSON
		MAMOK	A341 VJN M522 MAMOK
		BAXAL	W421 LHD W424 VTW A211 BAXAL
	WBKW	SINGAPORE FIR	KAMIN
AGOBA			W441 LATIL W453 BRU G580 VKG M761 AGOBA
ATETI			W441 LATIL W453 BRU G580 ATETI
OLKIT			W441 LATIL W453 BRU M759 OLKIT
ASISU			W425 VJN Y446 ASISU
			W441 DOGOG M768 ASISU
MANILA FIR		VINIK	W425 VJN M522 VINIK
		OSANU	W425 VJN M646 OSANU
		VIMAG	W424 LHD W421 VSN A341 VIMAG
JAKARTA FIR		PAPSA	W441 LATIL W453 BRU G580 VKG R445 PAPSA
		OKADA	W441 LATIL W453 BRU R223 BUTAX P648 OKADA
UJUNG FIR		BAXAL	A211 BAXAL
WBSB	SINGAPORE FIR	KAMIN	M646 KAMIN
		AGOBA	G580 VKG M761 AGOBA
		ATETI	G580 ATETI
		OLKIT	M759 OLKIT
		ASISU	M768 ASISU
		DAKIX	L649 DAKIX

From	Entering Adjacent FIR	Joining Airways or Waypoint	FPL Route
	MANILA FIR	VINIK	M754 VINIK
		OSANU	M646 OSANU
		VIMAG	W461 VSN A341 VIMAG
	JAKARTA FIR	PAPSA	G580 VKG R445 PAPSA
		OKADA	R223 BUTAX P648 OKADA
	UJUNG FIR	AGSON	R223 AGSON
		MAMOK	M768 MAMOK
		BAXAL	W453 LATIL W441 VTW A211 BAXAL

1.8.9.3 Flights Entering Kota Kinabalu FIR From Adjacent FIR

From Adjacent FIR	To	From Airways or Waypoints	FPL Route	
SINGAPORE FIR	WBGB	KAMIN	W447 VBU	
		AGOBA	M761 VKG G460 VBU	
		ATETI	G580 VKG G460 VBU	
		OLKIT	W442 VMY W422 VBU	
		ASISU	M768 BRU G460 VBU	
MANILA FIR		VINIK	M522 VJN M646 BRU G460 VBU	
		OSANU	M646 VJN M646 BRU G460 VBU	
		VIMAG	A341 VJN M646 BRU G460 VBU	
JAKARTA FIR		ANIPU	M772 VSI G460 VBU	
		PAPSA	R455 VKG G460 VBU	
UJUNG FIR		AGSON	R223 BRU G460 VBU	
		MAMOK	M768 BRU G460 VBU	
		BAXAL	A211 VTW W441 LATIL W453 BRU G460 VBU	
JAKARTA FIR		WBGG	AGOBA	M761 VKG
			ATETI	G580 VKG
	KAMIN		M646 KAMIN W443 VKG	
			G334 KAMIN W443 VKG	
	PAPSA		R455 VKG	
MANILA FIR	OSANU		M646 BRU G580 VKG	
	VIMAG		A341 VJN M646 BRU G580 VKG	
	VINIK		M522 VJN M646 BRU G580 VKG	
SINGAPORE FIR	ASISU		M768 BRU G580 VKG	

From Adjacent FIR	To	From Airways or Waypoints	FPL Route	
JAKARTA FIR	WBGR	KAMIN	M646 DARMU W455 VMY	
		AGOBA	M646 SABIP M761 VKG G580 VMY	
		ATETI	G580 VMY	
		ANIPU	ANIPU VSI G460 VBU W422 VMY	
		PAPSA	R455 VKG G580 VMY	
		OKADA	P648 BUTAX R223 BRU G580 VMY	
MANILA FIR		VINIK	M522 VJN M646 BRU G580 VMY	
		OSANU	M646 BRU G580 VMY	
		VIMAG	A341 VJN M646 BRU G580 VMY	
SINGAPORE FIR		OLKIT	W442 VMY	
		ASISU	M768 BRU G580 VMY	
UJUNG FIR		AGSON	R223 BRU G580 VMY	
		MAMOK	M768 BRU G580 VMY	
		BAXAL	A211 VTW W441 LATIL W453 BRU G580 VMY	
JAKARTA FIR		WBGS	KAMIN	G334 VSI
			AGOBA	AGOBA W459 ANKUP
			ATETI	G580 VKG G460 VSI
			ANIPU	M772 VSI
	PAPSA		R455 VKG G460 VSI	
MANILA FIR	OSANU		M646 BRU G460 VSI	
	VIMAG		A341 VJN M646 BRU G460 VSI	
	VINIK		M522 VJN M646 BRU G460 VSI	
SINGAPORE FIR	ASISU		M768 BRU G460 VSI	
UJUNG FIR	MAMOK		M768 BRU G460 VSI	
SINGAPORE FIR	WBKK		KAMIN	M646 VJN
			AGOBA	M761 VKG G580 BRU M646 VJN
		ATETI	G580 BRU M646 VJN	
			G580 VKG G460 VJN	
		OLKIT	M758 VJN	
		ASISU	Y446 VJN	
MANILA FIR		VINIK	M522 VJN	
		OSANU	M646 VJN	
		VIMAG	A341 VJN	
JAKARTA FIR		PAPSA	R455 VKG G580 BRU M646 VJN	
			R455 VKG G460 VJN	
		OKADA	P648 VJN	
UJUNG FIR		AGSON	R223 BRU M646 VJN	

From Adjacent FIR	To	From Airways or Waypoints	FPL Route
		MAMOK	M522 VJN
		BAXAL	A211 VTW W425 VJN
SINGAPORE FIR	WBKL	KAMIN	M646 BRU G460 VLB
		AGOBA	M761 VKG G580 BRU G460 VLB
		ATETI	G580 BRU G460 VLB
		OLKIT	M758 DOGOG W441 VLB
		ASISU	M768 DOGOG W441 VLB
MANILA FIR		VINIK	M754 UKIBA W441 VLB
			M522 VJN G460 VLB
		OSANU	M646 VJN G460 VLB
		VIMAG	A341 VJN G460 VLB
JAKARTA FIR		PAPSA	R455 VKG G580 BRU G460 VLB
		OKADA	P648 BUTAX R223 BRU G460 VLB
UJUNG FIR		AGSON	R223 BRU G460 VLB
		MAMOK	M768 BRU G460 VLB
		BAXAL	A211 VTW W441 VLB
SINGAPORE FIR		WBKS	KAMIN
	M646 VJN A341 VSN		
	AGOBA		M761 VKG G580 BRU W461 VSN
			M761 VKG G580 VJN A341 VSN
	ATETI		G580 BRU W461 VSN
			G580 BRU M646 VJN A341 VSN
	OLKIT		M758 VJN A341 VSN
			M759 BRU W461 VSN
	ASISU		Y446 VJN A341 VSN
	MANILA FIR		VINIK
OSANU			M646 VJN A341 VSN
VIMAG			A341 VSN
JAKARTA FIR	PAPSA		R455 VKG G580 W461 VSN
	OKADA		P648 VJN A341 VSN
UJUNG FIR	AGSON		R223 BRU W461 VSN
	MAMOK	M522 VJN A341 VSN	
	BAXAL	A211 VTW W424 LHD W421 VSN	
SINGAPORE FIR	WBKW	KAMIN	M646 BRU W453 LATIL W441 VTW
		AGOBA	M761 VKG G580 BRU W453 LATIL W441 VTW
		ATETI	G580 VKG G460 BRU W453 LATIL W441 VTW
		OLKIT	M759 BRU W453 LATIL W441 VTW
			M758 VJN W425 VTW

From Adjacent FIR	To	From Airways or Waypoints	FPL Route
MANILA FIR	WBSB	ASISU	Y446 VJN W425 VTW
		VINIK	M522 VJN W425 VTW
		OSANU	M646 VJN W425 VTW
		VIMAG	A341 VSN W421 LHD W424 VTW
JAKARTA FIR		PAPSA	R455 VKG G460 BRU W453 LATIL W441 VTW
		OKADA	P648 VJN W425 VTW
UJUNG FIR		BAXAL	A211 VTW
SINGAPORE FIR		KAMIN	M646 BRU
		AGOBA	M761 VKG G580 BRU
		ATETI	G580 BRU
		OLKIT	M759 BRU
MANILA FIR		ASISU	M768 BRU
	VINIK	M754 BRU	
	OSANU	M646 BRU	
JAKARTA FIR	VIMAG	A341 VSN W461 BRU	
	PAPSA	R455 VKG G580 BRU	
	OKADA	P648 BUTAX R223 BRU	
UJUNG FIR	AGSON	R223 BRU	
	MAMOK	M768 BRU	
	BAXAL	A211 VTW W441 LATIL W453 BRU	

1.8.9.4 Flights Overflying Kota Kinabalu FIR

1.8.9.4.1 Flight Planning Requirements for Direct Route Operations (DROs) within Kota Kinabalu FIR.

1.8.9.4.1.1 Only overflying aircraft cruising at FL340 and above will be allowed to participate in the DRO trial within Kota Kinabalu FIR. Flight Levels (FL) indication shall be accurately filed in FPL Item 15.

1.8.9.4.1.2 Aircraft participating in DRO shall annotate their flight plan one or more of the following:

Descriptor (Item 10)	Item 18	Description
W		RVSM approved aircraft.
RNP2	NAV/RNP 2	RNP 2 approved aircraft.
	RMK/KKDRO	DRO participating aircraft within Kota Kinabalu FIR.

1.8.9.4.1.3 Failure to indicate the above FPL descriptors and required remarks in Item 18 in their flight plan may result in the air traffic controller to re-route aircraft via the conventional fixed ATS network in Kota Kinabalu FIR.

1.8.9.4.1.4 It is crucial to highlight that Item 15 concerning the indication of Flight Levels (FL) be accurately filed in accordance with the guidelines presented in paragraph 1.8.9.4.1.1 and table in Paragraph 1.8.9.4.1.2. Failure to comply may necessitate the air traffic controller to reroute the aircraft utilising the conventional ATS route network as indicated in Paragraph 1.8.9.4.2.

1.8.9.4.1.5 DROs are available for flights overflying Kota Kinabalu FIR cruising FL340 and above on specified segments of ATS routes and flight levels (within radar coverage of KK FIR) as listed in the table below where applicable:

From Adjacent FIR	Entry WPT	Exit WPT	DRO Flight Planning	Track Miles Saving	
JAKARTA FIR	AGOBA	OSANU	AGOBA DCT SARVO DCT BRU DCT OSANU	31.6	
		VIMAG	AGOBA DCT SARVO DCT BRU DCT VIMAG	44	
		VINIK	AGOBA DCT SARVO DCT BRU DCT VINIK	30.6	
	ATETI	OSANU	ATETI DCT SARVO DCT BRU DCT OSANU	15.7	
		VIMAG	ATETI DCT SARVO DCT BRU DCT VIMAG	27.8	
		VINIK	ATETI DCT SARVO DCT BRU DCT VINIK	14.2	
	KAMIN	OSANU	KAMIN DCT DARMU DCT BRU DCT OSANU	1.5	
		VIMAG	KAMIN DCT DARMU DCT BRU DCT VIMAG	0.1	
	OKADA	OSANU	OKADA DCT OSANU	0.1	
		VINIK	OKADA DCT BRU DCT SUMLA DCT VINIK	4.8	
	PAPSA	OSANU	PAPSA DCT SARVO DCT BRU DCT OSANU	2.9	
		VIMAG	PAPSA DCT SARVO DCT BRU DCT VIMAG	15	
		VINIK	PAPSA DCT SARVO DCT BRU DCT VINIK	1.5	
		ASISU	PAPSA DCT DARMU DCT ASISU	123.7	
ANIPU	ASISU	ANIPU DCT DARMU DCT ASISU	0.1		
MANILA FIRS- INGAPORE FIR	OSANU	AGOBA	OSANU DCT BRU DCT SARVO DCT AGOBA	31.6	
		ATETI	OSANU DCT BRU DCT SARVO DCT ATETI	15.7	
		KAMIN	OSANU DCT BRU DCT DARMU DCT KAMIN	1.5	
		OKADA	OSANU DCT OKADA	0.1	
		PAPSA	OSANU DCT BRU DCT SARVO DCT PAPSA	2.9	
		OLKIT	OSANU DCT DOGOG DCT OLKIT	15.7	
		ASISU	OSANU DCT ADLEX DCT ASISU	61.1	
		MAMOK	OSANU DCT ELPOX DCT MAMOK	4.6	
		AGSON	OSANU DCT BRU DCT AGSON	1.4	
	BAXAL	OSANU DCT VTW DCT BAXAL	85.9		
	VIMAG	AGOBA	VIMAG DCT BRU DCT SARVO DCT AGOBA	44	
		ATETI	VIMAG DCT BRU DCT SARVO DCT ATETI	27.8	
		KAMIN	VIMAG DCT BRU DCT DARMU DCT KAMIN	6.4	
		PAPSA	VIMAG DCT BRU DCT SARVO DCT PAPSA	15	
		OLKIT	VIMAG DCT OLKIT	2.5	
		ASISU	VIMAG DCT VJN DCT ASISU	0.8	
		AGSON	VIMAG DCT BUTAX DCT AGSON	16.4	
	VINIK	AGOBA	VINIK M754 BRU DCT SARVO DCT AGOBA	30.5	
		ATETI	VINIK M754 BRU DCT SARVO DCT ATETI	14.2	
		OKADA	VINIK M754 BRU DCT OKADA	4.8	
		PAPSA	VINIK M754 BRU DCT SARVO DCT PAPSA	1.5	
		AGSON	VINIK DCT BUTAX DCT AGSON	1.2	
		BAXAL	VINIK DCT NODIN DCT VTW DCT BAXAL	35.9	
	OLKIT	OSANU	OLKIT DCT DOGOG DCT OSANU	15.7	
		VIMAG	OLKIT DCT VIMAG	2.5	
	ASISU	AGSON	ASISU DCT AGSON	29.5	
	UNJUNG PADANG FIR	AGSON	VINIK	AGSON DCT BUTAX DCT VINIK	1.2
		BAXAL	OSANU	BAXAL DCT VTW DCT OSANU	80.8
			VINIK	BAXAL DCT VTW DCT NODIN M522 VINIK	35.9
		MAMOK	VIMAG	MAMOK DCT MAMOK DCT VIMAG	39.5

1.8.9.4.1.6 Suspension

- a) NOTAMs may be issued 48 hours in advance if the unavailability of DRO provision is sufficiently foreseeable. This is to ensure safe and efficient fuel management for aircraft.

1.8.9.4.1.7 Contingency Event

- a) DRO is not available during the activation of Malaysia ATM Contingency Level 2.
- a) Upon activation, either published by NOTAM or informed by the transferring ATC unit, all participating DRO aircraft shall follow the applicable Contingency Route (CR) and Flight Level Allocation Scheme (FLAS) to ensure the safety of the flight and to facilitate limited flight operations commensurate with the prevailing conditions.

1.8.9.4.2 Overflying flights that are not eligible for DRO operations (see ENR 1.8.9.4.1) shall use conventional flight planning requirements within Kota Kinabalu FIR listed as below:

Adjacent FIR	To	Entry Airways or Waypoints	Exit Airways or Waypoints	FPL Route
SINGAPORE FIR	MANILA FIR	KAMIN	VINIK	M646 BRU M754 VINIK
			OSANU	M646 OSANU
			VIMAG	M646 BRU W461 VSN A341 VIMAG
		AGOBA	VINIK	M761 VKG G580 BRU M754 VINIK
			OSANU	M761 VKG G580 BRU M646 OSANU
			VIMAG	M761 VKG G580 BRU M646 VJN A341 VIMAG
		ATETI	VINIK	G580 BRU M754 VINIK
			OSANU	G580 BRU M646 OSANU
			VIMAG	G580 BRU M646 VJN A341 VIMAG
		OLKIT	OSANU	M758 VJN M646 OSANU
			VIMAG	M758 VJN A341 VIMAG
				M759 BRU W461 VSN A341 VIMAG
	ASISU	OSANU	M768 BRU M646 OSANU	
		VIMAG	M768 BRU W461 VSN A341 VIMAG	
	UJUNG FIR	OLKIT	AGSON	M759 BRU R223 AGSON
			MAMOK	M759 BRU M768 MAMOK
			BAXAL	M759 BRU W453 LATIL W441 VTW A211 BAXAL
		ASISU	AGSON	M768 BRU R223 AGSON
			MAMOK	M768 MAMOK
			BAXAL	M768 BRU W453 LATIL W441 VTW A211 BAXAL
MANILA FIR	SINGAPORE FIR	VINIK	KAMIN	M754 BRU M646 KAMIN
			AGOBA	M754 BRU G580 VKG M761 AGOBA
			ATETI	M754 BRU G580 ATETI
			OLKIT	M754 BRU M759 OLKIT
			ASISU	M754 BRU M768 ASISU
	OSANU	KAMIN	M646 KAMIN	
		AGOBA	M646 BRU G580 VKG M761 AGOBA	
		ATETI	M646 BRU G580 ATETI	

Adjacent FIR	To	Entry Airways or Waypoints	Exit Airways or Waypoints	FPL Route	
			OLKIT	M646 VJN M758 OLKIT	
			ASISU	M646 VJN Y446 ASISU	
		VIMAG		KAMIN	A341 VJN M646 KAMIN
				AGOBA	A341 VJN M646 BRU G580 VKG M761 AGOBA
			ATETI	A341 VJN M646 BRU G580 ATETI	
			OLKIT	A341 VJN M758 OLKIT	
			ASISU	A341 VJN Y446 ASISU	
	JAKARTA FIR	VINIK	PAPSA	M754 BRU G580 VKG R455 PAPSA	
			OKADA	M754 BRU R223 BUTAX P648 OKADA	
		OSANU	PAPSA	M646 BRU G580 VKG R455 PAPSA	
			OKADA	M646 VJN P648 OKADA	
		VIMAG	PAPSA	A341 VJN M646 BRU G580 VKG R455 PAPSA	
			OKADA	A341 VJN P648 OKADA	
	UJUNG FIR	VINIK	AGSON	M754 BRU R223 AGSON	
			MAMOK	M522 MAMOK	
			BAXAL	M522 VJN W425 VTW A211 BAXAL	
		OSANU	AGSON	M646 BRU R223 AGSON	
			MAMOK	M646 VJN M522 MAMOK	
			BAXAL	M646 VJN W425 VTW BAXAL	
		VIMAG	AGSON	A341 VJN M646 BRU R223 AGSON	
			MAMOK	A341 VJN M522 MAMOK	
BAXAL			A341 VJN W425 VTW A211 BAXAL		
JAKARTA FIR	SINGAPORE FIR	PAPSA	ASISU	R455 VKG G580 BRU M768 ASISU	
		ANIPU	ASISU	M772 ASISU (Unidirectional Eastbound)	
		OKADA	ASISU	P648 BUTAX R223 BRU M768 ASISU	
	MANILA FIR	PAPSA	VINIK	R455 VKG G580 BRU M754 VINIK	
			OSANU	R455 VKG G580 BRU M646 OSANU	
			VIMAG	R455 VKG G580 BRU M646 VJN A341 VIMAG	
		OKADA	VINIK	P648 BUTAX R223 BRU M754 VINIK	
			OSANU	P648 VJN M646 OSANU	
			VIMAG	P648 VJN A341 VIMAG	
UJUNG FIR	SINGAPORE FIR	AGSON	OLKIT	R223 BRU M759 OLKIT	
			ASISU	R223 BRU M768 ASISU	
	MAMOK	KAMIN	M768 BRU M646 KAMIN		
		AGOBA	M768 BRU G460 VSI W459 AGOBA		
		ATETI	M768 BRU G580 ATETI		
		OLKIT	M768 BRU M759 OLKIT		
		ASISU	M768 ASISU		

Adjacent FIR	To	Entry Airways or Waypoints	Exit Airways or Waypoints	FPL Route
	MANILA FIR	AGSON	VINIK	R223 BRU M754 VINIK
			OSANU	R223 BRU M646 OSANU
			VIMAG	R223 BRU M646 VJN A341 VIMAG
		MAMOK	VINIK	M522 VINIK
			OSANU	M522 VJN M646 OSANU
			VIMAG	M522 VJN A341 VIMAG
		BAXAL	VINIK	A211 VTW W425 VJN M522 VINIK
			OSANU	A211 VTW W425 VJN M646 OSANU
			VIMAG	A211 VTW W425 VJN A341 VIMAG

1.8.10 Malaysia Air Traffic Management Contingency Plan and Arrangement

1.8.10.1 Aircraft operators and pilots are expected to familiarise themselves with the ATM Contingency Plan and Arrangements of Kuala Lumpur FIR, Kota Kinabalu FIR and/or airspace where ATS is provided by Malaysia (see ENR 2.1).

1.8.10.2 Detailed Information on the Malaysia ATM Contingency Plan and Arrangements can be found on CAAM Official Website:

a) Malaysia ATM Contingency Level 1 Plan

The document elaborates on the details of domestic flight management within Kuala Lumpur FIR and/or Kota Kinabalu FIR during the contingency period

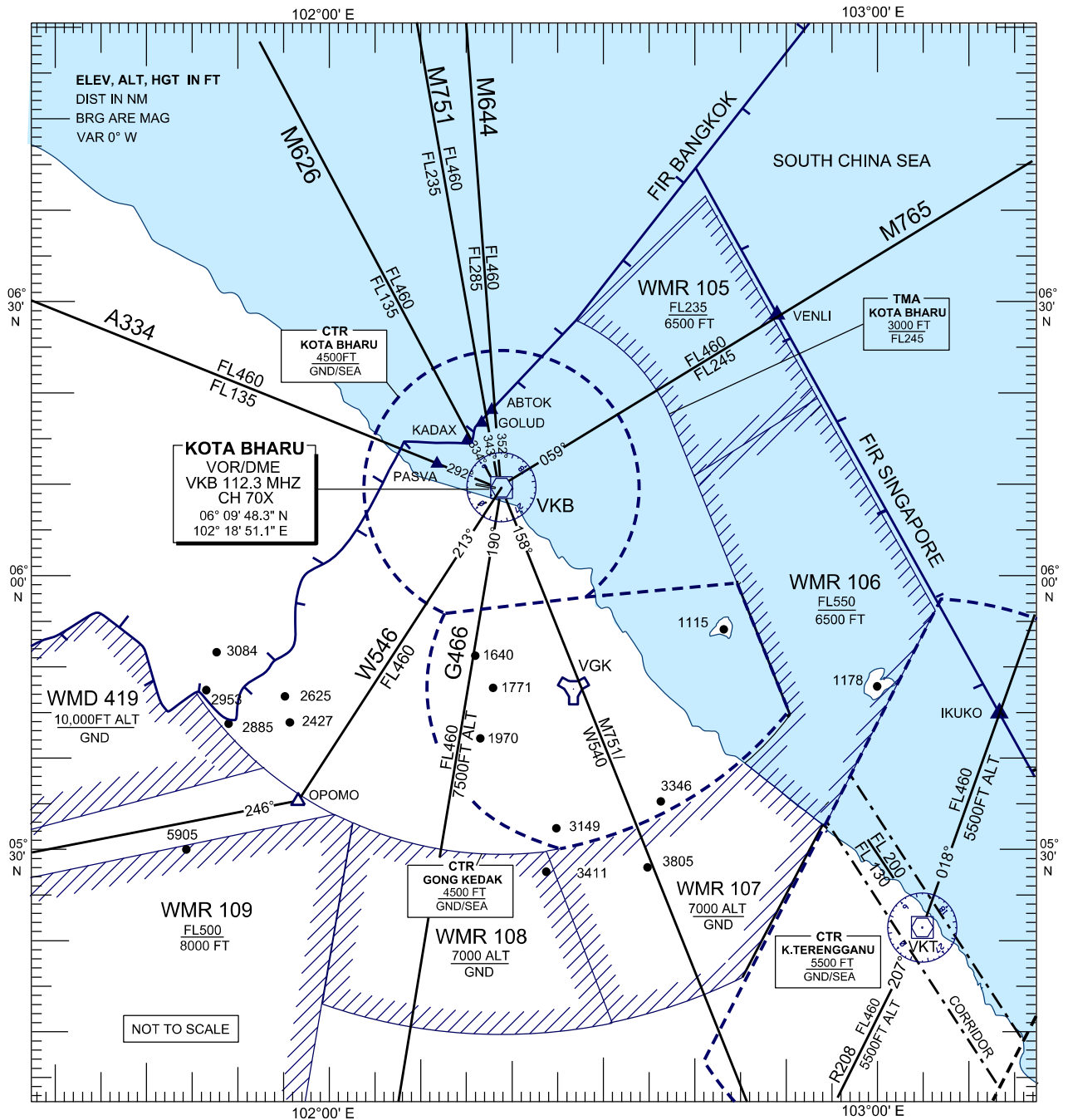
b) Malaysia ATM Contingency Level 2 The Arrangement

The document elaborates on the details for flights transiting Kuala Lumpur FIR and/or Kota Kinabalu FIR during the contingency period

c) Volcanic Ash Cloud Contingency (VAC)

The document elaborates on the detailed information of VAC contingency.

KOTA BHARU TMA



CHANGES : AMEND FIR BOUNDARY
AMEND ATS ROUTE

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WMKP AD 2.1 AERODROME LOCATION INDICATOR AND NAME

WMKP - PENANG INTERNATIONAL AIRPORT

WMKP AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	051744N 1001620E 5.6 M from edge of emergency access road & 5.8 M from edge of service road
2	Direction and distance from (city)	Dist 14.4KM BRG 206° from Georgetown (KOMTAR) Penang.
3	Elevation/Reference temperature	3M (10 FT) / 31.95°C
4	Geoid undulation at AD ELEV PSN	-12 M
5	MAG VAR/Annual change	0° W (2023) / -0° 1' 18" W decreasing
6	AD operator, address, telephone, telefax, e-mail address, AFS and website address	Operator: Malaysia Airports Sdn Bhd Penang International Airport 11900 Bayan Lepas Penang TEL: +604 - 2520252 Telefax: +604 - 6435339 e-mail: masb_pen@malaysiaairports.com.my Http://www.malaysiaairports.com.my ATC Services: Civil Aviation Authority Of Malaysia Penang Air Traffic Control Complex Penang International Airport 11900 Bayan Lepas Penang Malaysia TEL: +604 - 6444911 AFS:WMKPZTZX e-mail:wmkp@caam.gov.my
7	Types of traffic permitted (IFR/VFR)	IFR / VFR
8	Remarks	NIL

WMKP AD 2.3 OPERATIONAL HOURS

1	AD Operator	H24
2	Customs and immigration	Customs: H24 Immigration: H24
3	Health and sanitation	H24
4	AIS Briefing Office	NIL
5	ATS Reporting Office (ARO)	H24
6	MET Briefing Office	H24
7	ATS	H24
8	Fuelling	PETRONAS : 2200 - 1400; SHELL : 21:00 - 15:00
9	Handling	H24 : AeroDarat Services Sdn Bhd and POS Aviation Sdn Bhd, Ground Team Red Sdn Bhd, Malindo Airways Sdn Bhd
10	Security	H24
11	De-icing	NIL
12	Remarks	NIL

WMKP AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	AeroDarat Services Sdn Bhd and POS Aviation
2	Fuel/oil types	AVGAS 100, Jet A1
3	Fuelling facilities/capacity	PETRONAS: Hydrant refuelling, bowser / 3.5 million litre. SHELL: Bowser / 720,000 litre
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

WMKP AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotels in Bayan Lepas, Teluk Kumbar and Bukit Jambul
2	Restaurants	Restaurant in terminal building.
3	Transportation	Taxi,Rental car and Bus
4	Medical facilities	Clinic in terminal building and general hospital nearby in town.
5	Bank and Post Office	Currency Exchange.Automated Teller Machine
6	Tourist Office	Tourist Information Counter in terminal building.
7	Remarks	Duty Free Shops.

WMKP AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 9
2	Rescue equipment	Adequately provided as recommended by ICAO
3	Capability for removal of disabled aircraft	With arrangement with the respective airlines and ground handler. Aircraft lifting equipment: i) Largest aircraft - B747-8F
4	Remarks	All Airport Fire Rescue Service (AFRS) personnel are to be well trained in rescue and firefighting as well as medical first aid.

WMKP AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	-
2	Clearance priorities	-
3	Remarks	-

WMKP AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	<p>Bay A1, Bay A4, Bay A6, Bay A7 and Bay A8 Surface: Concrete (Rigid) Strength: PCR 1360 / R / D / W / U</p> <p>Bay A1R, Bay A1L, Bay A2, Bay A3, Bay A4R, Bay A4L and Bay A5 Surface: Concrete (Rigid) Strength: PCR 685 / R / C / W / U</p> <p>Bay 1L Surface: Concrete (Rigid) Strength: PCR 904 / R / D / W / U</p>
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		<p>Bay 1 Surface: Concrete (Rigid) Strength: PCR 1026 / R / D / W / U</p> <p>Bay A6R, Bay B1, Bay B3, Bay B5, Bay B7 Surface: Concrete (Rigid) Strength: PCR 704 / R / D / W / U</p> <p>Bay A6L, Bay A7R and Bay A7L Surface: Concrete (Rigid) Strength: PCR 157 / R / D / W / U</p> <p>Bay 21 Surface: Concrete (Rigid) Strength: PCR 801 / R / C / W / U</p> <p>Bay 22 and Bay 23 Surface: Concrete (Rigid) Strength: PCR 715 / R / B / W / U</p> <p>Bay 15, Bay 15L, Bay 15R, Bay 16, Bay 16R, Bay 17, Bay 18, Bay 19 Surface: Concrete (Rigid) Strength: PCR 1250 / R / C / W / T</p> <p>H1 Surface: Concrete(Rigid) Strength: PCR 160 / R / C / W / T</p>
2	Taxiway width, surface and strength	<p>Taxiway A and Taxiway E Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 577 / F / A / W / U</p> <p>Taxiway A/04 Width: 30 m Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 787 / R / A / W / U and PCR 577 / F / A / W / U</p> <p>Taxiway A/22 Width: 30 m Surface: Asphalt (Flexible) Strength: PCR 577 / F / A / W / U</p> <p>Taxiway B Width: 34 m Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 643 / R / A / W / U and PCR 481 / F / A / W / U</p> <p>Taxiway C Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 481 / F / A / W / U</p> <p>Taxiway D Width: 34 m Surface: Asphalt (Flexible) Strength: PCR 481 / F / A / W / U</p> <p>Taxiway F Width: 31 m Surface: Asphalt (Flexible) Strength: PCR 577 / F / A / W / U</p>

		<p>Taxiway H Width: 42 m Surface: Concrete (Rigid) Strength: PCR 1250 / R / C / W / T</p> <p>Taxiway G Width: 32 m Surface: Asphalt (Flexible) Strength: PCR 577 / F / A / W / U</p> <p>Taxiway J Width: 25 m Surface: Concrete (Rigid) Strength: PCR 715 / R / B / W / U</p> <p>Aircraft Stand Taxilane J1 Width: 48 m Surface: Concrete(Rigid) Strength: PCR 715 / R / B / W / U</p> <p>Apron Taxiway K Width: 24 m Surface: Concrete (Rigid) Strength: PCR 1360 / R / D / W / U</p> <p>Aircraft Stand Taxilane L Width: 24 m Surface: Concrete (Rigid) Strength: PCR 1250 / R / C / W / T</p> <p>Aircraft Stand Taxilane M Width: 13 m Surface: Concrete (Rigid) Strength: PCR 160 / R / C / W / T</p> <p>Aircraft Stand Taxilane N Width: 20 m Surface: Concrete (Rigid) Strength: PCR 160 / R / C / W / T</p>
3	Altimeter checkpoint location and elevation	<p>Location: Main Apron Elevation: 4 m</p> <p>Location: General Aviation Apron Elevation: 3 m</p> <p>Location: Cargo Apron Elevation: 3 m</p>
4	VOR checkpoints	NIL
5	INS checkpoints	At aircraft parking stands (See AD 2-WMKP-2-4)
6	Remarks	<p>TWY 'C' not available for wide-bodied aircraft after LDG RWY 04 due acute turn into TWY 'A'.</p> <p>No taxiway shoulder at TWY A, TWY A/04, TWY A/22, TWY B, TWY C, TWY D, TWY E, TWY F, TWY G and TWY H.</p>

WMKP AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Taxiing guidance signs at all intersection with TWY and RWY and at all RWY Holding positions. Yellow taxiing guide lines at apron. Visual docking and guidance system for aircraft stand with aerobridge. Nose wheel guidance lines for all parking bays.
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2	RWY and TWY markings and LGT	RWY: Centre line, designation, threshold, side stripe, transverse stripe, touchdown zone, aiming point and chevron markings. TWY: Centre line, taxi side stripe, intermediate holding position and runway-holding position and transverse stripe markings. RWY LGT: Edge, threshold lights and end lights. TWY LGT: Centre line, exit and edge lights.
3	Stop bars	NIL
4	Remarks	Any aircraft is strictly prohibited from holding in front of the Fire Station service road. This requirement ensures that access for emergency vehicles, including fire trucks and rescue teams, remains unobstructed at all times during emergencies

WMKP AD 2.10 AERODROME OBSTACLES

In Area 2					
OBST ID/ Designation	OBST type	OBST position	ELEV/HGT	Marking/Type, colour, lighting (LGT)	Remarks
a	b	c	d	e	f
WMKPOB001	HILL	051845N 1001650E	HGT 390 FT AMSL	NIL	DIST 1.81 KM, BRG 004° (T) FM ARP
WMKPOB002	HILL	051925N 1001910E	HGT 693 FT AMSL	NIL	DIST 5.39 KM, BRG 058° (T) FM ARP
WMKPOB003	HILL	051702N 1001508E	HGT 563 FT AMSL	NIL	DIST 3.32 KM, BRG 239° (T) FM ARP, HGT
WMKPOB004	HILL	051540N 1001645E	HGT 693 FT AMSL	NIL	DIST 3.99 KM, BRG 178° (T) FM ARP
WMKPOB005	HILL	051615N 1001640E	HGT 517 FT AMSL	NIL	DIST 2.89 KM, BRG 184° (T) FM ARP
WMKPOB006	Aerial Mast	NIL	HGT 2200FT MSL	LGTD	DIST 10.2 KM, BRG 349° FM ARP
WMKPOB007	BUILDING	051742.7N 1001511.4E	HGT 220 FT MSL	LGTD	NIL
WMKPOB008	BUILDING	051742.7N 1001644.4E	HGT 266 FT 8 IN MSL	LGTD	NIL
WMKPOB009	BUILDING	050858.8N 1001325.4E	HGT 289 FT MSL	LGTD	NIL
WMKPOB010	BUILDING	051932.7N 1001701.4E	HGT 412 FT MSL	LGTD	NIL
WMKPOB011	BUILDING	051958.7N 1001725.4E	HGT 317 FT MSL	LGTD	NIL
WMKPOB012	BUILDING	052016.7N 1001701.4E	HGT 450 FT MSL	LGTD	NIL
WMKPOB013	BUILDING	051934.7N 1001631.4E	HGT 255 FT MSL	LGTD	NIL
WMKPOB014	BUILDING	051828.7N 1001610.4E	HGT 270 FT MSL	LGTD	NIL
WMKPOB015	BUILDING	052000.7N 1001730.4E	HGT 390.4 FT MSL	LGTD	NIL
WMKPOB016	BUILDING	051904.7N 1001617.4E	HGT 253 FT MSL	LGTD	NIL
WMKPOB017	BUILDINGS	051840.8N 1001643E - 051939.2N 1001738.4E - 052055.3N 1001806.0E - 052057.6N 1001625.5E - 051959N 1001506E	HGT 100 M AGL	NIL	Erected within coordinate.
WMKPOB018	BUILDING	051955N 1001833E	HGT 295 FT AMSL	LGTD	NIL
WMKPOB019	BUILDING	051957N 1001834E	HGT 301 FT MSL	LGTD	NIL

WMKP AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	AMO BAYAN LEPAS
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	AMO BAYAN LEPAS H24 (0024 0606 1212 1818)
4	Trend forecast Interval of issuance	TREND Half hourly
5	Briefing/consultation provided	Provided
6	Flight documentation Language(s) used	Charts, Tabular Form and Abbreviated Plain Language Text English
7	Charts and other information available for briefing or consultation	Flight Level Wind/Temp FL050, FL100, FL140, FL180, FL240, FL270, FL300, FL320, FL340, FL360, FL390, FL410, FL450 and FL530, SIGWX, Volcanic Ash/Tropical Cyclone Advisory Bulletin, SIGMET, AIRMET, Aerodrome Warning, METAR Bulletin, TAFOR Bulletin, WMKP Take-Off Data, Area QNH for Kuala Lumpur FIR and Kota Kinabalu FIR, Radar and Satellite Pictures.
8	Supplementary equipment available for providing information	Doppler Weather Radar and Aviation Self-Briefing Terminal - ABT (Internet)
9	ATS units provided with information	Penang APP/TWR
10	Additional information (limitation of service, etc.)	TEL: +604 - 6438302 / 6456194 Telefax:+604 - 6449076 / 6804

WMKP AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength (PCR) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
04	42.24°	3354 x 46	PCR 787 / R / A / W / U - 50 m Concrete (Rigid) PCR 577 / F / A / W / U - 3304 m Asphalt (Flexible)	THR coordinates 051709.41N 1001600.14E RWY end coordinates 051830.25N 1001713.37E GUND -11.6m	THR: 2.7 m (8.9 ft) TDZ: 2.7 m (8.9 ft)
22	222.24°	3354 x 46	PCR 787 / R / A / W / U - 50 m Concrete (Rigid) PCR 577 / F / A / W / U - 3304 m Asphalt (Flexible)	THR coordinates 051830.25N 1001713.37E RWY end coordinates 051709.41N 1001600.14E GUND -12 m	THR: 3 m (10 ft)

Slope of RWY-SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
+0.012%	NIL	NIL	3474 x 280	NIL	RESA: 90m x 92 m
-0.012%	NIL	NIL	3474 x 280	NIL	RESA: 90m x 92 m

WMKP AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)		TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2		3	4	5	6
	FROM	TORA				
04	THRESHOLD	3354	3354	3354	3354	NIL
	INTERSECTION B	2686	2686	2686	N/A	NIL
22	THRESHOLD	3354	3354	3354	3354	NIL
	INTERSECTION D	2283	2283	2283	N/A	NIL

WMKP AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
04	CAT1 918.5 M LIH	Green -	PAPI Left & Right / Slope 3° 17.6 M (57.7 FT) White and Red, Left and Right of each RWY (8 light boxes) One (1) for each RWY.	NIL	NIL	3354 M 60 M Variable White/ Yellow LIH	Red	NIL	Inconsistent Interval Distance of Runway 04 Approach Light Mast From Row No. 21 to Row No. 30
22	SALS 420 M LIH	Green -	PAPI Left & Right / Slope 3° 18.4 M (60.4 FT) White and Red Left and Right of each RWY (8 light boxes) One (1) for each RWY	NIL	NIL	3354 M 60 M Variable White/ Yellow LIH	Red	NIL	NIL

WMKP AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	ABN: Available on top of Control Tower, FLG Green and WHITE 20 to 30 per minute.ON at night and during bad weather. IBN:Nil
2	LDI location and LGT Anemometer location and LGT	LDI: NIL Wind-direction indicator (WDI) RWY 04: 305 M from THR on left side, 130 M from RWY centre line and lighted. RWY 22: 351 M from THR on left side, 100 M from RWY centre line and lighted.
3	TWY edge and centre line lighting	TWY Edge Lights - At exit curve TWY Centre line lights - All TWY
4	Secondary power supply/switch-over time	Secondary power supply: Available to all AGL at AD. Switch-over time: Maximum 15 seconds
5	Remarks	NIL

WMKP AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	NIL

WMKP AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	BUTTERWORTH CTR Semi-circle of 15 NM radius centred on VBT (052837.19N 1002335.81E) from 053653N 1001113E clockwise to 051947N 1003555E thence a straight line to 050817N 1002755E thence a semi-circle of 15 NM radius centred VPG (051646.7N 1001537.4E) clockwise to 052517N 1000319E thence a straight line to 053654N 1001118E.
2	Vertical limits	SFC to 5 500 ft AMSL
3	Airspace classification	Class C
4	ATS unit call sign Language(s)	BUTTERWORTH RADAR, PENANG TOWER, PENANG GROUND English
5	Transition altitude	11 000 ft AMSL
6	Remarks	NIL

WMKP AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
SMC	PENANG GROUND	121.600 MHz 121.900 MHz	H24	121.600 MHz - For ACFT use. 121.900 MHz - for vehicles use.
TWR	PENANG TOWER	121.100 MHz		-
ATIS	PENANG INFORMATION	126.400 MHz		-

WMKP AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS	IPG	109.900 MHz	H24	051839.87N 1001722.00E	-	Alignment 042° / 222°
GP/DME	-	333.800 MHz CH 36X		051716.7N 1001613.4E	-	G/P 3°. DME located at G/P.
DVOR/DME	VPG	116.200 MHz CH 109X		051645.84N 1001538.78E	-	222° MAG / 0.53 NM to THR RWY 04.

WMKP AD 2.20 LOCAL AERODROME REGULATIONS

2.20.1 Start Up and Push Back

- 2.20.1.1 ATC will authorize the initiation of engine start up and aircraft push back in order to regulate the movement of aircraft with respect to other aircraft on the movement area
- 2.20.1.2 The pilots-in-command of all aircraft require clearance from air traffic control for both engine start up and push back
- 2.20.1.3 During engine start up, it shall be the responsibility of the pilot in command and the aircraft marshaller to ensure that the area of the blast cone is cleared
- 2.20.1.4 During aircraft push back, it shall be the responsibility of the pilot-in-command and the aircraft marshaller to ensure that the area behind the aircraft is cleared of vehicles and other objects
- 2.20.1.5 Prior to, and during engine start up, the pilot-in-command and aircraft marshaller shall be responsible to ensure that the aircraft is towed to the correct position for engine start and that the appropriate blast zone behind an aircraft is cleared during engine start up.
- 2.20.1.6 Power out in Penang International Airport is not permitted.
- 2.20.1.7 Aircraft/ground handler is responsible to ensure appropriate aircraft push back equipment is available.

2.20.2 Aircraft Bay Regulation at Cargo Apron

- 2.20.2.1 Bay 21, 22, 23 are to accommodate A330 and below with a wingspan no exceeding 60.3 M. All aircraft park at these bays are power in, push-back mode.
- 2.20.2.2 Aircraft at bay 21 shall be pushed-back abeam bay 22 before start up and aircraft at bay 22 shall be pushed-back abeam bay 23 before start up. Aircraft at bay 23 shall be pushed-back facing north follow push back limit line marking before start-up.
- 2.20.2.3 For A333 aircraft movements with either parking or being occupied at Bay 21, a wing tip marshaller shall be present to guide the aircraft and to ensure the wing tip clearance compliance during docking or push-back operation.

2.20.3 Parking Area For General Aviation Aircraft

- 2.20.3.1 General Aircraft with maximum wing span 27.05m operating at Turboprop Apron subject to allocation approval from Bay Allocation Unit, MASB
- 2.20.3.2 General Aircraft with above wing span 27.05m operating at all bay except Bay B2, B4, B6, A7R & A7L subject to allocation approval from Bay Allocation Unit, MASB

2.20.4 Turbo Prop Apron

- 2.20.4.1 Bays B2, B4 and B6 can only accommodate AT76 and smaller aircraft. Aircraft at Bay B2 shall push back straight to push back area and pull forward to the taxilane before start-up. Aircraft at Bay B4 shall push back to abeam B2 facing northeast or push back straight to push back area and pull forward to the taxilane before start-up.
- 2.20.4.2 Aircraft at Bay B6 shall push back to abeam bay B4 facing northeast before start-up. Ground handler shall ensure safety of the aircraft during pushing back operations.

2.20.5 Aircraft Operations Restrictions

- 2.20.5.1 Prior coordination with bay allocation unit needed if aircraft type B748 are in use.
- 2.20.5.2 B748 or similar size aircraft type should be parked at Bay 1 only. Aircraft should be pushed back via TWY K facing south and taxi out via TWY E, TWY A and follow ATC instruction for the runway in use.
- 2.20.5.3 No code E aircraft should taxi behind the parked B748 aircraft at Bay 1.
- 2.20.5.4 No simultaneous aircraft movement is allowed either power-in and push back at Bay A6, A7 or A7R.
- 2.20.5.5 No simultaneous aircraft movement is allowed either power-in and push back at the main and cargo apron.
- 2.20.5.6 When Bay A1, A4, A6, A7 and Bay 1 occupied with aircraft, no aircraft is allowed to be parked at Bay A1L, A1R, A4L, A4R, A6L, A6R, A7L, A7R, Bay 1L and Bay A8 and vice versa.

2.20.6 Engine Ground Run Procedure

- 2.20.6.1 The following conditions shall apply to engine-run by jet or turbine engine aircraft:
 - a) Idle-power engine run;
This is approved at the aircraft parking bay with clearance from ATCO. Engine-run operator shall ensure all ground precautions are taken.
 - b) Above idle-power engine-run;
This is approved only on the apron/Taxiway "A" at the position that is parallel to the runway.
 - c) Full-power engine-run;
ATCO shall use his/her discretion to permit a pilot's request to carry out a full-power engine-run on the runway-in-use with prior coordination with BUTTERWORTH RADAR to ensure that this would not cause delay to arriving or other departing aircraft.

WMKP AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

WMKP AD 2.22 FLIGHT PROCEDURES

2.22.1 DME Arrival Procedures For Penang International Airport.

RADIAL/ TRACK	NAVAID	DME CHECK POINT	MNM IFR EN-ROUTE ALTITUDE	AFTER Passing DME/VPG DESCEND to FT on QNH	REMARKS								
RDL 009 (ALFA 457)	VPG	Not Required	7000FT	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">33</td> <td style="text-align: center;">24</td> </tr> <tr> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> <tr> <td style="text-align: center;">5500</td> <td style="text-align: center;">4000</td> </tr> </table>	33	24	↓	↓	5500	4000	Make one of the following approaches as directed by ATC: <ul style="list-style-type: none"> i. 10 DME ARC VPG or ii. 15 DME ARC VPG or iii. Over VPG, carry out Standard Instrument Approach Procedure 		
33	24												
↓	↓												
5500	4000												
RDL 066 (BRAVO 219)	VPG	Not Required	FL 140	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">38</td> <td style="text-align: center;">27</td> </tr> <tr> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> <tr> <td style="text-align: center;">7500</td> <td style="text-align: center;">4000</td> </tr> </table>	38	27	↓	↓	7500	4000			
38	27												
↓	↓												
7500	4000												
RDL 130 (WHISKEY 530)	VPG	Not Required	7000FT	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">25</td> <td style="text-align: center;">12</td> <td style="text-align: center;">8</td> </tr> <tr> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> <tr> <td style="text-align: center;">5100</td> <td style="text-align: center;">4500</td> <td style="text-align: center;">4000</td> </tr> </table>	25	12	8	↓	↓	↓	5100	4500	4000
25	12	8											
↓	↓	↓											
5100	4500	4000											
RDL 155 (ALFA 457)	VPG	Not Required	7000FT	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">25</td> <td style="text-align: center;">12</td> <td style="text-align: center;">8</td> </tr> <tr> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> <tr> <td style="text-align: center;">5100</td> <td style="text-align: center;">4500</td> <td style="text-align: center;">4000</td> </tr> </table>	25	12	8	↓	↓	↓	5100	4500	4000
25	12	8											
↓	↓	↓											
5100	4500	4000											

RADIAL/ TRACK	NAVAID	DME CHECK POINT	MNM IFR EN-ROUTE ALTITUDE	AFTER Passing DME/VP DESCEND to FT on QNH	REMARKS
RDL 224 (GOLF 468)	VPG	Not Required	9000FT	17 ↓ 4000	
RDL 335 (WHISKEY 525)	VPG	Not Required	7000FT	17 ↓ 4000	

WMKP AD 2.23 ADDITIONAL INFORMATION**2.23.1 Local Flying Restrictions**

- a) Right hand circuit Runway 04
Left hand circuit Runway 22
- b) Circuit height - light ACFT 1000 ft within 5 NM radius of the ARP.
- other ACFT 1500 ft within 7 NM radius of the ARP.
- c) Circling prohibited in sector 250° - 020° due to high terrain.

2.23.2 Bird Concentration

Presence of birds within airport vicinity, Pilot to be caution during take off and landing.

2.23.3 Deviation of compliance

2.23.3.1 Wind direction indicator (WDI) non frangible for both runway.

2.23.4 GNSS RAIM

2.23.4.1 RNP AR APCH operations are authorised based on GNSS as the primary infrastructure. It is mandatory for operators who wish to conduct RNP AR APCH to get GNSS RAIM prediction associated with GNSS availability. At this stage, CAAM Malaysia will not provide such service and operators who wish to conduct RNP AR APCH procedures are assumed to have their own source for the necessary GNSS information.

2.23.5 Pilot to exercise caution on the aerodrome non-conforming issues

2.23.5.1 Portion of the perimeter road located within the runway strips on the left side of the Runway 22 approach. No vehicle movement is allowed during aircraft take-off and landing.

2.23.5.2 Portion of the perimeter road located within TWY strips parallel TWY A from TWY A22 to TWY D.

2.23.5.3 No vehicle movement is allowed during aircraft taxiing at TWY A from TWYA22 to TWY D.

2.23.5.4 Taxiway edge light not available at Cargo Apron.

2.23.5.5 Insufficient wing tip safety clearance of 5.1 m for A333 aircraft at the left side during entering and exiting at Bay 21.

2.23.5.6 A service road on the terminal apron is situated 33 m from the centre line of Apron Taxiway K.

2.23.5.7 The PCR strength of TWY B, C & D is lower than ACR of B777-300 ER.

2.23.5.8 The PCR strength of TWY B, C & D is lower than the RWY it serves.

WMKP AD 2.24 CHARTS RELATED TO AN AERODROME

Chart name	Page
AERODROME/HELIPORT CHART (WMKP) - ICAO	AD 2-WMKP-2-1
AIRCRAFT PARKING/DOCKING CHART (WMKP) - ICAO	AD 2-WMKP-2-3
AIRCRAFT PARKING/DOCKING CHART (WMKP) - ICAO (TABULAR 1)	AD 2-WMKP-2-4
AERODROME GROUND MOVEMENT CHART (WMKP) - ICAO	AD 2-WMKP-2-5
AERODROME OBSTACLE CHART (WMKP) - ICAO - TYPE A	AD 2-WMKP-3-1
STANDARD DEPARTURE CHART - ICAO - RWY 04/22 PENANG RADAR ONE	AD 2-WMKP-6-1
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 04 RNAV (GNSS) OMBOK 1A GOGOM 1A UGAMO 1A LUNTU 1A BETNU 1A BOGUK 1A KABOT 1A UDIKO 1A MADUM 1A	AD 2-WMKP-6-3
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 04 RNAV (GNSS) OMBOK 1A GOGOM 1A UGAMO 1A LUNTU 1A BETNU 1A BOGUK 1A KABOT 1A UDIKO 1A MADUM 1A (TABULAR 1)	AD 2-WMKP-6-4
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 04 RNAV (GNSS) OMBOK 1A GOGOM 1A UGAMO 1A LUNTU 1A BETNU 1A BOGUK 1A KABOT 1A UDIKO 1A MADUM 1A (TABULAR 2)	AD 2-WMKP-6-5
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 04 RNAV (GNSS) OMBOK 1A GOGOM 1A UGAMO 1A LUNTU 1A BETNU 1A BOGUK 1A KABOT 1A UDIKO 1A MADUM 1A (TABULAR 3)	AD 2-WMKP-6-6
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 04 OMBOK 1C BETNU 1C KABOT 1C MADUM 1C LUNTU 1C BOGUK 1C UDIKO 1C	AD 2-WMKP-6-7
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 04 OMBOK 1C BETNU 1C KABOT 1C MADUM 1C LUNTU 1C BOGUK 1C UDIKO 1C (TABULAR 1)	AD 2-WMKP-6-8
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 22 RNAV (GNSS) OMBOK 1B GOGOM 1B UGAMO 1B LUNTU 1B BETNU 1B BOGUK 1B KABOT 1B UDIKO 1B MADUM 1B	AD 2-WMKP-6-9
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 22 RNAV (GNSS) OMBOK 1B GOGOM 1B UGAMO 1B LUNTU 1B BETNU 1B BOGUK 1B KABOT 1B UDIKO 1B MADUM 1B (TABULAR 1)	AD 2-WMKP-6-10
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 22 RNAV (GNSS) OMBOK 1B GOGOM 1B UGAMO 1B LUNTU 1B BETNU 1B BOGUK 1B KABOT 1B UDIKO 1B MADUM 1B (TABULAR 2)	AD 2-WMKP-6-11
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 22 RNAV (GNSS) OMBOK 1B GOGOM 1B UGAMO 1B LUNTU 1B BETNU 1B BOGUK 1B KABOT 1B UDIKO 1B MADUM 1B (TABULAR 3)	AD 2-WMKP-6-12
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 22 OMBOK 1D BETNU 1D KABOT 1D MADUM 1D LUNTU 1D BOGUK 1D UDIKO 1D	AD 2-WMKP-6-13
STANDARD DEPARTURE CHART INSTRUMENT - ICAO - RWY 22 OMBOK 1D BETNU 1D KABOT 1D MADUM 1D LUNTU 1D BOGUK 1D UDIKO 1D (TABULAR 1)	AD 2-WMKP-6-14
STANDARD ARRIVAL CHART INSTRUMENT - ICAO - RWY 04 RNAV (GNSS) OMBOK 1E LUNTU 1E BETNU 1E GORVU 1E MADUM 1E	AD 2-WMKP-7-1
STANDARD ARRIVAL CHART INSTRUMENT - ICAO - RWY 04 RNAV (GNSS) OMBOK 1E LUNTU 1E BETNU 1E GORVU 1E MADUM 1E (TABULAR 1)	AD 2-WMKP-7-2
STANDARD ARRIVAL CHART INSTRUMENT - ICAO - RWY 04 RNAV (GNSS) OMBOK 1E LUNTU 1E BETNU 1E GORVU 1E MADUM 1E (TABULAR 2)	AD 2-WMKP-7-3
STANDARD ARRIVAL CHART INSTRUMENT - ICAO - RWY 22 RNAV (GNSS) OMBOK 1F BETNU 1F MADUM 1F LUNTU 1F GORVU 1F	AD 2-WMKP-7-5
STANDARD ARRIVAL CHART INSTRUMENT - ICAO - RWY 22 RNAV (GNSS) OMBOK 1F BETNU 1F MADUM 1F LUNTU 1F GORVU 1F (TABULAR 1)	AD 2-WMKP-7-6
STANDARD ARRIVAL CHART INSTRUMENT - ICAO - RWY 22 RNAV (GNSS) OMBOK 1F BETNU 1F MADUM 1F LUNTU 1F GORVU 1F (TABULAR 2)	AD 2-WMKP-7-7
INSTRUMENT APPROACH CHART - ICAO - RWY 04 VOR Z (12 DME ARC)	AD 2-WMKP-8-1
INSTRUMENT APPROACH CHART - ICAO - RWY 04 VOR Z (12 DME ARC) (TABULAR 1)	AD 2-WMKP-8-2
INSTRUMENT APPROACH CHART - ICAO - RWY 22 VOR Z (15 DME & 17 DME ARC)	AD 2-WMKP-8-3
INSTRUMENT APPROACH CHART - ICAO - RWY 22 VOR Z (15 DME & 17 DME ARC) (TABULAR 1)	AD 2-WMKP-8-4
INSTRUMENT APPROACH CHART - ICAO - RWY 04 ILS Z OR LOC Z (12 DME ARC)	AD 2-WMKP-8-5
INSTRUMENT APPROACH CHART - ICAO - RWY 04 ILS Z OR LOC Z (12 DME ARC) (TABULAR 1)	AD 2-WMKP-8-6
INSTRUMENT APPROACH CHART - ICAO - RWY 04 RNP Z (AR)	AD 2-WMKP-8-7
INSTRUMENT APPROACH CHART - ICAO - RWY 04 RNP Z (AR) (TABULAR 1)	AD 2-WMKP-8-8
INSTRUMENT APPROACH CHART - ICAO - RWY 04 RNP Z (AR) (TABULAR 2)	AD 2-WMKP-8-9
INSTRUMENT APPROACH CHART - ICAO - RWY 04 RNP Z (AR) (TABULAR 3)	AD 2-WMKP-8-10
INSTRUMENT APPROACH CHART - ICAO - RWY 22 RNP Z (AR)	AD 2-WMKP-8-11
INSTRUMENT APPROACH CHART - ICAO - RWY 22 RNP Z (AR) (TABULAR 1)	AD 2-WMKP-8-12

Chart name	Page
INSTRUMENT APPROACH CHART - ICAO - RWY 22 RNP Z (AR) (TABULAR 2)	AD 2-WMKP-8-13
INSTRUMENT APPROACH CHART - ICAO - RWY 22 RNP Z (AR) (TABULAR 3)	AD 2-WMKP-8-14
INSTRUMENT APPROACH CHART - ICAO - RWY 22 RNP Z (AR) (TABULAR 4)	AD 2-WMKP-8-15
INSTRUMENT APPROACH CHART - ICAO - RWY 04 RNP Y	AD 2-WMKP-8-17
INSTRUMENT APPROACH CHART - ICAO - RWY 04 RNP Y (TABULAR 1)	AD 2-WMKP-8-18
INSTRUMENT APPROACH CHART - ICAO - RWY 04 RNP Y (TABULAR 2)	AD 2-WMKP-8-19
INSTRUMENT APPROACH CHART - ICAO - RWY 22 RNP Y	AD 2-WMKP-8-21
INSTRUMENT APPROACH CHART - ICAO - RWY 22 RNP Y (TABULAR 1)	AD 2-WMKP-8-22
INSTRUMENT APPROACH CHART - ICAO - RWY 22 RNP Y (TABULAR 2)	AD 2-WMKP-8-23

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**AERODROME/HELIPORT
CHART - ICAO**

05° 17' 44" N
100° 16' 20" E

ELEV 3 M

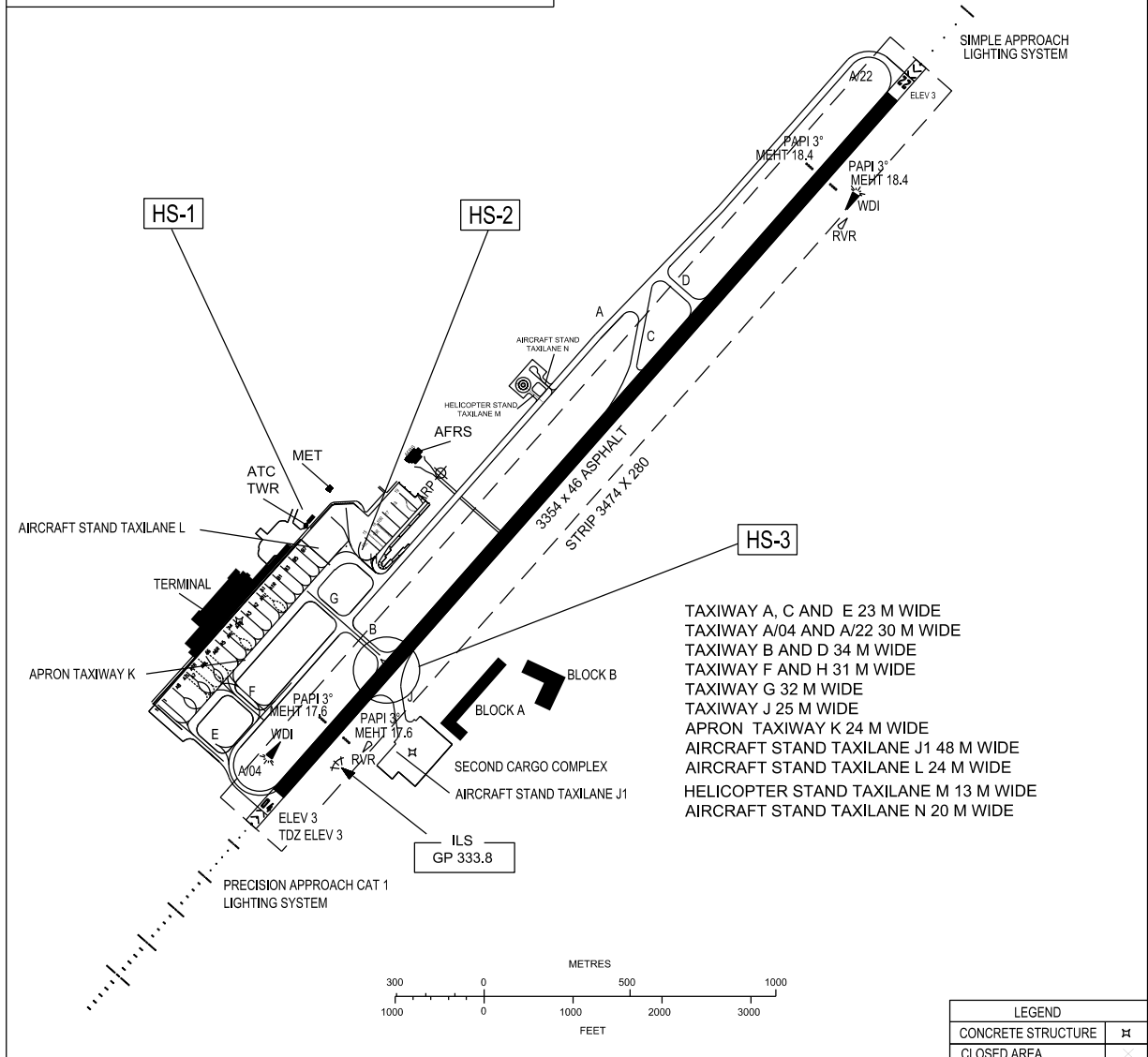
TWR	121.1
SMC	121.6
	121.9
ATIS	126.4

**PENANG/PENANG
INTERNATIONAL AIRPORT**

RWY	DIRECTION	THR	BEARING STRENGTH
04	42°	05° 17' 09.41" N 100° 16' 00.14" E	PCR 787/R/A/W/U-50 M CONCRETE (RIGID) PCR 577/F/A/W/U-3304 M ASPHALT (FLEXIBLE)
22	222°	05° 18' 30.25" N 100° 17' 13.37" E	PCR 577/F/A/W/U-3304 M ASPHALT (FLEXIBLE) PCR 787/R/A/W/U-50 M CONCRETE (RIGID)

HS1 CAUTION-VEHICLE CROSSING APRON TAXIWAY
HS2 CAUTION-MULTIPLE AIRCRAFT CROSSING
HS3 AIRCRAFT CROSSING RWY TO TWY J MUST HOLD SHORT AT TWY B

ANNUAL RATE OF CHANGE -0° 1' 18"W DECREASING
ELEVATIONS AND DIMENSIONS IN METERS
BEARINGS ARE MAGNETIC



CHANGES: UPDATE NEW AIRCRAFT PARKING BAY NO. 15L, 15, 15R, 16, 16R,
17, 18, 19 AND H1.
UPDATE REMOVAL OF AIRCRAFT PARKING BAY NO. B2, B4 AND B6
UPDATE REMOVAL HS-1 -CAUTION -VEHICLE CROSSING APRON TAXIWAY

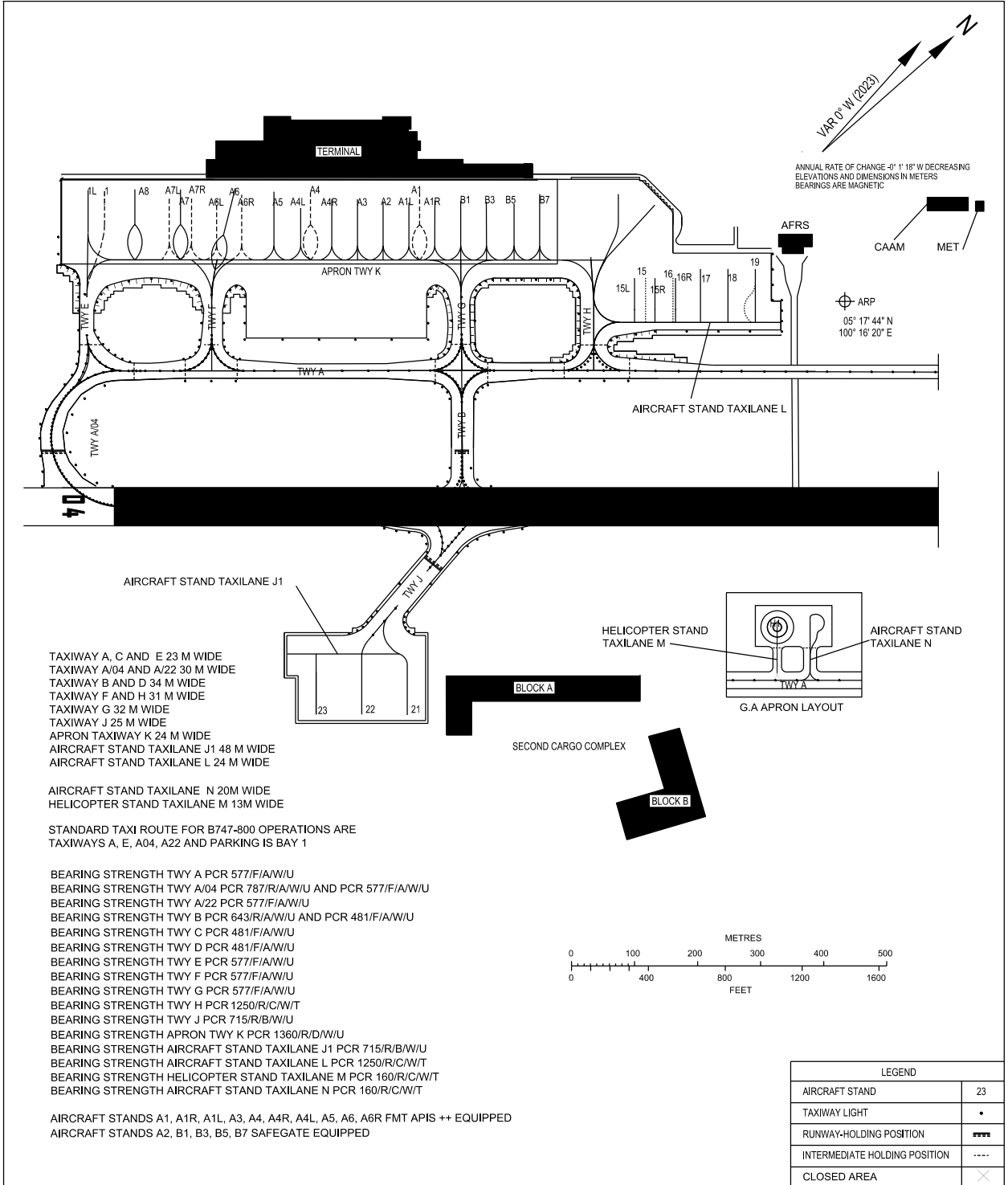
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**AIRCRAFT PARKING/
DOCKING CHART - ICAO**

APRON ELEV
4 M

TWR	121.1
SMC	121.6
	121.9
ATIS	126.4

**PENANG/PENANG
INTERNATIONAL AIRPORT**



CHANGES : UPDATE NEW HELICOPTER STAND TAXIWAY H, TAXILANE M &
AIRCRAFT STAND TAXILANE N

**AIRCRAFT PARKING/
DOCKING CHART - ICAO**

APRON ELEV
4 M

**PENANG/PENANG
INTERNATIONAL AIRPORT**

AIRCRAFT PARKING / DOCKING STAND POSITION

INS COORDINATES FOR AIRCRAFT STANDS		SURFACE & STRENGTH		AIRCRAFT TYPE	
A1	05°17'34.83"N 100°16'01.00"E	PCR	1360/R/D/W/U	B77W, B773	
A1R	05°17'35.22"N 100°16'01.74"E	PCR	685/R/C/W/U	A21N, B738, B739, A320, A319, AT76, E190	
A1L	05°17'34.21"N 100°16'00.83"E	PCR	685/R/C/W/U	B38M, A21N, B738, B739, A320, A321, AT76, E190	
A2	05°17'33.30"N 100°15'59.88"E	PCR	685/R/C/W/U	B38M, A21N, B738, B739, A320, A321, E190	
A3	05°17'32.31"N 100°15'59.01"E	PCR	685/R/C/W/U	A21N, B738, B739, A320, A321, E190	
A4	05°17'30.59"N 100°15'57.30"E	PCR	1360/R/D/W/U	B77W, B744, B773, A333	
A4R	05°17'31.35"N 100°15'58.10"E	PCR	685/R/C/W/U	B38M, A21N, B738, B739, A320, A321, E190	
A4L	05°17'30.06"N 100°15'57.13"E	PCR	685/R/C/W/U	B38M, A21N, B738, B739, A320, A321, E190	
A5	05°17'29.13"N 100°15'56.10"E	PCR	685/R/C/W/U	B38M, A21N, B738, B739, A320, A321, E190	
A6	05°17'27.77"N 100°15'54.63"E	PCR	1360/R/D/W/U	B77W, B773, A333	
A6R	05°17'27.97"N 100°15'54.90"E	PCR	704/R/D/W/U	A21N, B738, B739, A320, A321, E190	
A6L	05°17'26.69"N 100°15'54.39"E	PCR	157/R/D/W/U	AT76	
A7	05°17'25.64"N 100°15'52.78"E	PCR	1360/R/D/W/U	B77W, B733, B734, B744, B773, A333	
A7R	05°17'25.74"N 100°15'53.51"E	PCR	157/R/D/W/U	AT76	
A7L	05°17'24.88"N 100°15'52.74"E	PCR	157/R/D/W/U	AT76	
A8	05°17'23.89"N 100°15'51.20"E	PCR	1360/R/D/W/U	B77W, B744, B772, B773, A333	
1L	05°17'22.11"N 100°15'49.63"E	PCR	904/R/D/W/U	B744, A333	
1	05°17'22.73"N 100°15'50.16"E	PCR	1026/R/D/W/U	B748	
B1	05°17'36.19"N 100°16'02.66"E	PCR	704/R/D/W/U	B38M, A21N, B738, A320, AT76, E190	
B3	05°17'37.20"N 100°16'03.51"E	PCR	704/R/D/W/U	A21N, B738, A320, AT76, E190	
B5	05°17'37.89"N 100°16'04.88"E	PCR	704/R/D/W/U	A21N, B738, A320, AT76, E190	
B7	05°17'39.20"N 100°16'05.40"E	PCR	704/R/D/W/U	A21N, B738, A320, AT76, E190	
15L	05°17'39.91"N 100°16'11.88"E	PCR	1250/R/C/W/T	AT76	
15	05°17'40.65"N 100°16'11.92"E	PCR	1250/R/C/W/T	A21N, A320, B738, E190, AT76	
15R	05°17'40.70"N 100°16'12.60"E	PCR	1250/R/C/W/T	AT76	
16	05°17'41.70"N 100°16'12.87"E	PCR	1250/R/C/W/T	A21N, A320, B738, E190, AT76	
16R	05°17'41.48"N 100°16'13.30"E	PCR	1250/R/C/W/T	AT76	
17	05°17'42.75"N 100°16'13.82"E	PCR	1250/R/C/W/T	A21N, A320, B738, E190, AT76	
18	05°17'43.80"N 100°16'14.77"E	PCR	1250/R/C/W/T	A21N, A320, B738, E190, AT76	
19	05°17'44.85"N 100°16'15.72"E	PCR	1250/R/C/W/T	A21N, A320, B738, E190, AT76	
H1	05°17'33.83"N 100°16'09.17"E	PCR	160/R/C/W/T	MI-17	
21	05°17'14.95"N 100°16'19.87"E	PCR	801/R/C/W/U	A333, B752, B762, B763, A306	
22	05°17'13.20"N 100°16'18.29"E	PCR	715/R/B/W/U	A333, B752, B762, B763, A306	
23	05°17'11.45"N 100°16'16.70"E	PCR	715/R/B/W/U	A333, B752, B762, B763, A306	

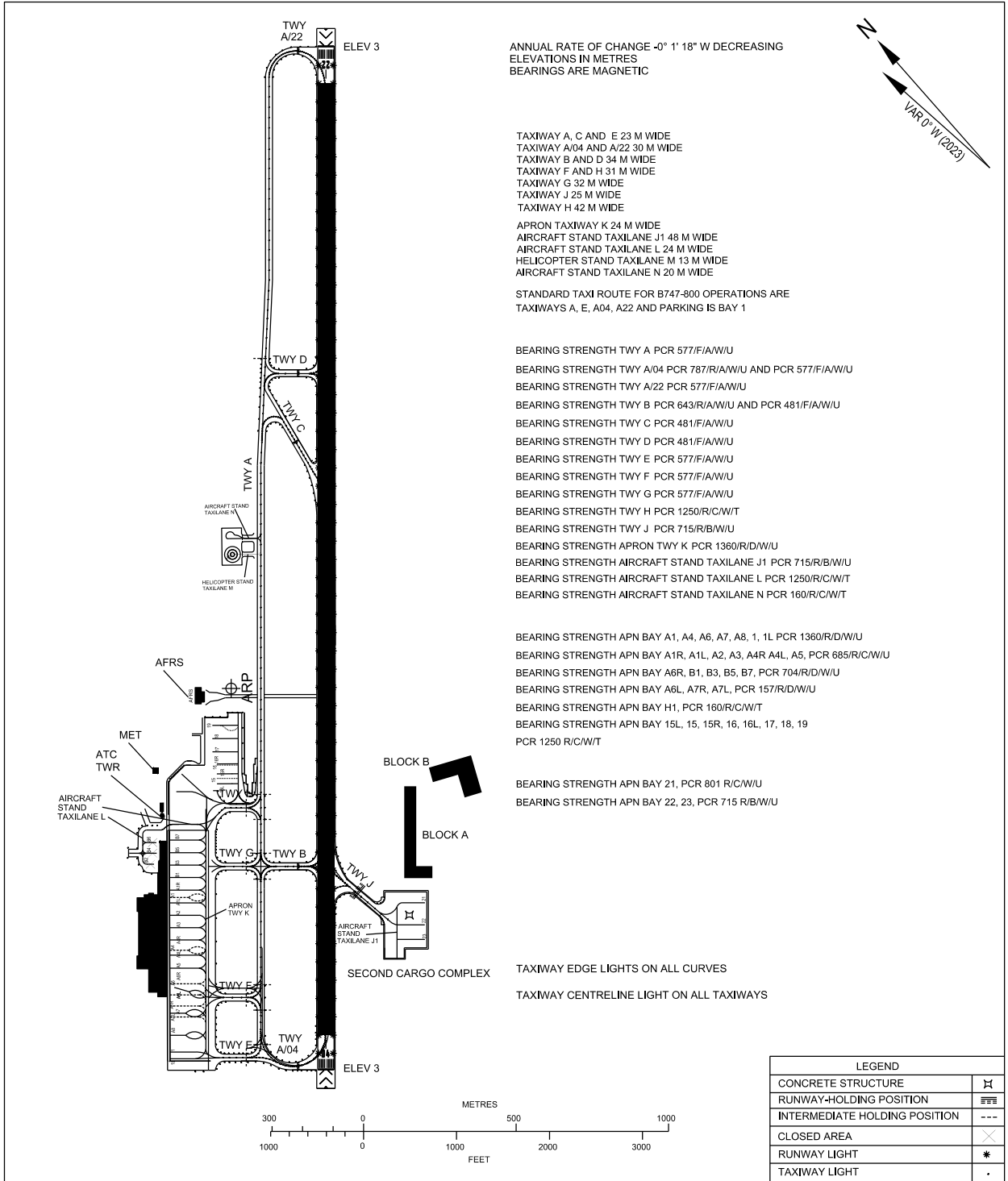
CHANGES : UPDATE INFORMATION ON AIRCRAFT STANDS COORDINATES AT BAY B5, B7, 15L, 15, 15R, 16, 16R, 17, 18, 19 AND H1
 UPDATE NEW AIRCRAFT TYPE AT BAY NO. 15L, 15, 15R, 16, 16R, 17, 18, 19 AND H1.
 UPDATE NEW AIRCRAFT PARKING BAY NO. 15L, 15, 15R, 16, 16R, 17, 18, 19 AND H1.
 UPDATE INFORMATION ON BEARING STRENGTH OF BAY 15L, 15, 15R, 16, 16R, 17, 18, 19 AND H1.

**AERODROME GROUND
MOVEMENT CHART - ICAO**

APRON ELEV
4 M

TWR 121.1
SMC 121.6
121.9
ATIS 126.4

**PENANG/PENANG
INTERNATIONAL AIRPORT**



CHANGES: UPDATE NEW AIRCRAFT PARKING BAY NO. 15L, 15, 15R, 16, 16R, 17, 18, 19 AND H1.
UPDATE REMOVAL OF AIRCRAFT PARKING BAY NO. B2, B4 AND B6
UPDATE NEW HELICOPTER STAND TXILANE M & AIRCRAFT STAND TAXILANE N
UPDATE INFORMATION ON BEARING STRENGTH OF BAY 15L, 15, 15R, 16, 16R, 17, 18, 19 AND H1

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WMPR AD 2.1 AERODROME LOCATION INDICATOR AND NAME

WMPR - PULAU REDANG

WMPR AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	054606N 1030021E Site: 168M from THR 20 and 27M from RWY centre line.
2	Direction and distance from (city)	1.30KM (0.7NM), Bearing 01°54'36" from Pulau Redang health clinic.
3	Elevation/Reference temperature	8 M (26 FT) / 33°C
4	Geoid undulation at AD ELEV PSN	-3 M
5	MAG VAR/Annual change	0° W (2024) / 0° 1' 52" decreasing
6	AD operator, address, telephone, telefax, e-mail address, AFS and website address	Operator: Malaysia Airports Sdn Bhd Padang Terbang Pulau Redang 21090 Pulau Redang, Kuala Terengganu Terengganu Darul Iman TEL: +609 - 6302224 Telefax: +609 - 6302222 Http: www.malaysiaairports.com.my ATC Service: Not available
7	Types of traffic permitted (IFR/VFR)	VFR
8	Remarks	FIS available through Kuala Terengganu Tower

WMPR AD 2.3 OPERATIONAL HOURS

1	AD Operator	0001 - 0900 UTC Daily
2	Customs and immigration	Available upon request
3	Health and sanitation	NIL
4	AIS Briefing Office	NIL
5	ATS Reporting Office (ARO)	NIL
6	MET Briefing Office	NIL
7	ATS	NIL
8	Fuelling	NIL
9	Handling	Handling facilities available prior arrangement.
10	Security	0001 - 0900 UTC
11	De-icing	NIL
12	Remarks	Operation beyond operational hours (0900 UTC) required four (4) hours prior notice. Maximum operational hours until sunset.

WMPR AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/oil types	NIL
3	Fuelling facilities/capacity	NIL
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL

7	Remarks	NIL
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WMPR AD 2.5 PASSENGER FACILITIES

1	Hotels	NIL
2	Restaurants	NIL
3	Transportation	NIL
4	Medical facilities	NIL
5	Bank and Post Office	NIL
6	Tourist Office	NIL
7	Remarks	NIL

WMPR AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 4
2	Rescue equipment	Adequately provided as recommended by ICAO.
3	Capability for removal of disabled aircraft	With arrangement with the respective airline and ground handler. a) Largest aircraft - ATR 42
4	Remarks	All Airport Fire and Rescue Service (AFRS) personnel are trained in rescue and fire-fighting as well as medical first-aid.

WMPR AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

WMPR AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	BAY 1 Surface: Concrete (Rigid) Strength: PCR 210 / R / A / W / T
2	Taxiway width, surface and strength	NIL
3	Altimeter checkpoint location and elevation	Location: At apron Elevation: 6 M (20 FT)
4	VOR checkpoints	NIL
5	INS checkpoints	Coordinates for aircraft stands: BAY 1: 054612.51N 1030023.37E
6	Remarks	NIL

WMPR AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Yellow taxiing guidelines at apron. Nose wheel guidance line for parking bay.
2	RWY and TWY markings and LGT	RWY markings: Designation, centre line, and transverse stripe markings. Threshold and chevron markings for RWY 02 only. LGT : NIL
3	Stop bars	NIL

4	Remarks	NIL
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WMPR AD 2.10 AERODROME OBSTACLES

In Area 2					
OBST ID/ Designation	OBST type	OBST position	ELEV/HGT	Marking/Type, colour, lighting (LGT)	Remarks
a	b	c	d	e	f
WMPROB001	High concentration of mangrove trees	NIL	8 M AMSL	NIL	Located along the eastern side of RWY 02
WMPROB002	Cut slopes	NIL	58 M AMSL	NIL	Located along the western side of RWY 02
WMPROB003	The hilly topography of the island	NIL	150 M to 350 M AMSL	NIL	Located along the western & eastern side surrounding the airstrip
WMPROB004	Air Terminal Building	NIL	7.5 M AMSL	NIL	Located at 135 M north-west from the end of RWY 02.
WMPROB005	AFRS Building	NIL	9 M	NIL	High located 35 M east of the end of RWY 02.
WMPROB006	Buildings	054624N 1030037E	18 M AMSL	NIL	Located to the north at approximately 750 M from the end of RWY 02
WMPROB007	Mosque	054624N 1030037E	30 M AMSL	NIL	Located to the north about 1 KM from the end of RWY 02
WMPROB008	Microwave Tower	054601N 1030034E	97 M AMSL	NIL	Located approximately 350 M to the east of the end of RWY 02
WMPROB009	Microwave Tower	054701N 1030044E	91 M AMSL	NIL	Located approximately 1.8 KM to the north from the end of RWY 02
WMPROB0010	Chalets and clusters of trees	NIL	38 M to 42 M AMSL	NIL	Located at about 80 M from approach path and about 500 M from threshold of RWY 02
WMPROB0011	Checked Board	054542N 1030006E	24.5 M AMSL	NIL	Located on western side of approach path at approximately 100 M from centreline of runway at 225 M from threshold of RWY 02
WMPROB0012	WDI RWY 02	054549.7N 1030017.1E	7 m / 11 m AMSL	Marked and Solar Lighted LIL, RED	NIL

WMPR AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	NIL
2	Hours of service MET Office outside hours	NIL
3	Office responsible for TAF preparation Periods of validity	NIL

4	Trend forecast Interval of issuance	NIL
5	Briefing/consultation provided	NIL
6	Flight documentation Language(s) used	NIL
7	Charts and other information available for briefing or consultation	NIL
8	Supplementary equipment available for providing information	NIL
9	ATS units provided with information	NIL
10	Additional information (limitation of service, etc.)	NIL

WMPR AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength (PCR) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
02	019.85°	1 101 x 30	PCR 630 / F / C / X / T Asphalt (Flexible)	THR Coordinates 054536.65N 1030011.48E RWY End coordinates 054610.37N 1030023.64E GUND -3 M	THR elevation: 8 M (26 FT)
20	199.85°	1 101 x 30	PCR 630 / F / C / X / T Asphalt (Flexible)	THR Coordinates 054610.37N 1030023.64E RWY End coordinates 054536.65N 1030011.48E GUND -3 M	THR elevation: 6 M (20 FT)

Slope of RWY- SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
-0.149%	NIL	NIL	1 221 x 59	NIL	NIL
+0.149%	NIL	NIL	1 221 x 59	NIL	

WMPR AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
02	NU	NU	NU	1 101	Runway 02 arrival only
20	1101	1101	1101	NU	Runway 20 for departure only

WMPR AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

WMPR AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	NIL
2	LDI location and LGT Anemometer location and LGT	Wind direction indicator (WDI): RWY 02: 437.13 m from THR on right, 29.17 m from RWY centre line and solar lighted. Anemometer: NIL
3	TWY edge and centre line lighting	NIL
4	Secondary power supply/switch-over time	NIL
5	Remarks	NIL

WMPR AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	NIL

WMPR AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	NIL
2	Vertical limits	NIL
3	Airspace classification	NIL
4	ATS unit call sign Language(s)	NIL
5	Transition altitude	NIL

6	Remarks	NIL
---	---------	-----

WMPR AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
NIL	NIL	NIL	NIL	NIL
NIL	NIL	NIL	NIL	NIL

WMPR AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NIL	NIL	NIL	NIL	NIL	NIL	NIL

WMPR AD 2.20 LOCAL AERODROME REGULATIONS

2.20.1 Arriving Aircraft

2.20.1.1 Arriving aircraft to track on Radial 345 from VKR VOR/DME and to obtain descent clearances from WMKN Tower.

2.20.2 Departing Aircraft

2.20.2.1 Departing aircraft to make left turn after departure and track for Pulau Bidong (9 NM east of Pulau Redang) climb not above 2500 FT and contact Terengganu Tower for ATC clearance.

Note:

1. Restricted Area WMR 106A is situated above Pulau Redang, lower limit is 5500 FT and upper limit is FL 130. (Pilots are advised to keep a listening watch on Gong Kedak Approach frequency).
2. Pilot to notify Terengganu Tower if there is any delay in departure from Pulau Redang.
3. Traffic Advisory transmission to be broadcasted blind on 126.1 MHz.

2.20.3 Local Flying Restrictions

2.20.3.1 Uni-directional runway in use due to resettlement area:

- Landing RWY 02
- Take-off RWY 20

2.20.3.2 Aerodrome limited to single aircraft operations only.

WMPR AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

WMPR AD 2.22 FLIGHT PROCEDURES

NIL

WMPR AD 2.23 ADDITIONAL INFORMATION

- 2.23.1. Pilot to exercise caution on the aerodrome non-conforming issues as follows:
1. Pilot to exercise extreme caution due to protruding of object in vicinity of aerodrome
 - a) Object protruding transitional surface slope
 - i. Perimeter fencing.
 - ii. AFRS building.
 - iii. Elevated water tank.
 - iv. Tractor Garage.
 - v. Wind direction indicator (WDI).
 - vi. Hill.
 - vii. Trees.
- 2.23.2. All aircraft are not allowed to make locked wheel turn on the runway and apron.
- 2.23.3. Bird concentration in the vicinity of the airport.
- 2.23.3.1 Concentration of birds within the vicinity of the aerodrome. Pilot to exercise caution during landing and take-off.
- 2.23.4. Limited ramp area for GSE parking.

WMPR AD 2.24 CHARTS RELATED TO AN AERODROME

Chart name	Page
AERODROME/HELIPORT CHART (WMPR) - ICAO	AD 2-WMPR-2-1
AIRCRAFT PARKING/DOCKING CHART (WMPR) - ICAO	AD 2-WMPR-2-3
AERODROME GROUND MOVEMENT CHART (WMPR) - ICAO	AD 2-WMPR-2-5

AERODROME/HELIPORT
CHART - ICAO

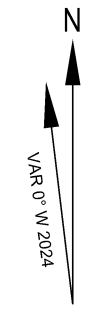
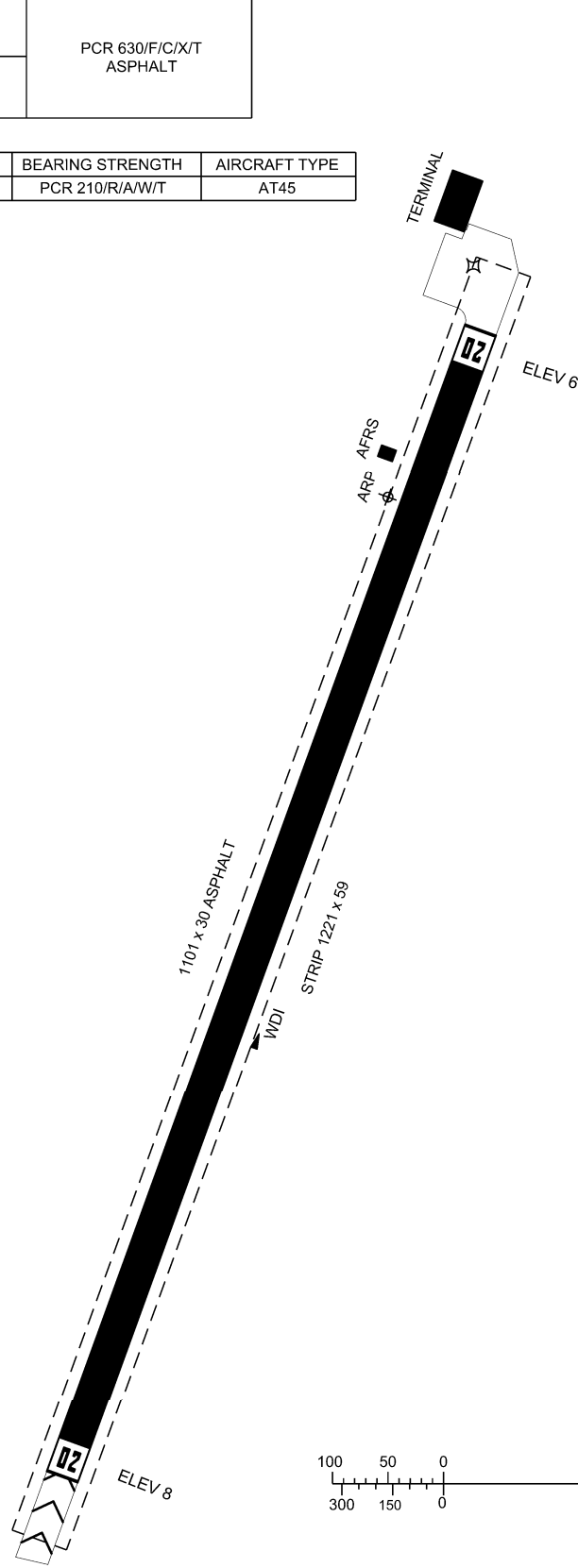
05° 46' 06" N
103° 00' 21" E

ELEV 8 M

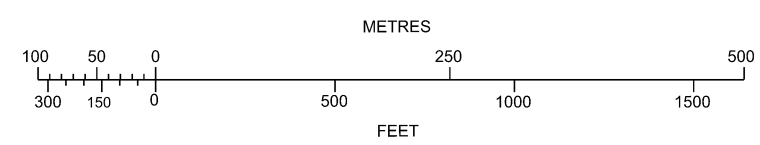
PULAU REDANG/
PULAU REDANG AIRPORT

RWY	DIRECTION	THR	BEARING STRENGTH
02	20°	05° 45' 36.65" N 103° 00' 11.48" E	PCR 630/F/C/X/T ASPHALT
20	200°	05° 46' 10.37" N 103° 00' 23.64" E	

INS COORDINATES FOR AIRCRAFT STANDS	BEARING STRENGTH	AIRCRAFT TYPE
1 05° 46' 12.51" N 103° 00' 23.37" E	PCR 210/R/A/W/T	AT45



ANNUAL RATE OF CHANGE -0° 1' 52" W
ELEVATIONS AND DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC



LEGEND	
CONCRETE STRUCTURE	▣

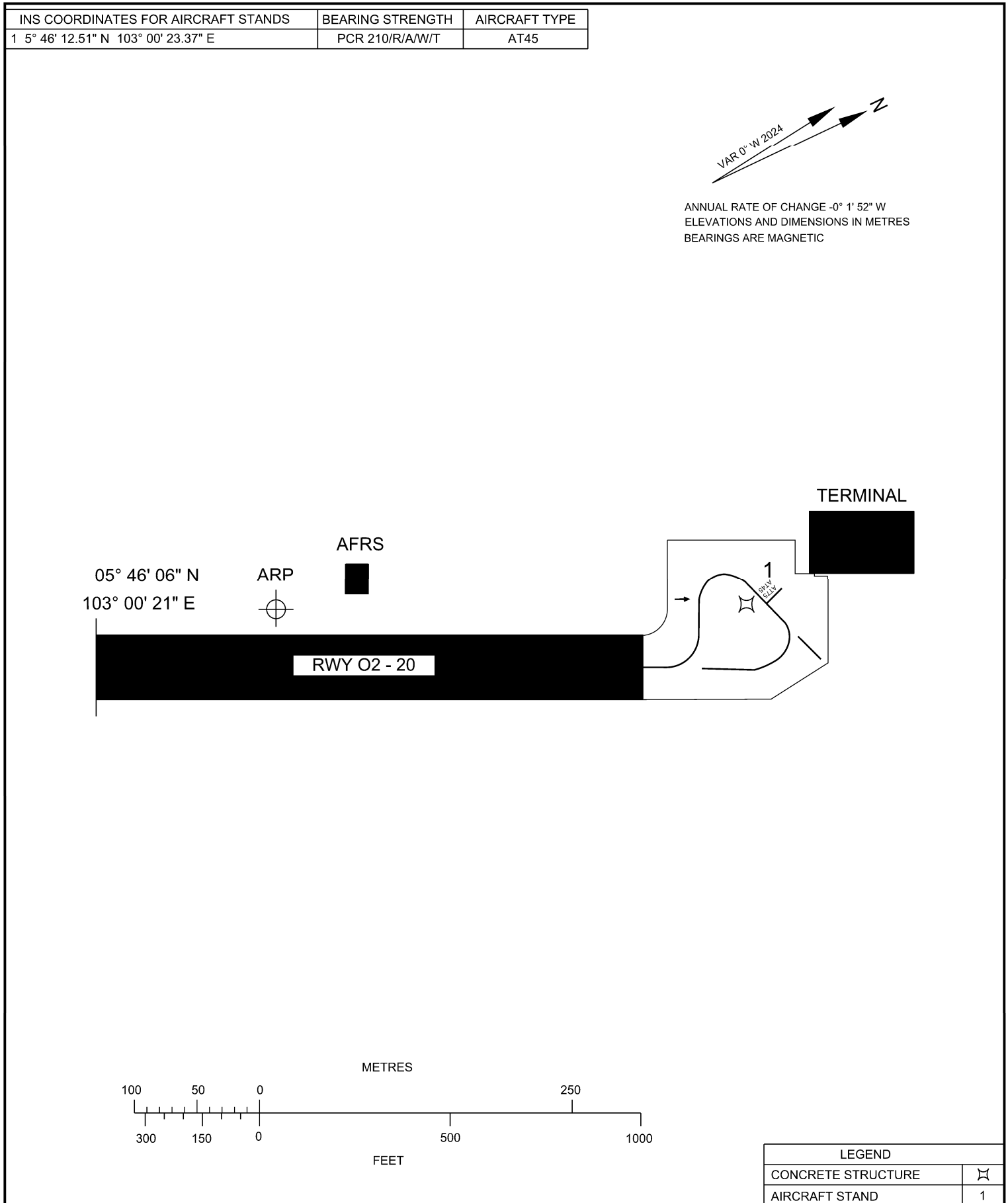
CHANGES: PAVEMENT BEARING STRENGTH
MAG VAR & ANNUAL CHANGE
RUNWAY STRIPS
AIRCRAFT TYPE

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**AIRCRAFT PARKING/
DOCKING CHART - ICAO**

APRON ELEV
6 M

**PULAU REDANG/
PULAU REDANG AIRPORT**

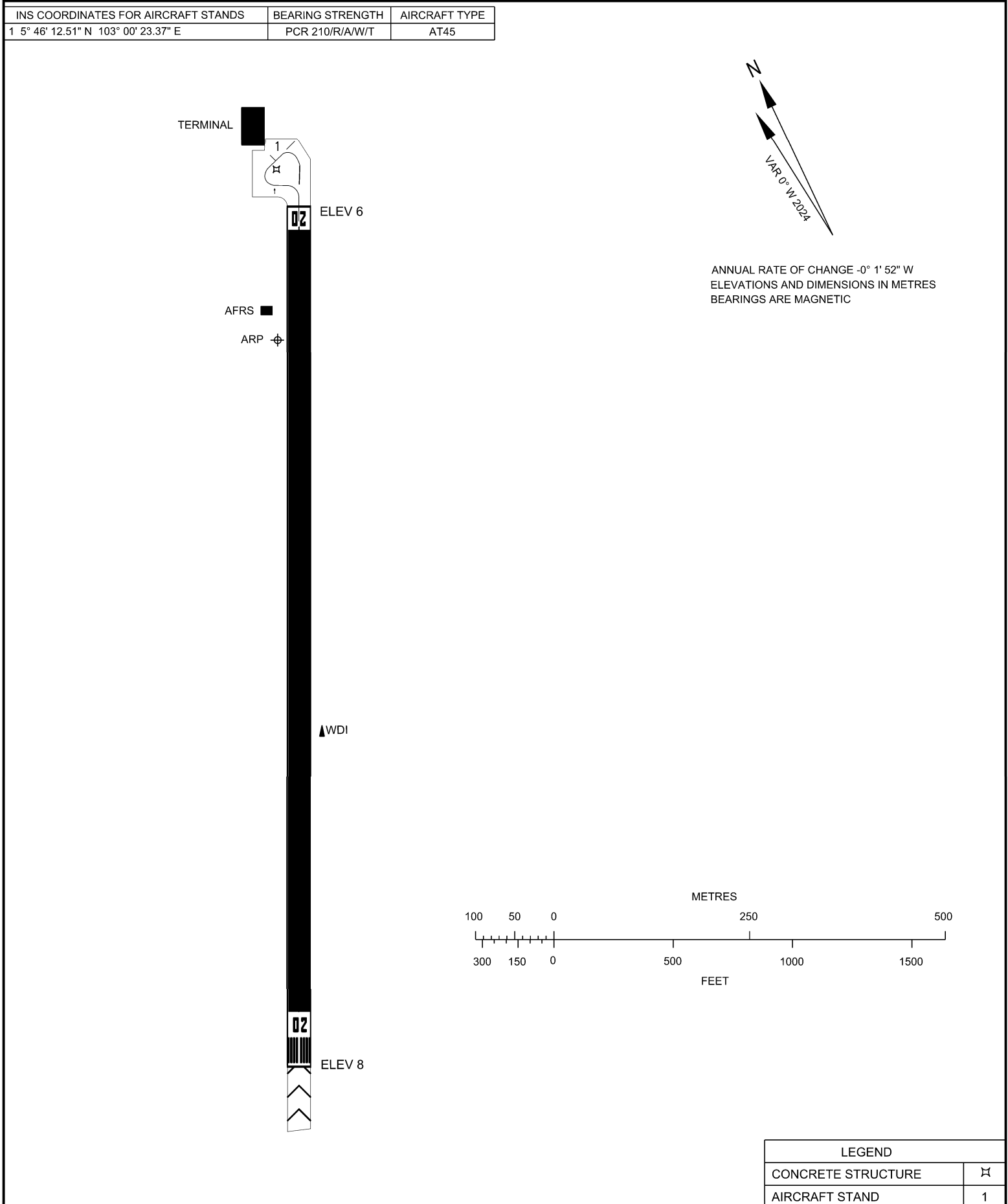


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**AERODROME GROUND
MOVEMENT CHART - ICAO**

APRON ELEV
6 M

**PULAU REDANG/
PULAU REDANG AIRPORT**



CHANGES: PAVEMENT BEARING STRENGTH
MAG VAR & ANNUAL CHANGE
AIRCRAFT TYPE

INTENTIONALLY BLANK

WBGB AD 2.20 LOCAL AERODROME REGULATIONS**2.20.1 Circuit Patterns**

2.20.1.1 Circuit patterns are Left hand Circuit for RWY 35 and Right Hand Circuit for RWY 17. Circuit height 1500 FT. Light aircraft and helicopters 1000 FT.

2.20.2 Arriving Aircraft Parking Arrangement

2.20.2.1 Arriving aircraft shall enter the main terminal parking apron from the runway via Taxiway A whilst departing aircraft shall use Taxiway B or as directed by ATC.

2.20.2.2 No simultaneous aircraft movement is allowed either power-in, push back and power-out at the main apron.

2.20.2.3 Parking at the Main Apron

- a) Bay 1, Bay 2 and Bay 3 - Power in and push back mode (PIPB).
- b) Bay 4 and Bay 5 - Power in and power out mode (PIPO).

2.20.2.4 Parking at the General Aviation (GA) Apron

- a) Bay R1, Bay R2 and Bay R2L - Power in and push back mode (PIPB).
- b) Bay H1 and Bay H2 for helicopter parking with D-value 12 M and below.

2.20.3 Allocation Of Aircraft Parking Stand

- a) All aircraft parking stands are allocated by MASB.
- b) General aviation and private aircraft will be parked at the General Aviation apron and helicopter Parking Area. Pilots to exercise caution and follow ATC instructions or aircraft operator shall make their own arrangement if marshalling services required.

2.20.4 Departing Aircraft

- a) Shall contact Bintulu Ground 121.800 MHZ for start-up clearance at least 10 minutes before departure.
- b) Shall contain start up, push back and taxi clearance from Bintulu Ground on 121.800 MHZ.
- c) Shall be pushed out onto the apron centre line with nose facing North-North East or as directed by ATC.

2.20.5 Engine Run Procedures For Aircraft

- a) Fitted with Auxiliary Power Unit (APU)
 - i. Aircraft shall start-up one engine.
 - ii. Push back shall commence after one engine has started up. Such engine shall be on idle power at push back.
 - iii. Start-up of other engine shall be made after push back and when the aircraft is in position on the apron taxiway line.
- b) Not fitted with Auxiliary Power Unit (APU) or when the APU is unserviceable.
 - i. Shall be permitted to start all engines before push back.

2.20.6 Procedures For VFR Flights Within Bintulu CTR

- a) A flight plan shall be filed for the flight concerned.
- b) ATC clearance shall be obtained from Bintulu Tower.
- c) Any deviation from ATC clearance requires prior permission.
- d) The flight shall be conducted with vertical visual reference to the ground.
- e) Two-way radio communication shall be established with Bintulu Tower on 122.30MHZ (P) or 119.25MHZ (S) prior to entering the Bintulu CTR.
- f) All VFR flights shall follow the established VFR Routes for entry and exit of the Bintulu CTR, as shown in ENR 3.5-11. Any deviation outside these routes requires prior ATC permission.

WBGB AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

WBGB AD 2.22 FLIGHT PROCEDURES

2.22.1. Communication failure procedures as per AIP Malaysia, ENR 1.6 - 3 para 1.6.2.1 are to be adopted by the pilot experiencing such exigency.

WBGB AD 2.23 ADDITIONAL INFORMATION

- 2.23.1. LNG - Storage tanks, plants and gas stacks are sited within a radius of 3NM of 031614N 1130409E, 9NM North East of Bintulu Airport. Flares may shoot up to a height of 1000FT. All aircraft to avoid this area.
- 2.23.2. MET Station Coordinates - 030716N 1130118E. Release time of Radio sonde at 2330 and 1130 daily.
- 2.23.3. Presence of birds at vicinity of airport. Pilots to exercise caution during landing and take-off.
- 2.23.4. Back track on the runway is allowed but no lock wheel turn on the runway.
- 2.23.5. Taxiway edge lights at runway turn pad 17 and runway turn pad 35 are not uniformly space with some longitudinal intervals exceeding 30 m.
- 2.23.6. The runway edge lights which are not uniformly spaced in rows at intervals of not more than 60 m.

WBGB AD 2.24 CHARTS RELATED TO AN AERODROME

Chart name	Page
AERODROME/HELIPORT CHART (WBGB) - ICAO	AD 2-WBGB-2-1
AIRCRAFT PARKING/DOCKING CHART (WBGB) - ICAO	AD 2-WBGB-2-3
AERODROME GROUND MOVEMENT CHART (WBGB) - ICAO	AD 2-WBGB-2-5
AERODROME OBSTACLE CHART (WBGB) - ICAO - TYPE A (OPERATING LIMITATIONS)	AD 2-WBGB-3-1
BINTULU CONTROL ZONE AND HOLDING AREAS	AD 2-WBGB-4-1
STANDARD DEPARTURE CHART INSTRUMENT (SID) – ICAO – RWY 17 RNAV (GNSS) – EKETO 1A DUNAS 1A NOKER 1A BENLI 1A BASUV 1A ADGAB 1A	AD 2-WBGB-6-1
STANDARD DEPARTURE CHART INSTRUMENT (SID) – ICAO – RWY 17 RNAV (GNSS) – EKETO 1A DUNAS 1A NOKER 1A BENLI 1A BASUV 1A ADGAB 1A (TABULAR 1)	AD 2-WBGB-6-2
STANDARD DEPARTURE CHART INSTRUMENT (SID) – ICAO – RWY 17 RNAV (GNSS) – EKETO 1A DUNAS 1A NOKER 1A BENLI 1A BASUV 1A ADGAB 1A (TABULAR 2)	AD 2-WBGB-6-3
STANDARD DEPARTURE CHART INSTRUMENT (SID) – ICAO – RWY 17 – EKETO 1B DUNAS 1B NOKER 1B BENLI 1B BASUV 1B ADGAB 1B	AD 2-WBGB-6-5
STANDARD DEPARTURE CHART INSTRUMENT (SID) – ICAO – RWY 17 – EKETO 1B DUNAS 1B NOKER 1B BENLI 1B BASUV 1B ADGAB 1B (TABULAR 1)	AD 2-WBGB-6-6
STANDARD DEPARTURE CHART INSTRUMENT (SID) – ICAO – RWY 35 RNAV (GNSS) – EKETO 2C DUNAS 2C NOKER 2C BENLI 2C BASUV 2C ADGAB 2C	AD 2-WBGB-6-7
STANDARD DEPARTURE CHART INSTRUMENT (SID) – ICAO – RWY 35 RNAV (GNSS) – EKETO 2C DUNAS 2C NOKER 2C BENLI 2C BASUV 2C ADGAB 2C (TABULAR 1)	AD 2-WBGB-6-8
STANDARD DEPARTURE CHART INSTRUMENT (SID) – ICAO – RWY 35 RNAV (GNSS) – EKETO 2C DUNAS 2C NOKER 2C BENLI 2C BASUV 2C ADGAB 2C (TABULAR 2)	AD 2-WBGB-6-9
STANDARD DEPARTURE CHART INSTRUMENT (SID) – ICAO – RWY 35 – EKETO 2D DUNAS 2D NOKER 2D BENLI 2D BASUV 2D ADGAB 2D	AD 2-WBGB-6-11
STANDARD DEPARTURE CHART INSTRUMENT (SID) – ICAO – RWY 35 – EKETO 2D DUNAS 2D NOKER 2D BENLI 2D BASUV 2D ADGAB 2D (TABULAR 1)	AD 2-WBGB-6-12
STANDARD ARRIVAL CHART INSTRUMENT (STAR) – ICAO – RWY 17 RNAV (GNSS) – EKETO 1E DUNAS 1E NOKER 1E BENLI 1E BASUV 1E ADGAB 1E	AD 2-WBGB-7-1
STANDARD ARRIVAL CHART INSTRUMENT (STAR) – ICAO – RWY 17 RNAV (GNSS) – EKETO 1E DUNAS 1E NOKER 1E BENLI 1E BASUV 1E ADGAB 1E (TABULAR 1)	AD 2-WBGB-7-2
STANDARD ARRIVAL CHART INSTRUMENT (STAR) – ICAO – RWY 17 RNAV (GNSS) – EKETO 1E DUNAS 1E NOKER 1E BENLI 1E BASUV 1E ADGAB 1E (TABULAR 2)	AD 2-WBGB-7-3
STANDARD ARRIVAL CHART INSTRUMENT (STAR) – ICAO – RWY 17 – EKETO 1F DUNAS 1F NOKER 1F BENLI 1F BASUV 1F ADGAB 1F	AD 2-WBGB-7-5
STANDARD ARRIVAL CHART INSTRUMENT (STAR) – ICAO – RWY 17 – EKETO 1F DUNAS 1F NOKER 1F BENLI 1F BASUV 1F ADGAB 1F (TABULAR 1)	AD 2-WBGB-7-6
STANDARD ARRIVAL CHART INSTRUMENT (STAR) – ICAO – RWY 35 RNAV (GNSS) – EKETO 1G DUNAS 1G NOKER 1G BENLI 1G BASUV 1G ADGAB 1G	AD 2-WBGB-7-7
STANDARD ARRIVAL CHART INSTRUMENT (STAR) – ICAO – RWY 35 RNAV (GNSS) – EKETO 1G DUNAS 1G NOKER 1G BENLI 1G BASUV 1G ADGAB 1G (TABULAR 1)	AD 2-WBGB-7-8
STANDARD ARRIVAL CHART INSTRUMENT (STAR) – ICAO – RWY 35 RNAV (GNSS) – EKETO 1G DUNAS 1G NOKER 1G BENLI 1G BASUV 1G ADGAB 1G (TABULAR 2)	AD 2-WBGB-7-9
STANDARD ARRIVAL CHART INSTRUMENT (STAR) – ICAO – RWY 35 – EKETO 1H DUNAS 1H NOKER 1H BENLI 1H BASUV 1H ADGAB 1H	AD 2-WBGB-7-11
STANDARD ARRIVAL CHART INSTRUMENT (STAR) – ICAO – RWY 35 – EKETO 1H DUNAS 1H NOKER 1H BENLI 1H BASUV 1H ADGAB 1H (TABULAR 1)	AD 2-WBGB-7-12
INSTRUMENT APPROACH CHART - ICAO- RWY 17 ILS OR LOC	AD 2-WBGB-8-1
INSTRUMENT APPROACH CHART - ICAO - RWY 17 ILS OR LOC (TABULAR 1)	AD 2-WBGB-8-2
INSTRUMENT APPROACH CHART – ICAO – RWY 17 RNP Z (AR)	AD 2-WBGB-8-3
INSTRUMENT APPROACH CHART - ICAO - RWY 17 RNP Z (AR) (TABULAR 1)	AD 2-WBGB-8-4
INSTRUMENT APPROACH CHART - ICAO– RWY 17 RNP Z (AR) (TABULAR 2)	AD 2-WBGB-8-5
INSTRUMENT APPROACH CHART - ICAO- RWY 17 RNP Y	AD 2-WBGB-8-7
INSTRUMENT APPROACH CHART - ICAO- RWY 17 RNP Y (TABULAR 1)	AD 2-WBGB-8-8
INSTRUMENT APPROACH CHART - ICAO- RWY 17 VOR	AD 2-WBGB-8-9
INSTRUMENT APPROACH CHART - ICAO- RWY 17 VOR (TABULAR 1)	AD 2-WBGB-8-10

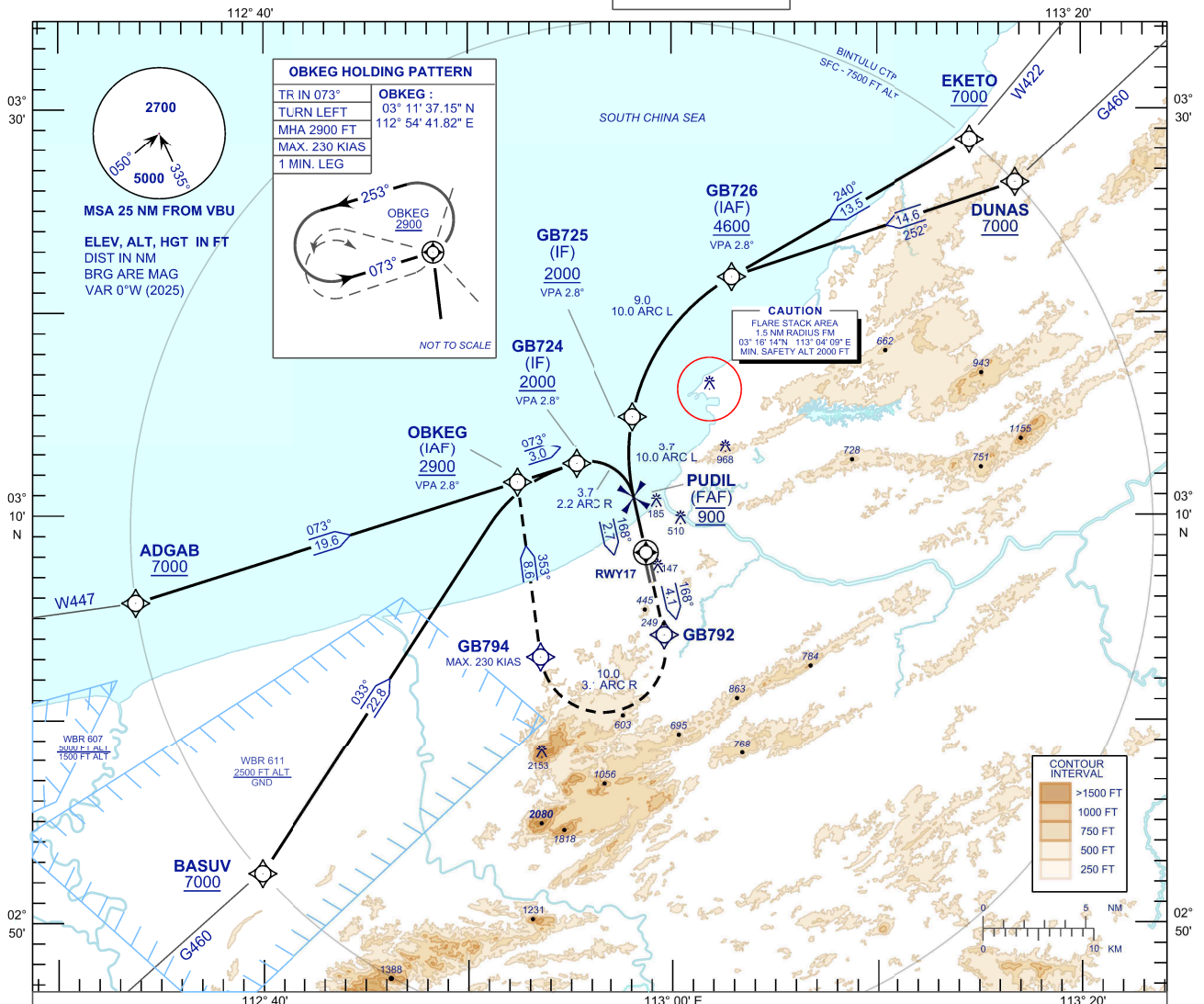
Chart name	Page
INSTRUMENT APPROACH CHART - ICAO - RWY 35 RNP Z (AR)	AD 2-WBGB-8-11
INSTRUMENT APPROACH CHART - ICAO - RWY 35 RNP Z (AR) (TABULAR 1)	AD 2-WBGB-8-12
INSTRUMENT APPROACH CHART - ICAO- RWY 35 RNP Z (AR) (TABULAR 2)	AD 2-WBGB-8-13
INSTRUMENT APPROACH CHART - ICAO- RWY 35 RNP Y	AD 2-WBGB-8-15
INSTRUMENT APPROACH CHART - ICAO- RWY 35 RNP Y (TABULAR 1)	AD 2-WBGB-8-16
INSTRUMENT APPROACH CHART - ICAO - RWY 35 VOR	AD 2-WBGB-8-17
INSTRUMENT APPROACH CHART - ICAO - RWY 35 VOR (TABULAR 1)	AD 2-WBGB-8-18

**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 75 FT
HEIGHT RELATED TO
THR RWY 17 - ELEV 34 FT

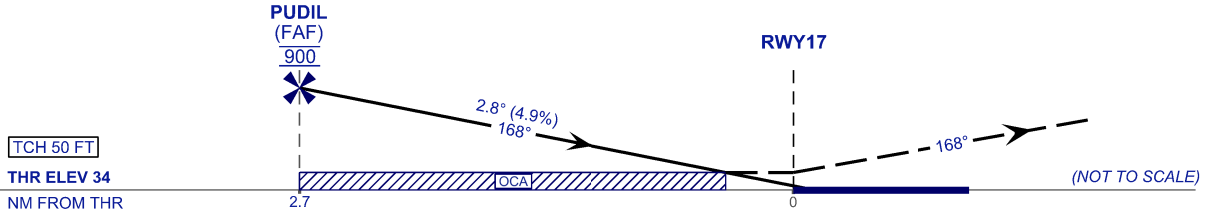
TWR	122.30 (P)
SMC	121.80
ATIS	127.80
	119.25 (S)

BINTULU/BINTULU (WBGB)
RNP Z RWY 17 (AR)



TRANSITION LEVEL FL 130
TRANSITION ALT 11,000 FT

MISSED APPROACH:
CLIMB TO 2900 FT OR ABOVE ON RNP Z MISSED APPROACH,
TRACK TO OBKEG AND HOLD, OR AS DIRECTED BY ATC.



STRAIGHT-IN APPROACH	OCA (OCH)	
CATEGORY OF AIRCRAFT	C	D
RNP (0.30)	598 (564)	
CIRCLING AND ALTERNATE N/A		

AUTHORIZATION REQUIRED

- NOTES :**
- 1) APPROACH NOT AUTHORIZED WHEN AIRPORT TEMPERATURE BELOW 15°C OR ABOVE 40°C.
 - 2) RF REQUIRED.
 - 3) WBGB ALTIMETER SETTING REQUIRED.
 - 4) GNSS REQUIRED.
 - 5) PAPI AND VERTICAL PATH ANGLE NOT COINCIDENT.
 - 6) RNP 0.3 REQUIRED FROM IAF'S TO FAF.

CHANGES : REVISE OBKEG HEIGHT RESTRICTION & ADD VPA.

**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 75 FT
HEIGHT RELATED TO
THR RWY 17 - ELEV 34 FT

**BINTULU/BINTULU (WBGB)
RNP Z RWY 17 (AR)**

TABULAR DESCRIPTION

EKETO TRANSITION

SEQ.	PATH TERM.	WAYPOINT IDENTIFIER	RF ARC CENTER	FLY OVER	WPT. DESC.	TRACK/DIST. OR COURSE/TIME	ARC DIRECT.	ALTITUDE (FT)	SPEED LIMIT (KT)	VPA	RNP
010	IF	EKETO	-	-	-	-	-	+7000	-	-	-
020	TF	GB726	-	-	IAF	240° M / 13.5 NM	-	+4600	-	-	1.0
030	RF	GB725	RGB73	-	IF	10.0 RF / 9.0 NM	L	+2000	-	-2.8°	0.3
040	RF	PUDIL	RGB73	-	FAF	10.0 RF / 3.7 NM	L	@900	-	-2.8°	0.3

DUNAS TRANSITION

SEQ.	PATH TERM.	WAYPOINT IDENTIFIER	RF ARC CENTER	FLY OVER	WPT. DESC.	TRACK/DIST. OR COURSE/TIME	ARC DIRECT.	ALTITUDE (FT)	SPEED LIMIT (KT)	VPA	RNP
010	IF	DUNAS	-	-	-	-	-	+7000	-	-	-
020	TF	GB726	-	-	IAF	252° M / 14.6 NM	-	+4600	-	-	1.0
030	RF	GB725	RGB73	-	IF	10.0 RF / 9.0 NM	L	+2000	-	-2.8°	0.3
040	RF	PUDIL	RGB73	-	FAF	10.0 RF / 3.7 NM	L	@900	-	-2.8°	0.3

BASUV TRANSITION

SEQ.	PATH TERM.	WAYPOINT IDENTIFIER	RF ARC CENTER	FLY OVER	WPT. DESC.	TRACK/DIST. OR COURSE/TIME	ARC DIRECT.	ALTITUDE (FT)	SPEED LIMIT (KT)	VPA	RNP
010	IF	BASUV	-	-	-	-	-	+7000	-	-	-
020	TF	OBKEG	-	-	IAF	033° M / 22.8 NM	-	+2900	-	-	1.0
030	TF	GB724	-	-	IF	073° M / 3.0 NM	R	+2000	-	-2.8°	0.3
040	RF	PUDIL	RGB71	-	FAF	2.2 RF / 3.7 NM	R	@900	-	-2.8°	0.3

ADGAB TRANSITION

SEQ.	PATH TERM.	WAYPOINT IDENTIFIER	RF ARC CENTER	FLY OVER	WPT. DESC.	TRACK/DIST. OR COURSE/TIME	ARC DIRECT.	ALTITUDE (FT)	SPEED LIMIT (KT)	VPA	RNP
010	IF	ADGAB	-	-	-	-	-	+7000	-	-	-
020	TF	OBKEG	-	-	IAF	073° M / 19.6 NM	-	+2900	-	-	2.0
030	TF	GB724	-	-	IF	073° M / 3.0 NM	-	+2000	-	-2.8°	0.3
040	RF	PUDIL	RGB71	-	FAF	2.2 RF / 3.7 NM	R	@900	-	-2.8°	0.3

CHANGES : REVISE OBKEG HEIGHT RESTRICTION & ADD VPA AT GB724.

**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 75 FT
HEIGHT RELATED TO
THR RWY 17 - ELEV 34 FT

**BINTULU/BINTULU (WBGB)
RNP Z RWY 17 (AR)**

TABULAR DESCRIPTION

FINAL AND MISSED APPROACH

SEQ.	PATH TERM.	WAYPOINT IDENTIFIER	RF ARC CENTER	FLY OVER	WPT. DESC.	TRACK/DIST. OR COURSE/TIME	ARC DIRECT.	ALTITUDE (FT)	SPEED LIMIT (KT)	VPA	RNP
010	IF	PUDIL	-	-	FAF	-	-	@900	-	-	-
020	TF	RWY17	-	Y	-	168° M / 2.7 NM	-	-	-	-2.8	0.3
030	TF	GB792	-	-	-	168° M / 4.1 NM	-	-	-	-	1.0
040	RF	GB794	RGB91	-	-	3.1 RF / 10.0 NM	R	-	-230	-	1.0
050	TF	OBKEG	-	-	-	353° M / 8.6 NM	-	+2900	-	-	1.0
060	HM	OBKEG	-	Y	-	073° M / 1 MIN.	L	+2900	-230	-	1.0

AERONAUTICAL DATA TABULATION

WAYPOINT IDENTIFIER	COORDINATE	
ADGAB	03° 05' 44.00" N	112° 36' 03.00" E
BASUV	02° 52' 25.52" N	112° 42' 13.42" E
DUNAS	03° 26' 22.15" N	113° 19' 04.55" E
EKETO	03° 28' 28.87" N	113° 16' 51.74" E
OBKEG	03° 11' 37.15" N	112° 54' 41.82" E
PUDIL	03° 10' 52.28" N	113° 00' 26.05" E
GB724	03° 12' 31.78" N	112° 57' 35.17" E
GB725	03° 14' 33.99" N	113° 00' 19.06" E
GB726	03° 21' 44.37" N	113° 05' 12.55" E
GB792	03° 04' 09.45" N	113° 01' 54.35" E
GB794	03° 03' 05.01" N	112° 55' 48.41" E
THR RWY17	03° 08' 10.44" N	113° 01' 01.47" E

RF ARC CENTER COORDINATE

WAYPOINT IDENTIFIER	COORDINATE	
RGB71	03° 10' 23.30" N	112° 58' 15.24" E
RGB73	03° 13' 01.85" N	113° 10' 11.89" E
RGB91	03° 03' 29.23" N	112° 58' 52.77" E

CHANGES : REVISE OBKEG HEIGHT RESTRICTION.

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WBG-AD 2.1 AERODROME LOCATION INDICATOR AND NAME

WBG - KUCHING INTERNATIONAL

WBG-AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	012907N 1102042E Between TWY A3 and TWY B. (Approx. 110 M from RWY Centerline and 265 M from TWY B)
2	Direction and distance from (city)	Dist 7 KM (4NM) - Bearing 179° South East of Dewan Suarah Building, Kuching
3	Elevation/Reference temperature	27 M (89FT) / 31.6°C
4	Geoid undulation at AD ELEV PSN	+34 M
5	MAG VAR/Annual change	0° E (2023) / -0° 3' 6" decreasing
6	AD Administration, address, telephone, telefax, telex, AFS	Operator: Malaysia Airports Sdn Bhd Kuching International Airport P.O Box 1070 93722 Kuching Sarawak TEL: +6082 - 454242 e-mail:masb_kch@malaysiaairports.com.my Http://www.malaysiaairport.com.my ATC Services: Civil Aviation Authority of Malaysia Kuching International Airport 93250 Kuching Sarawak Malaysia TEL:+6082 - 455572 / 616532 / 457979 / 616535 / 616536 / 616537 Telefax:+6082 - 453199 / 571524 / 454523 e-mail: atcckuching@caam.gov.my
7	Types of traffic permitted (IFR/VFR)	IFR / VFR
8	Remarks	NIL

WBG-AD 2.3 OPERATIONAL HOURS

1	AD Operator	H24
2	Customs and immigration	Customs: 2300 - 1700 Immigration: H24
3	Health and sanitation	On request.
4	AIS Briefing Office	H24
5	ATS Reporting Office (ARO)	H24
6	MET Briefing Office	H24
7	ATS	H24
8	Fuelling	Shell: 2045 - 1600 Petronas: 2100 - 1300
9	Handling	By prior arrangement with handling agents.
10	Security	H24
11	De-icing	NIL
12	Remarks	NIL

WBGG AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	By arrangement with airlines.
2	Fuel/oil types	Fuel: Jet A1
3	Fuelling facilities/capacity	Refuelling by PETRONAS and SHELL through hydrant pit and bowsers. Capacity 1200 litres per minute. PETRONAS : 1,424,000 litres per month. SHELL : 1,600,000 litres per month.
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	By prior arrangement through agents.
7	Remarks	NIL

WBGG AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotels in city.
2	Restaurants	24 hours airport restaurant / cafeteria.
3	Transportation	Taxi, car for hire and chartered coach / bus services.
4	Medical facilities	General Hospital - 7.4 KM fm airport.
5	Bank and Post Office	Bank and Post Office in city Auto Teller Machine (ATM) available at airport
6	Tourist Office	In city: Sarawak Tourism Board and Tourism Malaysia. Terminal building: Tourism Malaysia. TEL: +6082 - 410944 / +6082 - 410942
7	Remarks	NIL

WBGG AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 9
2	Rescue equipment	Adequately provided as recommended by ICAO.
3	Capability for removal of disabled aircraft	By arrangement with the respective airlines and ground handler. Aircraft lifting equipment a) Largest aircraft - B744
4	Remarks	All Airport Fire and Rescue Service (AFRS) personnel are trained in rescue and fire-fighting as well as medical first-aid.

WBGG AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

WBGG AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	MAIN APRON: Bay 1 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1220 / R / B / W / T and PCR 10650 / F / B / X / T
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		<p>Bay 2 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1290 / R / B / W / T and PCR 11000 / F / B / X / T</p> <p>Bay 3 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1250 / R / B / W / T and PCR 9700 / F / B / X / T</p> <p>Bay 4 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1210 / R / B / W / T and PCR 11020 / F / B / X / T</p> <p>Bay 5 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1140 / R / B / W / T and PCR 11750 / F / B / X / T</p> <p>Bay 6 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1290 / R / B / W / T and PCR 10590 / F / B / X / T</p> <p>Bay 7 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1930 / R / B / W / T and PCR 7225 / F / B / X / T</p> <p>Bay 8 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 2130 / R / B / W / T and PCR 1530 / F / B / X / T</p> <p>Bay 9 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1250 / R / B / W / T and PCR 1840 / F / B / X / T</p> <p>Bay R1 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1190 / R / B / W / T and PCR 2040 / F / B / X / T</p> <p>Bay R2 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1220 / R / B / W / T and PCR 930 / F / B / X / T</p> <p>Bay R3 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1840 / R / B / W / T and PCR 740 / F / B / X / T</p> <hr/> <p>CARGO APRON:</p> <p>Bay 10 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1960 / R / B / W / T and PCR 660 / F / C / X / T</p> <p>Bay 10A Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1850 / R / B / W / T and PCR 660 / F / C / X / T</p>
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		<p>Bay 10B Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 2010 / R / B / W / T and PCR 660 / F / C / X / T</p> <p>Bay 11 Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 2030 / R / B / W / T and PCR 660 / F / C / X / T</p> <p>Bay 11A Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1950 / R / B / W / T and PCR 660 / F / C / X / T</p> <p>Bay 11B Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 1920 / R / B / W / T and PCR 660 / F / C / X / T</p>
		<p>GA APRON: Bay G1, Bay G2, Bay G3, Bay H1, Bay H2 Surface: Asphalt (Flexible) Strength: PCR 560 / F / C / X / T</p>
<p>2</p>	<p>Taxiway width, surface and strength</p>	<p>Taxiway A Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 2770 / F / B / X / T</p> <p>Taxiway A1 Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 2260 / F / B / X / T</p> <p>Taxiway A2 Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 9150 / F / B / X / T</p> <p>Taxiway A3 Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 890 / F / C / X / T</p> <p>Taxiway B Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 7930 / F / B / X / T</p> <p>Taxiway C Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 3150 / F / C / X / T</p> <p>Taxiway D Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 2580 / F / B / X / T</p> <p>Taxiway E Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 920 / F / C / X / T</p>

		<p>Taxiway F Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 1010 / F / C / X / T</p> <p>Taxiway G Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 800 / F / C / X / T</p> <p>Taxiway H Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 750 / F / C / X / T</p> <p>Taxiway J Width: 15 m Surface: Asphalt (Flexible) Strength: PCR 660 / F / C / X / T</p> <p>Taxiway K Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 640 / F / C / X / T</p> <p>Taxiway L Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 670 / F / C / X / T</p> <p>Apron Taxiway (Main Apron) Width: 23 m Surface: Asphalt (Flexible) Strength: PCR 2930 / F / B / X / T</p>
3	ACL location and elevation	Location: Main apron Elevation: 21 m (69 ft)
4	VOR checkpoints	VOR: TWY A Holding Position : 114.5 MHz 250° 3.6 NM TWY A1 Holding Position: 114.5 MHz 250° 3.0 NM TWY B Holding Position: 114.5 MHz 251° 1.9 NM
5	INS checkpoints	Refer to Aircraft Parking Docking Chart (See AD 2-WBGG-2-3)
6	Remarks	NIL

WBGG AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Taxiing guidance signs at intersection with TWY and RWY and at RWY Holding positions. Yellow taxiing guidelines at aprons. Visual Docking Guidance System (VDGS) for Bays 1, 2, 3, 4, 5, 6, 7, 8 and 9. Nose wheel guidance lines for all parking bays.
2	RWY and TWY markings and LGT	<p>RWY markings: Runway designation, threshold, touchdown zone, centre line, aiming point, side stripe and transverse stripe marking. Runway turn pad markings for RWY 07.</p> <p>RWY LGT: Threshold, edge and end. Wing bar lights at RWY 25.</p> <p>TWY markings: Centre line, taxi side stripe, runway holding position, intermediate holding position and transverse stripe markings.</p> <p>VOR aerodrome checkpoint marking at TWY A, TWY A1 and TWY B.</p>

		TWY LGT: Centre line, exit, edge, intermediate holding position lights.
3	Stop bars	RWY guard lights at TWY A, A1, A2, A3, B and C.
4	Remarks	NIL

WBGG AD 2.10 AERODROME OBSTACLES

In approach/TKOF areas			In circling area and at AD		Remarks
1			2		
RWY NR/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	3
a	b	c	a	b	
07 APCH 25 TKOF	LOC ANTENNA 29.1M / 95.4FT	012848.08N 1102003.90E	WDI RWY 07 33 M / 109 FT Marked and Lighted GLIDE PATH AERIAL 28.75M / 94.32 FT WDI RWY 25 22 M / 73 FT Marked and Lighted BUILDING 73.15M/240 FT	012853.9N 1102026.7E 012930.41N 1102159.18E 012929.4N 1102155.3E 013044N 1102126E BRG 025°, DIST 1.8NM (3330 M) FM ARP.	

RWY/ Area affected	Obstacles within 10NM of ARP - Type Elevation Markings / LGT	Coordinates
a	b	c
	TELECOM TWR AT UNIMAS, KPG. Melaban Muara, HGT 200 FT AMSL. Marked and LGTD.	012730.0N 1102701.9E
	TELECOM TWR AT AD PETRONAS DEPOT, HGT 182 FT (55.50 M) AMSL. Marked and LGTD.	012910.9N 1102020.0E
	TELECOM TWR AT PENDING INDUSTRIAL ESTATE, HGT 320FT (97.40 M) AMSL. Marked and LGTD.	013347.9N 1102309.9E
	TELECOM TWR AT SIBURAN, Kuching, HGT 299 FT (91.20 M) AMSL. Marked and LGTD.	012116.0N 1102458.9E
	TELECOM TWR AT LOT 1220, BINTAWA INDUSTRIAL ESTATE HGT 280 FT (85.34 M) AMSL. Marked and LGTD.	013351.9N 1102311.9E
	TELECOM TWR AT JLN DATUK BANDAR MUSTAFA Kuching, HGT 174 FT (53 M) AMSL. Marked and LGTD.	012957.9N 1102018.0E
	TELECOM TWR AT SAMARAHAN, HGT 236 FT (72 M) AMSL. Marked and LGTD.	012722.0N 1102734.9E
	TELECOM TWR AT TAMAN MALIAHAH, HGT 174 FT (53 M) AMSL. Marked and LGTD.	013319.0N 1101530.0E
	TELECOM TWR AT KPG SIBURAN, HGT 181 FT (55 M) AMSL. Marked and LGTD.	012123.0N 1102445.9E
	TELECOM TWR AT SEMONGKOK, HGT 174 FT (53 M) AMSL. Marked and LGTD.	012353.0N 1102020.0E
	TELECOM TWR AT SERIAN ROAD, Kuching, HGT 181 FT (55 M) AMSL. Marked and LGTD.	012301.0N 1102245.9E
	TELECOM TWR AT MATANG ROAD, HGT 89 FT (27 M) AMSL. Marked and LGTD.	013416.9N 1101833.0E
	TELECOM TWR AT BINTAWA, HGT 210 FT (63.58 M) AMSL. Marked and LGTD.	013405.9N 1102311.9E

RWY/ Area affected	Obstacles within 10NM of ARP - Type Elevation Markings / LGT	Coordinates
a	b	c
	TELECOM TWR AT KENYALANG PARK, HGT 210 FT (63.70 M) AMSL. Marked and LGTD.	013205.9N 1102127.0E
	TELECOM TWR AT TAN VILLA MATANG, HGT 175 FT (53.44 M) AMSL. Marked and LGTD.	013436.9N 1101527.0E
	TELECOM TWR AT KG MUARA TUANG, HGT 157 FT (47.76 M) AMSL. Marked and LGTD.	012730.0N 1102940.9E
	TELECOM TWR AT KUNG PHIN ROAD, HGT 190 FT (58 M) AMSL. Marked and LGTD.	013002.9N 1101939.0E
	TELECOM TWR AT SENTAH-SEGU LAND DISTRICT, HGT 206 FT (62.72 M) AMSL. Marked and LGTD.	012354.0N 1102017.0E
	TELECOM TWR AT PETRA JAYA HGT 120 FT (36.48 M) AMSL. Marked and LGTD.	013434.9N 1101940.0E
	TELECOM TWR AT SIBURAN HGT 184 FT (56.22 M) AMSL. Marked and LGTD.	012116.0N 1102458.9E
	TELECOM TWR AT BATU KAWA, HGT 298 FT (90.7 M) AMSL. Marked and LGTD.	012943.9N 1101727.0E
	TELECOM TWR AT MILE 10, Kuching, HGT 517 FT (157.48 M) AMSL. Marked and LGTD.	012509.0N 1101955.0E
	TELECOM TWR AT PETRA JAYA HGT 248 FT (75.6 M) AMSL. Marked and LGTD.	013640.9N 1102048.0E
	TELECOM TWR AT KUCHING, HGT 521 FT (158.92 M) AMSL. Marked and LGTD.	013223.9N 1102105.0E
	TELECOM TWR AT MUARA TABUAN, HGT 213 FT (64.96 M) AMSL. Marked and LGTD.	013134.9N 1102350.9E
	TELECOM TWR AT SEJINGKAT, HGT 160 FT (48.72 M) AMSL.	013512.5N 1102423.9E
	TELECOM TWR AT KUCHING-SERIAN ROAD , HGT 166 FT (50.72 M) AMSL.	012352.9N 1102009.2E
	TELECOM TWR AT PETRA JAYA HGT 163 FT (49.72 M) AMSL.	013418.0N 1101901.7E
	TELECOM TWR AT PETRA JAYA, HGT 166 FT (50.72 M) AMSL.	013714.9N 1102017.6E
	TELECOM TWR AT SAMARAHAN HGT 176 FT (53.72 M) AMSL.	012730.8N 1102658.8E
	TELECOM TWR, HGT 133 FT (40.5 M) AMSL. Marked and LGTD.	012958.5N 1102305.4E
	NEW RADAR TOWER HGT 82 FT (25 M) AGL, 150 FT (45 M) AMSL	012904.0N 1102113.0E

WBGG AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	AMO KUCHING
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	AMO KUCHING H24 (0024 0606 1212 1818)
4	Trend forecast Interval of issuance	TREND Half hourly
5	Briefing/consultation provided	Provided
6	Flight documentation Language(s) used	Charts, Tabular Form and Abbreviated Plain Language Text English
7	Charts and other information available for briefing or consultation	Flight Level Wind/Temp FL050, FL100, FL140, FL180, FL240, FL270, FL300, FL320, FL340, FL360, FL390, FL410, FL450 and FL530, SIGWX, Volcanic Ash/Tropical Cyclone Advisory Bulletin, SIGMET, AIRMET, Aerodrome Warning, METAR Bulletin, TAFOR Bulletin, WBGG Take-Off Data, Area QNH for Kuala Lumpur FIR & Kota Kinabalu FIR, Radar and Satellite Pictures.
8	Supplementary equipment available for providing information	Aviation Self-Briefing Terminal - ABT (Internet)
9	ATS units provided with information	Kuching ACC/APP/TWR/ARSC

10	Additional information (limitation of service, etc.)	TEL: +6082 - 617737 / 617736 Telefax:+6082 - 617730 / 617703
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WBGG AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength (PCR) and surface of RWY and SWY	THR Coordinates RWY End Coordinates THR Geoid Undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
07	068.46°T	3780 x 46	PCR 8033 / F / B / X / T Asphalt (Flexible)	THR Coordinates 012851.63N 1102012.87E RWY End Coordinates 012936.82N 1102206.61E GUND +34M	THR elevation: 27 M (89 FT)
25	248.46°T	3780 x 46	PCR 8033 / F / B / X / T Asphalt (Flexible)	THR Coordinates 012936.82N 1102206.61E RWY End Coordinates 012851.63N 1102012.87E GUND +33.8M	THR elevation: 12.8 M(42 FT) TDZ elevation: 12.8 M(42 FT)

Slope of RWY-SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
-0.004%	NIL	NIL	3900 x 280	Provided	RESA 90 M X 92 M
+0.004%	NIL	60 x 150	3900 x 280	Provided	RESA 90 M X 92 M

WBGG AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks	
1	2	3	4	5	6	
07	FROM	TORA				
	THRESHOLD	3780	3780	3780	3780	NIL
	TWY C	3610	3610	3610	NIL	NIL
	TWY B	3031	3031	3031	NIL	NIL
	TWYA3	2367	2367	2367	NIL	NIL
25	TWY A2	1854	1854	1854	NIL	NIL
	THRESHOLD	3780	3840	3780	3780	NIL
	TWY A1	2740	2800	2740	NIL	NIL
	TWY A2	1925	1985	1925	NIL	NIL
	TWY A3	1394	1454	1394	NIL	NIL

WBGG AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
07	SALS 420M LIH	Green -	PAPI LEFT / Slope 3° 21.0M (68.9FT)	NIL	NIL	3780M, 60M, Variable White / Yellow, LIH	Red -	NIL	NIL
25	CAT1 900M LIH	Green Green	PAPI Left / Slope 3° 21.6M (70.9FT)	NIL	NIL	3780M, 60M, Variable White / Yellow, LIH	Red -	NIL	NIL

WBGG AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	ABN: Available on top of Control Tower, rotating Green and White 20 to 30 per minute. Sunset to sunrise and during bad weather. IBN: NIL
2	LDI location and LGT Anemometer location and LGT	Wind direction indicator (WDI) RWY 07: 424 M from THR on right ,91 M from RWY centreline and lighted. RWY 25: 412 M from THR on left,83 M from RWY centreline and lighted
3	TWY edge and centre line lighting	TWY Edge Light - on all TWY curve. TWY Centre line Light - on all TWY.
4	Secondary power supply/switch-over time	Secondary power supply: Available Secondary power supply to all AGL at AD. Switch-over time: Maximum 15 seconds
5	Remarks	NIL

WBGG AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	NIL

WBGG AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	KUCHING CTR A major arc of a circle radius 25NM centred on VKG commencing at 0125N 10953.6E clockwise to 0103.5N 10115.3E then along Malaysia - Indonesia border to 0125N 10953.6E.
2	Vertical limits	SFC to 3 000 FT AMSL
3	Airspace classification	C

4	ATS unit call sign Language(s)	KUCHING TOWER English
5	Transition altitude	11 000 FT AMSL
6	Remarks	NIL

WBGG AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
SMC	KUCHING GROUND	121.900 MHZ	H24	Acft to contact SMC on 121.9 MHZ for start-up and ATC clearance
TWR/APP	KUCHING TOWER	118.100 MHZ (PRI) 121.700 MHZ (SRY)		All IFR Departure must contact Kuching Radar after airborne unless instructed otherwise
	KUCHING RADAR	120.200 MHZ (PRI) 123.850 MHZ (SRY)		
ACC	KUCHING RADAR	134.500 MHZ (PRI) 125.350 MHZ (SRY) 132.350 MHZ (PRI) 133.950 MHZ (SRY)		Area of responsibility : 108 E to abeam VBU within WBFC FIR.
ATIS	KUCHING TERMINAL INFORMATION	128.400 MHZ		-
FIS	KUCHING INFORMATION	134.750 MHZ HF 6589 KHZ	HJ	

WBGG AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS/LOC	IKG	110.300 MHZ	H24	012848.08N 1102003.90E	-	-
GP/DME		335.000 MHZ CH 40X		012930.41N 1102159.18E	28.75 M	G/P - 3° slope. DME collocated with GP.
DVOR/DME	VKG	114.500 MHZ CH 92X		012823.6N 1101841.7E	-	VOR/DME OPR 5 consecutive VKG codings. VOR OPR 4 consecutive VKG codings followed by short pulse. DME OPR 1 VKG coding followed by long pulse.

WBGG AD 2.20 LOCAL AERODROME REGULATIONS

2.20.1 Departing Aircraft / Start Up and Push Back

2.20.1.1 Pilot-in-command of all departure aircraft shall request from Kuching Ground an ATC clearance 5 minutes before start up. All IFR departure will be issued with SID or Standard Radar Departure with standard initial altitude 6000FT. Further climb on ATC approval only. Departure aircraft shall contact Kuching Director after airborne as soon as practicable before passing 2000FT on freq 120.2MHz without ATC instruction to change radio frequency unless otherwise instructed. First contact with Kuching Director after airborne advice the SID ident or assigned heading, the last level vacated to the nearest 100FT and the assigned altitude.

2.20.1.2 The pilot-in-command and aircraft marshallers shall be responsible for the safety of aircraft with respect to all other aircraft, vehicles, persons and other obstructions on the apron during docking, engine start-up, push back, taxiing and also ensuring the appropriate blast zone behind the aircraft is clear during engine start-up.

2.20.1.3 Clearance to enter active runway and departure clearance shall be issued by the TWR on 118.1MHZ.

2.20.1.4 All aircraft are not allowed to make locked-wheel turn on the runway

2.20.2 Arriving Aircraft Parking Arrangement

2.20.2.1 Arriving schedule aircraft will be allocated a Stand / Bay number by SMC.

2.20.2.2 Upon entering the apron the pilot shall look out for the marshaller to guide the aircraft to the assigned parking stand or be guided by the VDGS.

2.20.2.3 For full code C aircraft movements at bay 2 or bay 3 with either parking bay 2 or bay 3 already occupied with code C aircraft, a wingtip marshaller shall be present to guide aircraft to ensure wingtip clearance during docking or push-back.

2.20.2.4 General aviation aircraft will be allocated open bay (Bay G1, G2 or G3) at the General Aviation apron. Aircraft operators shall make their own arrangement if marshalling service is required..

2.20.2.5 Arriving foreign state aircraft (including foreign military aircraft) intending to park at the RMAF apron shall make their own arrangement.

2.20.2.6 When Bays 10 and 11 are occupied, no aircraft is allowed to be parked at bays 10A, 10B, 11A and 11B.

2.20.3 Power In Power Out Arrangement

2.20.3.1 Aircraft at PIPO configuration shall start up and taxi at minimum power until clearing the appropriate blast zone.

2.20.4 Removal of Aircraft

2.20.4.1 Removal of a crashed / disable aircraft is the responsibility of the airport operator and the aircraft owner or operator. In the case of a reportable accident, the permission of the Chief Inspector, Air Accidents Investigation Bureau (AAIB), Ministry of Transport is required prior to the removal

2.20.5 Taxiing Route To Cargo Apron

2.20.5.1 Aircraft upon landing RWY 25 and vacating via TWY A3 shall not make a right turn onto TWY A and proceed to cargo Apron except for light aircraft.

2.20.5.2 B747-400 upon landing RWY 25 to vacate via TWY C, TWY A and TWY L. Landing RWY 07 to vacate via TWY A and TWY L.

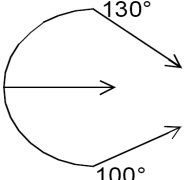
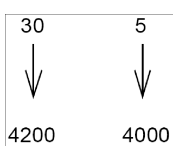
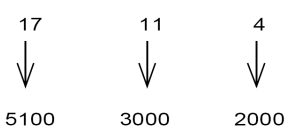
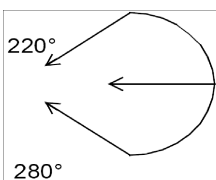
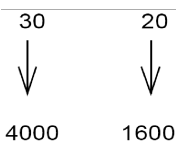
2.20.5.3 B747-400 departure via RWY25 to taxiing via TWY L and TWY A. Departure via TWY 07 to taxiing via TWY L, TWY A and TWY C.

WBGG AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

WBGG AD 2.22 FLIGHT PROCEDURES

2.22.1 VOR / DME Arrival Procedures For Kuching International Airport

MAGNETIC TRACK OR SECTOR	TO	DME CHECK POINT	MINIMUM IFR EN-ROUTE LEVEL OR ALTITUDE	DESCEND STEPS AT DME DISTANCE NM DESCEND TO FT ON QNH	REMARKS
	VKG	Not Required	7000 FT		Execute Standard Instrument Approach procedure for duty RWY or as directed by ATC
089°	VKG	Not Required	7000 FT		If not visual at 4 DME climb on 080° to 4000 FT then track to EGOMO hold for ILS approach RWY 25 or as directed by ATC
	VKG	Not Required	7000 FT		Execute ILS approach for RWY 25. Missed approach : similar to EGOMO hold missed approach procedure

2.22.2 PROCEDURES FOR VFR FLIGHTS WITHIN KUCHING CONTROL ZONE

- 2.22.2.1 All VFR flights shall be conducted in accordance with the visual flight rules and obtain ATC clearance. Departure from airport onto the VFR lane and arrivals from VFR lanes into the airport shall be as instructed by ATC. ATC shall assigned the VFR lane to be followed. Any deviation from the VFR lane must obtain prior clearance from ATC.
- 2.22.2.2 Two way radio communication shall be established and maintained on the appropriate Frequency.

WBGG AD 2.23 ADDITIONAL INFORMATION

- 2.23.1. Birds' concentration within the vicinity of the aerodrome. Pilot to exercise caution during landing and take-off.
- 2.23.2. The runway edge lights which are not uniformly spaced in rows at intervals of not more than 60 m.
- 2.23.3. Runway 07 turnpad provided without shoulder.
- 2.23.4. Insufficient Clearance Distances between Aircraft Stands with objects (Passenger Boarding Bridge) at Bay 1, Bay 2, Bay 3 and Bay 4. Pilot to exercise caution during taxiing in.
- 2.23.5. Location distances for taxiing guidance signs and runway exit signs exceeds the distance required to the defined pavement edges.
- 2.23.6. Existence portion of the perimeter road located within the runway strips on the Runway 25 approach. No vehicle movement is allowed during aircraft take-off and landing.
- 2.23.7 Release of Radio Sonda**
- 2.23.7.1 Release time of Radio Sonda: 2300 UTC, 1100 UTC
- 2.23.8 RNP AR APCH**
- 2.23.9. RNP AR APCH operations are authorised based on GNSS as the primary infrastructure. It is mandatory for operators who wish to conduct RNP AR APCH to get GNSS RAIM prediction associated with GNSS availability. At this stage, CAAM will not provide such service and operators who wish to conduct RNP AR APCH procedures are assumed to have their own source for the necessary GNSS information.

WBGG AD 2.24 CHARTS RELATED TO AN AERODROME

Chart name	Page
AERODROME/HELIPORT CHART (WBGG) - ICAO	AD 2-WBGG-2-1
AIRCRAFT PARKING/DOCKING CHART (WBGG) - ICAO	AD 2-WBGG-2-3
AERODROME GROUND MOVEMENT CHART (WBGG) - ICAO	AD 2-WBGG-2-5
AERODROME OBSTACLE CHART - ICAO - TYPE A	AD 2-WBGG-3-1
KUCHING CONTROL ZONE	AD 2-WBGG-4-1
IFR HOLDING AREAS	AD 2-WBGG-4-3
ATC SURVEILLANCE MINIMUM ALTITUDE CHART (WBGG)	AD 2-WBGG-4-5
STANDARD RADAR DEPARTURE - RWY 25/07	AD 2-WBGG-6-1
STANDARD DEPARTURE CHART - ICAO - RWY 07 (RNAV) ESBAL 1K DEP MOXUN 1J DEP TEMES 1H DEP (VIA PEGDU)	AD 2-WBGG-6-3
STANDARD DEPARTURE CHART - ICAO - RWY 07 (RNAV) - ESBAL 1K DEP MOXUN 1J DEP TEMES 1H DEP (VIA PEGDU) (TABULAR 1)	AD 2-WBGG-6-4
STANDARD DEPARTURE CHART - ICAO - RWY 07 (RNAV) OROMA 1H DEP LUTMO 1H DEP KIKAK 1J DEP	AD 2-WBGG-6-5
STANDARD DEPARTURE CHART - ICAO - RWY 07 (RNAV) OROMA 1H DEP LUTMO 1H DEP KIKAK 1J DEP (TABULAR 1)	AD 2-WBGG-6-6
STANDARD DEPARTURE CHART - ICAO - RWY 25 (RNAV) AGTEB 1A OLTOB 1B OLTOB 1A IDUNO 1A	AD 2-WBGG-6-7
STANDARD DEPARTURE CHART - ICAO - RWY 25 (RNAV) AGTEB 1A OLTOB 1B OLTOB 1A IDUNO 1A (TABULAR 1)	AD 2-WBGG-6-8
STANDARD DEPARTURE CHART - ICAO - RWY 25 KIKAK 1C DEP KIKAK 1D DEP LUTMO1C DEP LUTMO 1D DEP OROMA 1C DEP	AD 2-WBGG-6-9
STANDARD DEPARTURE CHART - ICAO - RWY 07 (RNAV) PAPSA 1G MOXUN 1H ESBAL 1J DEP (VIA RUNVO)	AD 2-WBGG-6-11
STANDARD DEPARTURE CHART - ICAO - RWY 07 (RNAV) PAPSA 1G MOXUN 1H ESBAL 1J DEP (VIA RUNVO) (TABULAR 1)	AD 2-WBGG-6-12
STANDARD DEPARTURE CHART - ICAO - RWY 07 MOXUN 1K DEP TEMES 1J DEP PAPSA 1H DEP ESBAL 1L DEP	AD 2-WBGG-6-13
STANDARD DEPARTURE CHART - ICAO - RWY 07 OROMA 1J DEP KIKAK 1K DEP LUTMO 1J DEP	AD 2-WBGG-6-15
STANDARD DEPARTURE CHART - ICAO - RWY 25 (RNAV) TEMES 1D DEP MOXUN 1D DEP ESBAL 1E DEP PAPSA 1C DEP	AD 2-WBGG-6-17
STANDARD DEPARTURE CHART - ICAO - RWY 25 (RNAV) TEMES 1D DEP MOXUN 1D DEP ESBAL 1E DEP PAPSA 1C DEP (TABULAR 1)	AD 2-WBGG-6-18
STANDARD DEPARTURE CHART - ICAO - RWY 25 TEMES 1E DEP MOXUN 1E DEP ESBAL 1F DEP PAPSA 1D DEP	AD 2-WBGG-6-19
STANDARD ARRIVAL CHART - ICAO - RWY 07 (RNAV) TEMES 1F ESBAL 1G MOXUN 1F PAPSA 1E	AD 2-WBGG-7-1
STANDARD ARRIVAL CHART - ICAO - RWY 07 (RNAV) TEMES 1F ESBAL 1G MOXUN 1F PAPSA 1E (TABULAR 1)	AD 2-WBGG-7-2
STANDARD ARRIVAL CHART - ICAO - RWY 07 (RNAV) KIKAK 1F LUTMO 1E OROMA 1F	AD 2-WBGG-7-3
STANDARD ARRIVAL CHART - ICAO - RWY 07 (RNAV) KIKAK 1F LUTMO 1E OROMA 1F (TABULAR 1)	AD 2-WBGG-7-4
STANDARD ARRIVAL CHART - ICAO - RWY 07 (RNAV) KIKAK 1G LUTMO 1F OROMA 1E	AD 2-WBGG-7-5
STANDARD ARRIVAL CHART - ICAO - RWY 07 (RNAV) KIKAK 1G LUTMO 1F OROMA 1E (TABULAR 1)	AD 2-WBGG-7-6
STANDARD ARRIVAL CHART - ICAO - RWY 07 TEMES 1G ARR MOXUN 1G ARR ESBAL 1H ARR PAPSA 1F ARR	AD 2-WBGG-7-7
STANDARD ARRIVAL CHART - ICAO - RWY 07 KIKAK 1H LUTMO 1G OROMA 1G	AD 2-WBGG-7-9
STANDARD ARRIVAL CHART - ICAO - RWY 25 (RNAV) TEMES 1A ESBAL 1A ESBAL 1B MOXUN 1A	AD 2-WBGG-7-11
STANDARD ARRIVAL CHART - ICAO - RWY 25 (RNAV) TEMES 1A ESBAL 1A ESBAL 1B MOXUN 1A (TABULAR 1)	AD 2-WBGG-7-12
STANDARD ARRIVAL CHART - ICAO - RWY 25 (RNAV) TEMES 1B ESBAL 1C MOXUN 1B PAPSA 1A	AD 2-WBGG-7-13
STANDARD ARRIVAL CHART - ICAO - RWY 25 (RNAV) TEMES 1B ESBAL 1C MOXUN 1B PAPSA 1A (TABULAR 1)	AD 2-WBGG-7-14
STANDARD ARRIVAL CHART - ICAO - RWY 25 (RNAV) KIKAK 1A LUTMO 1A OROMA 1A	AD 2-WBGG-7-15
STANDARD ARRIVAL CHART - ICAO - RWY 25 (RNAV) KIKAK 1A LUTMO 1A OROMA 1A (TABULAR 1)	AD 2-WBGG-7-16
STANDARD ARRIVAL CHART - ICAO - RWY 25 TEMES 1C ESBAL 1D MOXUN 1C PAPSA 1B	AD 2-WBGG-7-17
STANDARD ARRIVAL CHART - ICAO - RWY 25 (VOR/DME) KIKAK 1B LUTMO 1B OROMA 1B	AD 2-WBGG-7-19
INSTRUMENT APPROACH CHART - ICAO - RWY 07 VOR Z (FROM STAR)	AD 2-WBGG-8-1
INSTRUMENT APPROACH CHART - ICAO - RWY 07 VOR Y (FROM OVERHEAD VKG)	AD 2-WBGG-8-3
INSTRUMENT APPROACH CHART - ICAO - RWY 25 ILS Z/LOC Z (FROM STAR)	AD 2-WBGG-8-5
INSTRUMENT APPROACH CHART - ICAO - RWY 25 ILS Y/LOC Y (FROM OVERHEAD VKG)	AD 2-WBGG-8-7
INSTRUMENT APPROACH CHART - ICAO - RWY 25 VOR Z (FROM EGOMO)	AD 2-WBGG-8-9
INSTRUMENT APPROACH CHART - ICAO - RWY 07 RNP Z (AR)	AD 2-WBGG-8-11

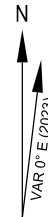
Chart name	Page
INSTRUMENT APPROACH CHART - ICAO - RWY 07 RNP Z (AR) (TABULAR 1)	AD 2-WBGG-8-12
INSTRUMENT APPROACH CHART - ICAO - RWY 07 RNP Z (AR) (TABULAR 2)	AD 2-WBGG-8-13
INSTRUMENT APPROACH CHART - ICAO - RWY 07 RNP Z (AR) (TABULAR 3)	AD 2-WBGG-8-14
INSTRUMENT APPROACH CHART - ICAO - RWY 07 RNP Z (AR) (TABULAR 4))	AD 2-WBGG-8-15
INSTRUMENT APPROACH CHART - ICAO - RWY 25 RNP Z (AR)	AD 2-WBGG-8-17
INSTRUMENT APPROACH CHART - ICAO - RWY 25 RNP Z (AR) (TABULAR 1)	AD 2-WBGG-8-18
INSTRUMENT APPROACH CHART - ICAO - RWY 25 RNP Z (AR) (TABULAR 2)	AD 2-WBGG-8-19
INSTRUMENT APPROACH CHART - ICAO - RWY 25 RNP Z (AR) (TABULAR 3)	AD 2-WBGG-8-20

AERODROME/HELIPORT CHART - ICAO 01° 29' 07" N
110° 20' 42" E ELEV 27 M

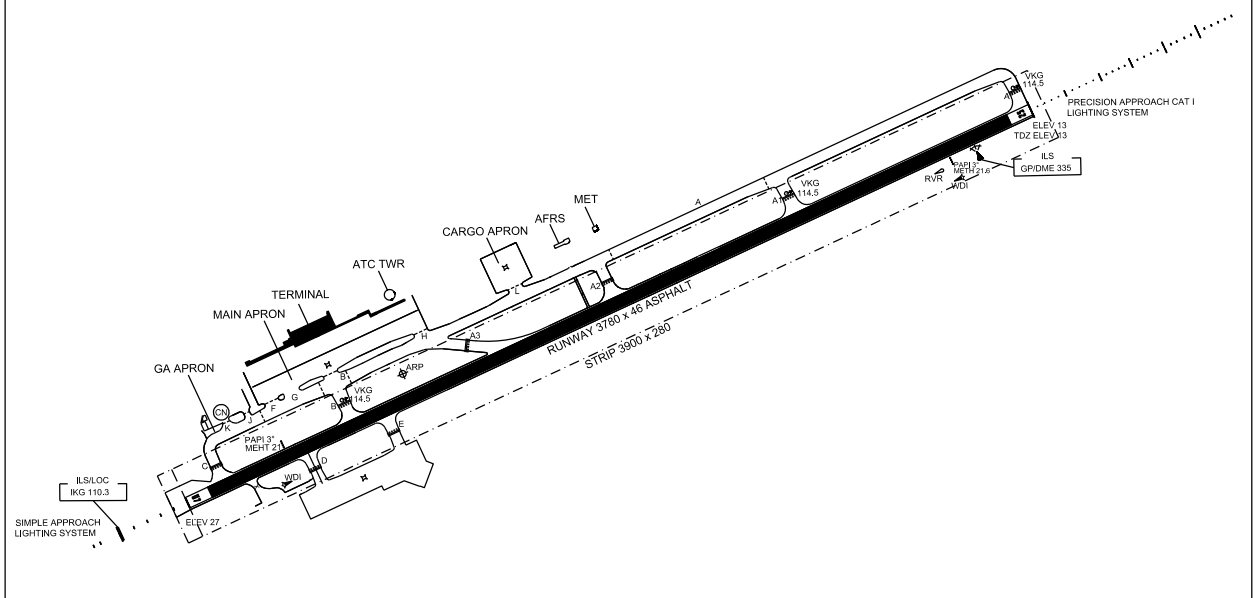
TWR 118.1 (P)	SMC 121.9
121.7 (S)	ATIS 128.4
APP 120.2 (P)	FIS 134.75
123.85 (S)	
ACC 134.5 (P)	
125.35 (S)	

KUCHING/KUCHING INTERNATIONAL AIRPORT

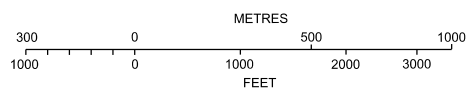
RWY	DIRECTION	THR	BEARING STRENGTH
07	068°	01° 28' 51.63" N 110° 20' 12.87" E	PCR 8033 / F / B / X / T ASPHALT (FLEXIBLE)
25	248°	01° 29' 36.82" N 110° 22' 06.61" E	



ANNUAL RATE OF CHANGE -0° 3' 6" W
ELEVATIONS AND DIMENSIONS
IN METRES
BEARINGS ARE MAGNETIC



TAXIWAYS A, A1,A2, A3, B, C, D, E, F, G, H, K
AND L 23 M WIDE
TAXIWAY J 15 M WIDE
APRON TAXIWAY 23 M WIDE



LEGEND	
CONCRETE STRUCTURE	▣
VOR CHECK POINT AND FREQUENCY	⊕→ VKG 114.5

CHANGES: UPDATE PAVEMENT BEARING STRENGTH
UPDATE RUNWAY-HOLDING POSITION MARKING
UPDATE PRECISION APPROACH CAT 1 LIGHTING SYSTEM

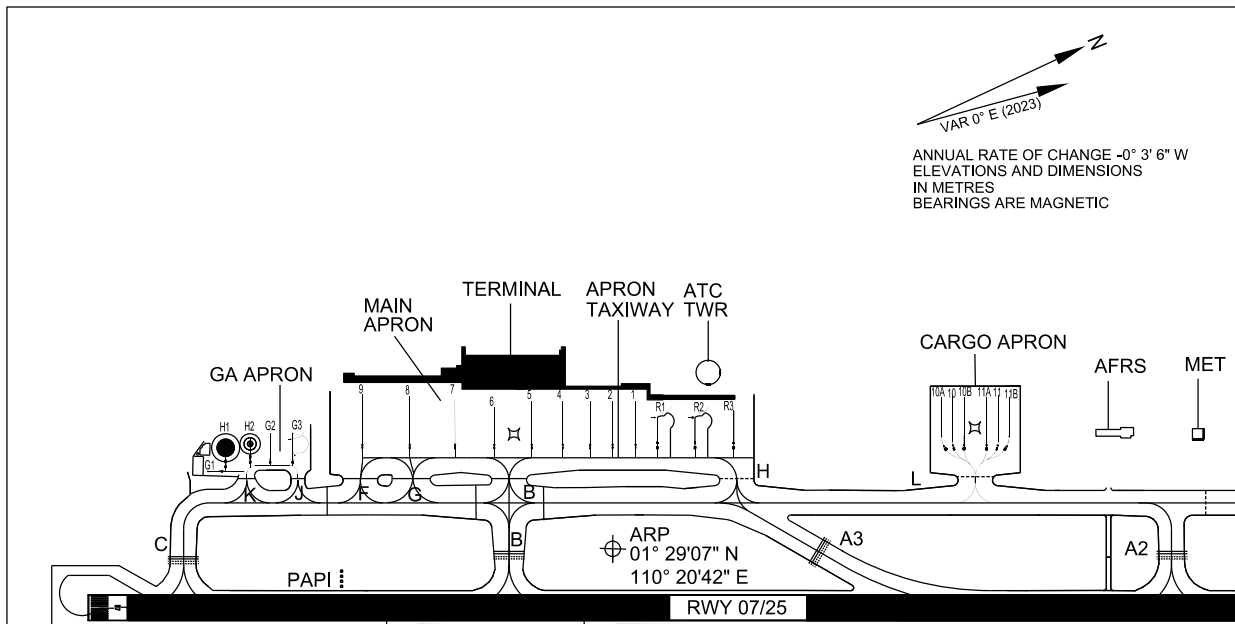
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**AIRCRAFT PARKING/
DOCKING CHART - ICAO**

APRON ELEV
21 M

TWR 118.1 (P)	SMC 121.9
121.7 (S)	ATIS 128.4
APP 120.2 (P)	FIS 134.75
123.85 (S)	
ACC 134.5 (P)	
125.35 (S)	

**KUCHING/KUCHING
INTERNATIONAL AIRPORT**

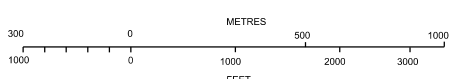


VAR 0° E (2023)
ANNUAL RATE OF CHANGE -0° 3' 6" W
ELEVATIONS AND DIMENSIONS
IN METRES
BEARINGS ARE MAGNETIC

AIRCRAFT PARKING / DOCKING STAND POSITION

INS COORDINATES FOR AIRCRAFT STANDS	SURFACE & STRENGTH CONCRETE (RIGID)	SURFACE & STRENGTH ALPHALT (FLEXIBLE)	AIRCRAFT TYPE
1 1° 29' 14.36" N 110° 20' 37.66" E	PCR 1220 / R / B / W / T	PCR 10650 / F / B / X / T	B738, A320, A21N,
2 1° 29' 13.88" N 110° 20' 36.45" E	PCR 1290 / R / B / W / T	PCR 11000 / F / B / X / T	B738, A320, A21N,
3 1° 29' 13.40" N 110° 20' 35.24" E	PCR 1250 / R / B / W / T	PCR 9700 / F / B / X / T	B738, A320, A21N,
4 1° 29' 12.80" N 110° 20' 33.78" E	PCR 1210 / R / B / W / T	PCR 11020 / F / B / X / T	B738, A320, A21N,
5 1° 29' 12.19" N 110° 20' 32.11" E	PCR 1140 / R / B / W / T	PCR 11750 / F / B / X / T	B738, A320, A21N, B38M
6 1° 29' 11.01" N 110° 20' 30.27" E	PCR 1290 / R / B / W / T	PCR 10590 / F / B / X / T	A320, B738, A319, B38M
7 1° 29' 10.89" N 110° 20' 27.88" E	PCR 1930 / R / B / W / T	PCR 7225 / F / B / X / T	B738, A319, A332, A338, A333, E295, A320, A21N, A127
8 1° 29' 09.84" N 110° 20' 25.49" E	PCR 2130 / R / B / W / T	PCR 1530 / F / B / X / T	A359, B744, A343, A332, A21N, A320, B738, A319, B788, E295
9 1° 29' 09.01" N 110° 20' 22.89" E	PCR 1250 / R / B / W / T	PCR 1840 / F / B / X / T	A31N, A320, B738, A321, A319, B788, A359, A332, A343
R1 1° 29' 14.99" N 110° 20' 40.06" E	PCR 1190 / R / B / W / T	PCR 2040 / F / B / X / T	AT75, AT76, DHCG
R2 1° 29' 15.76" N 110° 20' 42.06" E	PCR 1220 / R / B / W / T	PCR 930 / F / B / X / T	AT75, AT76, DHCG
R3 1° 29' 16.10" N 110° 20' 43.26" E	PCR 1840 / R / B / W / T	PCR 740 / F / B / X / T	A320, DHCG
10 1° 29' 21.45" N 110° 20' 54.63" E	PCR 1960 / R / B / W / T	PCR 660 / F / C / X / T	B744, A332, B738
10A 1° 29' 21.61" N 110° 20' 55.27" E	PCR 1850 / R / B / W / T	PCR 660 / F / C / X / T	B738
10B 1° 29' 21.13" N 110° 20' 54.07" E	PCR 2010 / R / B / W / T	PCR 660 / F / C / X / T	B738
11 1° 29' 22.41" N 110° 20' 57.06" E	PCR 2030 / R / B / W / T	PCR 660 / F / C / X / T	B744, A332, B738
11A 1° 29' 22.57" N 110° 20' 57.68" E	PCR 1950 / R / B / W / T	PCR 660 / F / C / X / T	B738
11B 1° 29' 22.09" N 110° 20' 56.48" E	PCR 1920 / R / B / W / T	PCR 660 / F / C / X / T	B738
G1 1° 29' 01.89" N 110° 20' 16.48" E	-	PCR 560 / F / C / X / T	BE20, B350
G2 1° 29' 03.45" N 110° 20' 18.14" E	-	PCR 560 / F / C / X / T	GL51, GL7T, GLEX
G3 1° 29' 05.34" N 110° 20' 20.48" E	-	PCR 560 / F / C / X / T	GLF5, GLF6
H1 1° 29' 02.58" N 110° 20' 16.90" E	-	PCR 560 / F / C / X / T	M-17
H2 1° 29' 02.81" N 110° 20' 17.48" E	-	PCR 560 / F / C / X / T	A139

TAXIWAYS A, A1, A2, A3, B, C, D, E, F, G, H, K AND L 23M WIDE
TAXIWAY J 15 M WIDE
APRON TAXIWAY 23 M WIDE
BEARING STRENGTH TWY A PCR 2770 / F / B / X / T
BEARING STRENGTH TWY A1 PCR 2260 / F / B / X / T
BEARING STRENGTH TWY A2 PCR 9150 / F / B / X / T
BEARING STRENGTH TWY A3 PCR 890 / F / C / X / T
BEARING STRENGTH TWY B PCR 7930 / F / B / X / T
BEARING STRENGTH TWY C PCR 3150 / F / C / X / T
BEARING STRENGTH TWY D PCR 2580 / F / B / X / T
BEARING STRENGTH TWY E PCR 920 / F / C / X / T
BEARING STRENGTH TWY F PCR 1010 / F / C / X / T
BEARING STRENGTH TWY G PCR 800 / F / C / X / T
BEARING STRENGTH TWY H PCR 750 / F / C / X / T
BEARING STRENGTH TWY J PCR 660 / F / C / X / T
BEARING STRENGTH TWY K PCR 640 / F / C / X / T
BEARING STRENGTH TWY L PCR 670 / F / C / X / T
BEARING STRENGTH APRON TWY PCR 2930 / F / B / X / T
AIRCRAFT STANDS 1 TO 9 APGS EQUIPPED



LEGEND	
CONCRETE STRUCTURE	▣
RUNWAY-HOLDING POSITION	▬▬▬
INTERMEDIATE-HOLDING POSITION	- - -
AIRCRAFT STAND	9

CHANGES: UPDATE AIRCRAFT TYPE
UPDATE PAVEMENT BEARING STRENGTH

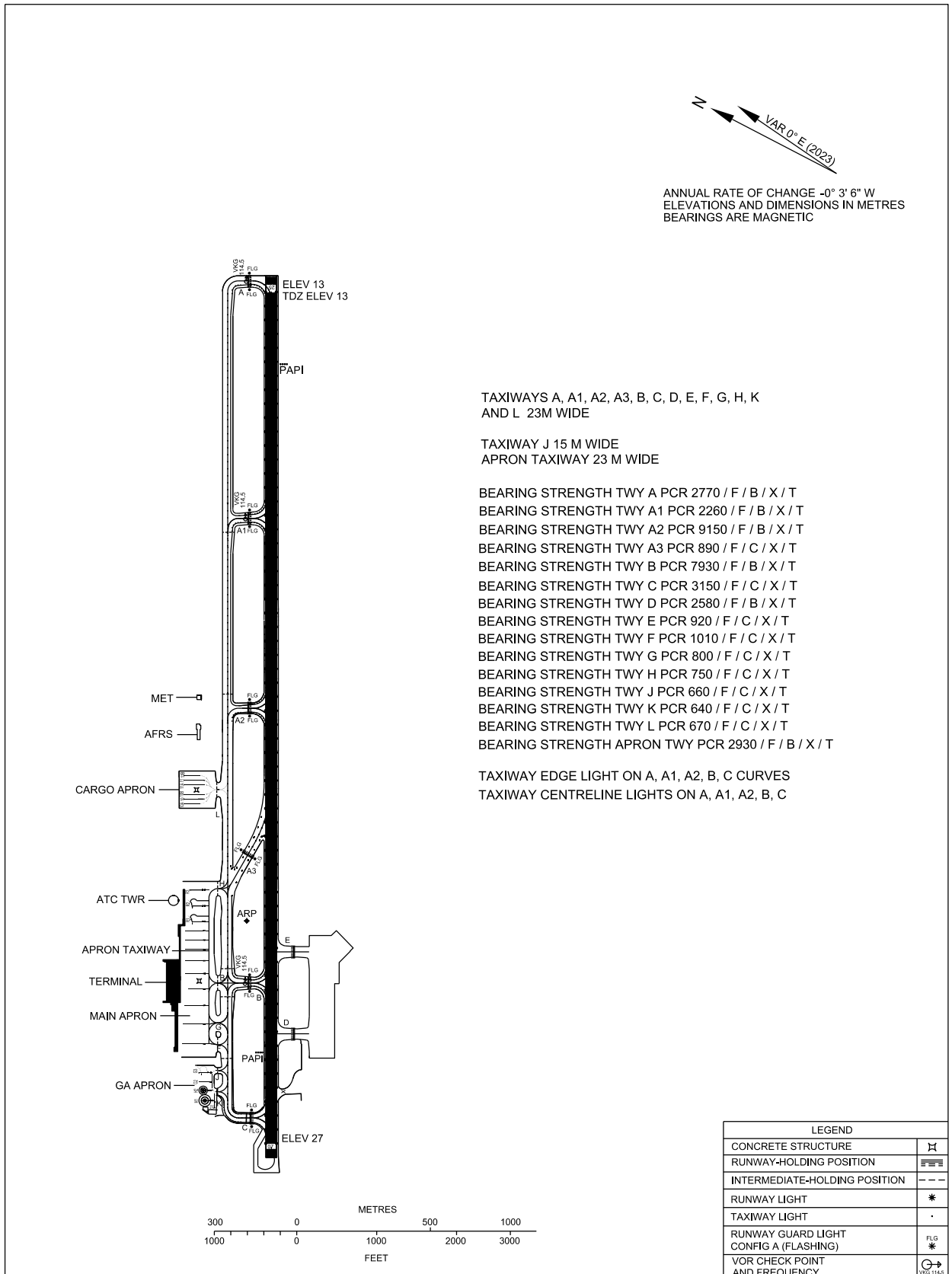
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**AERODROME GROUND
MOVEMENT CHART - ICAO**

APRON ELEV
21 M

TWR	118.1 (P) 121.7 (S)	SMC	121.9 128.4
APP	120.2 (P) 123.85 (S)	FIS	134.75
ACC	134.5 (P) 125.35 (S)		

**KUCHING/KUCHING
INTERNATIONAL AIRPORT**



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WBGS AD 2.24 CHARTS RELATED TO AN AERODROME

Chart name	Page
AERODROME/HELIPORT CHART (WBGS) - ICAO	AD 2-WBGS-2-1
AIRCRAFT PARKING/DOCKING CHART (WBGS) - ICAO	AD 2-WBGS-2-3
AERODROME GROUND MOVEMENT CHART (WBGS) - ICAO	AD 2-WBGS-2-5
AERODROME OBSTACLE CHART - ICAO - TYPE A	AD 2-WBGS-3-1
SIBU CONTROL ZONE, VOR/DME AND VOR OVERHEAD HOLDING AREAS	AD 2-WBGS-4-1
ATC SURVEILLANCE MINIMUM ALTITUDE CHART	AD 2-WBGS-4-3
STANDARD DEPARTURE CHART - ICAO - RWY 13/31 SIBU RADAR 1 DEP	AD 2-WBGS-6-1
STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO - RNAV (GNSS) RWY 13 - NOLUS 1A REDUK 1A LENTU 1A ELNAL 1A BIPIB 1A ANKUP PILAX 1A	AD 2-WBGS-6-3
STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO - RNAV (GNSS) RWY 13 - NOLUS 1A REDUK 1A LENTU 1A ELNAL 1A BIPIB 1A ANKUP PILAX 1A (TABULAR 1)	AD 2-WBGS-6-4
STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO - RNAV (GNSS) RWY 13 - NOLUS 1A REDUK 1A LENTU 1A ELNAL 1A BIPIB 1A ANKUP PILAX 1A (TABULAR 2)	AD 2-WBGS-6-5
STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO - RWY 13 - NOLUS 1B REDUK 1B LENTU 1B ELNAL 1B BIPIB 1B ANKUP 1B PILAX 1B	AD 2-WBGS-6-7
STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO - RWY 13 - NOLUS 1B REDUK 1B LENTU 1B ELNAL 1B BIPIB 1B ANKUP 1B PILAX 1B (TABULAR 1)	AD 2-WBGS-6-8
STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO - RNAV (GNSS) RWY 31 - NOLUS 1C REDUK 1C LENTU 1C ELNAL 1C BIPIB 1C ANKUP 1C PILAX 1C	AD 2-WBGS-6-9
STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO - RNAV (GNSS) RWY 31 - NOLUS 1C REDUK 1C LENTU 1C ELNAL 1C BIPIB 1C ANKUP 1C PILAX 1C (TABULAR 1)	AD 2-WBGS-6-10
STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO - RWY 13 - NOLUS 1C REDUK 1C LENTU 1C ELNAL 1C BIPIB 1C ANKUP 1C PILAX 1C (TABULAR 2)	AD 2-WBGS-6-11
STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO - RWY 31 - NOLUS 1D REDUK 1D LENTU 1D ELNAL 1D BIPIB 1D ANKUP 1D PILAX 1D	AD 2-WBGS-6-13
STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO - RWY 31 - NOLUS 1D REDUK 1D LENTU 1D ELNAL 1D BIPIB 1D ANKUP 1D PILAX 1D (TABULAR 1)	AD 2-WBGS-6-14
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RNAV (GNSS) RWY 13 NOLUS 1E REDUK 1E LENTU 1E ELNAL 1E BIPIB 1E ANKUP 1E PILAX 1E	AD 2-WBGS-7-1
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RNAV (GNSS) RWY 13 NOLUS 1E REDUK 1E LENTU 1E ELNAL 1E BIPIB 1E ANKUP 1E PILAX 1E (TABULAR 1)	AD 2-WBGS-7-2
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RNAV (GNSS) RWY 13 NOLUS 1E REDUK 1E LENTU 1E ELNAL 1E BIPIB 1E ANKUP 1E PILAX 1E (TABULAR 2)	AD 2-WBGS-7-3
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RWY 13 NOLUS 1F REDUK 1F LENTU 1F ELNAL 1F BIPIB 1F ANKUP 1F PILAX 1F	AD 2-WBGS-7-5
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RWY 13 NOLUS 1F REDUK 1F LENTU 1F ELNAL 1F BIPIB 1F ANKUP 1F PILAX 1F (TABULAR 1)	AD 2-WBGS-7-6
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RWY 13 NOLUS 1F REDUK 1F LENTU 1F ELNAL 1F BIPIB 1F ANKUP 1F PILAX 1F (TABULAR 2)	AD 2-WBGS-7-7
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RNAV (GNSS) RWY 31 NOLUS 1G REDUK 1G LENTU 1G ELNAL 1G BIPIB 1G ANKUP 1G PILAX 1G	AD 2-WBGS-7-9
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RNAV (GNSS) RWY 31 NOLUS 1G REDUK 1G LENTU 1G ELNAL 1G BIPIB 1G ANKUP 1G PILAX 1G (TABULAR 1)	AD 2-WBGS-7-10
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RNAV (GNSS) RWY 31 NOLUS 1G REDUK 1G LENTU 1G ELNAL 1G BIPIB 1G ANKUP 1G PILAX 1G (TABULAR 2)	AD 2-WBGS-7-11
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RWY 31 NOLUS 1H REDUK 1H LENTU 1H ELNAL 1H BIPIB 1H ANKUP 1H PILAX 1H	AD 2-WBGS-7-13
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RWY 31 NOLUS 1H REDUK 1H LENTU 1H ELNAL 1H BIPIB 1H ANKUP 1H PILAX 1H (TABULAR 1)	AD 2-WBGS-7-14
STANDARD ARRIVAL CHART INSTRUMENT (STAR) - ICAO - RWY 31 NOLUS 1H REDUK 1H LENTU 1H ELNAL 1H BIPIB 1H ANKUP 1H PILAX 1H (TABULAR 2)	AD 2-WBGS-7-15
INSTRUMENT APPROACH CHART - ICAO - RWY 13 ILS Z OR LOC Z	AD 2-WBGS-8-1
INSTRUMENT APPROACH CHART - ICAO - RWY 13 ILS Z OR LOC Z (TABULAR 1)	AD 2-WBGS-8-2
INSTRUMENT APPROACH CHART - ICAO - RWY 13 ILS Y OR LOC Y	AD 2-WBGS-8-3
INSTRUMENT APPROACH CHART - ICAO - RWY 13 ILS Y OR LOC Y (TABULAR 1)	AD 2-WBGS-8-4

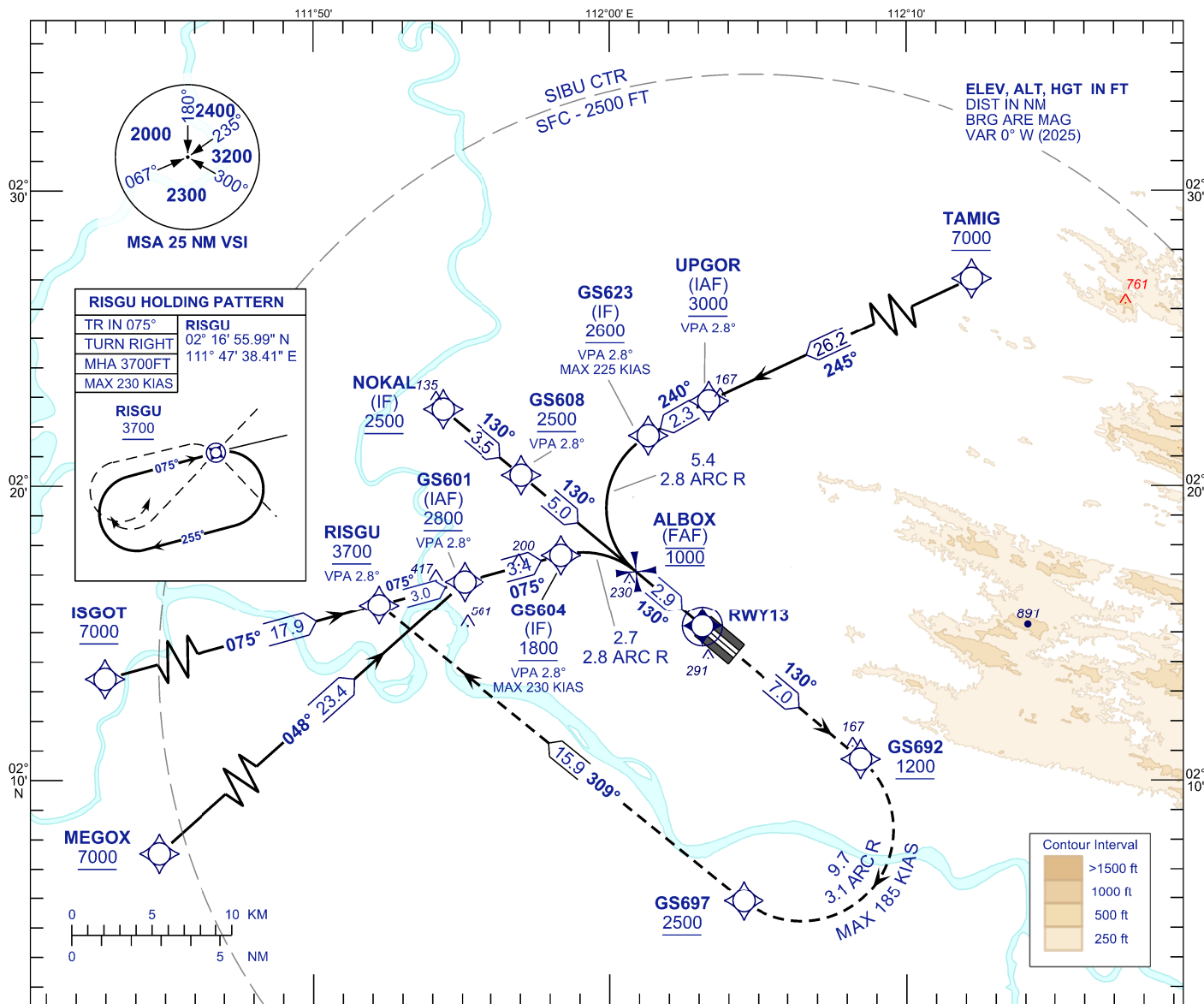
Chart name	Page
INSTRUMENT APPROACH CHART - ICAO - RWY 13 RNP Z (AR)	AD 2-WBGS-8-5
INSTRUMENT APPROACH CHART - ICAO - RWY 13 RNP Z (AR) (TABULAR 1)	AD 2-WBGS-8-6
INSTRUMENT APPROACH CHART - ICAO - RWY 13 RNP Z (AR) (TABULAR 2)	AD 2-WBGS-8-7
INSTRUMENT APPROACH CHART - ICAO - RWY 13 RNP Y	AD 2-WBGS-8-9
INSTRUMENT APPROACH CHART - ICAO - RWY 13 RNP Y (TABULAR 1)	AD 2-WBGS-8-10
INSTRUMENT APPROACH CHART - ICAO - RWY 13 VOR Z	AD 2-WBGS-8-11
INSTRUMENT APPROACH CHART - ICAO - RWY 13 VOR Z (TABULAR 1)	AD 2-WBGS-8-12
INSTRUMENT APPROACH CHART - ICAO - RWY 13 VOR Y	AD 2-WBGS-8-13
INSTRUMENT APPROACH CHART - ICAO - RWY 13 VOR Y (TABULAR 1)	AD 2-WBGS-8-14
INSTRUMENT APPROACH CHART - ICAO - RWY 31 RNP Z (AR)	AD 2-WBGS-8-15
INSTRUMENT APPROACH CHART - ICAO - RWY 31 RNP Z (AR) (TABULAR 1)	AD 2-WBGS-8-16
INSTRUMENT APPROACH CHART - ICAO - RWY 31 RNP Z (AR) (TABULAR 2)	AD 2-WBGS-8-17
INSTRUMENT APPROACH CHART - ICAO - RWY 31 RNP Y	AD 2-WBGS-8-19
INSTRUMENT APPROACH CHART - ICAO - RWY 31 RNP Y (TABULAR 1)	AD 2-WBGS-8-20
INSTRUMENT APPROACH CHART - ICAO - RWY 31 VOR Z	AD 2-WBGS-8-21
INSTRUMENT APPROACH CHART - ICAO - RWY 31 VOR Z (TABULAR 1)	AD 2-WBGS-8-22
INSTRUMENT APPROACH CHART - ICAO - RWY 31 VOR Y	AD 2-WBGS-8-23
INSTRUMENT APPROACH CHART - ICAO - RWY 31 VOR Y (TABULAR 1)	AD 2-WBGS-8-24

**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 121 FT
HEIGHTS RELATED TO
THR RWY 13 - ELEV 81 FT

APP	122.60 (P), 124.40 (S)
TWR	123.20
SMC	121.90
ATIS	127.65

SIBU/SIBU (WBGS)
RNP Z RWY 13 (AR)



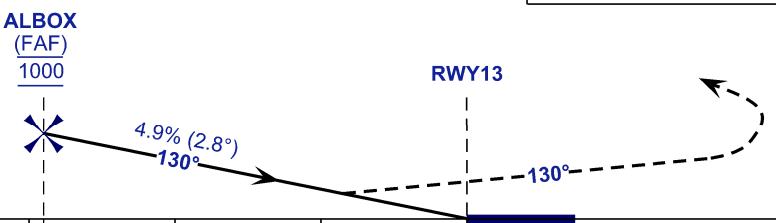
TCH 51
VPA 2.8°

TRANSITION LEVEL FL 130
TRANSITION ALT 11000

MISSED APPROACH
CLIMB TO 3700FT OR ABOVE VIA RNP Z MISSED
APCH TRACK TO RISGU AND HOLD,
OR AS DIRECTED BY ATC.

CAUTION
MISSED APPROACH TURN SPEED
MAX 185 KIAS

THR ELEV 81
TO THR 13 (NM)



STRAIGHT IN-APPROACH	OCA (H)	
CATEGORY OF AIRCRAFT	C	D
RNP 0.3	453 (372)	
CIRCLING AND ALTERNATE N/A		

AUTHORIZATION REQUIRED

NOTES

- 1) APPROACH NOT AUTHORIZED WHEN AIRPORT TEMPERATURE BELOW 19°C OR ABOVE 40°C.
- 2) RF REQUIRED.
- 3) WBGS ALTIMETER SETTING REQUIRED.
- 4) GNSS REQUIRED.
- 5) PAPI AND VERTICAL PATH ANGLE NOT COINCIDENT.
- 6) RNP 0.30 FROM IAF'S TO RWY.
- 7) RNP 0.50 FROM RWY TO GS692.

CHANGES : REVISE UPGOR, RISGU & GS601 HEIGHT RESTRICTION, ADD VPA.

**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 121 FT
HEIGHTS RELATED TO
THR RWY 13 - ELEV 81 FT

**SIBU/SIBU (WBGS)
RNP Z RWY 13 (AR)**

TABULAR DESCRIPTION

TAMIG TRANSITION

SEQ	PATH TERM	WPT	RF ARC CENTER	FLY OVER	WPT DESC	TRACK/ DISTANCE OR COURSE/TIME	ARC DIRECTION	ALTITUDE (FT)	MAX IAS (KT)	VPA	RNP
010	IF	TAMIG	-	-	-	-	-	+7000	-	-	-
020	TF	UPGOR	-	-	IAF	245°M / 26.2NM	-	+3000	-	-	2.0
030	TF	GS623	-	-	IF	240° M / 2.3NM	-	+2600	-225	-2.80°	0.3
040	RF	ALBOX	RGS03	-	FAF	2.8 RF / 5.4NM	L	@1000	-185	-2.80°	0.3

NOKAL TRANSITION

SEQ	PATH TERM	WPT	RF ARC CENTER	FLY OVER	WPT DESC	TRACK/ DISTANCE OR COURSE/TIME	ARC DIRECTION	ALTITUDE (FT)	MAX IAS (KT)	VPA	RNP
010	IF	NOKAL	-	-	IF	-	-	+2500	-	-	-
020	TF	GS608	-	-	-	130° M / 3.5 NM	-	+2500	-	-	0.3
030	TF	ALBOX	-	-	FAF	130° M / 5.0 NM	-	@1000	-185	-2.80°	0.3

ISGOT TRANSITION

SEQ	PATH TERM	WPT	RF ARC CENTER	FLY OVER	WPT DESC	TRACK/ DISTANCE OR COURSE/TIME	ARC DIRECTION	ALTITUDE (FT)	MAX IAS (KT)	VPA	RNP
010	IF	ISGOT	-	-	-	-	-	+7000	-	-	-
020	TF	RISGU	-	-	-	075° M / 17.9 NM	-	+3700	-	-	2.0
030	TF	GS601	-	-	IAF	075° M / 3.0 NM	-	+2800	-	-2.80°	2.0
040	TF	GS604	-	-	IF	075° M / 3.4 NM	-	+1800	-230	-2.80°	0.3
050	RF	ALBOX	RGS01	-	FAF	2.8 RF / 2.7 NM	R	@1000	-185	-2.80°	0.3

MEGOX TRANSITION

SEQ	PATH TERM	WPT	RF ARC CENTER	FLY OVER	WPT DESC	TRACK/ DISTANCE OR COURSE/TIME	ARC DIRECTION	ALTITUDE (FT)	MAX IAS (KT)	VPA	RNP
010	IF	MEGOX	-	-	-	-	-	+7000	-	-	-
020	TF	GS601	-	-	IAF	048° M / 23.4 NM	-	+2800	-	-	2.0
030	TF	GS604	-	-	IF	075° M / 3.4 NM	-	+1800	-230	-2.80°	0.3
040	RF	ALBOX	RGS01	-	FAF	2.8 RF / 2.7 NM	R	@1000	-185	-2.80°	0.3

FINAL AND MISSED APPROACH

SEQ	PATH TERM	WPT	RF ARC CENTER	FLY OVER	WPT DESC	TRACK/ DISTANCE OR COURSE/TIME	ARC DIRECTION	ALTITUDE (FT)	MAX IAS (KT)	VPA	RNP
010	IF	ALBOX	-	-	FAF	-	-	@1000	-185	-	0.3
020	TF	RWY13	-	Y	LTP/FTP	130° M / 2.9 NM	-	+132	-	-2.80°	0.3
030	TF	GS692	-	-	-	130° M / 7.0 NM	-	+1200	-	-	0.5
040	RF	GS697	RG002	-	-	3.1 NM RF / 9.7 NM	R	+2500	-185	-	1.0
050	TF	RISGU	-	-	-	309° M / 15.9 NM	-	+3700	-	-	1.0
060	HM	RISGU	-	Y	-	075° M / 1.0 MIN.	-	+3700	-230	-	1.0

CHANGES : REVISE UPGOR, RISGU & GS601 HEIGHT RESTRICTION, ADD VPA.

WBKD AD 2.1 AERODROME LOCATION INDICATOR AND NAME

WBKD - LAHAD DATU

WBKD AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	050146N 1181945E Site at AD: 43.40M from RWY Centreline and 67.21M from TWY B Centreline
2	Direction and distance from (city)	1.7KM (0.9NM) Bearing 81° from Lahad Datu Hospital: 2.1KM by road.
3	Elevation/Reference temperature	15M (49FT) / 32.8°C
4	Geoid undulation at AD ELEV PSN	+59M
5	MAG VAR/Annual change	0° W (2023) / - 0° 5' 12" W decreasing
6	AD operator, address, telephone, telefax, e-mail address, AFS and website address	Operator: Malaysia Airports Sdn Bhd Lahad Datu Airport P.O. Box 60928 91118 Lahad Datu Sabah. TEL: +6089 - 881033 / 881491 Telefax: +6089 - 881618 Email: masb_ldu@malaysiaairports.com.my Website: www.malaysiaairports.com.my ATS: Civil Aviation Authority of Malaysia Lahad Datu Airport P.O Box 60213 91108 Lahad Datu Sabah Malaysia TEL: +6089 - 886745 (Administration) +6089 - 896698 (Tower) Telefax: +6089 - 882852 (Administration) +6089 - 896588 (Tower) AFS: WBKDZTZX
7	Types of traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	NIL

WBKD AD 2.3 OPERATIONAL HOURS

1	AD Operator	0000 - 0900 UTC Daily
2	Customs and immigration	On request
3	Health and sanitation	NIL
4	AIS Briefing Office	NIL
5	ATS Reporting Office (ARO)	NIL
6	MET Briefing Office	NIL
7	ATS	HJ
8	Fuelling	NIL
9	Handling	Prior arrangements.
10	Security	HJ
11	De-icing	NIL
12	Remarks	Dawn to dusk for notified sked movements. Other movements PPR fm ATCC Kinabalu.

WBKD AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/oil types	Not available.
3	Fuelling facilities/capacity	NIL
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

WBKD AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotels in town.
2	Restaurants	At AD and in the city
3	Transportation	Taxi services.
4	Medical facilities	Hospital in town.
5	Bank and Post Office	Bank and Post Office in town.
6	Tourist Office	Tabin Wildlife Resort in Airport Terminal Building.
7	Remarks	NIL

WBKD AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 5
2	Rescue equipment	Adequately provided as recommended by ICAO.
3	Capability for removal of disabled aircraft	With arrangement with the respective airline and ground handler a) Largest aircraft - ATR 72-500
4	Remarks	All Airport Fire & Rescue Service (AFRS) personnel are to be well trained in rescue and firefighting as well as medical first aid.

WBKD AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	-
2	Clearance priorities	-
3	Remarks	-

WBKD AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	Bay 1 and Bay 2 Apron Surface: Asphalt (Flexible) Strength: PCR 116 / F / B / W / U
2	Taxiway width, surface and strength	Taxiway A Width: 16 M Surface: Asphalt (Flexible) Strength: PCR 116 / F / B / W / U
		Taxiway B TWY Width: 17 M Surface: Asphalt (Flexible) Strength: PCR 116 / F / B / W / U
		Taxiway C TWY Width: 10 M Surface: Asphalt (Flexible) Strength: 11 Tonnes
3	Altimeter checkpoint location and elevation	Location: At main apron Elevation: 14M (46FT)
4	VOR checkpoints	NIL
5	INS checkpoints	At aircraft parking stands (See AD 2-WBKD-2-3)
6	Remarks	NIL

WBKD AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	TWY guideline to all parking bays. Aircraft lead-in line, turn bar, turning line, alignment bar, stop line and lead-out line for all parking bays.
2	RWY and TWY markings and LGT	RWY : Runway designation, threshold, transverse stripe, aiming point, centre line, side stripe and turn pad markings. Chevron marking at RWY 29 only. TWY : Centre line, runway-holding position, taxi side stripe and mandatory instruction markings LGT : NIL
3	Stop bars	NIL
4	Remarks	Pilot to exercise caution when taxiing to holding position

WBKD AD 2.10 AERODROME OBSTACLES

In Area 2					
OBST ID/ Designation	OBST type	OBST position	ELEV/HGT	Marking/Type, colour, lighting (LGT)	Remarks
a	b	c	d	e	f
WBKDOB001	Telecom Tower	050150.9N 1182018.2E	89 FT AGL	Painted red / white	NIL
WBKDOB002	Power Transmission Line (T1)	050137.4N 1182034.6E	41.4 M	NIL	NIL
WBKDOB003	Power Transmission Line (T2)	050147.4N 1182039.5E	62.87 M	NIL	NIL

In Area 2					
OBST ID/ Designation	OBST type	OBST position	ELEV/HGT	Marking/Type, colour, lighting (LGT)	Remarks
a	b	c	d	e	f
WBKDOB004	Power Transmission Line (T3)	050148.2N 1182050.0E	94.24 M	NIL	NIL
WBKDOB005	Power Transmission Line (T4)	050146.6N 1182055.8E	104.53 M	NIL	NIL
WBKDOB006	Power Transmission Line (T5)	050143.9N 1182105.7E	93.59 M	NIL	NIL
WBKDOB007	Power Transmission Line (T6)	050151.9N 1182111.0E	90.83 M	NIL	NIL
WBKDOB008	Power Transmission Line (T7)	050159.4N 1182115.7E	58.41 M	NIL	NIL
WBKDOB009	Building	NIL	75 M	NIL	Erected on the right of RWY 11
WBKDOB010	High-Mast LGT	NIL	13.5 M	NIL	Taking place at location at forward OPR base (FOB) Royal Malaysian Air Force Area, APRX 65 M FM RCL on the Right Handside RWY 29.
WBKDOB011	Structure	NIL	NIL	NIL	Structure APRX 77.24 M FM RCL on the RWY11 PARX 815 M FM THR.

WBKD AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	AMS TAWAU
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	AMO KOTA KINABALU H24(0024 0606 1212 1818)
4	Trend forecast Interval of issuance	-
5	Briefing/consultation provided	NIL
6	Flight documentation Language(s) used	Charts, Tabular Form and Abbreviated Plain Language Text English
7	Charts and other information available for briefing or consultation	No briefing and consultation but charts available upon request
8	Supplementary equipment available for providing information	Aviation Self-Briefing Terminal - ABT (Interet)
9	ATS units provided with information	LAHAD DATU INFORMATION
10	Additional information (limitation of service, etc.)	TEL: +6089 - 950569 Telefax:+6089 - 950561

WBKD AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength (PCR) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
11	115.35°	1380 x 30	PCR 116 / F / B / W / U Asphalt (Flexible)	THR coordinates 050205.88N 1181906.25E RWY end coordinates 050146.30N 1181946.59E GUND +59M	THR elevation: 11M(36FT)
29	295.35°	1380 x 30	PCR 116 / F / B / W / U Asphalt (Flexible)	THR coordinates 050146.30N 1181946.59E RWY end coordinates 050205.88N 1181906.25E GUND +59M	THR elevation: 15M(49FT)

Slope of RWY-SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
-0.260%	NIL	NIL	1440 X 60	NIL	NIL
+0.260%	NIL	NIL	1440 X 60	NIL	NIL

WBKD AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
11	1380	1380	1380	1380	NIL
29	1380	1380	1380	1380	NIL

WBKD AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
11	NIL	NIL	PAPI Left Slope 3° 6.9M (22.6FT)	NIL	NIL	NIL	NIL	NIL	NIL

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
29	NIL	NIL	PAPI Right Slope 3° 6.9 M (22.6 FT)	NIL	NIL	NIL	NIL	NIL	NIL

WBKD AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	NIL
2	LDI location and LGT Anemometer location and LGT	Wind direction indicator (WDI): RWY 11: 197.5 M from THR on left, 61.5 M from RWY centre line and not lighted. RWY 29: 211 M from THR on right, 61.5 M from RWY centre line and not lighted.
3	TWY edge and centre line lighting	NIL
4	Secondary power supply/switch-over time	Secondary power supply: Available - PAPI only Switch-over time: 15 seconds
5	Remarks	NIL

WBKD AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	NIL

WBKD AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	LAHAD DATU FIZ A Circle 5NM radius centered on Lahat Datu ARP (050146N 1181945E)
2	Vertical limits	SFC to 1500FT AMSL
3	Airspace classification	G
4	ATS unit call sign Language(s)	LAHAD DATU INFORMATION English
5	Transition altitude	NIL
6	Remarks	NIL

WBKD AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
GROUND	LAHAD DATU GROUND	121.900 MHZ	HJ	-
AFIS	LAHAD DATU INFORMATION	122.300 MHZ	HJ	-

WBKD AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
L	LHD	334KHZ	HJ	050129.1N 1182010.8E	-	114° MAG / 1464 M to RWY 29. 100 W Antenna Elevation: 29M

WBKD AD 2.20 LOCAL AERODROME REGULATIONS

- 2.20.1. Aerodrome is not avbl to aircraft with multiple wheel undercarriage systems.
- 2.20.2. Arriving aircraft Parking Arrangement
- 2.20.2.1 No simultaneous aircraft movement (power-in and power-out operations) at the main apron.
- 2.20.2.2 The aerodrome operates with Aerodrome Reference Code (ARC) 1B and non-instrument runway operations.
- 2.20.2.3 All aircraft operating within Lahad Datu FIZ shall be equipped with and maintain two-way radio communication.
- 2.20.2.4 Pilots shall maintain continuous listening watch on the designated frequency while operating within the Lahad Datu FIZ.
- 2.20.2.5 Pilots to maintain track within the lateral limits of the airway and to navigate in accordance with information given by AFIS officer. The minimum requirement is one-radio compass.
- 2.20.2.6 Pilots shall report their position and intentions at all relevant points of the aerodrome traffic circuit, including downwind, base, and final.
- 2.20.2.7 Upon initial contact with Lahad Datu Information, or when entering the Lahad Datu FIZ, pilots shall provide relevant information, including aircraft identification, position, level, and intentions to enhance situational awareness.
- 2.20.2.8 Advisory information will be provided in place of control instructions.
- 2.20.2.9 Pilots shall be responsible for the avoidance of collision with other aircraft and, based on their own observation and information provided by the AFIS unit, decide on the appropriate course of action. Pilots shall establish and maintain to-way radio communication and report their position, level, and intentions.

WBKD AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

WBKD AD 2.22 FLIGHT PROCEDURES

NIL

WBKD AD 2.23 ADDITIONAL INFORMATION

- 2.23.1. Bird Concentration In The Vicinity Of The Airport**
- 2.23.1.1 Concentration of birds within the vicinity of the aerodrome. Pilot to exercise caution during landing and take-off.
- 2.23.2. Pilot to exercise caution and follow local procedure on
- a) Aircraft taxiing and parking (Apron management procedure)

2.23.3. All aircraft are not allowed to make locked wheel turns on the runway.

2.23.4. The runway turn pads at RWY 11 and 29 are not provided with a shoulder.

2.23.5. Circuit Pattern

- a) Runway 11 - Left hand circuit
- b) Runway 29 - Right hand circuit

2.23.6. Engine run procedure

- a) Full thrust engine procedure is only allowed when aircraft on Runway (Take-off position).

2.23.7. Manually Transmit Weather Information

- a) At first contact, pilot will request for Lahad Datu weather information and Lahad Datu Air Traffic Controller will transmit Lahad Datu weather information by following AWS information given.

Air Traffic Controller will transmit weather info based on format below;

- i. Surface wind
- ii. Visibility
- iii. Lowest cloud formation
- iv. Temperature
- v. Dew Point
- vi. QNH

Note: *Visibility and cloud based on tower observation*

WBKW AD 2.1 AERODROME LOCATION INDICATOR AND NAME

WBKW - TAWAU

WBKW AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	041839N 1180659E Site: Between TWY A and TWY B (89.82M from RWY Centre line)
2	Direction and distance from (city)	25.78 KM (13.92 NM), Bearing 73°3' from Masjid Al-khautar, 31 KM by road
3	Elevation/Reference temperature	(56 ft) / 32°C
4	Geoid undulation at AD ELEV PSN	+59M
5	MAG VAR/Annual change	0° W (2023) / - 0° 5' 7" W decreasing
6	AD operator, address, telephone, telefax, e-mail address, AFS and website address	Operator: Malaysia Airports Sdn. Bhd. Tawau Airport P.O. Box 60132 91011 Tawau Sabah. TEL: +089 - 950777,+6089 - 950012 / 013 / 014 Telefax: +6089 - 950781 e-mail: masb_twu@malaysiaairports.com.my Http://www.malaysiaairports.com.my ATC Services: Civil Aviation Authority of Malaysia Tawau Airport P.O. Box 379 91007 Tawau Sabah Malaysia TEL: +6089 - 950111 / +6089 - 950114 / +6089 - 950115 +6089 - 950113 (Tower) Telefax: +6089 - 950112 (Administration) +6089 - 950100 (Tower) AFS: WBKWZTZX
7	Types of traffic permitted (IFR/VFR)	IFR / VFR
8	Remarks	NIL

WBKW AD 2.3 OPERATIONAL HOURS

1	AD Operator	2300 - 1400UTC Daily
2	Customs and immigration	Customs: 2300 - 1400 Immigration: 2300 - 1400
3	Health and sanitation	2300 - 1400
4	AIS Briefing Office	NIL
5	ATS Reporting Office (ARO)	2300 - 1400 Daily
6	MET Briefing Office	H24
7	ATS	2300 - 1400 Daily
8	Fuelling	2300 - 1400
9	Handling	Prior arrangement.
10	Security	H24
11	De-icing	NIL
12	Remarks	NIL

WBKW AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	By arrangement with Malaysia Airline Berhad.
2	Fuel/oil types	Jet A1 Fuel
3	Fuelling facilities/capacity	Refuelling by bowser.
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

WBKW AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotels in town.
2	Restaurants	Airport restaurant.
3	Transportation	Bus and Taxi services.
4	Medical facilities	Hospital in town.
5	Bank and Post Office	Auto Teller Machine (ATM) at airport Bank and Post Offices in town
6	Tourist Office	NIL
7	Remarks	NIL

WBKW AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 7
2	Rescue equipment	Adequately provided as recommended by ICAO
3	Capability for removal of disabled aircraft	With arrangement with the respective airline and ground handler i) Largest aircraft - B762
4	Remarks	All Airport Fire Rescue Service (AFRS) personnel are trained in rescue and fire-fighting as well as medical first-aid.

WBKW AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	-
2	Clearance priorities	-
3	Remarks	-

WBKW AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1.	Apron surface and strength	<p>Bay 1, Bay 2, Bay 3, Bay 4 and Bay 5</p> <p>Surface: Concrete (Rigid) and Asphalt (Flexible) Strength: PCR 685 / R / C / W / U and PCR 574 / F / C / W / U</p> <p>Bay 6</p> <p>Surface: Asphalt (Flexible) Strength: PCR 135 / F / C / W / U</p> <p>Bay 6A</p> <p>Surface: Asphalt (Flexible) Strength: PCR 116 / F / C / W / U</p>
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2	Taxiway width, surface and strength	<p>Taxiway A Width: 23 M Surface: Asphalt (Flexible) Strength: PCR 574 / F / C / W / U</p> <p>Taxiway B Width: 22 M Surface: Asphalt (Flexible) Strength: PCR 574 / F / C / W / U</p> <p>Apron Taxiway Width: 24 M Surface: Asphalt (Flexible) Strength: PCR 574 / F / C / W / U</p>
3	Altimeter checkpoint location and elevation	Location: At apron Elevation: 16 M
4	VOR checkpoints	VOR: TWY A and TWY B holding position. See AD chart
5	INS checkpoints	At aircraft parking stands (See AD 2-WBKW-2-3)
6	Remarks	B762 aircraft are only allowed to use TWY A to enter and exit the apron.

WBKW AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Taxiing guidance signs at all intersection with TWY and RWY and at all RWY Holding positions. Yellow taxiing guide lines at apron Visual docking and guidance system for Bay 1 and 2 Nose wheel guidance lines for all parking bays.
2	RWY and TWY markings and LGT	<p>RWY marking : Designation, threshold, centre line, side stripes, transverse stripe, touchdown zone, aiming point and runway turn pad markings.</p> <p>RWY LGT : Edge,threshold,end and wing bar lights.</p> <p>TWY marking : Centre line, taxi side stripe, runway-holding position and VOR aerodrome checkpoint markings.</p> <p>TWY LGT : Center line, exit and edge lights.</p>
3	Stop bars	NIL
4	Remarks	Pilot to exercise caution when taxiing to holding position

WBKW AD 2.10 AERODROME OBSTACLES

In approach/TKOF areas			In circling area and at AD		Remarks
1			2		
RWY NR/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
a	b	c	a	b	
06 /APCH 24 /TKOF	LOC ANTENNA, 63FT (19.2M). Lighted, colour red.	041817N 1180629E			
	LOCATOR ANTENNA, 116FT (35.35M). Lighted, colour red.	041759N 1180559E			

In approach/TKOF areas			In circling area and at AD		Remarks
1			2		3
RWY NR/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
a	b	c	a	b	
24/ APCH 06/ TKOF	WDI 16M Marked and lgtd.	041829.4N 1180654.8E			
	GP ANTENNA, 87FT (26.5M). Lighted, colour red.	041902N 1180750E			
	DVOR ANTENNA 70FT (21.25M). Lighted, colour red.	041928N 1180824E			
	WDI 16M Marked and lgtd.	041907.8N 1180744.5E			

Elevation of Obstacles within 10 NM radius from ARP		
RWY / AREA Affected	Obstacles Type, Elevation, Marking / Lighting	Coordinates
Within 10 NM radius from ARP	HILL, hgt 600FT (183M), brg 016° distance 5.2NM from ARP.	042347N 1180845E
	HILL, hgt 700FT (214M), brg 034° distance 6.2NM from ARP.	042354N 1181042E
	HILL, hgt 400FT (122M), brg 048° distance 6.3NM from ARP.	042300N 1181157E
	HILL, hgt 324FT (99M), brg 102° distance 4.1NM from ARP.	041757N 1181118E
	HILL, hgt 850FT (259M), brg 238° distance 8.6NM from ARP. Lighted.	041415N 1180005E
	HILL, hgt 400FT (122M), brg 241° distance 6.4NM from ARP.	041544N 1180145E
	HILL, hgt 1285FT (392M), brg 247° distance 9.5NM from ARP.	041508N 1175834E
	HILL, hgt 600FT (183M), brg 251° distance 7.4NM from ARP.	041621N 1180022E
	HILL, hgt 900FT (275M), brg 333° distance 5.3NM from ARP.	042332N 1180457E
	TELECOMMUNICATION TOWER, Sungai Kawa, hgt 62M lighted	041920N 1180537E

WBKW AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	AMS TAWAU
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	AMO KOTA KINABALU H24(0024 0606 1212 1818)
4	Trend forecast Interval of issuance	NIL
5	Briefing/consultation provided	NIL
6	Flight documentation Language(s) used	Charts, Tabular Form and Abbreviated Plain Language Text English
7	Charts and other information available for briefing or consultation	No briefing and consultation but charts available upon request
8	Supplementary equipment available for providing information	Aviation Self-Briefing Terminal - ABT (Internet)
9	ATS units provided with information	Tawau Control Tower
10	Additional information (limitation of service, etc.)	TEL: +6089 - 950560 Telefax:+6089 - 950568 Wind and RWY Visual Range (WRVR) System equipped for RWY24 and RWY06

WBKW AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE & MAG BRG	Dimensions of RWY(M)	Strength (PCR) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
06	58.37°	2685 x 47	PCR 574 / F / C / W / U Asphalt (Flexible)	THR coordinates 041825.28N 1180641.96E RWY end coordinates 041911.11N 1180756.07E GUND: +59M	THR: 16 M
24	238.37°	2685 x 47	PCR 574 / F / C / W / U Asphalt (Flexible)	THR coordinates 041911.11N 1180756.07E RWY end coordinates 041825.28N 1180641.96E GUND: +58.9M	THR: 11.0 M TDZ:11.0 M

Slope of RWY-SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
-0.191%	60 x 47	180 x 150	2925 x 280	NIL	RESA 90 x 94
+0.191%	60 x 47	180 x 150	2925 x 280	NIL	RESA 90 x 94

WBKW AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
06	2685	2865	2745	2685	NIL
24	2685	2865	2745	2685	NIL

WBKW AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
06	SALS 420M LIH	Green Green	PAPI Left Slope 3° 18.5M	NIL	NIL	2685M 57M Variable White/ Yellow LIH	Red -	60M Red	NIL
24	CAT1 900M LIH	Green Green	PAPI Left Slope 3° 17.9M	NIL	NIL	2685M 57M Variable White / Yellow LIH	Red -	60M Red	NIL

WBKW AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	ABN: Available on top of Control Tower. Rotating: Green and White 20 to 30 per minutes. IBN: NIL 1000 - 1400 UTC
2	LDI location and LGT Anemometer location and LGT	LDI: NIL Wind- direction indicator (WDI) RWY 06: 400 M from THR on left side, 100 M from RWY centerline lighted. RWY 24: 353 M from THR on left side, 100 M from RWY centerline lighted.
3	TWY edge and centre line lighting	TWY Edge - TWY A and TWY B TWY Centre line - TWY A and TWY B
4	Secondary power supply/switch-over time	Secondary power supply: Available to all AGL at AD Switch-over time: Maximum 15 seconds
5	Remarks	NIL

WBKW AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL

6	APP and FATO lighting	NIL
7	Remarks	NIL

WBKW AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	TAWAU CTR Commencing from 040800N 1173000E, clockwise along an arc of a circle 40NM radius centered on VTW DVOR/DME 041928.3N 1180823.7E, to 045841N 1175930E thence a straight line to 044247N 1184102E, thence along the arc of a circle 40NM radius centered on VTW DVOR/DME 041928.3N 1180823.7E to 040002N 1184327E thence along the Malaysian/Indonesian National boundary to 040800N 1173000E
2	Vertical limits	SFC to 11 500 FT AMSL
3	Airspace classification	C
4	ATS unit call sign Language(s)	TAWAU RADAR / TAWAU TOWER English
5	Transition altitude	11 000 FT AMSL
6	Remarks	TAWAU RADAR during Approach Radar service provision. TAWAU TOWER during Approach Procedural service provision.

WBKW AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
SMC	TAWAU GROUND	121.900 MHZ	2300 - 1400	NIL
TWR	TAWAU TOWER	122.500 MHZ		
APP	TAWAU RADAR	123.550 MHZ	0100 - 1000	Radar service available between 0100 - 1000 UTC daily: TAWAU TOWER shall be responsible for the provision of Air Traffic Services outside the above operation hours.
ATIS	TAWAU TERMINAL INFORMATION	126.250 MHZ	2300 - 1400	NIL
EMERGENCY FREQUENCY		121.500 MHZ		

WBKW AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS/LOC	ITWU	111.300 MHZ	H24	041817.12N 1180628.79E	-	LOC - 25 Watt
GP/DME		332.300 MHZ CH 50 X		041902.07N 1180749.92E	87 FT (26.5 M)	RDH: 50 FT GP - 5 Watt DME - 100 Watt
DVOR/DME	VTW	115.600 MHZ CH 103X		041928.3N 1180823.7E	65FT (19.75 M)	Antenna Elevation: 11.95 M

WBKW AD 2.20 LOCAL AERODROME REGULATION

- 2.20.1. Circuit Pattern
- a) RWY 06 - Right Hand Circuit.
 - b) RWY 24 - Left Hand Circuit.
- 2.20.2. Engine run procedures for aircraft
- a) Fitted with Auxiliary Power Unit (APU)
 - i. Aircraft shall start-up one engine.
 - ii. Push back shall commence after one engine has started up. Such engine shall be on idle power at push back.
 - iii. Start-up of other engine shall be made after push back and when the aircraft is position on the apron taxiway line.
 - b) Not fitted with Auxiliary Power unit (APU) or when the APU is unserviceable
 - i. Shall be permitted to start all engines before push back.
- 2.20.3. Parking for general aviation aircraft - refer to Aerodrome Chart.
- 2.20.4. Helicopter landing / take-off are confined to either runway or taxiway subject to air traffic requirement, thereafter air taxi to the helicopter stand.
- 2.20.5. Departing aircraft shall be pushed back onto the apron taxiway centreline and face North East or South West as directed by ATC.
- 2.20.6. Two way radio communication shall be established with Tawau Approach (123.550 MHz) or Tawau Tower (122.500 MHz) prior to enter Tawau CTR.
- 2.20.7 Arriving Aircraft Arrangement**
- 2.20.7.1 No simultaneous aircraft movement is allowed either power-in, push back and power-out at the main apron.
- 2.20.7.2 When Bay 5 is occupied with B762, no aircraft is allowed to be parked at Bay 4, Bay 6 and Bay 6A.
- 2.20.7.3 When Bay 6 is occupied with AT75, no aircraft is allowed to be parked at Bay 6A.
- 2.20.7.4 When Bay 6A is occupied with C750, no aircraft are allowed to be parked at Bay 6.
- 2.20.7.5 When Bay 5 is occupied with Code C aircraft, movement of the aircraft to power-in into Bay 6A is not permitted due to insufficient wing tip clearance.
- 2.20.8. Taxiway B is restricted to aircraft with an outer main gear wheel span (OMGWS) of 8.9 M and below

WBKW AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

WBKW AD 2.22 FLIGHT PROCEDURES

2.22.1 Communication Failure Procedure

In the event of communication failure, the pilot shall act in accordance with the communication failure procedures as published in Malaysian AIP, ENR 1.6-3, Para 1.6.2.1.

WBKW AD 2.23 ADDITIONAL INFORMATION

2.23.1 Bird Concentration In The Vicinity Of The Airport

2.23.1.1 Presence of birds at the aerodrome. Pilots to exercise caution while landing and take-off.

2.23.2 Backtrack on RWY

2.23.2.1 No backtrack on RWY. (No Wheel lock Turn)

**AERODROME/HELIPORT
CHART - ICAO**

04° 18' 39" N
118° 06' 59" E

ELEV 17 M

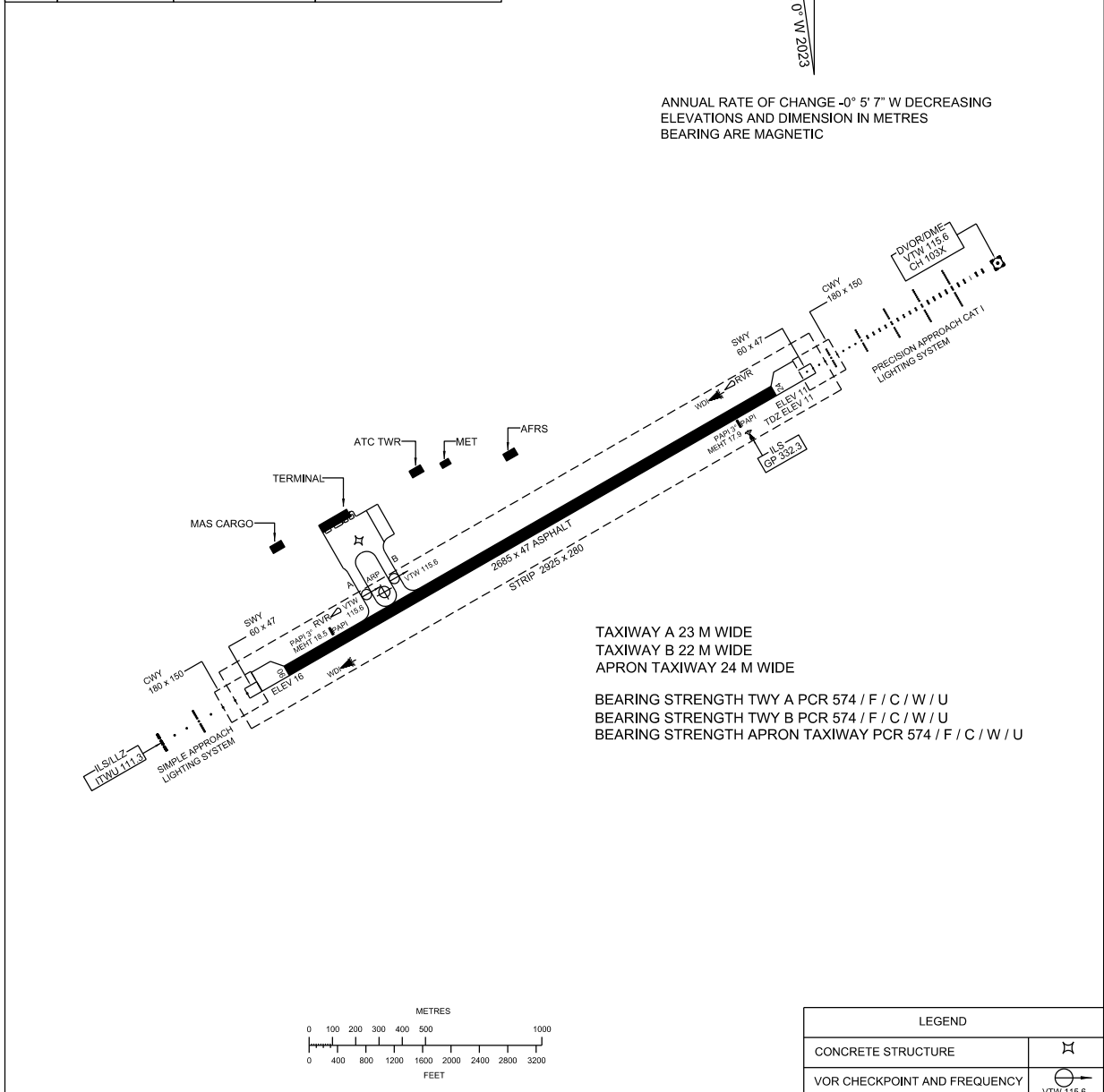
TWR	122.50
SMC	121.9
APP	123.55
ATIS	126.25

**TAWAU/
TAWAU AIRPORT**

RWY	DIRECTION	THR	BEARING STRENGTH
06	58°	04° 18' 25.28" N 118° 06' 41.96" E	PCR 574 / F / C / W / U ASPHALT
24	238°	04° 19' 11.11" N 118° 07' 56.07" E	



ANNUAL RATE OF CHANGE -0° 5' 7" W DECREASING
ELEVATIONS AND DIMENSION IN METRES
BEARING ARE MAGNETIC



TAXIWAY A 23 M WIDE
TAXIWAY B 22 M WIDE
APRON TAXIWAY 24 M WIDE

BEARING STRENGTH TWY A PCR 574 / F / C / W / U
BEARING STRENGTH TWY B PCR 574 / F / C / W / U
BEARING STRENGTH APRON TAXIWAY PCR 574 / F / C / W / U

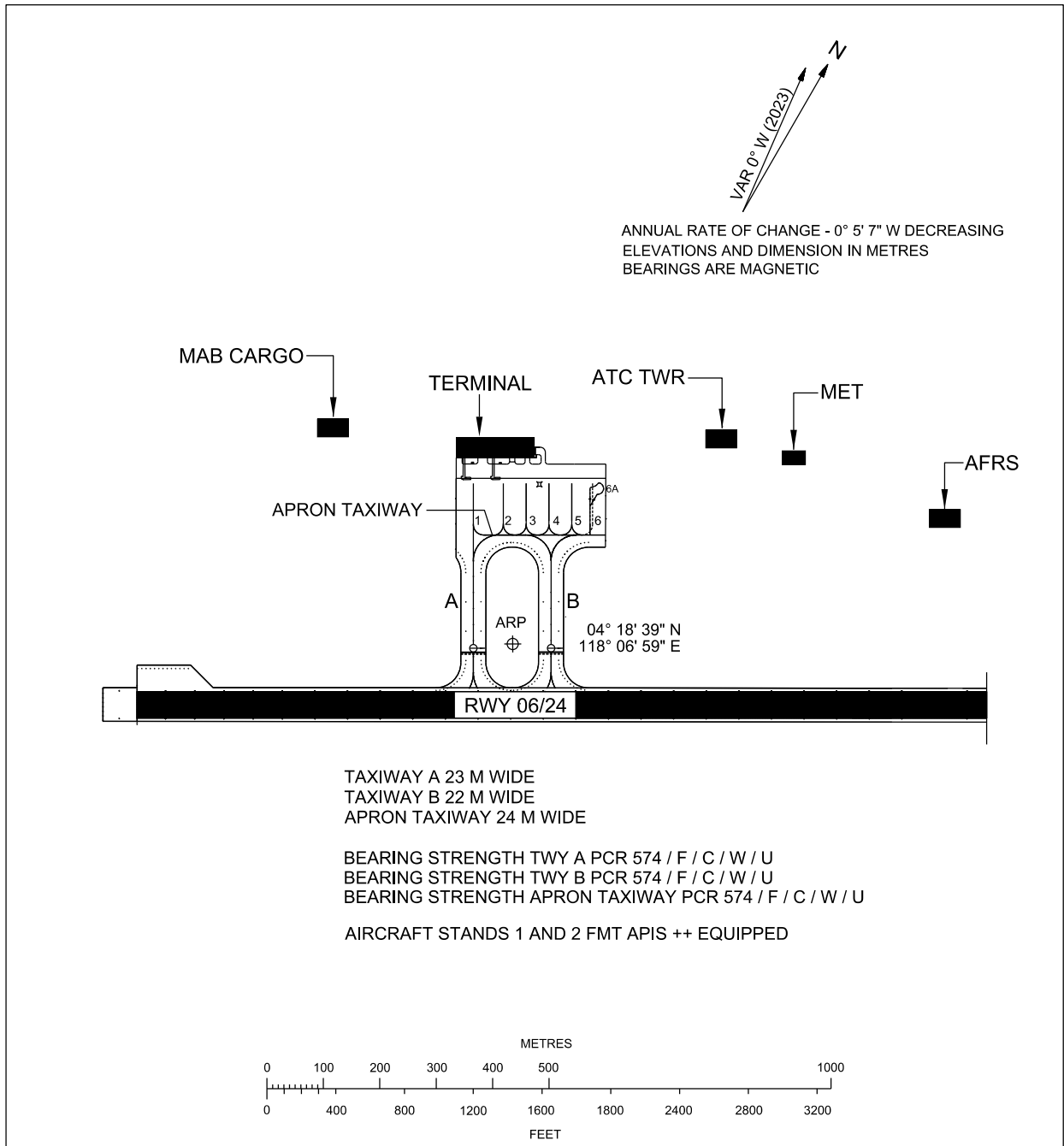
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**AIRCRAFT PARKING/
DOCKING CHART - ICAO**

APRON ELEV
16 M

TWR	122.50
SMC	121.9
APP	123.55
ATIS	126.25

**TAWAU/
TAWAU AIRPORT**



AIRCRAFT PARKING / DOCKING STAND POSITION

INS COORDINATES FOR AIRCRAFT STANDS	SURFACE & STRENGTH	AIRCRAFT TYPE
1 04° 18' 46.54" N 118° 06' 51.59" E	PCR 685 / R / C / W / U and PCR 574 / F / C / W / U	AT75, B738, B38M A320, A21N
2 04° 18' 47.43" N 118° 06' 53.03" E	PCR 685 / R / C / W / U and PCR 574 / F / C / W / U	AT75, B738, B38M A320, A21N
3 04° 18' 47.93" N 118° 06' 54.27" E	PCR 685 / R / C / W / U and PCR 574 / F / C / W / U	AT75, B738, B38M A320, A21N
4 04° 18' 48.62" N 118° 06' 55.39" E	PCR 685 / R / C / W / U and PCR 574 / F / C / W / U	B738, B38M, A320, A21N
5 04° 18' 49.31" N 118° 06' 56.51" E	PCR 685 / R / C / W / U and PCR 574 / F / C / W / U	B738, B38M, A320, A21N, B762
6 04° 18' 49.92" N 118° 06' 57.52" E	PCR 135 / F / C / W / U	AT75
6A 04° 18' 49.90" N 118° 06' 57.81" E	PCR 116 / F / C / W / U	C750 (CITATION X)

LEGEND	
AIRCRAFT STAND	6
TAXIWAY LIGHT	●
RUNWAY-HOLDING POSITION	■
CONCRETE STRUCTURE	■
VOR CHECKPOINT AND FREQUENCY	⊕

CHANGES: PAVEMENT BEARING STRENGTH

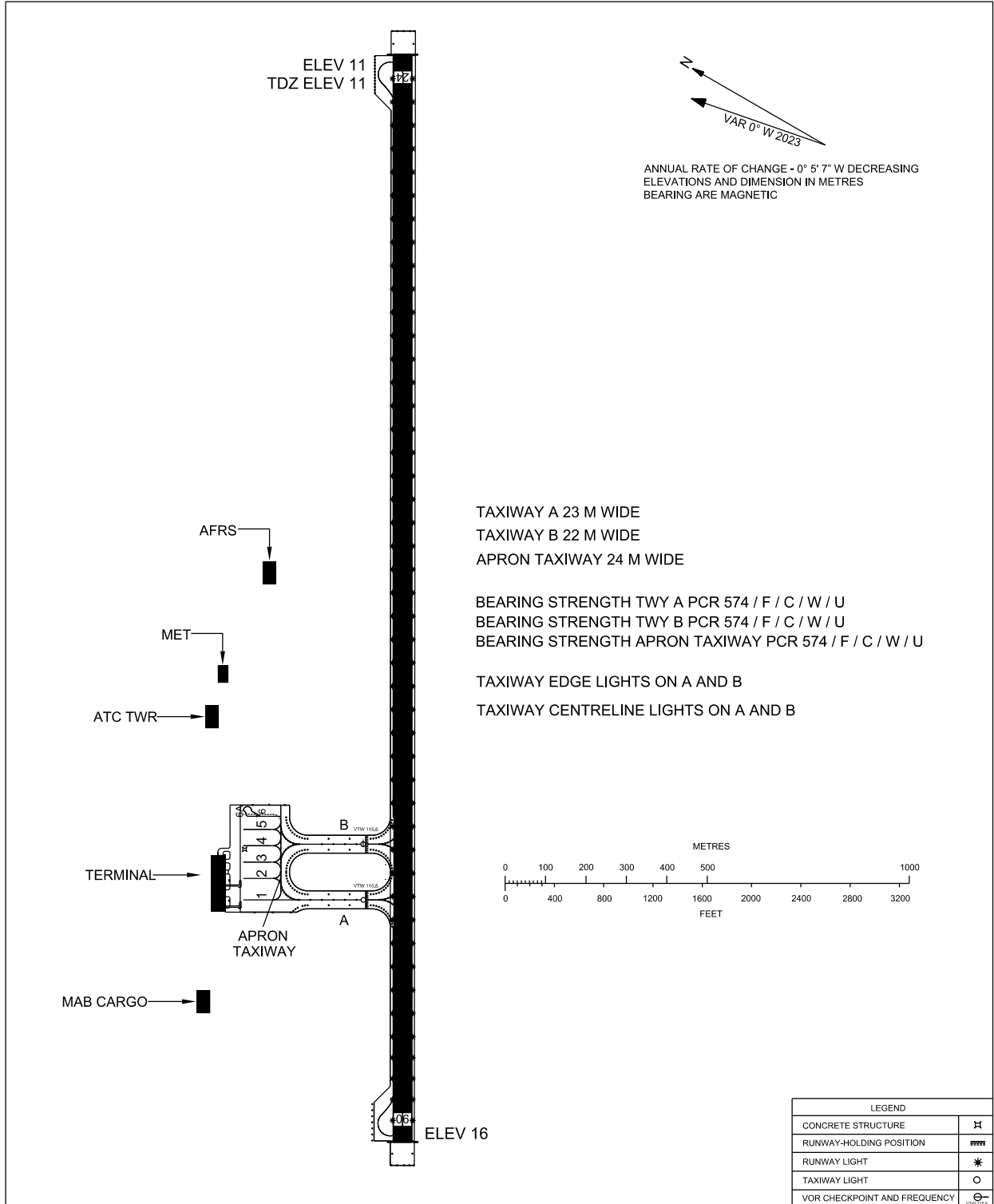
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**AERODROME GROUND
MOVEMENT CHART - ICAO**

APRON ELEV
16 M

TWR	122.50
SMC	121.9
APP	123.55
ATIS	126.25

**TAWAU/
TAWAU AIRPORT**



CHANGES: PAVEMENT BEARING STRENGTH

INTENTIONALLY BLANK

WBGM AD 2.1 AERODROME LOCATION INDICATOR AND NAME

WBGM - MARUDI

WBGM AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	041044N 1141940E Site: 38.0M from RWY Centreline and 48.0M from TWY A Centreline
2	Direction and distance from (city)	0.25KM (0.13NM). Bearing 74°10'55" from Marudi Hospital
3	Elevation/Reference temperature	24M(79FT) / 32°C
4	Geoid undulation at AD ELEV PSN	+44M
5	MAG VAR/Annual change	0° W (2019) -0.07° decreasing
6	AD operator, address, telephone, telefax, e-mail address, AFS and website address	Operator: Malaysia Airports Sdn Bhd Padang Terbang Marudi Jalan Limbang, Marudi 98050 Baram Sarawak Malaysia TEL: +6085 - 755220 Telefax: +606 - 3175214 Website: www.malaysiaairports.com.my ATS Services: Civil Aviation Authority of Malaysia Padang Terbang Marudi Jalan Limbang 98050 Marudi Sarawak Malaysia TEL: +6085 - 755069 Telefax:+6085 - 756504 e-mail: caam.marudi@caam.gov.my
7	Types of traffic permitted (IFR/VFR)	VFR
8	Remarks	NIL

WBGM AD 2.3 OPERATIONAL HOURS

1	AD Operator	HJ
2	Customs and immigration	NIL
3	Health and sanitation	Available on request.
4	AIS Briefing Office	NIL
5	ATS Reporting Office (ARO)	NIL
6	MET Briefing Office	NIL
7	ATS	HJ
8	Fuelling	NIL
9	Handling	Handling facilities available prior arrangement.
10	Security	HJ
11	De-icing	NIL
12	Remarks	NIL

WBGM AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/oil types	NIL
3	Fuelling facilities/capacity	NIL
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

WBGM AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotel in town
2	Restaurants	Restaurant in town
3	Transportation	Local taxi and local transports
4	Medical facilities	Marudi Hospital in town
5	Bank and Post Office	Bank and Post Office available in town
6	Tourist Office	NIL
7	Remarks	NIL

WBGM AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	NIL
2	Rescue equipment	Available 4x4 vehicle equipped with 50KG (3 unit) dry chemical powders.
3	Capability for removal of disabled aircraft	With arrangement with the respective airline and ground handler. a) Largest aircraft - DHC6
4	Remarks	All Airport Fire & Rescue Service (AFRS) personnel are to be well trained in rescue and firefighting as well as medical first aid.

WBGM AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

WBGM AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	Bay 1 and Bay 2 Surface : Asphalt (Flexible) Strength : 5670 KG / 0.50 MPa
2	Taxiway width, surface and strength	Taxiway A Taxiway Width : 16M Surface : Asphalt (Flexible) Strength : 5670 KG / 0.50 MPa
3	Altimeter checkpoint location and elevation	Location: At apron Elevation: 23M (75FT)
4	VOR checkpoints	NIL
5	INS checkpoints	At aircraft parking stands (See AD 2-WBGM-2-3)

6	Remarks	NIL
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WBGM AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Taxiing guidance signs at RWY Holding positions. Yellow taxiing guidelines at aprons
2	RWY and TWY markings and LGT	RWY markings : Designation, threshold, transverse stripe, centre line aiming point markings. TWY markings : Centre line, taxi side stripe and runway - holding position markings. LGT : NIL
3	Stop bars	NIL
4	Remarks	NIL

WBGM AD 2.10 AERODROME OBSTACLES

In Area 2					
OBST ID/ Designation	OBST type	OBST position	ELEV/HGT	Marking/Type, colour, lighting (LGT)	Remarks
a	b	c	d	e	f
WBGMOB001	Telecom Tower	041126.2N 1142621.1E	HGT 127 FT (389 M) AMSL	Marked and LGTD	At Bukit Dabei
WBGMOB002	Telecom Tower	041129.2N 1142621.1E	HGT 1201 FT (366.20 M) AMSL	Marked and LGTD	At Bukit Dabei
WBGMOB003	Telecom Tower	041129.2N 1140256.2E	HGT 1033 FT (315 M) AMSL	Marked and LGTD	At Miri Bukit Lambir
WBGMOB004	Telecom Tower	041331.2N 1140632.2E	HGT 956 FT (291.44 M) AMSL	Marked and LGTD	At Bukit Pantu Buri
WBGMOB005	Telecom Tower	041114.2N 1142010.1E	HGT 170 FT (51.72 M) AMSL	Marked and LGTD	At Marudi Town
WBGMOB006	Crane	041039.0N 1141919.0E	HGT 250 FT AGL	NIL	Erected at the bridge construction site at Baram River Ferry Terminal
WBGMOB007	Incinerator	NIL	HGT 20 M AGL	NIL	Erected Marudi Hospital, APRX 70 M right of centreline RWY 10 and 250 M fm airport terminal building.

WBGM AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	AMS MIRI
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	AMO KUCHING H24(0024 0606 1212 1818)
4	Trend forecast Interval of issuance	NIL
5	Briefing/consultation provided	NIL
6	Flight documentation Language(s) used	Charts, Tabular Form and Abbreviated Plain Language Text English

7	Charts and other information available for briefing or consultation	No briefing and consultation but charts available upon request
8	Supplementary equipment available for providing information	NIL
9	ATS units provided with information	MARUDI INFORMATION
10	Additional information (limitation of service, etc.)	NIL

WBGM AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
10	103.15°	834 x 24	5670 KG / 0.50 MPa Asphalt (Flexible)	THR Coordinate 041046.57N 1141935.92E RWY End coordinate 041040.39N 1142002.26E GUND +44M	THR elevation: 23M (75FT)
28	283.15°	834 x 24	5670 KG / 0.50 MPa Asphalt (Flexible)	THR Coordinate 041040.39N 1142002.26E RWY End coordinate 041046.57N 1141935.92E GUND +44M	THR elevation: 24M (79FT)

Slope of RWY-SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
+0.151%	NIL	NIL	894 x 60	NIL	NIL
-0.151%	NIL	NIL	894 x 60	NIL	NIL

WBGM AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
10	834	834	834	834	NIL
28	834	834	834	834	NIL

WBGM AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
10	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
28	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

WBGM AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	NIL
2	LDI location and LGT Anemometer location and LGT	LDI: NIL Wind direction indicator (WDI): RWY 10: 417M from THR on left, 30M from RWY centreline and not lighted
3	TWY lighting	NIL
4	Secondary power supply/switch-over time	NIL
5	Remarks	NIL

WBGM AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	NIL

WBGM AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	A Circle of 5NM radius on Marudi
2	Vertical limits	FIZ: GND TO 1500 FT
3	Airspace classification	G
4	ATS unit call sign Language(s)	English
5	Transition altitude	NIL
6	Remarks	NIL

WBGM AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
FIZ	MARUDI INFORMATION	122.4 MHZ	HJ	NIL

WBGM AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NIL	NIL	NIL	NIL	NIL	NIL	NIL

WBGM AD 2.20 LOCAL AERODROME REGULATIONS

- 2.20.1. Arriving Aircraft Parking Arrangement
 - 2.20.1.1 No simultaneous aircraft movement (power-in and power-out operations) at the apron.
- 2.20.2. Departing aircraft are required to hold on the parking apron until receiving information from MARUDI INFORMATION prior for departure
- 2.20.3. All aircraft operating within the MARUDI FLIGHT INFORMATION ZONE (FIZ) shall be equipped with and maintain two-way radio communication.
- 2.20.4. Pilots shall maintain continuous listening watch on the designated frequency while operating within the MARUDI FIZ.
- 2.20.5. Pilots shall report their position and intentions at all relevant points of the aerodrome traffic circuit, including downwind, base and final
- 2.20.6. Upon initial contact with MARUDI INFORMATION, or when entering the MARUDI FIZ, pilots shall provide relevant information including aircraft identification, position, level and intentions to enhance situational awareness.
- 2.20.7. Advisory information will be provided in lieu of control instructions.
- 2.20.8. Pilots shall be responsible for the avoidance of collision with other aircraft and, based on information provided by the AFIS unit and their own observations, decide on the appropriate course of action.

WBGM AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

WBGM AD 2.22 FLIGHT PROCEDURES

NIL

WBGM AD 2.23 ADDITIONAL INFORMATION

- 2.23.1. Pilot to exercise caution on the aerodrome non-conforming issues:
 - a) Pilot to exercise extreme caution due to protruding of objects in the vicinity of the aerodrome.
 - b) AFRS not complying with critical aircraft requirements (Twin Otter) but minimum fire fighting provided 4 x 4 vehicle equipped with 50KG (3 units) dry chemical powders.
- 2.23.2. Presence of birds in the vicinity of the airport. Pilots exercise caution during landing and take-off.
- 2.23.3. Due to only one taxiway accessible to the runway from the apron and vice versa, departing aircraft are required to hold at apron to facilitate landing aircraft taxiing in.
- 2.23.4. All aircraft are not allowed to make locked wheel turns on the runway.

WBGQ AD 2.1 AERODROME LOCATION INDICATOR AND NAME

WBGQ - BAKELALAN

WBGQ AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	035829N 1153708E Site: 50.676M from RWY 23 Centreline and 11.884M from edge of passenger walkway
2	Direction and distance from (city)	0.108KM (0.1NM) Bearing 154°28'10" from Bakelalan Health Clinic, Buduk Nur.
3	Elevation/Reference temperature	932 m (3058 ft) / 29°C
4	Geoid undulation at AD ELEV PSN	51M
5	MAG VAR/Annual change	0°W 2020 -0.08° decreasing
6	AD operator, address, telephone, telefax, e-mail address, AFS and website address	Operator: Malaysia Airports Sdn Bhd Padang Terbang Bakelalan Sarawak, Malaysia ATC Services: Not Available
7	Types of traffic permitted (IFR/VFR)	VFR
8	Remarks	FIS available through Miri Tower

WBGQ AD 2.3 OPERATIONAL HOURS

1	AD Operator	HJ
2	Customs and immigration	NIL
3	Health and sanitation	Available on request
4	AIS Briefing Office	NIL
5	ATS Reporting Office (ARO)	NIL
6	MET Briefing Office	NIL
7	ATS	NIL
8	Fuelling	NIL
9	Handling	Handling facilities available prior arrangement.
10	Security	H24
11	De-icing	NIL
12	Remarks	NIL

WBGQ AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/oil types	NIL
3	Fuelling facilities/capacity	NIL
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

WBGQ AD 2.5 PASSENGER FACILITIES

1	Hotels	NIL
2	Restaurants	NIL
3	Transportation	NIL
4	Medical facilities	NIL
5	Bank and Post Office	NIL
6	Tourist Office	NIL
7	Remarks	NIL

WBGQ AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	NIL
2	Rescue equipment	Available three wheel motor cycle vehicle equipped with DCP 50KG (4 Unit)
3	Capability for removal of disabled aircraft	By arrangement with the respective airlines and ground handler a) Largest aircraft - DH-6
4	Remarks	NIL

WBGQ AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

WBGQ AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	BAY 1 Apron Surface : Asphalt (Flexible) Strength : 5670 KG / 0.50 MPa
2	Taxiway width, surface and strength	NIL
3	Altimeter checkpoint location and elevation	Location : At apron Elevation : 920 M (3018 FT)
4	VOR checkpoints	NIL
5	INS checkpoints	Coordinates for aircraft stands: 035830.09N 1153708.27E
6	Remarks	NIL

WBGQ AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Yellow taxiing guidelines at apron. Nose wheel guidance line for parking bay.
2	RWY and TWY markings and LGT	RWY markings : Designation, centre line and transverse stripe markings. Threshold marking for RWY 23 only LGT : NIL
3	Stop bars	NIL
4	Remarks	NIL

WBGQ AD 2.10 AERODROME OBSTACLES

RWY / Area affected	Obstacles Type Elevation Markings / LGT	Coordinates
a	b	c
-	NIL	NIL

WBGQ AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	AMS MIRI
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	AMO KUCHING H24 (0024 0606 1212 1818)
4	Trend forecast Interval of issuance	NIL
5	Briefing/consultation provided	NIL
6	Flight documentation Language(s) used	Charts, Tabular Form and Abbreviated Plain Language Text English
7	Charts and other information available for briefing or consultation	No briefing and consultation but charts available upon request
8	Supplementary equipment available for providing information	NIL
9	ATS units provided with information	NIL
10	Additional information (limitation of service, etc.)	NIL

WBGQ AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE & MAG BRG	Dimensions of RWY(M)	Strength (PCR) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
05	50.32°	550 x 18	5670 KG / 0.50 MPa Asphalt (Flexible)	THR coordinates: 035819.51N 1153654.56E RWY end coordinates 035830.94N 1153708.28E GUND 51 M	THR elevation: 932 M (3058 FT)
23	230.32°	550 x 18	5670 KG / 0.50 MPa Asphalt (Flexible)	THR coordinates: 035830.94N 1153708.28E RWY end coordinates 035819.51N 1153654.56E GUND 51 M	THR elevation: 920 M (3018 FT)

Slope of RWY-SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
-2.25%	NIL	NIL	610 x 60	NIL	NIL
+2.25%	NIL	NIL	610 x 60	NIL	NIL

WBGQ AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
05	550	550	550	NU	NIL
23	NU	NU	NU	550	NIL

WBGQ AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
05	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
23	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

WBGQ AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	Wind direction indicator (WDI) RWY 23 : 64.939 m from THR on left, 44.928 m from RWY centre line and not lighted Anemometer : NIL
2	LDI location and LGT Anemometer location and LGT	NIL
3	TWY lighting	NIL
4	Secondary power supply/switch-over time	NIL
5	Remarks	NIL

WBGQ AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	NIL

WBGQ AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	NIL
2	Vertical limits	NIL
3	Airspace classification	NIL
4	ATS unit call sign Language(s)	NIL
5	Transition altitude	NIL
6	Remarks	NIL

WBGQ AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
NIL	NIL	NIL	NIL	NIL

WBGQ AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NIL	NIL	NIL	NIL	NIL	NIL	NIL

WBGQ AD 2.20 LOCAL TRAFFIC REGULATIONS

NIL

WBGQ AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

WBGQ AD 2.22 FLIGHT PROCEDURES

NIL

WBGQ AD 2.23 ADDITIONAL INFORMATION

- 2.23.1. Pilot to exercise caution on the aerodrome non-conforming issues:
1. Pilot to exercise extreme caution due to protruding of object in vicinity of aerodrome.
 2. AFRS not complying with critical aircraft requirement (Twin Otter) but minimum fire fighting is provided with three wheel motor cycle with 50KG (4 unit) dry chemical powders.
- 2.23.2. All aircraft are not allowed to make locked wheel turn on the runway and apron.
- 2.23.3. Bird concentration in the vicinity of the airport.
- 2.23.3.1 Concentration of birds within the vicinity of the aerodrome. Pilot to exercise caution during landing and take-off.
- 2.23.4. AD available for schedule and notified aircraft movement only.
- 2.23.5. Aerodrome is restricted to single aircraft operations only.

WBGQ AD 2.24 CHARTS RELATED TO AN AERODROME

Chart name	Page
AERODROME/HELIPORT CHART (WBGQ) - ICAO	AD 2-WBGQ-2-1
AERODROME GROUND MOVEMENT CHART (WBGQ) - ICAO	AD 2-WBGQ-2-3

**AERODROME/HELIPORT
CHART - ICAO**

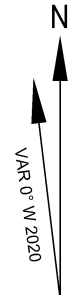
03° 58' 29" N
115° 37' 08" E

ELEV 932 M

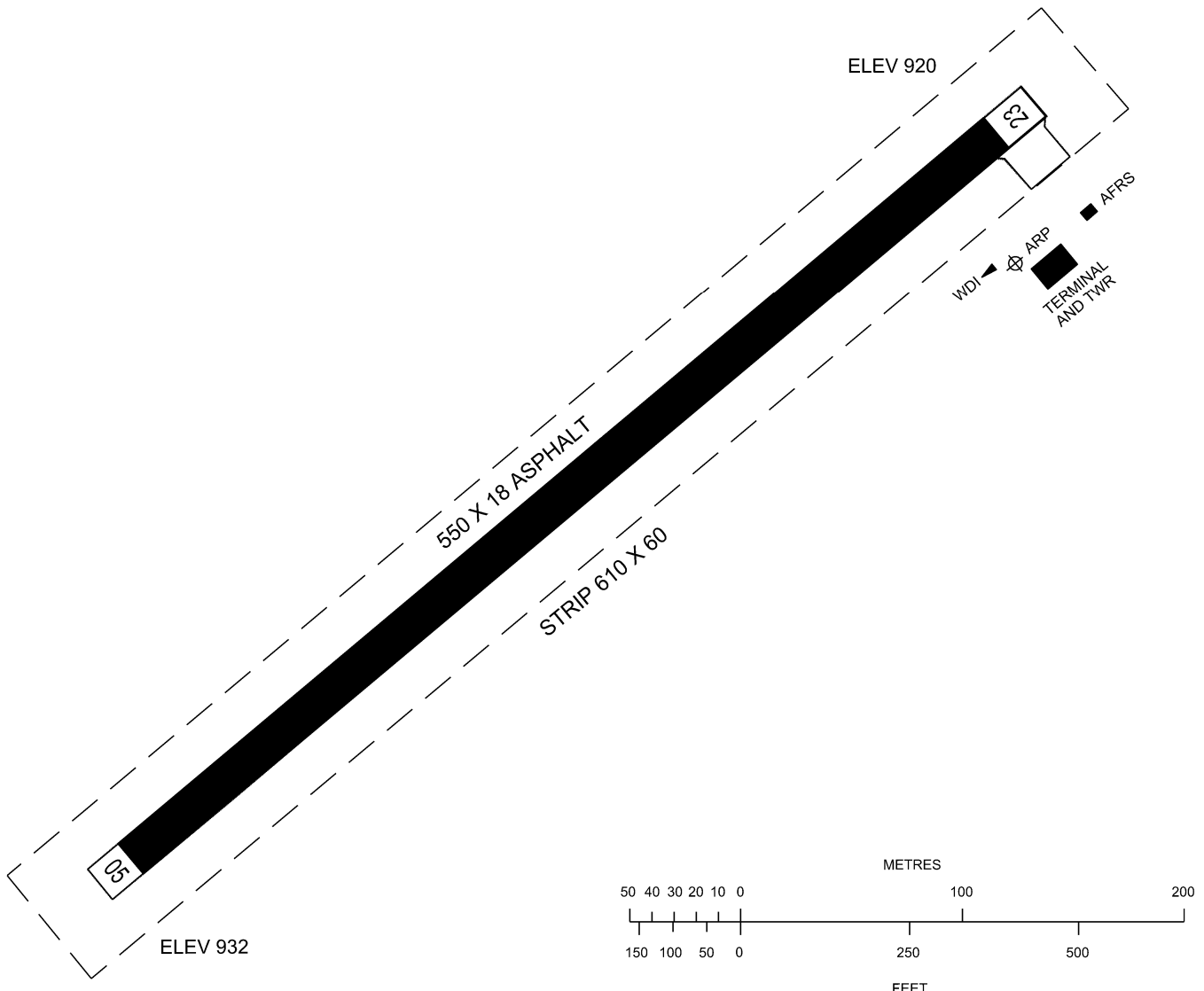
**BAKELALAN/
BAKELALAN AIRPORT**

RWY	DIRECTION	THR	BEARING STRENGTH
05	50° T	03° 58' 19.51" N 115° 36' 54.56" E	5670KG/0.50MPA ASPHALT
23	230° T	03° 58' 30.94" N 115° 37' 08.28" E	

INS COORDINATES FOR AIRCRAFT STANDS	BEARING STRENGTH	AIRCRAFT TYPE
1 03° 58' 30.09" N 115° 37' 08.27" E	5670KG/0.50MPA ASPHALT	DHC-6



ANNUAL RATE OF CHANGE -0.08°
ELEVATIONS AND DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC



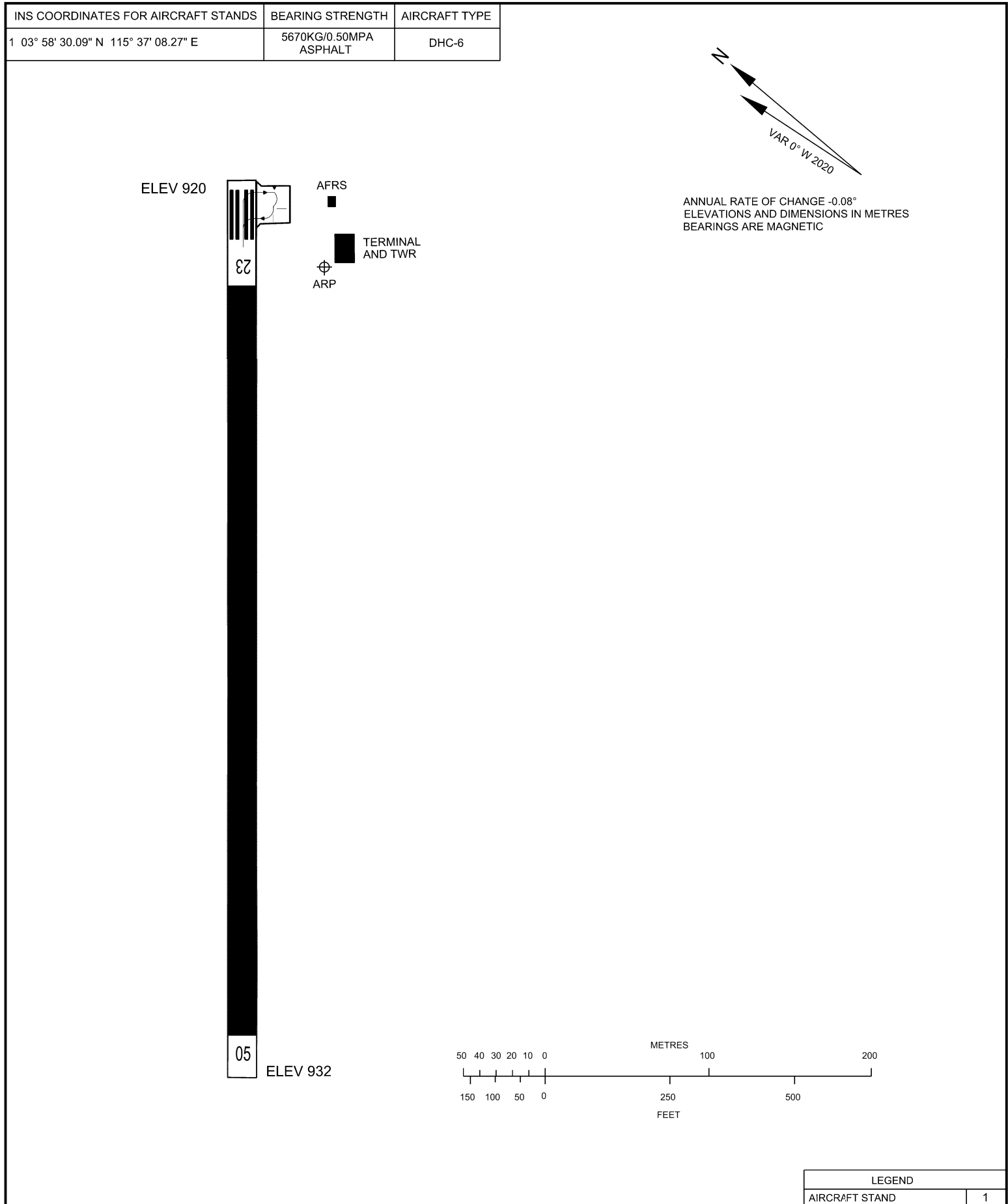
CHANGES: AIRCRAFT STAND COORDINATES
ADD INFO PAVEMENT STRENGTH
AERODROME ELEVATION
SCALE BAR

INTENTIONALLY BLANK

**AERODROME GROUND
MOVEMENT CHART - ICAO**

APRON ELEV
920 M

**BAKELALAN/
BAKELALAN AIRPORT**



CHANGES: AIRCRAFT STAND COORDINATES
ADD INFO PAVEMENT STRENGTH
SCALE BAR

INTENTIONALLY BLANK

WBGW AD 2.1 AERODROME LOCATION INDICATOR AND NAME

WBGW - LAWAS

WBGW AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	045047N 1152426E Site: 36.29M from RWY 01 Centreline and 12.25M from Apron Edge
2	Direction and distance from (city)	2.14KM (1.2NM), Bearing 162°15' 29" from Lawas Mosque.
3	Elevation/Reference temperature	6 M (18 FT) / 32°C
4	Geoid undulation at AD ELEV PSN	47 M
5	MAG VAR/Annual change	0° W (2019)/0.08° decreasing
6	AD operator, address, telephone, telefax, e-mail address, AFS and website address	Operator: Malaysia Airports Sdn Bhd Padang Terbang Lawas. 98850 Lawas, Sarawak, Malaysia TEL: +6085-284023 Telefax:+6085-284023 Website address: www.malaysiaairports.com.my ATS Services: Civil Aviation Authority of Malaysia Padang Terbang Lawas 98850 Lawas Sarawak Malaysia TEL: +6085-285401 Telefax: +6085-284388 e-mail: wbgw@caam.gov.my
7	Types of traffic permitted (IFR/VFR)	VFR
8	Remarks	NIL

WBGW AD 2.3 OPERATIONAL HOURS

1	AD Operator	HJ
2	Customs and immigration	Immigration available for schedule and non schedule flight on request
3	Health and sanitation	Available on request.
4	AIS Briefing Office	NIL
5	ATS Reporting Office (ARO)	In Control Tower during AD operating HRS
6	MET Briefing Office	NIL
7	ATS	HJ
8	Fuelling	NIL
9	Handling	Handling facilities available prior arrangement.
10	Security	H24
11	De-icing	NIL
12	Remarks	NIL

WBGW AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	By prior arrangement with MasWings Sdn Bhd
2	Fuel/oil types	NIL
3	Fuelling facilities/capacity	NIL

4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

WBGW AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotel in town.
2	Restaurants	Cafe and restaurant available in town.
3	Transportation	Local buses and local transports
4	Medical facilities	Lawas Hospital in town
5	Bank and Post Office	Bank and Post Office available in town
6	Tourist Office	Tourist Office in town
7	Remarks	NIL

WBGW AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 2
2	Rescue equipment	Adequately provided as recommended by ICAO.
3	Capability for removal of disabled aircraft	By arrangement with the respective airline and ground handler. a) Largest aircraft - DHC - 6
4	Remarks	All Airport Fire & Rescue Service (AFRS) personnel are trained in rescue and fire-fighting as well medical first-aid

WBGW AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

WBGW AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	Bay 1 Apron Surface: Asphalt(Flexible) Strength : 5670 KG / 0.50 MPa
2	Taxiway width, surface and strength	NIL
3	Altimeter checkpoint location and elevation	Location: At apron Elevation: 5 M (16 FT)
4	VOR checkpoints	NIL
5	INS checkpoints	Coordinates for aircraft stand: BAY 1: 045047.71N 1152425.25E
6	Remarks	NIL

WBGW AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Yellow taxiing guidelines at apron. Nose wheel guidance line for parking bay
2	RWY and TWY markings	RWY: Runway designation, Threshold, Aiming point, Centre line, Transverse stripe Marking. LGT not available
3	Stop bars	NIL
4	Remarks	NIL

WBGW AD 2.10 AERODROME OBSTACLES

In Area 2					
OBST ID/ Designation	OBST type	OBST position	ELEV/HGT	Marking/Type, colour, lighting (LGT)	Remarks
a	b	c	d	e	f
WBGWOB001	Ducts and drainage pipes	NIL	NIL	NIL	At 61 M intervals abutting.
WBGWOB002	A/F fencing	NIL	HGT 5 FT	NIL	DIST 800 FT FM THR RWY 19. Across APCH area.
WBGWOB003	Telecom Tower	044937.0N 1151807.7E	HGT 695 FT (211.92 M).	LGTD	At Bukit Siang Siang
WBGWOB004	Telecom Tower	045255.0N 1152345.6E	HGT 544 FT (166 M) AMSL.	Marked and LGTD	Erected at Bukit Tiong
WBGWOB005	Telecom Tower	045253.0N 1152342.6E	HGT 501 FT (152.7 M) AMSL.	Marked and LGTD	At Bukit Tiong
WBGWOB006	Telecom Tower	045124.0N 1152448.6E	HGT 153 FT (46.71 M) AMSL.	Marked and LGTD	Erected Shangsang Hotel
WBGWOB007	Telecom Tower	045323.0N 1151230.7E	HGT 166 FT (50.72 M) AMSL.	Marked and LGTD	Erected Pekan Sundar
WBGWOB008	Telecom Tower	045124.0N 1152448.6E	HGT 153 FT (46.71 M) AMSL.	Marked and LGTD	At Lawas.
WBGWOB009	Microwave Tower	044936.0N 1151805.7E	HGT 730 FT (222.56 M) AMSL.	Marked and LGTD	At Bukit Siang Siang

WBGW AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	AMS MIRI
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	AMO KUCHING H24 (0024 0606 1212 1818)
4	Trend forecast Interval of issuance	NIL
5	Briefing/consultation provided	NIL
6	Flight documentation Language(s) used	Charts, Tabular Form and Abbreviated Plain Language Text English
7	Charts and other information available for briefing or consultation	No briefing and consultation but charts available upon request

8	Supplementary equipment available for providing information	NIL
9	ATS units provided with information	LAWAS INFORMATION
10	Additional information (limitation of service, etc.)	NIL

WBGW AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength (PCR) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
01	8.41°	758 x17	5670 KG / 0.50 MPa Asphalt (Flexible)	THR Coordinates 045046.67N 1152426.94E RWY end coordinates 045111.08N 1152430.54E GUND 47 M	THR elevation 6 M (18 FT)
19	188.41°	758 x17	5670 KG / 0.50 MPa Asphalt (Flexible)	THR Coordinates 045109.47N 1152430.30E RWY end coordinates 045046.67N 1152426.94E GUND 47 M	THR elevation 5 M (17 FT)

Slope of RWY-SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
0.027%	NIL	NIL	818 x 60	NIL	NIL
- 0.027%	NIL	NIL	818 x 60	NIL	NIL

WBGW AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
01	758	758	758	758	NIL
19	758	758	758	708	Displaced Threshold 50 M

WBGW AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
01	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
19	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

WBGW AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	NIL
2	LDI location and LGT Anemometer location and LGT	LDI : Not available. Wind Direction Indicator (WDI) RWY 01: 34.0 M FM THR and 41.0 M FM RWY CL on right side. Not LGTD RWY 19: 34.5 M FM RWY End 01 and 51.0 M FM RWY CL on left side Not LGTD.
3	TWY lighting	NIL
4	Secondary power supply/switch-over time	NIL
5	Remarks	NIL

WBGW AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	NIL

WBGW AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	A Circle of 5NM radius on Lawas
2	Vertical limits	FIZ: GND / SEA to 1500 FT
3	Airspace classification	G
4	ATS unit call sign Language(s)	Lawas Information English
5	Transition altitude	NIL
6	Remarks	NIL

WBGW AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
FIZ	LAWAS INFORMATION	122.200 MHz	HJ	NIL

WBGW AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NIL	NIL	NIL	NIL	NIL	NIL	NIL

WBGW AD 2.20 LOCAL TRAFFIC REGULATIONS

- 2.20.1. All movement and activity at the apron area is within apron safety line marking
- 2.20.2. Departing aircraft are required to hold on the parking apron until receive information by AFISO for departure.
- 2.20.3. All aircraft operating within the LAWAS FLIGHT INFORMATION ZONE (FIZ) shall be equipped with and maintain two - way radio communication
- 2.20.4. Pilots shall maintain continuous listening watch on the designated frequency while operating within the Lawas FIZ
- 2.20.5. Pilots shall report their position and intentions at all relevant points of the aerodrome traffic circuit, including downwind, base and final.
- 2.20.6. Upon initial contact with Lawas Information, or when entering the Lawas FIZ, pilots shall provide relevant information including aircraft identification, position, level and intentions to enhance situational awareness.
- 2.20.7. Advisory information will be provided in lieu of control instructions
- 2.20.8. Pilots shall be responsible for the avoidance of collision with other aircraft and, based on information provided by the AFIS unit and their own observations, decide on the appropriate course of action. Pilots shall establish and maintain two-way radio communication and report their position, level and intentions.

WBGW AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

WBGW AD 2.22 FLIGHT PROCEDURES

NIL

WBGW AD 2.23 ADDITIONAL INFORMATION

- 2.23.1. Due to presence of birds around the airfield, pilots to exercise precaution operating to and departing from Lawas.
- 2.23.2. All Non Schedule aircraft to fax FPL to +6085-284388 (24 HRS) and confirmed received via +6085-285401 (HJ).
- 2.23.3. Pilot to exercise caution on the aerodrome non-conforming issues as follows:
 - 1. Pilot to exercise extreme caution due to protruding of object in vicinity of aerodrome.
 - 2. AFRS not complying with critical aircraft requirement (Twin Otter) but minimum fire fighting provided Mini rapid Intervention Vehicle with 1120 Litre water and 225 KG dry chemical powders.
 - 3. Runway width only 17 M.
- 2.23.4. Presence of timber barge movement along Lawas River crossing the departure path for both RWY 01 and 19. Pilot to exercise caution during landing and take off.
- 2.23.5. AD available for schedule and notified aircraft movement only.
- 2.23.6. Aerodrome is restricted to single aircraft operations only.

WBGW AD 2.24 CHARTS RELATED TO AN AERODROME

Chart name	Page
AERODROME/HELIPORT CHART (WBGW) - ICAO	AD 2-WBGW-2-1
AERODROME GROUND MOVEMENT CHART (WBGW) - ICAO	AD 2-WBGW-2-3

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