KAAN HAVACILIK SANAYİ VE TİC. A.Ş.

El Kitabı : OPERATIONS MANUAL PART C
Revizyon No : 11
Revizyon Tarihi : 23.06.2023

SİVİL HAVACILIK GENEL MÜDÜRLÜĞÜ

DIRECTORATE GENERAL OF CIVIL AVIATION

ONAY SERTİFİKASI
APPROVAL CERTIFICATE

OPERATIONS MANUAL PART C

KAAN HAVACILIK SANAYİ VE TİC. A.Ş.

KAAN HAVACILIK

Revision Date : 23.06.2023 Revision No : 11

This Operations Manual (Part C / Route/Role/Area and Aerodrome/Operating Site Instructions and Information) has been evaluated and inspected in accordance with SHT-OPS Instructions and approved by the Turkish DGCA.

Approved By:

Ali Osman YAMAN
Head Of Flight Operations Section

Approval Date

05/10/2023

e-İmzalıdır

T.C. ULAŞTIRMA VE ALTYAPI BAKANLIĞI

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REVISION HIGHLIGHTS

Revision No:2

Air-OPS HOFO requirements added to related articles according to specific approval OFFSHORE request.

Revision No:3

Added Helideck pictorial at Appendix C.01.04.07a, New Section; 01.01.13 Airborne radar approaches (ARAs) to offshore locations CAT operations

Revision No:4

(01.01.02)- Operating Minima For Departure, Destination And Alternate Aerodromes,
(01.01.03)- Communication Facilities And Navigation Aids,
(01.01.04)- Runway / Final Approach And Take-Off Area (FATO) Data And Aerodrome / Operating Site Facilities,
(01.01.06)- Communication - Failure Procedures,
(01.01.07)- Search And Rescue Facilities,
(01.01.10)- En-Route Communication / Navigation Procedures,
(01.01.12)- Special Aerodrome / Operating Site Limitations;
All above chapters revised to sub-chapters

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Revision No:9

Revisions related to Aerodrome Categorization designation to used landing sites:
00.02.02 Record Of Amendments And Revisions With Insertion Dates And Effective Dates, 01.01.11 Aerodrome / Operating Site

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00.01-Introduction

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(00.01.01)- Statement That The Manual Complies With All Applicable Regulations And With The Terms And Conditions Of The Applicable Air Operator Certificate (AOC)

Revizyon No: 11 Revizyon Tarihi: 23.06.2023

ORO.MLR.100

This **Operations Manual OM-C** has been prepared in accordance with the conditions contained in the Air Operator Certificate (AOC) TR-AT-038, approved by TR DGCA and with the relevant provisions of SHT-OPS, SHY-6A, SHY-6B, EASA Air OPS and relevant regulations.

These procedures are approved by the signee and have to be adhered within all Commercial Air Transport Operations, when applicable.

This manual and procedures reflects the valid policies and procedures of KAAN AIR. It has been prepared in the English language and approved by the Turkish DGCA.

This Operations Manual is always superseded by TR DGCA regulations. In the event of conflicting statements, TR DGCA regulations apply. Recognized conflicts will be amended with the next revision of this manual.

A paper-copy of the Operations Manual is deposited at the Flight Operations Manager. Digital copies are available in the company intranet.

ISTANBUL, 23.06.2023

Prepared By	Controlled By	Approved By
Cemil PEKDEMİR Flight Ops. Manager, Captain KAAN Hvcl. San. Tic. A.S.	Kadir ERDOGAN Quality/Comp. Mont. & Safety Mng, Captain KAAN Hvcl. San. Tic. A.Ş.	M. Kemal SULER Accountable Manager, Captain KAAN Hvcl. San. Tic. A.Ş.

(00.01.02)- Statement That The Manual Contains Operational Instructions That Are To Be Complied With By The Relevant Personnel

Revizyon No: 1 Revizyon Tarihi: 26.01.2018

ORO.MLR.100

Operations Manual contains information and instructions to enable operational personnel to perform their duties in best standards. KAAN AIR will make available this manual's procedures to operational personnel. The amendment of this manual and its procedures shall be properly controlled.

KAAN AIR will not introduce any alternative procedures to those prescribed in this manual unless needed and equivalent safety case has first been approved by Turkish DGCA.

It is accepted that these procedures do not override the necessity of complying with any new or amended regulation published by Turkish DGCA from time to time here these new or amended regulations are in conflict with these procedures.

The Turkish DGCA has been provided with a copy of the Operations Manual, and receives all amendments and revisions thereto.

The rules and regulations contained in the Operations Manual will be adhered to by the **relevant personnel** at all times; in the event of wilful or negligent disobedience to those rules and regulations the personnel concerned may become subject to disciplinary, legal or penal action. However, nothing contained in the Operations Manual will keep personnel from exercising their own best judgment during any irregularity for which the Operations Manual gives no provisions or in emergencies.

The **pilot-in-command** will, in an emergency situation that requires immediate decision and action, take any action he considers necessary under the circumstances. In such cases he may deviate from rules, operational procedures and methods in the interest of safety.

All **flight crewmembers** will have written copy of the Operations Manual in every aircraft . All **other operations personnel** will have easy access to the parts relevant to their respective duties. All **operating staff** is required to adhere to instructions laid down in this manual and any deviations should be reported, the reasons for such deviation being given.

Should any individual consider that all or any part of a procedure or instruction requires to be amended, he should notify the **Flight Operations Manager**.

(00.01.03)- List And Brief Description Of The Various Parts, Their Contents, Applicability And Use

Revizyon No: 11 Revizyon Tarihi: 23.06.2023

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00-Administration and Control of Operations Manual
01-**Route/Role/Area and Aerodrome/Operating Site Instructions and Information**

01.01-Instructions and information relating to Communications, Navigation and Aerodromes/Operating Sites including; Minimum Flight Levels and Altitudes for Each Route to be Flown and Operating Minima for Each Aerodrome/Operating Site planned to be used

01.01.01-**Minimum Flight Altitudes**
01.01.02-**Operating Minima** for Departure, Destination and Alternate Aerodromes
01.01.03-**Communication** Facilities and **Navigation** Aids
01.01.04-**Runway / Final Approach and Take-Off Area (FATO) Data and Aerodrome** / **Operating Site Facilities**
01.01.05-**Approach, Missed Approach and Departure** Procedures including **Noise Abatement Procedures**
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(00.01.04)- Explanations And Definitions Of Terms And Words Needed For The Use Of The Manual

Revizyon No: 1 Revizyon Tarihi: 26.01.2018

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Refer to OM Part A 00.01.04.

00.02-System of Amendment And Revision

ORO.MLR.100

(00.02.01)- Details of the person(s) responsible for the issuance and insertion of amendments and revisions.

Revizyon No: 11 Revizyon Tarihi: 23.06.2023

ORO.MLR.100

The Operational Manual Part C**,** its amendments and revisions are published and issued by the **Flight Operations Manager** and **Compliance Monitoring Manager**.

The Flight Operations Manager is responsible for its contents, and for keeping the instructions and information up to date of chapters. Both managers will supply the Turkish DGCA with intended amendments and revisions in advance of the effective date.

The operations manual will be published in accordance with **easy usage** and **human factors** principles. The manual will be easy reading and understanding language by operations personnel.

All KAAN AIR employees have easy access to OM Part C via web site written in chapter 00.02.07 using their personal usernames and passwords. The electronic version of part in the system contains whole up to date manual in PDF file format and may be used as a master document. Individually produced printouts from any electronic version of the part is for information only.

The binders and pages will be good handling and well reading on board of helicopters. In additions, the electronic copy will be colored and easy reading by users.

Note: *If it is evaluated by KAAN AIR that the planned change to be made in a procedure in which the national/international legislation specified as "Requires Approval" in the reference pool, the commitment form in the system is approved and the related procedure is included in the scope of the "Temporary Revision" and put into force. In this case, the information required by the system is sent to the responsible manual manager of TR DGCA. It is also possible; to make necessary entries into the system and take effect by initiating a new revision or temporary revision process for the procedures in which national and/or international legislation specified as "No Approval Required" in the reference pool. Temporary revisions shall be submitted for approval as a new revision within a maximum of 12 months.*

All holders of the part will revise the manual at the time specified in the amendment’s introduction, and record, on the Record of Revision, the insertion date, the effective date, and their name.

With each normal amendment an updated "List of Effective Pages" will be issued, which will enable the user to check whether his manual is up to date.

In order to identify changes, additions and deletions, a vertical line or red coloured word/sentence shall be used to outline revised or newly published paragraphs on the pages. In addition, an introduction ("Revision Letter") may be provided, identifying the revised pages and briefly describing the reason for their revision. Personnel are required to carefully take note of the change.

The page(s) affected will be entered in the "Temporary Revision Record". Temporary revisions will be brought to the attention of the Turkish DGCA immediately and, unless limited to a defined period, be followed by a normal amendment as soon as practicable.

(00.02.02)- Record Of Amendments And Revisions With Insertion Dates And Effective Dates

Revizyon No: 11 Revizyon Tarihi: 23.06.2023

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Rev. No.	Date	Effective Pages	Inserted By
Original	03.04.2014	All	Tuncay YÜCE
1 Elec	26.01.2018	All chapters has been adapted to electronic version	Kadir ERDOĞAN
2	13.08.2018	Refer to Revision Highlights section	Kadir ERDOĞAN
3	14.12.2018	" "	Kadir ERDOĞAN
4	02.08.2019	" "	Kadir ERDOĞAN
5	28.02.2020	" "	Kadir ERDOĞAN
6	30.06.2020	" "	Kadir ERDOĞAN
7	25.03.2021	" "	Kadir ERDOĞAN
8	13.07.2021	" "	Cemil PEKDEMİR Kadir ERDOĞAN
9	21.11.2021	" "	Cemil PEKDEMİR Kadir ERDOĞAN
10	02.05.2023	" "	Cemil PEKDEMİR
11	23.06.2023	" "	Cemil PEKDEMİR

(00.02.03)- A statement that handwritten amendments and revisions are not permitted, except in situations requiring immediate amendment or revision in the interest of safety.

Revizyon No: 1 Revizyon Tarihi: 26.01.2018

ORO.MLR.100

Handwritten amendments are permissible only in situations requiring immediate revision in the interest of safety; they will be initiated and put into force by a circular of the Flight Operations Manager. They will be followed by a formal amendment as soon as practicable and the Turkish DGCA will be informed immediately.

(00.02.04)- A description of the system for the annotation of pages or paragraphs and their effective dates.

Revizyon No: 1 Revizyon Tarihi: 26.01.2018

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Permanent changes or revisions will be noted in the Record of Revisions along with the insertion date and the effective date. The List of Effective Pages will be updated and each revised page will be accompanied by a new "Effective Date" located at the top of each page of the Operations Manual.

All text revisions will be noted by a **single black line at the left/right side (l)** of the text and red colored that has been changed or added. The revision border will be removed when the section is revised again. Only the most current revision will have the text border.

Any text that has been deleted will be referenced in the Revisions Section of this Operations Manual along with a brief explanation of the text that was removed and why.

Each holder of Operations Manual, or appropriate parts of it, shall keep it up to date with the amendments or revisions supplied by the KAAN AIR.

KAAN AIR will supply the TR DGCA with intended amendments and revisions in advance of the effective date. When the amendment concerns any part of the Operations Manual which must be approved in accordance with the regulations, this approval will be obtained before the amendment becomes effective.

KAAN AIR will incorporate all amendments and revisions required by the regulations and the TR DGCA.

(00.02.05)- Annotation of changes (in the text and, as far as practicable, on charts and diagrams).

Revizyon No: 8 Revizyon Tarihi: 13.07.2021

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All revisions or changes to diagram or charts will be identified by a revision bar to the right of the diagram or chart. The changes or revisions to the diagrams or charts will be noted in the Record of Revisions along with the insertion date and the effective date. The List of Effective Pages will be updated and each revised page will be accompanied by a new "Effective Date" located at the top of each page of the Operations Manual.

(00.02.06)- Temporary Revisions

Revizyon No: 11 Revizyon Tarihi: 23.06.2023

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Temp Rev. No.	Date	Effective Pages	Inserted By
3.01	30.07.2019	(01.01.03)- Communication Facilities And Navigation Aids; revised to sub-chapters	Kadir ERDOGAN
3.02	31.07.2019	(01.01.07)- Search And Rescue Facilities, (01.01.10)- En-Route Communication / Navigation Procedures; revised to sub-chapters	Kadir ERDOGAN
3.03	31.07.2019	(01.01.06)- Communication - Failure Procedures, (01.01.12)- Special Aerodrome / Operating Site Limitations; revised to sub-chapters	Kadir ERDOGAN
3.04	01.08.2019	(01.01.02)- Operating Minima For Departure, Destination And Alternate Aerodromes; (01.01.04)- Runway / Final Approach And Take-Off Area (FATO) Data And Aerodrome / Operating Site Facilities; revised to sub-chapters	Kadir ERDOGAN
5.01	10.05.2020	(01.01.04.07)- Helideck Motion Limits - Pitch, Roll and Heave Limitations	Kadir ERDOGAN
6.01	06.12.2020	(01.01.12.03) List of used OPERATION SITES; added ops.sites	Kadir ERDOGAN

(00.02.07)- Distribution System For The Manuals, Amendments And Revisions

Revizyon No: 11 Revizyon Tarihi: 23.06.2023

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Copy No	Distribution	Format
Original	TR DGCA	PDF
1	Flight Operations Manager	Paper Copy
2	OCC Operations Control Center	Paper Copy
3	Accountable Manager	PDF
4	Compliance Monitoring / Safety Manager	PDF
5	Crew Training Manager	PDF
6	Ground Operations / Security Manager	PDF
7	All Operation Sites, listed in OM-C 01.01.12.03, when in using	Paper Copy
8	Every Helicopters in the Fleet	Paper Copy

The operations manual will be distributed to all pilots, operations personnel when it issued and/or revised after approval to access the operations manuals **within 15 days after approval**. All personnel can access to operations manual PDF copies at KAAN AIR's https://kaanair-depo.online/MANUALS/OPERATIONS/ website.

Flight Operations Manager and/or **Compliance Monitoring Manager** is responsible of distribution to all operations personel via https://ftl.safejets.net/ website which is notification portal has all the related operations personnel's email addresses recorded. Website will send a notification email which also has a quick link to access to attached document(s). Website also will log in a Notification Sheet/List for the personnel's access (by the way; been informed) date and time record for the further auditing purposes and as a legal proof.

All operations personnel can make a request copy of approved Operations Manual from Flight Operations Manager or Compliance Monitoring Manager when operation personnel outside of main base.

All operations manual will be distributed with TR DGCA Approval Certificate in the 2nd page after cover. All personnel shall look at the latest approval certificate before using operations manual.

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01-ROUTE/ROLE/AREA AND AERODROME/OPERATING SITE INSTRUCTIONS AND INFORMATION

CAT.OP.MPA.145

01.01-Instructions and information relating to Communications, Navigation and Aerodromes/Operating Sites including; Minimum Flight Levels and Altitudes for Each Route to be Flown and Operating Minima for Each Aerodrome/Operating Site planned to be used

Revizyon No: 1 Revizyon Tarihi: 26.01.2018

CAT.OP.MPA.145

During KAAN AIR Flight Operations, the following AIP documents, will be used as the prior references when necessary; AIP. Those documents and manuals will be available in KAAN AIR Flight Operations Department and on board the aircraft. In this "Route and Aerodrome Instruction and Information" Part C of KAAN AIR Operations Manual, above manuals and documents are referenced by topic in detail.

Since KAAN AIR is an Air Taxi organization, there is no specific fixed route for the flight operations. And also most of the KAAN AIR flight operations are off-airport and non-scheduled flights. Therefor there is no need to establish fixed routes. In special cases International and domestic ATC routes shall be used.

(01.01.01)- Minimum Flight Level / Altitude

Revizyon No: 6 Revizyon Tarihi: 30.06.2020

GM1 CAT.OP.MPA.175(b)(5) / CAT.OP.MPA.270 / GM1 CAT.OP.MPA.145(a) / AMC1 CAT.OP.MPA.145(a) / CAT.OP.MPA.145 / AMC1 CAT.OP.MPA.175(a)

Refer to **OM A Chapter 08.01.01 Minimum Flight Altitudes.**

01.01.02-Operating Minima for Departure, Destination and Alternate Aerodromes

Revizyon No: 6 Revizyon Tarihi: 30.06.2020

CAT.OP.MPA.110 / GM1 CAT.OP.MPA.110 / GM2 CAT.OP.MPA.110 / GM3 CAT.OP.MPA.110 / GM1 CAT.OP.MPA.110(a) / CAT.OP.MPA.125 / CAT.OP.MPA.265 / CAT.OP.MPA.300 / CAT.OP.MPA.305 / AMC1 CAT.OP.MPA.305(e) / CAT.OP.MPA.320 / AMC1 CAT.OP.MPA.300 / SPO.OP.110

When establishing aerodrome operating minima, KAAN AIR will take the following into account:

(1) the type, performance and handling characteristics of the aircraft;
(2) the composition, competence and experience of the flight crew;
(3) the dimensions and characteristics of the runways/final approach and take-off areas (FATOs) that may be selected for use;
(4) the adequacy and performance of the available visual and non-visual ground aids;
(5) the equipment available on the aircraft for the purpose of navigation and/or control of the flight path during the take-off, the approach, the flare, the landing, rollout and the missed approach;
(6) for the determination of obstacle clearance, the obstacles in the approach, missed approach and the climb-out areas necessary for the execution of contingency procedures;
(7) the obstacle clearance altitude/height for the instrument approach procedures;
(8) the means to determine and report meteorological conditions; and
(9) the flight technique to be used during the final approach.

The minima for a specific type of approach and landing procedure will only be used if all the following conditions are met:

(1) the ground equipment shown on the chart required for the intended procedure is operative;
(2) the aircraft systems required for the type of approach are operative;
(3) the required aircraft performance criteria are met; and
(4) the flight crew is appropriately qualified.

Criteria and Responsibility for Determining the Adequacy of Aerodromes to be used:

Before an aerodrome or heliport is first utilized in the company operation it will be approved by Flight Operations Manager. Before first operation, following items have to be checked by the flight operation department / deputy flight operation manager:

- aerodrome dimensions with regard to performance requirements,
- a minimum runway length and bearing strength,
- minimum nav. facilities and procedures absence of critical obstacles,
- obstacle conditions in the approach, missed approach and departure sectors, local conditions such as special weather situations, night flying restrictions or,

- even political aspects which might affect operations,
- flight / over flight / Landing permission, from Turkish DGCA and the other controls ground service facilities for fueling, loading, de-/anti-icing, fire fighting and rescue, catering, general handling and the availability of immigration authorities

(01.01.02.01)- Take-Off Operations - Helicopters

Revizyon No: 6 Revizyon Tarihi: 30.06.2020

AMC4 SPO.OP.110 / AMC2 CAT.OP.MPA.110

a. **General**

1. Take-off minima should be expressed as visibility or runway visual range (RVR) limits, taking into account all relevant factors for each aerodrome planned to be used and aircraft characteristics. Where there is a specific need to see and avoid obstacles on departure and/or for a forced landing, additional conditions, e.g. ceiling, should be specified.
2. **The commander should not commence take-off unless the weather conditions at the aerodrome of departure are equal to or better than applicable minima for landing at that aerodrome unless a weather-permissible take-off alternate aerodrome is available.**
3. When the reported meteorological visibility (VIS) is below that required for take-off and RVR is not reported, a take-off should only be commenced if the commander can determine that the visibility along the take-off runway/area is equal to or better than the required minimum.
4. When no reported meteorological visibility or RVR is available, a take-off should only be commenced if the commander can determine that the visibility along the take-off runway/area is equal to or better than the required minimum.

b. **Visual reference**

1. The take-off minima should be selected to ensure sufficient guidance to control the aircraft in the event of both a rejected take-off in adverse circumstances and a continued take-off after failure of the critical engine.
2. For **night** operations, ground lights should be available to illuminate the runway/final approach and take-off area (FATO) and any obstacles.

c. **Required RVR/VIS — helicopters:**

1. For Performance **Class 1** operations, and for helicopters having a mass where it is possible to reject the take-off and land on the FATO in case of the critical engine failure being recognised at or before the take-off decision point (TDP) in accordance with Specialised Operations, KAAN AIR shall specify an RVR/VIS as take-off minima in accordance with Table 1.H.
    a. For all other cases other than para (c)(1) in accordance with Specialised Operations, the pilot-in-command shall operate to take-off minima of 800 m RVR/VIS and remain clear of cloud during the take-off manoeuvre until reaching the performance capabilities of (c)(1).
2. For Performance **Class 2** operations onshore, the commander shall operate to take-off minima of 800 m RVR/VIS and remain clear of cloud during the take-off manoeuvre until reaching performance class 1 capabilities.
3. For Performance **Class 2** operations **offshore**, the commander shall operate to minima not less than that for performance class 1 and remain clear of cloud during the take-off manoeuvre until reaching performance class 1 capabilities.
4. Table 8 for converting reported meteorological visibility to RVR should not be used for calculating take-off minima.

Table 1.H
Take-off — helicopters (without LVTO approval)
RVR/VIS

Onshore aerodromes with instrument flight rules (IFR) departure procedures	**RVR/VIS (m)**
No light and no markings (day only)	400 or the rejected take-off distance, whichever is the greater
No markings (night)	800
Runway edge/FATO light and centreline marking	400
Runway edge/FATO light, centreline marking and relevant RVR information	400
Offshore helideck *	
Two-pilot operations	400
Single-pilot operations	500

*: The take-off flight path to be free of obstacles.

(01.01.02.02)- NPA, APV, CAT I Operations

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

AMC3 CAT.OP.MPA.110 / AMC4 CAT.OP.MPA.110

a. The decision height (DH) to be used for a non-precision approach (NPA) flown with the continuous descent final approach (CDFA) technique, approach procedure with vertical guidance (APV) or category (CAT) I operation should not be lower than the highest of:

   1. the minimum height to which the approach aid can be used without the required visual reference;
   2. the obstacle clearance height (OCH) for the category of aircraft;
   3. the published approach procedure DH where applicable;
   4. the system minimum specified in Table 3; or
   5. the minimum DH specified in the aircraft flight manual (AFM) or equivalent document, if stated.

b. The minimum descent height (MDH) for an NPA operation flown without the CDFA technique should not be lower than the highest of:

   1. the OCH for the category of aircraft;
   2. the system minimum specified in Table 3; or
   3. the minimum MDH specified in the AFM, if stated.

Table 3
System minima

Facility	Lowest DH/MDH (ft)
ILS/MLS/GLS	200
GNSS/SBAS (LPV)	200
GNSS (LNAV)	250
GNSS/Baro-VNAV (LNAV/ VNAV)	250
LOC with or without DME	250
SRA (terminating at ½ NM)	250
SRA (terminating at 1 NM)	300
SRA (terminating at 2 NM or more)	350
VOR	300
VOR/DME	250
NDB	350
NDB/DME	300
VDF	350

DME: distance measuring equipment;
GNSS: global navigation satellite system;
ILS: instrument landing system;
LNAV: lateral navigation;
LOC: localiser;
LPV: localiser performance with vertical guidance
SBAS: satellite-based augmentation system;
SRA: surveillance radar approach;
VDF: VHF direction finder;
VNAV: vertical navigation;
VOR: VHF omnidirectional radio range.

(01.01.02.03)- Determination Of RVR / CMV / VIS Minima For NPA, CAT I Helicopters

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

AMC8 SPO.OP.110 / AMC6 CAT.OP.MPA.110

a. Helicopters

The RVR/CMV/VIS minima for NPA, APV and CAT I operations should be determined as follows:

1. For NPA operations operated in performance class 1 (PC1) or performance class 2 (PC2), the minima specified in Table 6.1.H should apply:

   i. where the missed approach point is within ½ NM of the landing threshold, the approach minima specified for FALS may be used regardless of the length of approach lights available. However, FATO/runway edge lights, threshold

lights, end lights and FATO/runway markings are still required;
ii. for night operations, ground lights should be available to illuminate the FATO/runway and any obstacles; and
iii. for single-pilot operations, the minimum RVR is 800 m or the minima in Table 6.1.H, whichever is higher.

2. For CAT I operations operated in PC1 or PC2, the minima specified in Table 6.2.H should apply:

i. for night operations, ground light should be available to illuminate the FATO/runway and any obstacles;
ii. for single-pilot operations, the minimum RVR/VIS should be calculated in accordance with the following additional criteria:

A. an RVR of less than 800 m should not be used except when using a suitable autopilot coupled to an ILS, MLS or GLS, in which case normal minima apply; and
B. the DH applied should not be less than 1.25 times the minimum use height for the autopilot.

Table 6.1.H
Onshore NPA minima

MDH (ft) *	Facilities vs RVR/CMV (m) **, ***			
	FALS	IALS	BALS	NALS
250 – 299	600	800	1 000	1 000
300 – 449	800	1 000	1 000	1 000
450 and above	1 000	1 000	1 000	1 000

*: The MDH refers to the initial calculation of MDH. When selecting the associated RVR, there is no need to take account of a rounding up to the nearest 10 ft, which may be done for operational purposes, e.g. conversion to MDA.
**: The tables are only applicable to conventional approaches with a nominal descent slope of not greater than 4°. Greater descent slopes will usually require that visual glide slope guidance (e.g. precision approach path indicator (PAPI)) is also visible at the MDH.
***: FALS comprise FATO/runway markings, 720 m or more of high intensity/medium intensity (HI/MI) approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights to be on.
IALS comprise FATO/runway markings, 420 - 719 m of HI/MI approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights to be on.
BALS comprise FATO/runway markings, <420 m of HI/MI approach lights, any length of low intensity (LI) approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights to be on.
NALS comprise FATO/runway markings, FATO/runway edge lights, threshold lights, FATO/runway end lights or no lights at all.

Table 6.2.H
Onshore CAT I minima

DH (ft) *	Facilities vs RVR/CMV (m) **, ***			
	FALS	IALS	BALS	NALS
200	500	600	700	1 000
201 – 250	550	650	750	1 000
251 – 300	600	700	800	1 000
301 and above	750	800	900	1 000

*: The DH refers to the initial calculation of DH. When selecting the associated RVR, there is no need to take account of a rounding up to the nearest 10 ft, which may be done for operational purposes, e.g. conversion to DA.
**: The table is applicable to conventional approaches with a glide slope up to and including 4°.
***: FALS comprise FATO/runway markings, 720 m or more of HI/MI approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights to be on.
IALS comprise FATO/runway markings, 420 - 719 m of HI/MI approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights to be on.
BALS comprise FATO/runway markings, <420 m of HI/MI approach lights, any length of LI approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights to be on.
NALS comprise FATO/runway markings, FATO/runway edge lights, threshold lights, FATO/runway end lights or no lights at all.

(01.01.02.04)- Onshore Circling Operations - Helicopters

Revizyon No: 6 Revizyon Tarihi: 30.06.2020
SPO.OP.113 / AMC8 CAT.OP.MPA.110

The MDH for an onshore circling operation with helicopters, shall not be lower than 250 ft, and the meteorological visibility not less than 800 m.

(01.01.02.05)- Visual Approach Operations

KAAN AIR will not use an RVR of less than 800 m for a visual approach operation.

(01.01.02.06)- Conversion Of Reported Meteorological Visibility to RVR

a. A conversion from meteorological visibility to RVR/CMV should not be used:

   1. when reported RVR is available;
   2. for calculating take-off minima; and
   3. for any RVR minima less than 800 m.

b. If the RVR is reported as being above the maximum value assessed by the aerodrome operator, e.g. 'RVR more than 1 500 m', it should not be considered as a reported value for (a)(1).

c. When converting meteorological visibility to RVR in circumstances other than those in (a), the conversion factors specified in Table 8 should be used.

Table 8
Conversion of reported meteorological visibility to RVR/CMV

Light elements in operation	**RVR/CMV = reported meteorological visibility x**	
	Day	**Night**
HI approach and runway lights	1.5	2.0
Any type of light installation other than above	1.0	1.5
No lights	1.0	not applicable

(01.01.02.07)- Effect on Landing Minima of Temporarily Failed or Downgraded Ground Equipment

a. General

   These instructions are intended for use both pre-flight and in-flight. It is, however, not expected that the commander would consult such instructions after passing 1 000 ft above the aerodrome. If failures of ground aids are announced at such a late stage, the approach could be continued at the commander's discretion. If failures are announced before such a late stage in the approach, their effect on the approach should be considered as described in Table 9, and the approach may have to be abandoned.

b. Conditions applicable to Table 9:

   1. multiple failures of runway/FATO lights other than indicated in Table 9 should not be acceptable;
   2. deficiencies of approach and runway/FATO lights are treated separately; and
   3. failures other than ILS, MLS affect RVR only and not DH.

Table 9
Failed or downgraded equipment — effect on landing minima Operations without a low visibility operations (LVO) approval

Failed or downgraded equipment	**Effect on landing minima**	
	CAT I	**APV, NPA**
ILS/MLS stand-by transmitter	No effect	
		APV — not applicable
		NPA with FAF: no effect unless used as FAF

Outer Marker	Not allowed except if replaced by height check at 1 000 ft	If the FAF cannot be identified (e.g. no method available for timing of descent), non- precision operations cannot be conducted
Middle marker	No effect	No effect unless used as MAPt
RVR Assessment Systems	No effect	
Approach lights	Minima as for NALS	
Approach lights except the last 210 m	Minima as for BALS	
Approach lights except the last 420 m	Minima as for IALS	
Standby power for approach lights	No effect	
Edge lights, threshold lights and runway end lights	Day: no effect; Night: not allowed	
Centreline lights	No effect if F/D, HUDLS or auto-land otherwise RVR 750 m	No effect
Centreline lights spacing increased to 30 m	No effect	
Touchdown zone lights	No effect if F/D, HUDLS or auto-land; otherwise RVR 750 m	No effect
Taxiway lighting system	No effect	

(01.01.02.08)- VFR Operations with Other-Than-Complex Motor-Powered Aircfat

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

AMC12 CAT.OP.MPA.110

For the establishment of VFR operation minima, KAAN AIR may apply the VFR operating minima specified in Part-SERA. Where necessary, KAAN AIR may specify in the OM additional conditions for the applicability of such minima taking into account such factors as radio coverage, terrain, nature of sites for take-off and landing, flight conditions and ATS capacity.

(01.01.02.09)- Onshore Aerodrome Departure Procedures - Helicopters

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

GM1 CAT.OP.MPA.110

The cloud base and visibility should be such as to allow the helicopter to be clear of cloud at take-off decision point (TDP), and for the pilot flying to remain in sight of the surface until reaching the minimum speed for flight in instrument meteorological conditions (IMC) given in the RFM.

01.01.03-Communication Facilities and Navigation Aids

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

(01.01.03.01)- Responsible Services

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

The responsible service for the provision of telecommunication and air navigation facility services in Turkey is the General Directorate of State Airports (DHMİ Genel Müdürlüğü Havacılık Bilgi Yönetimi (AIM) Şube Müdürlüğü, AFS: LTAAYGSD)

The service is provided in accordance with the provisions contained in the following ICAO documents:

- Annex 10 - Aeronautical Telecommunications,
- Doc 8400 - Procedures for the Air Navigation Services - Abbreviations and Codes (PANS-ABC)
- Doc 8585 - Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services,
- Doc 7030 - Regional Supplementary Procedures,

- Doc 7910 - Location Indicators.

(01.01.03.02)- Area of Responsibility

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

Communication services are provided for the entire Ankara and Istanbul FIRs. Arrangements for such services on a continuing basis should be made by the Headquarter Communication Systems Directory, who is also responsible for the application of the regulations concerning the design, type and installations of aircraft radio stations. Responsibility for the day-to-day operation of these services is vested in Electronic Managers. Inquiries, suggestions or complaints regarding any telecommunication services should be referred to the relevant Electronic Managers or to the Directory of Communication Systems, as appropriate.

01.01.03.03-Types of Services

Annex 10 Volume II

(01.01.03.03.01)- Radio Navigation Services

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

The following types of radio aids to navigation are available:

- Non-directional Beacon (NDB)
- Instrument Landing System (ILS)
- VHF Omni Directional Radio Range (VOR)
- Distance Measuring Equipment (DME)
- Secondary Surveillance Radar (SSR)
- Ground Controlled Approach (GCA)
- UHF Tactical Air Navigation Aid (TACAN)
- Primary Surveillance Radar (PSR)

Note: GCA and TACAN are available only at Military Aerodromes.

Selected radio broadcasting stations are included as additional navigational facilities. The information is limited to stations with a power of 10 kw or more. It should be noted that unserviceability of these stations will not be reported. The co-ordinates listed refer to the transmitting antennas with the exception of direction-finding stations, for which the co-ordinates of the receiving antennas are given.

According to the judgement of the direction-finding stations, bearings are classified as follows:

- Class A - accurate within ± 2 degrees
- Class B - accurate within ± 5 degrees
- Class C - accurate within ± 10 degrees

Direction-finding stations have authority to refuse to give bearings or headings to steer when conditions are unsatisfactory or when bearings do not fail within the calibrated limits of the station, stating the reason at the time of refusal.

(01.01.03.03.02)- Mobile Services

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

The Aeronautical Stations maintain a continuous watch on their stated frequencies during the published hours of service unless otherwise notified. An aircraft should normally communicate with the air-ground control radio stations which exercises control in the area which it is flying. Aircraft should maintain continuous watch on the appropriate frequency of the control station and should not abandon watch, except in emergency, without informing the control radio station.

The air-ground control station should be notified when an aircraft is about to change frequency when landing, an aircraft should maintain watch on appropriate control frequency until it has finished taxiing.

Use of Aeronautical Emergency Channel shall be used only for genuine emergency purposes as broadly outlined in the following:

a) To provide a clear channel between aircraft in distress or emergency and ground station when the normal channels are being utilized for other aircraft.

b) To provide a VHF or UHF communication channel between aircraft either civil or military and between such aircraft and

surface services, in case an emergency condition arises.
c) To provide a common VHF and UHF communication channel between aircraft either civil or military and between such aircraft and surface services, in case an emergency condition arises.
d) To provide air-ground communication with aircraft when airborne equipment failure prevents the use of the regular channels.
e) To provide radar advisory service when contact in the other available channels are not possible.

(01.01.03.03.03)- Fixed Services

Revizyon No: 10 Revizyon Tarihi: 02.05.2023

Annex 10 Volume II

The Aeronautical Fixed Service (AFS), is performed by the Ankara/HTKM AFTN/AMHS Com center, and the Aeronautical Information Management Units at the aerodromes. These units are connected to the AFTN/AMHS Com center by network circuits.

Messages to the transmitted over the Aeronautical Fixed Services are accepted only if satisfy the requirements of Annex 10 Volume 2 Chapters 3 and 4.

(01.01.03.03.04)- Class "B" Messages

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

General Aircraft Operating Agency messages are only accepted for transmission to states or territories which have agreed to accept class "B" traffic. Messages of the following categories, prescribed in Annex 10 Volume 2 Chapter 4, are considered as class "B" traffic when are originated by aircraft operating agencies.

a) Flight Safety messages,
b) Meteorological messages,
c) Flight Regularity messages,
d) Reservation messages,
e) General Aircraft Operating Agency messages.

Messages addressed to parties other than aircraft operating agencies or their representative are not acceptable.

(01.01.03.03.05)- Broadcasting Services

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

The following meteorological broadcast are available for the use of aircraft in flight:

a) Sub-area meteorological broadcasts (VOLMET-Radio-Telegraphy Broadcasts)
b) VHF RTT meteorological broadcasts.

(01.01.03.03.06)- Where Detailed Information Can Be Obtained

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

Details of the various facilities available for the en-route traffic can be found in Turkish AIP Part 2 (ENR-4).

Details of the facilities available at the individual aerodromes can be found in the relevant sections of Part 3 (AD). In cases where a facility is serving both the en-route traffic and the aerodromes, details are given in the relevant sections of Part 2 (ENR) and Part 3 (AD).

(01.01.03.03.07)- Requirements And Conditions

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

The requirements of the Directorate of Communication Services and the general conditions under which the communication services are available for international use, as well as the requirements for the carriage of radio equipment, are contained in the Air Navigation (Radio) Regulations of Turkey.

(01.01.03.04)- Navigation Aids

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

Radio Navigation Aids Systems records and frequencies of required stations can be found in Turkish AIP GEN-2.5 and ENR-4.1.

01.01.04-Runway / Final Approach and Take-Off Area (FATO) Data and Aerodrome / Operating Site Facilities

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

CAT.OP.MPA.181

(01.01.04.01)- Planning Minima for IFR Flights Helicopters

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

CAT.OP.MPA.192

(A) Planning minima for take-off alternate aerodrome(s)

KAAN AIR will only select an aerodrome or landing site as a take-off alternate aerodrome when the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the take-off alternate aerodrome, the weather conditions will be at or above the applicable landing minima specified in accordance with CAT.OP.MPA.110. The ceiling shall be taken into account when the only approach operations available are NPA operations. Any limitation related to OEI operations shall be taken into account.

(B) Planning minima for destination aerodrome and destination alternate aerodrome(s)

KAAN AIR will only select the destination and/or destination alternate aerodrome(s) when the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the aerodrome or operating site, the weather conditions will be at or above the applicable planning minima as follows:

(1) except as provided in CAT.OP.MPA.181(d), planning minima for a destination aerodrome shall be:

(i) RVR/VIS specified in accordance with CAT.OP.MPA.110; and
(ii) for NPA operations, the ceiling at or above MDH;

(2) planning minima for destination alternate aerodrome(s) are as shown in Table 1.

Table 1
Planning minima destination alternate aerodrome

Type of approach	Planning minima
CAT II and III	CAT I RVR
CAT I	CAT I + 200 ft/400 m visibility
NPA	NPA RVR/VIS + 400 m Ceiling shall be at or above MDH + 200 ft

(C) Planning Minima for Alternate Aerodromes

Non-precision minima (NPA) in Table 1 of CAT.OP.MPA.186 mean the next highest minima that apply in the prevailing wind and serviceability conditions. Localizer only approaches, if published, are considered to be non-precision in this context. It is recommended that operators wishing to publish tables of planning minima choose values that are likely to be appropriate on the majority of occasions (e.g. regardless of wind direction). Unserviceabilities should, however, be fully taken into account.

As Table 1 does not include planning minima requirements for APV, LTS CAT I and OTS CAT II operations, the operator may use the following minima:

(a) for APV operations — NPA or CAT I minima, depending on the DH/MDH;
(b) for LTS CAT I operations — CAT I minima; and
(c) for OTS CAT II operations — CAT II minima.

(01.01.04.02)- Heliports

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 14 Volume II - Heliports

If heliport use is needed, the commander must contact with the heliport operator about the details of the flight and any service/assistance requested.

(01.01.04.03)- Elevated Helidecks

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Operator Procedure

With elevated helicopter landing sites, it is assumed that the FATO and TLOF are contiguous. An elevated helicopter landing site shall have at least a FATO. The dimensions of the FATO are determined as follows:

1. for an helicopter landing site intended for helicopters operated in Performance Class 1 as described in the OM, the width of the FATO may not be less tha 1.5 x the total length of the longest respectively widest helicopter type intended to operate at that site.

2. for a landing site intended for helicopters operated in Performance Class 2, the FATO must be of a sufficient size and form that a diameter of at least 1.5 x the either the greater dimension of either length or width of the largest helicopter type intended to operate at that site.

The slope of the elevated helicopter landing site must meet the requirements set out above for such sites on land.

The FATO must meet the prescribed operational criteria for elevated helicopter landing pads. The design shall take into account additional stresses from personnel, snow, cargo, fueling, fire-fighting equipment etc.

The surface of the FATO and TLOF shall be anti-slip for both helicopter and personnel and suitable to support ground effect.

(01.01.04.04)- Helidecks (On Ships or Fixed Installations)

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Operator Procedure

The form of the FATO is discretionary. It must be of sufficient dimension and space to accommodate a single rotor helicopter or a helicopter with contiguous double rotors, such that the surface contains a diameter not less than 1 D for the largest helicopter type for which the helideck is intended.

Fixed objects on the boundary of the FATO are not permitted. Frangible objects which by nature of their function are required to be so placed are permissible.

Objects which for reasons of their function need to be part of the FATO may not exceed a height of 0.25M. The surface of the take-off and landing surface must be both anti-slip with respect to both the helicopter and persons, as well as being of such design that puddles do not form. Where are helideck is constructed using a grid, the lower surface must be of a design that ensures that ground effect is not impaired.

** Actual Helideck Pictorial is at Appendix C.01.04.07a Helideck Info Sheet HOF-01.

(01.01.04.05)- Flight to A Transformer Platform, Crane Ship or Ship with or without A Helideck

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Operator Procedure

Landing on a helideck by both day and night is permissible (a long as the deck is certified for the type of operation). Fixed installations require in addition an approval from the TR DGCA.

During approach and a least 5 minutes prior to reaching the destination platform, information concerning the weather (wind direction and speed, visibility and cloud base, and ship movement where applicable) shall be obtained. In addition, the status of the helideck is to be obtained (via radio from the HLO, the installation or controlling agency).

Deck is green ? Helideck available for landing

Only when the deck status is confirmed by the helicopter crew may a landing be carried out.

(01.01.04.06)- Wind Limitations for Flights to Helidecks or Elevated Heliports or Ships

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Operator Procedure

Flights with helicopters to a helideck or elevated FATO shall only be operated when the mean wind speed at the helideck or

elevated FATO is reported to be **less than 60 kt.**

(01.01.04.07)- Helideck Motion Limits - Pitch, Roll and Heave Limitations

Revizyon No: 6 Revizyon Tarihi: 30.06.2020

Operator Procedure

Company Procedure and TPAO Aviation Operation Guide
Heldeck Certification Agency - Helideck Limitation List (HLL) Part C

The following chart defines the maximum limits for helideck movement :

	HELIDECK CATEGORY - 1				
Aircraft Category B (AW139)	**Conditions**	**Limits for Landing - Day**	**Limits for Landing - Night**	**Limits for Planning - Day**	**Limits for Planning - Night**
	Pitch and Roll	± 4 °	± 3 °	± 3 °	± 2 °
	Average Heave Rate	1,3 m/sec	1,0 m/sec	1,3 m/sec	1,0 m/sec

01.01.04.08-Alternate in the Offshore Flight

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

SPA.HOFO.120

For flights under instrument meteorological conditions (IMC), the commander will select a takeoff **alternate** aerodrome **within one hour flying time** at normal cruising speed if it would not be possible to return to the site of departure due to meteorological reasons.

(01.01.04.08.01)- Onshore Destination Alternate Aerodrome

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

SPA.HOFO.120

Notwithstanding CAT.OP.MPA.181, NCC.OP.152, and SPO.OP.151, the pilot-in command/commander does not need to specify a destination alternate aerodrome in the operational flight plan when conducting flights from an offshore location to a land aerodrome if either:

1. the destination aerodrome is defined as a coastal aerodrome, or
2. the following criteria are met:

    i. the destination aerodrome has a published instrument approach;
    ii. the flight time is less than 3 hours; and
    iii. the published weather forecast valid from 1 hour prior, and 1 hour subsequent to the expected landing time specifies that:

        A. the cloud base is at least 700 feet above the minima associated with the instrument approach, or 1 000 feet above the destination aerodrome, whichever is the higher; and
        B. visibility is at least 2 500 meters.

(01.01.04.08.02)- Coastal Aerodrome

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

AMC1 SPA.HOFO.120

a. Any alleviation from the requirement to select an alternate aerodrome for a flight to a coastal aerodrome under instrument flight rules (IFR) routing from offshore should be based on an individual safety risk assessment.
b. The following should be taken into account:

    1. suitability of the weather based on the landing forecast for the destination;
    2. the fuel required to meet the IFR requirements of CAT.OP.MPA.150, NCC.OP.131 or SPO.OP.131 except for the alternate fuel;
    3. where the destination coastal aerodrome is not directly on the coast, it should be:

        i. within a distance that with the fuel specified in (b)(2), the helicopter is able, at any time after crossing the coastline, to return to the coast, descend safely, carry out an approach under visual flight rules (VFR) and land, with the VFR

fuel reserves intact;
ii. within 5 nm of the coastline; and
iii. geographically sited so that the helicopter is able, within the rules of the air and within the landing forecast:

A. to proceed inbound from the coast at 500-ft above ground level (AGL), and carry out an approach and landing under VFR; or
B. to proceed inbound from the coast on an agreed route, and carry out an approach and landing under VFR;

4. procedures for coastal aerodromes should be based on a landing forecast no worse than:

i. by day, a cloud base of ≥ 400 ft above descent height (DH)/minimum descent height (MDH), and a visibility of 4 km, or, if descent over the sea is intended, a cloud base of 600 ft and a visibility of 4 km; or
ii. by night, a cloud base of 1 000 ft and a visibility of 5 km;

5. the descent to establish visual contact with the surface should take place over the sea or as part of the instrument approach;
6. routings and procedures for coastal aerodromes nominated as such should be included in the operations manual (OM) (Part C for CAT operators);
7. the minimum equipment list (MEL) should reflect the requirement for airborne radar and radio altimeter for this type of operation; and
8. operational limitations for each coastal aerodrome should be specified in the OM.

(01.01.04.08.03)- Offshore Destination Alternate Helideck

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

SPA.HOFO.120

KAAN AIR may select an offshore destination alternate helideck when all of the following criteria are met:

1. An offshore destination alternate helideck shall be used only after the point of no return (PNR) and when an onshore destination alternative aerodrome is not geographically available. Prior to the PNR, an onshore destination alternate aerodrome shall be used.
2. One engine inoperative (OEI) landing capability shall be attainable at the offshore destination alternate helideck.
3. To the extent possible, helideck availability shall be guaranteed prior to PNR. The dimensions, configuration and obstacle clearance of individual helidecks or other sites shall be suitable for its use as an alternate helideck by each helicopter type intended to be used.
4. Weather minima shall be established taking into account the accuracy and reliability of meteorological information.
5. The MEL shall contain specific provisions for this type of operation.
6. An offshore destination alternate helideck shall only be selected if the operator has established a procedure in the operations manual.

(01.01.04.08.04)- Offshore Destination Alternate Aerodrome

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

AMC2 SPA.HOFO.120

'Aerodrome' is referred to as 'helideck' in this subchapter.

a. Offshore destination alternate helideck landing environment

The landing environment at an offshore location proposed for use as an offshore destination alternate helideck should be pre-surveyed, together with the physical characteristics, such as the effect of wind direction and strength, as well as of turbulence established. This information, which should be available to the pilot-in-command/commander both at the planning stage and in-flight, should be published in an appropriate form in the operations manual (OM) (including the orientation of the helideck) so that the suitability of the alternate helideck can be assessed. This helideck should meet the criteria for size and obstacle clearance appropriate to the performance requirements of the type of helicopter concerned.

b. Performance considerations

The use of an offshore destination alternate helideck should be restricted to helicopters that can achieve one engine inoperative (OEI) in ground effect (IGE) hover at an appropriate power rating above the helideck at the offshore location. Where the surface of the helideck or prevailing conditions (especially wind velocity) precludes an OEI IGE, OEI out-of-ground effect (OGE) hover performance at an appropriate power rating should be used to compute the landing mass. The landing mass should be calculated based on graphs provided in the operations manual (OM) (Part B for CAT operators). When this landing mass is computed, due account should be taken of helicopter configuration, environmental conditions and the operation of systems that have an adverse effect on performance. The planned landing mass of the helicopter, including

crew, passengers, baggage, cargo plus 30-min final reserve fuel (FRF), should not exceed the OEI landing mass of the helicopter at the time of approach to the offshore destination alternate.

c. Weather considerations

1. Meteorological observations

When the use of an offshore destination alternate helideck is planned, the meteorological observations, both at the offshore destination and the alternate helideck, should be made by an observer acceptable to the authority responsible for the provision of meteorological services. Automatic meteorological-observation stations may be used.

2. Weather minima

When the use of an offshore destination alternate helideck is planned, the operator should neither select an offshore location as destination nor as alternate helideck unless the weather forecasts for the two offshore locations indicate that during a period commencing 1 h before and ending 1 h after the expected time of arrival at the destination and the alternate helideck, the weather conditions will be at or above the planning minima shown in the following table:

Table 1 — Planning minima

Planning minima		
	Day	**Night**
Cloud base	600 ft	800 ft
Visibility	4 km	5 km

3. Conditions of fog

To use an offshore destination alternate helideck, it should be ensured that fog is not forecast or present within 60 nm of the destination helideck and alternate helideck during the period commencing 1 h before and ending 1 h after the expected time of arrival at the offshore destination or alternate helideck.

d. Actions at point of no return (PNR)

Before passing the point of no return, which should not be more than 30 min from the destination, the following actions should have been completed:

1. confirmation that navigation to the offshore destination and offshore destination alternate helideck can be assured;
2. radio contact with the offshore destination and offshore destination alternate helideck (or master station) has been established;
3. the landing forecast at the offshore destination and offshore destination alternate helideck have been obtained and confirmed to be at or above the required minima;
4. the requirements for OEI landing (see (b) above) have been checked in the light of the latest reported weather conditions to ensure that they can be met; and
5. to the extent possible, having regard to information on the current and forecast use of the offshore alternate helideck and on prevailing conditions, the availability of the helideck on the offshore location intended as destination alternate helideck should be guaranteed by the duty holder (the rig operator in the case of fixed installations, and the owner in the case of mobile ones) until the landing at the destination, or the offshore destination alternate helideck, has been achieved or until offshore shuttling has been completed.

01.01.05-Approach, Missed Approach and Departure Procedures including Noise Abatement Procedures

Revizyon No: 6 Revizyon Tarihi: 30.06.2020

CAT.OP.MPA.131

(a) KAAN AIR ensures that take-off and landing procedures take into account the need to minimise the effect of helicopter noise.

(b) The procedures shall:

(1) ensure that **safety has priority** over noise abatement; and
(2) be simple and safe to operate with no significant increase in crew workload during critical phases of flight.

(01.01.05.00)- General

Revizyon No: 6 Revizyon Tarihi: 30.06.2020

CAT.OP.MPA.131

The criteria for establishing Approach and Departure procedures in use in Turkey, are based on those contained in the latest edition of ICAO DOC - 8168 - PANS-OPS,VOL-2 " Procedures for Air Navigation Services - Aircraft operations (PANS-OPS)"

The recommendations in DOC 8168 PANS-OPS are applicable with the following exceptions as described below:

a) Instrument approach procedure based on special two facilities is used.
b) The times to be flown between FAP and MAPt based on speed categories will not be indicated on IAC charts.

Other Issues:

a) Simultaneous Approach to Parallel runways will not be executed.
b) If GP component of an ILS is unserviceable, instruction (information) will be given to the pilots such as; "***cleared for ILS approach, caution GP is inoperative***".
c) Side step application:
Side step application can be used at:

- İstanbul/ Atatürk,
- İzmir/Adnan Menderes,
- Ankara/ Esenboğa,
- Antalya,
- Milas/ Bodrum,
- Muğla/ Dalaman,
- Erzurum,
- Gaziantep,
- Bursa/ Yenişehir,
- Denizli/ Çardak,
- Tekirdag/ Çorlu Aerodromes,

where the distance between two parallel runway's centerline is less than 365 m,

In case an instrument runway, having a published instrument approach procedure, is unusable for any reason **(accidents, crashes, maintenance, repair etc),** Side step application may be conducted for landing purposes to the parallel RWY, emergency RWY or the parallel TWY which is officially allowed to be used as an alternate runway and declared advanced notice for this purpose.

Side step application phraseology given below:

Cleared for …. (Name or type of approach) Approach for RWY … (Associated RWY for that approach) Side Step to RWY …. (landing of the parallel RWY).
Example: Cleared for ILS/DME 2 Approach for RWY 03R side step to RWY 03L"

(01.01.05.01)- Arriving Flights

Revizyon No: 6 Revizyon Tarihi: 30.06.2020
CAT.OP.MPA.131

IFR flights entering and landing within a terminal control area will be cleared to a specified holding point and instructed to contact approach control at a specified time, level or position. The terms of this clearance shall be adhered to until further instructions are received from approach control, if the clearance limit is reached before further instructions have been received, holding procedure shall be carried out at the level last authorized.

Due to the limited airspace available, it is important that the approaches to the patterns and the holding procedures be carried out as precisely as possible. Pilots are strongly requested to inform ATC if for any reason the approach and / or holding cannot be performed as required.

(01.01.05.02)- Aircraft Categories

Revizyon No: 6 Revizyon Tarihi: 30.06.2020
CAT.OP.MPA.131 / GM1 SPO.OP.110

a. Aircraft categories shall be based on the indicated airspeed at threshold (VAT), which is equal to the stalling speed (VSO) multiplied by 1.3 or where published 1-g (gravity) stall speed (VS1g) multiplied by 1.23 in the landing configuration at the maximum certified landing mass. If both VSO and VS1g are available, the higher resulting VAT shall be used.
b. The aircraft categories specified in Table 1 shall be used.

Table 1:
Aircraft categories corresponding to VAT values

Aircraft category	VAT

A	Less than 91 kt
B	from 91 to 120 kt
C	from 121 to 140 kt
D	from 141 to 165 kt
E	from 166 to 210 kt

(01.01.05.03)- Final Approach Alignment

Revizyon No: 6 Revizyon Tarihi: 30.06.2020

CAT.OP.MPA.131

Straight - In Approach

a) For a straight - in approach the angle formed by the final approach track and the centerline shall not exceed 30° for A and B categories and 15° the other categories ; and the distance between the runway threshold and the point at which the final approach track intersects the runway centerline shall not be less than 1400 m.

b) A final approach track which does not intersect the extended centerline of the runway may also be established, provided such track lies within 150 m. laterally of the extended runway centerline at a point 1400 m. outward from the runway threshold.

(01.01.05.04)- Segments of Instrument Approach

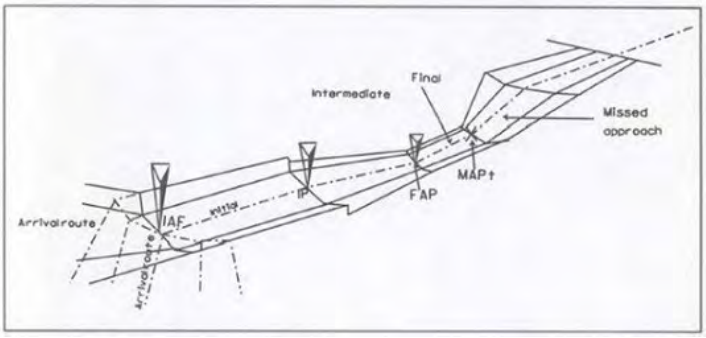
Revizyon No: 6 Revizyon Tarihi: 30.06.2020

CAT.OP.MPA.131

An instrument approach procedure may have five separate segments. They are;

1. **Arrival,**
2. **Initial,**
3. **Intermediate,**
4. **Final and**
5. **Missed Approach** segments.

In addition, an area for circling the aerodrome under visual conditions should be considered.



(01.01.05.05)- Noise Abatement Procedures

Revizyon No: 6 Revizyon Tarihi: 30.06.2020

CAT.OP.MPA.131 / SPO.OP.120 / GM1 SPO.OP.120

(a) KAAN AIR will ensure that take-off and landing procedures take into account the need to minimize the effect of helicopter noise.

(b) KAAN AIR will:

(1) Ensure that **safety has priority** over noise abatement; and
(2) Noise Abatement procedure is simple and safe to operate with **no significant increase in crew workload** during critical phases of flight.

(c) The pilot-in-command shall take into account **published noise abatement procedures** to minimise the effect of aircraft noise while ensuring that safety has priority over noise abatement.

- The rule addresses only the vertical profile of the departure procedure. Lateral track has to comply with the standard instrument departure (SID).

All KAAN AIR helicopter types and noise abatement procedures on take off, climb, approach and landing phases are at below table:

TYPES PHASES	A119	AW109	A139	KA32
TAKE-OFF AND CLIMB	Collective : Increase slowly and bring the helicopter to a 3 ft AGL hover. Cyclic and collective : Rotate the nose down approximately 10° from the hover datum. While accelerating increase slightly the torque to avoid loss of altitude. At 30 KIAS increase torque by approximately 15% and adjust cyclic to obtain 0° attitude. Continue acceleration to VY. At VY increase torque as required by the desired flight path. Climb over 500 feet AGL as soon as possible.	Flight controls : Apply as necessary to lift the helicopter to a 3 ft AGL hover. Cyclic / Collective : Rotate approximately 10 deg nose down from hover datum. While accelerating increase slightly the torque to avoid loss of altitude. At 30 KIAS increase torque by 15% and adjust cyclic to obtain 0 deg attitude. Continue acceleration to Vy. At Vy increase torque as required for the desired flight path. Climb over 500 feet AGL as soon as possible.	Hover — Establish at 5 feet (1.5 m) AGL. Relative wind between 135° and 225° (quartering tail winds) is not recommended. Collective/Cyclic Control — Apply cyclic to commence a nose down attitude change of 7°. At approximately half way through the rotation apply collective to increase PI to 5% above the hover PI. Acceleration and Climb — Accelerate forward and climb to achieve 50 ft (15 m) above take off surface at 50 KIAS, continue up to 80 KIAS. Climb — At 80 KIAS (Vy) adjust attitude to stabilize at Vy and climb smoothly. Climb over 500 feet AGL as soon as possible.	HOVER - Collective pitch Increase to hover, Directional control on landmarks, Cyclic control As required to maintain desired position, Collective As required to maintain desired height Trim button Press to unload controls Balancing Cyclic position close to neutral Instrument Reading normal CATEGORY B TAKEOFF Test hover height before acceleration 2 m (6 ft) Cyclic Apply as required to attain pitch of 10 to 15 degrees nose down and start acceleration with a simultaneous climb Collective Apply minimum necessary to obtain a rate of climb and airspeed 65 km/h (35 kt) IAS at 15 m (50 ft) height **NOTE** During takeoff, pitch attitude must be adjusted commensurate with power application to prevent entering the AVOID area of the Height-Velocity diagram Continue climb and acceleration to attain the best rate of climb speed at 30 m (100 ft) CLIMB Climb at the best rate of climb speed (ref RFM, Section 4) Do not allow rotor RPM droop below 87 % Change over to level flight when the required altitude is reached by reducing the collective pitch
	Approach path: Perform the approach at 75 KIAS. Reduce the airspeed gradually with the cyclic. At 70 ft make a flare and apply collective as required to bring the helicopter to a 3 ft AGL hover. After reaching a hover descend slowly to the ground surface.	Landing path : Reduce the airspeed gradually and at 70 ft AGL flare and apply collective to pass 30 KIAS at 30 ft AGL. Bring the helicopter to a hover at 3 ft AGL. Descend vertically to the ground. After ground contact, lower the collective to the minimum pitch or as necessary if taxiing is required.	Initial point — During the approach, reduce airspeed gradually to arrive at a position 200 ft (61 m) above touchdown point with a rate of descent of no more than 500 fpm. Initiate a deceleration to achieve 30 KIAS at 50 ft (15 m). At 50 ft rotate	DESCENT Before descent disengage altitude stabilization mode as follow: ROUTE switch on the collective Off PA switch Off PA light on Central Pedestal panel off Pre-selected speed obtain by setting the

TYPES PHASES	A119	AW109	A139	KA32
APPROACH AND LANDING			nose up to approximately 20° to decelerate. Landing — Continue the deceleration and descent to hover.	corresponding helicopter pitch angle Required vertical descent speed (within the limits) obtain by decreasing the collective pitch **NOTE** Slightly change the collective pitch when variations of rotor rpm and engine instrument readings occur that may be caused by bleed valves cycling in engine derated power conditions APPROACH By 50 ft (15 m) height obtain speed of 30 kt (55 km/h) and vertical rate of descent not above 300 ft/min (1,5 m/s) Starting from 50 ft (15 m), smoothly decrease speed and rate of descent (pitch angle 13 degrees nose up, maximum limit value) to hover at 6 ft (2 m) height Hover height prior to landing 6 ft (2 m) Decent velocity after hover not exceeding 100 ft/min (05 m/s) Collective after landing full down

01.01.06-Communication - Failure Procedures

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

(01.01.06.01)- Visual Meteorological Conditions (VMC)

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

Except as provided for in 01.01.06.02, a controlled flight experiencing communication failure in VMC shall:

a) set transponder to Code 7600;
b) continue to fly in VMC;
c) land at the nearest suitable aerodrome; and
d) report its arrival time by the most expeditious means to the appropriate ATS unit.

(01.01.06.02)- Instrument Meteorological Conditions (IMC)

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

A controlled IFR flight experiencing communication failure in IMC, or where it does not appear feasible to continue in accordance with 01.01.06.01 shall:

(a) set transponder to Code 7600;
(b) maintain for a period of 7 minutes the last assigned speed and level or the minimum flight altitude, if the minimum flight altitude is higher than the last assigned level. The period of 7 minutes commences:

1) if operating on a route **without** compulsory reporting points or if instructions have been received to omit position reports:

i) at the time the last assigned level or minimum flight altitude is reached, or
ii) at the time the transponder is set to Code 7600,
whichever is later; or

2) if operating on a route **with** compulsory reporting points and no instruction to omit position reports has been received:

i) at the time the last assigned level or minimum flight altitude is reached, or
ii) at the previously reported pilot estimate for the compulsory reporting point, or
iii) at the time of a failed report of position over a compulsory reporting point,
whichever is later;

(c) thereafter, adjust level and speed in accordance with the filed flight plan;
(d) If being radar vectored or proceeding offset according to RNAV without a specified limit, proceed in the most direct manner possible to rejoin the current flight plan route no later than the next significant point, taking into consideration the applicable minimum flight altitude;
(e) proceed according to the current flight plan route to the appropriate designated navigation aid serving the destination aerodrome and, when required to ensure compliance with (f), hold over this aid until commencement of descent;
(f) commence descent from the navigation aid specified in (e) at, or as close as possible to, the expected approach time last received and acknowledged or, if no expected approach time has been received and acknowledged, at, or as close as possible to, the estimated time of arrival resulting from the current flight plan;
(g) complete a normal instrument approach procedure as specified for the designated navigation aid; and
(h) land, if possible, within 30 (thirty) minutes after the estimated time of arrival specified in (f) or the last acknowledged expected approach time, whichever is later.

01.01.07-Search and Rescue Facilities in the Area over which the Aircraft is to be Flown

Revizyon No: 10 Revizyon Tarihi: 02.05.2023
Annex 10 Volume II / TURKISH AIP GEN

The search and rescue services in Turkish SRR, Ankara and Istanbul FIRs are organized in accordance with international standards and recommended practices of ICAO and Ministry of Transport and Infastructure is responsible for making available the necessary facilities.

(01.01.07.01)- Authorities Responsible For Search And Rescue Services

Revizyon No: 10 Revizyon Tarihi: 02.05.2023
Annex 10 Volume II

a) Headquarters of Search and Rescue Coordination Unit is Ministry of Transport and Infastructure:

Tel : +90 (312) 231 91 05 or 232 47 83
Fax : +90 (312) 232 08 23
Telex : 4 271 22324 (Inmarsat-C)
Email : SAR@uab.gov.tr

b) Air Search and Rescue Coordination Center (ARCC) is operated by Turkish Air Force:

Post: Air Rescue Coordination Center, Odunpazari / Eskisehir / TURKIYE
Tel : +90 222 324 34 07
Fax: +90 222 300 00 23
Fax: +90 222 324 33 88
Email 1: ARCC@hvkk.tsk.tr
Email 2: MARCC@hvkk.tsk.tr

(01.01.07.02)- Area of Responsibility

Revizyon No: 10 Revizyon Tarihi: 02.05.2023
Annex 10 Volume II

Turkish SSR covers Ankara and Istanbul FIRs which is an area designated based on the rescue of survivors in the high seas as soon as possible.

TURKISH Search and Rescue Region:

(01.01.07.03)- Types of Services

Revizyon No: 10 Revizyon Tarihi: 02.05.2023

Annex 10 Volume II

Details of the Rescue Coordination Center (RCC) and related rescue assets are given below, in addition various elements of government agencies available for Search and Rescue missions when required.

SAR helicopters are equipped with winch gear.

Aircraft and marine craft are equipped to communicate on 121.5 MHZ, 123.1 MHZ, 243 MHZ, 282.8 MHZ. SAR aircraft and marine craft are equipped with direction finding equipment and radar.

Used Frequencies :

- 121.5 MHZ Emergency and Distress
- 123.1 MHZ SAR
- 243.0 MHZ Emergency and Distress
- 282.8 MHZ SAR (Military)
- Other frequencies may be used as directed by the ARCC
- 135.275 MHZ Air-to-air frequency has been allocated to be used in disaster and emergency aid, search and rescue situations.

(01.01.07.04)- COSPAS - SARSAT System

Revizyon No: 10 Revizyon Tarihi: 02.05.2023

Annex 10 Volume II

This international system of localization of distress situations by satellites receives the radio beacons signals emitted on 406 MHz.

The Mission Control Centre (MCC) and ARCC units are the receiving stations for distress emissions.

The system consists of space and earth segment and dedicated transmitters are submitting identification and localization data. The devices for aeronautical use are ELT (Emergency Locator Transmitter) type.

(01.01.07.05)- SAR Agreements

Revizyon No: 10 Revizyon Tarihi: 02.05.2023

Annex 10 Volume II

Request for the entry of aircraft equipment and personnel from other states to engage in search for aircraft in distress or to rescue survivors of aircraft accidents should be transmitted to the Main Search and Rescue Center in the Ministry of Transport and Infastructure.

The SAR service and facilities in TURKIYE are available without charge to neighboring States upon request to the General Directorate of Civil Aviation (TR DGCA) at all times when they are not engaged in search and rescue operations in their home territory. All facilities are specialized in SAR techniques and functions. The mountain rescue unit trained for SAR work and is activated as necessary.

(01.01.07.06)- Procedures And Signals Used

Revizyon No: 10 Revizyon Tarihi: 02.05.2023

Annex 10 Volume II

Procedures for pilots-in-command observing an accident or intercepting a distress call and/or message are outlined in ICAO Annex 12, Chapter 5.

Transmission and reception of distress message within the Turkish Search and Rescue Area are handled in accordance with ICAO Annex 10, Volume II, Chapter 5, Paragraph 5.3.

For communications during search and rescue operations, the codes and abbreviations published in ICAO Abbreviations and Codes (Doc 8400) are used.

The frequency 121.5 MHz is guarded continuously during the hours service at all Area Control Centers. In addition, the aerodrome control towers serving international aerodromes and international alternate aerodromes will, on request, guard the frequency 121.5 MHz. All coast stations guard the international distress frequencies.

Rescue aircraft belonging to permanent Search and Rescue Units use both the call sign RESCUE and additional identification marks (ALFA, BRAVO, CHARLIE, etc) during rescue operations.

The search and rescue signals to be used are those prescribed in ICAO Annex 12, Chapter 5, paragraph 5.8. Ground / air visual signal codes for use by survivors s follows:

No	Message	Code Symbol
1	Require assistance	V
2	Require medical assistance	X
3	No or Negative	N
4	Yes or Affirmative	Y
5	Proceeding in this direction	î

Instructions for use:
1. Make signals not less than 8 FT (2.5 m).
2. Take care to lay out signals exactly as shown.
3. Provide as much color contrast as possible between signals and background.
4. Make every effort to attract by other means such as radio, flares, smoke, reflected light.

(01.01.08)- Aeronautical Charts that should be Carried On Board in relation to the Type Of Flight and the Route to be Flown, including the Method to Check Their Validity

Revizyon No: 1 Revizyon Tarihi: 26.01.2018

CAT.GEN.MPA.180 / AMC1 SPO.GEN.140(a)(12)

(a) The aeronautical charts carried will contain data appropriate to the applicable air traffic regulations, rules of the air, flight altitudes, area/route and nature of the operation. Due consideration should be given to carriage of textual and graphic representations of:

(1) aeronautical data including, as appropriate for the nature of the operation:

(i) airspace structure;
(ii) significant points, navigation aids (nav aids) and air traffic services (ATS) routes;
(iii) navigation and communication frequencies;
(iv) prohibited, restricted and danger areas; and
(v) sites of other relevant activities that may hazard the flight; and

(2) topographical data, including terrain and obstacle data.

(b) A combination of different charts and textual data may be used to provide adequate and current data.

(c) The aeronautical data will be appropriate for the current aeronautical information regulation and control (AIRAC) cycle.

(d) The topographical data will be reasonably recent, having regard to the nature of the planned operation.

01.01.09-Availability Of Aeronautical Information And MET(EOROLOGICAL) Services

Revizyon No: 6 Revizyon Tarihi: 30.06.2020

Annex 3

01.01.09.01-AERONAUTICAL INFORMATION SERVICES

Annex 3

(01.01.09.01.01)- Responsible Service

Revizyon No: 10 Revizyon Tarihi: 02.05.2023

Annex 3

The Aeronautical Information Management (AIM) unit, which forms part of the Air Navigation Department of the General Directorate of State Airports Administration (DHMİ) ensures the flow of information necessary for the safety, regularity and efficiency of international and national air navigation within the area of its responsibility as indicated under GEN 3.1.2 and 3.1.3.

It consists of AIM Headquarters, International NOTAM office (NOF), Communication Center (COM) and AIS units established at ADs. It also consists of Flight Information Center (FIC) at Air Traffic Control Center and VFR flights monitoring and RCC unit at Atatürk Airport.

(a) (3.1.1.2) AIM HEADQUARTER

The Aeronautical Information Management Service forms part of the Air Navigation Department of Directorate General of State Airports (DHMI) Service (See also GEN 3.1).

- DHMİ Genel Müdürlüğü Hava Seyrüsefer Dairesi Başkanlığı Havacılık Bilgi Yönetimi (AIM) Şube Müdürlüğü Etiler Yenimahalle/ANKARA/TURKIYE

Phone: +90 312 204 22 85 (Manager)
Phone: +90 312 204 22 87 (AIM)
Fax: +90 312 222 09 76
AFS: LTAAYEYX
Email: secil.ucpinarlar@dhmi.gov.tr; saffet.ozturk@dhmi.gov.tr

(b) (3.1.1.3) INTERNATIONAL NOTAM OFFICE (NOF)

A. The International NOTAM Office (NOF) is an integral part of the AIM Headquarter and located at Air Traffic Control Center, 24 hours service is provided.

- International NOTAM Office (NOF) Hava Trafik Kontrol Merkezi Başmüdürlüğü Havacılık Bilgi Yönetimi (AIM) Şube Müdürlüğü Çubuk-Ankara/TÜRKİYE

Phone: +90.312.827 21 54
Fax: +90.312.827 10 52
Fax: +90.312.827 21 53
AFS: LTAAYNYX
Email: aisnof@dhmi.gov.tr

B. Functions of AIS

AIS exercise the following functions;

a) Collection, evaluation, preparation and publication of information necessary for the safe, regular and efficient conduct of flights,
b) Receiving, checking, accepting and transmitting of Flight Plans and subsequent Flight Plan message
c) Preflight information service (Briefing)
d) Production and publication of aeronautical charts,
e) Receiving of pilots reports (Post-Flight information)

(c) (3.1.1.4) FLIGHT INFORMATION CENTER (FIC):

A. The FIC units are an integral part of the AIM Headquarters and located at the Air Traffic Control Center, 24 hours service is provided.

- Ankara FIC, International FIC Unit, Hava Trafik Kontrol Merkezi Başmüdürlüğü Havacılık Bilgi Yönetimi (AIM) Şube Müdürlüğü Çubuk-Ankara/TÜRKİYE

Phone: +90.312.82710 48, +90.312.398 03 65
+90.312.590 52 51, +90.312.590 52 52, +90.312.590 52 53
Fax: +90.312.82710 51, +90.312.398 04 10
AFS: LTAAZIZX

B. Functions of Flight Information Center (FIC)

FIC exercise the following main functions;

a) Tracking and checking all civil flight permissions performed in Turkish Airspace
b) Receiving, checking, accepting and transmitting of VFR flight plans and subsequent flight plan messages,
c) Co-operation with search and rescue service,
d) To provide the necessary permission for landing and transit civil flights over Turkish Airspace on behalf of Civil Aviation Authority during the official holidays and weekends

(d) (3.1.1.5) RESPONSIBILITIES OF REMAINING AIS UNITS

AIS units are responsible for collecting and submission to flight crew all information for Turkish airspace.

Also receiving, checking, accepting and transmitting of all flight plans and subsequent flight plan messages, Preparation of issue preflight information bulletins (PIB), Tracking and checking all flight permissions for own aerodromes. Tracking and keeping NOTAMs and other related aeronautical information publications concerning neighbor countries and its own territory.

(e) (3.1.2) AREA of RESPONSIBILITY

The Aeronautical Information Management units are responsible for the collection and dissemination of information for the entire territory and territorial waters of the state and for airspace over the high seas in which Turkey performs its FIR responsibility.

(01.01.09.01.02)- Aeronautical Publications

Revizyon No: 10 Revizyon Tarihi: 02.05.2023

Annex 3

(GEN 3.1.3.1) The aeronautical information is provided in the Aeronautical Information products consisting of the following elements:

- Aeronautical Information Publications (AIP)
- Amendment Service to the AIP (AIP AMDT)
- Supplement to the AIP (AIP SUP)
- NOTAM
- Aeronautical Information Circulars (AIC)
- Aeronautical Charts; and
- Data Sets (Obstacles).

NOTAMs and related monthly checklists are issued via the Aeronautical Fixed Service (AFS). Preflight information Bulletin (PIB) can be obtained from the European AIS Database (EAD) system located in AIS offices at airports. All other aeronautical pruducts can be accessed on the website https://www.dhmi.gov.tr or distributed to subscribers via mail as CDs.

(a) (3.1.3.2) AERONAUTICAL INFORMATION PUBLICATIONS (AIP)

The AIP is the **basic aviation document** intended primarily to satisfy international requirements for the exchange of permanent aeronautical information and long duration temporary changes essential for air navigation. The AIP contains all basic aeronautical information of lasting character and regulations essential to air navigation within the Turkish airspace. AIP Turkey is published in 2 volumes.

The AIP is published in a loose-leaf form with bilingual text (Turkish and English) for use in international and domestic operations, whether the flight is a commercial or a private one.

(b) (3.1.3.3) AMENDMENT SERVICE TO THE AIP (AIP AMDT)

Amendments to the AIP are made by means of replacement sheets. Two types of AIP AMDT are produced.

- **Regular AIP Amendment (AIP AMDT):** Issued in accordance with the established regular interval and identified by a light blue cover sheet incorporates permanent changes into the AIP on the indicated publication date.

- **AIRAC AIP Amendment (AIRAC AIP AMDT):** Issued in accordance with the AIRAC system and identified by a pink cover sheet and acronym AIRAC, incorporated operational significant permanent changes into the AIP on the indicated AIRAC effective date.

A brief description of the subjects affected by the amendment is given on the AIP Amendment cover sheet. New information included on the reprinted AIP pages is annotated or identified by a vertical line in the left margin (or immediately to the left) of the change/addition. Each AIP page and each AIP replacement page introduced by an amendment, including the amendment cover sheet are dated. The date consists of the publication date (regular AIP AMDT) or of the AIRAC effective date (AIRAC AIP AMDT) of the information.

The pages to be removed or replaced, and which NOTAM and/or Aeronautical Information Product elements will be canceled due to their incorporation to the AIP are listed respectively on the AIP cover page.

Each AIP AMDT and each AIRAC AIP AMDT are allocated separate serial numbers which are consecutive and based on the calendar year. The year indicated by the digits, is a part of the serial number of the amendment e.g: AIP AMDT 01/07; AIRAC AMDT 01/08.

A checklist of AIP pages containing page number/chart title and the publication or effective date (day, month by name and year) of the information is reissued with each amendment and is an integral part of the AIP.

(c) (3.1.3.4) SUPPLEMENT TO THE AIP (AIP SUP)

Temporary changes of long duration (**three months and longer**) and information of short duration which consists of extensive text and/or graphics, supplementing the permanent information contained in the AIP, are published as AIP supplement (AIP SUP), when necessary.

AIP Supplements are separated by information subject (General-GEN), En-route-ENR, Aerodromes-AD) and are placed accordingly at the beginning of each AIP Part. Supplements are published on yellow paper to be conspicuous and to stand from the rest of the AIP.

Each AIP Supplement is allocated a serial number which is consecutive and based on the calendar year, e.g AIP SUP 1/00.

An AIP Supplement is kept in the AIP as long as all or some of its contents remain valid. The period of validity of the information contained in the AIP supplement will normally be given in the supplement itself. Alternatively, NOTAM may be used to indicate changes to the period of validity or cancellation of the supplement.

A checklist of valid AIP Supplements is issued at intervals of not more than one month as part of the checklist of NOTAM. The AIP Supplements in force also take place in AIP AMDT CDs and in the web site.

(d) (3.1.3.5) NOTAM AND PREFLIGHT INFORMATION BULLETIN (PIB)

NOTAM contain information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential for personally concerned with flight operations.

The text of each NOTAM contains the information in the order shown in the ICAO NOTAM format and is composed of the significations/uniform abbreviated phraseology assign to the ICAO NOTAM Code complemented by ICAO abbreviations, indicators, identifiers, designators, call signs, frequencies, figures and plain language. NOTAM of each series are numbered consecutively in a calendar year starting at 00:01 UTC on 1st January.

INTERNATIONAL NOTAM SERIES

NOTAMs are distributed in four series identified by the letters A, B, C, D in English to the international users via EAD System.

SERIES "A": General rules, en-route navigation and communication facilities airspace restrictions and activities taking place above FL245 and information concerning international aerodromes (see AD 1.3) This information concerns radio navigation aids, services, procedures and dangerous, all en-route facilities, navigational warnings of Ankara and İstanbul FIRs and PERM NOTAMs.

SERIES "B": Information on airspace restrictions, and activities taking place below FL245 and only national aerodromes.(See AD 1.3)

SERIES "C": Information on heliports and/or aerodromes at which only VFR flights are permitted and unmanned aircraft flying above 400 FT AGL.

SERIES "D": NOTAM containing information on Military aerodromes, navigational facilities and changes of interest to domestic and international recipients which affected flight safety and traffics. "D" series NOTAMs are numbered

consecutively from "D0001" starting January 1st of each year.

(SNOWTAM): A special series NOTAM notifying the presence or removal of hazardous conditions due snow, ice, slush or standing water associated with snow, slush and ice in the movement areas by means of a spesific format in accordance with ICAO PANS-AIM DOC 10066, Appendix 4, and are issued for each airport directly, with separate serial numbers. Details are given in the snow plan in the Aerodrome (AD) Part.

NATIONAL NOTAM SERIES

Domestic NOTAMs are divided into 4 series and promulgated in Turkish. The following series are distributed within TURKIYE only.

SERIES "G": NOTAM containing information of all aerodromes, en-route, navigational facilities, airspace restriction and warning of interest to domestic recipients and PERM NOTAMs.

SERIES "H": NOTAM containing information on aerodromes, navigational facilities and changes relating İstanbul FIR of interest to domestic recipients.

SERIES "M": NOTAM containing information on military aerodromes, navigational facilities and changes of interest to military authorities or domestic recipients. Military NOTAMs are numbered consecutively from M5001 starting 00:01 UTC on January 1st of each year.

SERIES "L": Information on unmanned aircraft flights.

Preflight Information Bulletins (PIB)

Bulletins (PIB) which contain a recapitulation of current NOTAM and other information of urgent character for the operator/flight crews, are available at the aerodrome AIM or AIS units. The extent of the information contained in the PIB is indicated under 5th of subsection.

Trigger NOTAM

When an AIP amendment or SUP is published, a trigger NOTAM will be issued on the AIRAC effective date to:

a) serve as a reminder, through pre-flight information bulletins, of the coming into effect of operationally significant permanent or temporary changes to the AIP; and
b) ensure that users are aware of changes that may affect their flights.

Trigger NOTAM, remain in force for 14 days, shall contain:

a) a brief AIRAC AIP AMDT and AIRAC AIP SUP description of the contents of the amendment or supplement;
b) the effective date; and
c) the reference number of the amendment or supplement.

(e) (3.1.3.6) Aeronautical Information Circular (AIC)

The Aeronautical Information Circular (AIC) contain information on the long term forecast of any major change in legislation, regulations, procedures or facilities; information of a purely explanatory or advisory nature liable to affect flight safety; and information of an explanatory or advisory nature concerning technical, legislative or purely administrative matters.

AICs are divided by subject and are issued in two series (A and B). AIC series "A" contains information affecting international civil aviation and are given international distribution in English. While AIC series B contains information affecting national aviation only and is given national distribution in Turkish. Each AIC is numbered consecutively within each series on a calendar year basis. The year, indicated by two digits, is a part of the serial number of the AIC, e.g AIC A 01/00 AIC B01/00.The check list of AIC currently in force is issued by an AIC at least once a year.

(f) (3.1.3.7) Checklist of NOTAM

A checklist of valid NOTAM is issued monthly via AFS for each NOTAM series. A NOTAM checklist also contains the latest AIP AMDTs, AIRAC AMDTs, AIP SUPs, AICs, Datasets information and AIP SUP checklist; if none, the NIL AIRAC notification.

(g) (3.1.3.8) Sale of Publications

The publications issued by AIM Head Quarter (see GEN 1.1-1 for address) will be supplied free of charge to ICAO authorities and foreign Aeronautical Information Services (AIS) on reciprocal basis. All other organizations or persons will pay the charges stated in related AIC.

(h) (3.1.4) AIRAC SYSTEM

In order to control and regulate the operationally significant changes requiring amendments to charts, route manuals etc., such changes, whenever possible, will be issued on predetermined dates according to the AIRAC system. This type of information will be published as an AIRAC AIP AMDT. A notification will be distributed by NOTAM if an AIRAC date will not be used for promulgation of AIP AIRAC AMDT.

If no information was submitted for publication at the AIRAC date, a NIL notification will be issued by NOTAM not later than one AIRAC cycle before the AIRAC effective date concerned.

(i) (3.1.5) PREFLIGHT INFORMATION BULLETIN (PIB) AT AERODROMES

Preflight information Bulletin (PIB) related to all countries and aerodromes can rapidly be obtained through European AIS Database (EAD) systems available at the AIS Units at any Airports/Aerodromes opened to international traffic.

Besides, daily Preflight Information Bulletins (PIBs), route bulletins and NOTAM summaries related to other Airports/Aerodromes can also be provided on request through the associated NOFs.

(j) (3.1.6) DIGITAL DATA SETS

The obstacle data higher than 100 M AGL for Area 1 is available electronically at the Turkish AIP Website and CDROM by selecting the link from the En-route (ENR) 5.4 AIP page. Some attributes are not fully comply with Annex 15 due to acquisition of stored data from different sources, it cannot be guaranteed that all obstacle data comply with the accuracy requirements of ICAO Annex 15. Some data may be repeated because of the level of resolution used by different data owners. The data set does not consist all the obstacles higher than 100 M AGL that exist currently for Area 1.

National Mapping Institute in TURKIYE provides electronic terrain data for TURKIYE territory in compliance with ICAO requirements relating to Area 1. These data can be acquired and used in accordance with a license agreement to be concluded directly with that Institute.

Area 1 electronic terrain data may be obtained from the following address;

Post : Harita Genel Mu?du?rlu?ğu? Tıp Faku?ltesi Caddesi 06590 ANKARA/TÜRKİYE

Phone : +90 312 595 24 15

Fax : +90 312 320 14 95

Note: In case obstacles that are published in AD 2.10 and ENR 5.4 section are available in electronic files, excel file will be used as a primary source.

The electronic terrain and obstacles datasets for Areas 2a, 3 and 4 as indicated in the table below can be downloaded from the Turkish AIP website. (https://www.dhmi.gov.tr) See obstacle folder at Turkish AIP web page for AD 2.10 Aerodrome Obstacles digital data sets.

01.01.09.02-METEOROLOGICAL SERVICES

Annex 3

(01.01.09.02.01)- Responsible Service

Revizyon No: 10 Revizyon Tarihi: 02.05.2023
Annex 3

The meteorological services for civil and military aviation are provided by the Turkish State Meteorological Services.

- Turkish State Meteorological Service Kalaba/Keçiören Ankara/TURKEY

Web site: mgm.gov.tr, hezarfen.mgm.gov.tr;
Email: havacilik@mgm.gov.tr
TEL: +90 312 203 25 75
AFS : LTACYMYX

The service is provided in accordance with the provisions contained in the following ICAO and WMO (The World Meteorology Organisations) documents.

- Annex 3 - Meteorological Service for International Air Navigation.
- Doc 7030 - Regional Supplementary procedures
- WMO No:49 - Technical regulations
- WMO No:306 - Manual on codes

Area of Responsibility

Meteorological service is provided within the ANKARA FIR and ISTANBUL FIR.

(01.01.09.02.02)- Meteorological Observations and Reports

Revizyon No: 10 Revizyon Tarihi: 02.05.2023
Annex 3

It can be seen a chart containing Meteorology station list and types of report at AIP GEN 3.5-2.

(a) Types of Services

Aeronautical Meteorological Offices provide the following information for flight crew members:

a) The European, Middle East and Asia significant chart and upper wind and temperature forecasts,
b) The prognostic weather charts,
c) Summary forecasts of en-route weather conditions,
d) SFC chart and 850, 700, 500, 300, 200 hPa contour map,
e) Personal briefing and consultation,
f) Observations (METAR, SPECI) and forecasts (TREND, TAF, Aerodrome Warnings)
g) Observations and forecasts for alternate aerodromes.

Aeronautical meteorological stations provide the following information for flight crew members:

a) Actual observations at aerodromes /(METAR, SPECI)
b) Observations and forecasts for alternate aerodromes.

(b) Observations

- Surface wind is normally measured by three cup anemometer/anemograph and anemometer at the height of 10 meters above runway.
- Prevailing is observed by observer generally
- RVR assessment is made by either a human observer or an instrument RVR system. If the RVR equipment unserviceable, RVR assessment is made by human observer with help of runway edge lights.
- Information on cloud height is obtained by the use of ceilometer/ceilograph or observer estimation.
- Generally, air temperature is reported in whole degrees from liquid-in glass or electrical resistance thermometers located in a ventilated screen.
- Generally, the air pressure is measured in the weather observation room by means of a aneroid barometer.
- Automated weather observing systems (AWOS) have been installed at some aerodromes and military airbases. AWOS

include the following sensors/parameters:

1. AWOS: Wind speed, direction and gust, RVR, sky condition/ceiling, air temperature, dew point temperature, altimeter setting, humidity and rain gauge.
2. Mobile AWOS: Wind speed, direction and gust, ceiling, air temperature, dew point temperature, altimeter setting, humidity and rain gauge.

(c) Notification required from operators

Notification from operators in respect of briefing, consultation, flight documentation and other meteorological information needed by them (ICAO Annex 3, paragraph 2.3) is normally required for intercontinental flights of more than 3500 Km. Such Notification should be received at least 6 hours before the expected time of departure; at least 2 hours before short-range flights.

Meteorological briefing/consultation and flight documentation can be obtained only by flight crew members or qualified personnel/officer.

(d) Aircraft Reports

- Pursuant to ICAO Annex 3 Chapter 5 the making and transmission of aircraft reports (AIREP) are required.
- The following aircraft observations shall be made;

1. Routine aircraft observations during enroute and climb-out phases of the flight; and
2. Special and non-routine aircraft observations during any phase of the flight.

- Aircraft observations shall be reported by air-ground data link. Where air-ground data link is not available or appropriate, aircraft observations shall be reported by voice communications.
- Aircraft observations shall be reported by during flight at the time the observation is made or as soon thereafter as is practicable.
- The meteorological observations reported by aircraft in flight to ATS units are delivered without delay to the associated meteorological office.
- Also AIREPs should be given directly to the meteorological office by flight crew members or their representatives at the end of flight/landing.

(e) VOLMET Service
See the table GEN 3.5.7 VOLMET Service

(f) SIGMET Service
See the table GEN 3.5.8 SIGMET Service

General

For the safety of air traffic, the Meteorological Authority maintains an area meteorological watch and warning service. This consists partly of a continuous weather watch within the lower and upper FIR and the issuance of appropriate information (SIGMET) by Meteorological Watch Offices and partly of the issuing of warnings for the respective aerodrome and, subject to agreement for other aerodromes by all aeronautical MET offices.

Area Meteorological Watch Service

The area meteorological watch service is performed by the following Meteorological Watch Offices (MWOs);

a) ANKARA/Esenboğa
b) ISTANBUL/Atatürk

The MWOs issue information in the form of SIGMET messages about the occurrence or expected occurrence significant meteorological phenomena.

- moderate turbulence
- severe turbulence
- severe icing
- severe mountain waves
- heavy sandstorm/dust storm
- volcanic ash cloud
- cumulonimbus
- hail
- thunderstorms (Area widespread Cb clouds or Cb along a line (squall line) with little or no space between individual clouds, or Cb embedded in cloud layers or obscured by haze.)

The SIGMETs are issued in abbreviations and plain language ICAO abbreviations and are numbered consecutively for each day commencing at 0001. Their period of validity is generally limited to less than 4 hours from the time of transmission.

SIGMETs are transmitted by the ATS units and MWOs for their own area of responsibility.

In addition to the issuance of SIGMETs, the MWOs will inform the Regional Control Centers about the occurrence or expected occurrence of thunderstorms, moderate icing, light to moderate hail, or moderate turbulence within the FIRs concerned. The information is intended for the safety of low-level flights and is limited to the lower airspace.

Warning Service

Warnings for the protection of parked and moored aircraft or of other equipment at the airport are issued by all Aerodrome Meteorological Offices, if one or several of the following phenomena are expected to occur at the airport.

- thunderstorm
- hail
- heavy rime deposit
- heavy snow
- freezing precipitation
- squall (The warning is designated as "storm" warning and will be issued when the mean speed of the surface wind is expected to exceed 34 KT or when gusts in excess of 41 KT are expected to occur.)
- frost (A "frost" warning will be issued when the air temperature is expected to fall below 0°C on those dates when protective measures have generally not yet been taken and also when a substantial deposit of hoarfrost, e.g wing surface is expected)
- tropical cyclone
- sandstorm/testosterone
- rising sand or dust
- blowing snow
- strong surface wind and gust (‘Strong surface wind" warning will be issued when the speed of surface wind is expected to exceed 20 KT or when gusts in excess of 30 KT are expected to occur (National regulation).

The warnings are generally issued in English and are distributed in accordance with a distribution in accordance with a distribution list which has to be agreed upon locally. In order to guarantee rapid dissemination of the warnings, the distribution list to be used shall, as for as possible, contain only one recipient for an interested group; this recipient will be responsible for the further dissemination of the warning within the group.

SIGMET information is disseminated, in addition to directed transmissions to aircraft general calls, as an aeronautical or radio broadcast;

a) by Ankara Area Control Centre for Ankara FIR and Istanbul Area Control Centre for Istanbul FIR of responsibility.

b) By the ATS units for their own area of responsibilities. The Information is broadcast from the MWO concerned and repeated every half and full hour during the period of validity of the SIGMET information

01.01.10-En-Route Communication / Navigation Procedures

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

(01.01.10.01)- Communications Procedures in TURKISH Airspace

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

An aircraft flown as a controlled flight will maintain continuous listening watch on the appropriate radio frequency of, and establish two-way communications as necessary with the appropriate air traffic control unit. If unable, communications will be established with the aeronautical station involved who will relay the message to the responsible ATC unit.

Non-radio equipped aircraft forming part of the aerodrome traffic at an aerodrome, where aerodrome control is in operation will keep a watch for such instructions as may be issued by visual signals.

The radio frequencies (UHF - VHF - HF) to be used by aircraft are indicated in section Turkish AIP (AD-2).

An IFR flight operating outside controlled airspace will maintain a listening watch on the appropriate radio frequency and establish two-way communication as necessary with the appropriate ATS unit.

01.01.10.02-Aircraft Under RADAR Control

Annex 10 Volume II

(01.01.10.02.01)- Aircraft Loss Of Two-way Communication

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

When this situation has occurred;

a) Controller shall attempt to establish communications by requesting the pilot to make turns or use his ATC RBS (RADAR Beacon) as directed. If answering action is observed, the controller shall continue to provide RADAR service or,

b) Otherwise, the pilot shall proceed in accordance with instructions contained in next paragraphs 01.01.10.02.02 or 01.01.10.02.03. If an aircraft vectored to uncontrolled airspace other than the current flight plan route, the pilot will return to such route by the most direct course.

c) Radar air traffic service needs not to be restricted or suspended provided that :

(1) Radar separation is maintained between all controlled aircraft and,
(2) If aircraft that has experienced communication failure is not radar identified, then separation shall be applied between all identified aircraft and any identified aircraft target until it is known or safely determined that the aircraft with radio failure has passed through the airspace concerned, has landed, or has proceeded elsewhere.

(01.01.10.02.02)- Controller Loss Of Communication

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

In preparedness for such a situation;

a) During a vector to a radar final approach;

(1) In **IMC**, the pilot will be advised of the route to fly, the fix to which cleared the altitude to maintain, ATC unit to contact and the radio frequency to use,

(2) In **VMC**, the pilot will be advised to proceed in VMC, information about ATC unit to contact and the frequency to use may also be given.

b) While on a radar final approach;

(1) In **IMC**, the pilot will be advised to execute a missed approach, unless the approach may be continued by non-radar means.

(2) In **VMC**, the pilot will be advised to proceed in VMC.

(01.01.10.02.03)- Loss of RADAR

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

When this situation has occurred:

Non-radar separation shall be provided, and if making radar approach;

(1) The aircraft has **not** commenced final approach, it will receive clearance as appropriate,
(2) The aircraft has commenced final approach, the approach may be continued by non-radar means, or the pilot will be instructed to execute missed approach.

(01.01.10.03)- Position Reports

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

Annex 10 Volume II

In the absence of designated reporting points for aircraft on IFR position reports will be made **30 minutes after takeoff** and thereafter **at intervals of one hour**, unless additional position reports are requested by the appropriate ATS unit.

A position report will be transmitted when entering or leaving Turkish airspace, from IFR aircraft.

(01.01.11)- Aerodrome / Operating Site Categorisation For Flight Crew Competence Qualification

Revizyon No: 11 Revizyon Tarihi: 23.06.2023

AMC1 ORO.FC.105(b)(2);(c) / AMC1 ORO.FC.105(c) / AMC1 SPA.HOFO.115

For commercial operations, the experience of the route or area to be flown and of the aerodrome facilities and procedures to be used should include the following:

(A) AREA AND ROUTE KNOWLEDGE

(1) An objective of the area and route training should be to ensure that the pilot has knowledge of:
  (i) terrain and minimum safe altitudes;
  (ii) seasonal meteorological conditions;
  (iii) meteorological, communication and air traffic facilities, services and procedures;
  (iv) search and rescue procedures where available; and
  (v) navigational facilities associated with the area or route along which the flight is to take place.
(2) Another objective of the area and route training should be to ensure that the pilots are aware of the **most significant underlying risks and threats** of a route or an area that could affect their operations following the '**threat and error management model**' or an alternative risk model agreed with TR DGCA.
(3) The area and route familiarisation training should:
  (i) be based on an assessment by KAAN AIR of the underlying risks and threats of a route or an area using:
    (AA) internal evidence;
    (BB) external evidence;
  (ii) be conducted:
    (AA) as an initial training before operating to a route and area;
    (BB) as a refresher training after not operating to a route and area for 12 months.
(4) The area and route familiarisation training should be delivered using different methods and tools.
  (i) The selection of the method and tools should result from a combination of the learning objectives and the type of risk or threat that needs to be trained.
  (ii) The selection of the appropriate method and tool should be driven by the desired outcome in terms of adequate knowledge and awareness.
  (iii) The methods and tools employed should **include one or more** of the following:

- Training in a flight simulation training device (FSTD),
- computer-based training,
- familiarisation flight as a pilot in-command/commander or co-pilot under supervision or an observer,
- video training,
- virtual reality training,
- familiarisation by self-briefing with route documentation and audio training.

(B) AERODROME KNOWLEDGE

(1) Aerodrome training should include knowledge of obstructions, physical layout, lighting, approach aids and arrival, departure, holding and instrument approach procedures, applicable operating minima and ground movement considerations.
(2) The operations manual is been describing the method of categorisation of aerodromes and, in the case of CAT operations, provide a list of those aerodrome categorised as B or C.
(3) All aerodromes which KAAN AIR operates will be categorised in one of these three categories :

(i) Category A — an aerodrome that meets all of the following conditions:

(AA) a straight-in 3D instrument approach procedure with a glide path angle of not more than 3.5 degrees to each runway expected to be used for landing;
(BB) at least one runway with no performance-limited procedure for take-off and/or landing, such as no requirement to follow a contingency procedure for obstacle clearance in the event of an engine failure on take-off from any runway expected to be used for departure; and
(CC) night operations capability.

(ii) Category B — an aerodrome that does not meet the "category A" conditions or which requires extra considerations due to:

(AA) non-standard approach aids and/or approach patterns, such as restrictions on the availability of straight-in instrument approach procedures;
(BB) unusual local weather conditions, such as environmental features that can give rise to turbulence, windshear or unusual wind conditions;
(CC) unusual characteristics or performance limitations, such as unusual runway characteristics in length, width, slope, markings or lighting that present an atypical visual perspective on approach;
(DD) any other relevant considerations, including obstructions, physical layout, lighting, etc., such as restrictions on circling in certain sectors due to obstacles in the circling area;
(EE) training or flight crew experience requirements stipulated by the competent authority responsible for the aerodrome that do not include instruction in an FSTD or visiting the aerodrome.

(iii) Category C — an aerodrome:

(AA) that requires additional considerations to those of a category B aerodrome; or
(BB) for which flight crew experience or qualification requirements stipulated by the competent authority responsible for the aerodrome include instruction in an FSTD or visiting the aerodrome.

(iv) Offshore Installations will be categorised as **Category C**, taking into account the limitations determined in accordance with AMC1 SPA.HOFO.115 'Use of offshore locations' and category designation for all KAAN AIR used operational sites will be shown in the form of Appendix to OM-C.01.01.12.03.

(C) PRIOR TO OPERATING TO A CATEGORY "B" AERODROME,
(planned destination or required alternate), the pilot-in-command/commander should:

(1) **comply with any requirements** stipulated by the competent authority responsible for the aerodrome; and
(2) **be briefed, or self-brief** by means of programmed instruction, about the additional considerations applicable to operations to that category B aerodrome. The **completion** of the briefing should be **recorded**. This recording may be accomplished after completion or confirmed by the pilot-in-command/commander before departure on a flight involving category B aerodrome(s) as destination or alternate aerodromes.

(D) PRIOR TO OPERATING TO A CATEGORY "C" AERODROME,
(planned destination or required alternate), the pilot-in-command/commander should:

(1) **comply with any requirements** stipulated by the competent authority responsible for the aerodrome; and
(2) **be briefed or self-brief** by means of programmed instruction, about the additional considerations applicable to operations to that category C aerodrome; and
(3) **visit the aerodrome** as an observer and/or undertake instruction in a suitable FSTD. The observer should occupy an observer's seat where installed. If an observer's seat is not available and cannot be installed, the pilot-incommand/ commander may occupy a pilot seat to conduct the aerodrome visit with a suitably qualified commander nominated by the category C aerodrome operator. The **completion** of the briefing, visit and/or instruction should be **recorded.**

(E) ROUTE/AREA AND AERODROME RECENCY

(a) The 12-month period should be counted from the last day of the month:
(1) when the familiarisation training was undertaken; or
(2) of the latest operation on the route or area to be flown and of the aerodromes, facilities and procedures to be used.
(b) When the operation is undertaken within the last 3 calendar months of that period, the new 12-month period should be

counted from the original expiry date.

(F) USE OF OFFSHORE LOCATIONS - GENERAL

(a) The operations manual (OM) relating to the specific usage of offshore helicopter landing areas (Part C for CAT operators) should contain, or make reference to, a directory of helidecks (**Helideck Directory (HD)**) intended to be used. The directory should provide details of helideck limitations and a pictorial representation of each offshore location and its helicopter landing area, recording all necessary information of a permanent nature and using a standardised template.

The HD entries should show, and be amended as necessary, the most recent status of each helideck concerning noncompliance with applicable national standards, limitations, warnings, cautions or other comments of operational importance. An example of a typical template is shown in GM1 SPA.HOFO.115.

(b) In order to ensure that the safety of flights is not compromised, KAAN AIR should obtain relevant information and details in order to compile the HD, as well as the pictorial representation from the owner/operator of the offshore helicopter landing area.

(c) If more than one name for the offshore location exists, the common name painted on the surface of the landing area **should be listed**, but other names should also be included in the HD (e.g. **radio call sign**, if different). After renaming an offshore location, the old name should also be included in the HD for the following 6 months.

(d) Any limitations associated with an offshore location should be included in the HD. With complex installation arrangements, including combinations of installations/vessels (e.g. combined operations), a separate listing in the HD, accompanied by diagrams/pictures, where necessary, may be required.

(e) Each offshore helicopter landing area should be inspected and assessed based on limitations, warnings, instructions and restrictions, in order to determine its acceptability with respect to the following as a minimum:

(1) The physical characteristics of the landing area, including size, load-bearing capability and the appropriate ‘D’ and ‘t’ values
(2) The preservation of obstacle-protected surfaces (an essential safeguard for all flights)
(3) Marking and lighting
(4) Deck surface
(5) Environment
(6) Rescue and firefighting
(7) Communication and navigation (Com/Nav)
(8) Fuelling facilities
(9) Additional operational and handling equipment
(10) Personnel

(f) The HD entry for each offshore location should be completed and kept up to date, using the template and reflecting the information and details described in (e) above. The template should contain at least the following:

(1) details:
(i) name of offshore location;
(ii) R/T call sign;
(iii) helicopter landing area identification marking;
(iv) side panel identification marking;
(v) landing area elevation;
(vi) maximum installation/vessel height;
(vii) helideck size and/or ‘D’ value;
(viii) type of offshore location:
(AA) fixed, permanently manned installation;
(BB) fixed, normally unattended installation;
(CC) vessel type (e.g. diving support vessel, tanker, etc.);
(DD) semi-submersible, mobile, offshore drilling unit:
(EE) jack-up, mobile, offshore drilling unit:
(FF) floating production, storage and offloading (FPSO);
(ix) name of owner/operator;
(x) geographical position, where appropriate;
(xi) Com/Nav frequencies and identification;
(xii) general drawing of the offshore location that shows the helicopter landing area with annotations indicating location of derrick, masts, cranes, flare stack, turbine and gas exhausts, side identification panels, windsock, etc.;
(xiii) plan view drawing, and chart orientation from the general drawing to show the above; the plan view should also show the 210-degree sector orientation in degrees true;
(xiv) type of fuelling:
(AA) pressure and gravity;
(BB) pressure only;
(CC) gravity only; and
(DD) none;
(xv) type and nature of firefighting equipment;
(xvi) availability of GPU;
(xvii) deck heading;
(xviii) ‘t’ value ;
(xix) status light system (Yes/No); and
(xx) revision publication date or number; and

(2) one or more diagrams/photographs, and any other suitable guidance to assist pilots.

(g) For offshore locations for which there is incomplete information, 'restricted' usage based on the information available may be considered by KAAN AIR, **subject to risk assessment prior to the first helicopter visit**. During subsequent operations, and before any restriction on usage is lifted, information should be gathered and the following should apply:

(1) pictorial (static) representation:

(i) template blanks (GM1 SPA.HOFO.115) should be available to be filled in during flight preparation on the basis of the information given by the offshore location owner/operator and of flight crew observations;

(ii) where possible, suitably annotated photographs may be used until the HD entry and template have been completed;

(iii) until the HD entry and template have been completed, conservative operational restrictions (e.g. performance, routing, etc.) may be applied;

(iv) any previous inspection reports should be obtained and reviewed by the operator; and

(v) an inspection of the offshore helicopter landing area should be carried out to verify the content of the completed HD entry and template; once found suitable, the landing area may be considered authorised for use by the operator; and

(2) with reference to the above, the HD entry should contain at least the following:

(i) HD revision date or number;

(ii) generic list of helideck motion limitations;

(iii) name of offshore location;

(iv) helideck size and/or 'D' value and 't' value; and

(v) limitations, warnings, instructions and restrictions.

01.01.12-Special Aerodrome / Operating Site Limitations (Performance Limitations And Operating Procedures etc.)

Revizyon No: 4 Revizyon Tarihi: 02.08.2019

CAT.OP.MPA.192

(01.01.12.01)- Selection of Aerodromes and Operating Sites Helicopters

Revizyon No: 10 Revizyon Tarihi: 02.05.2023

CAT.OP.MPA.192

(a) For flights under instrument meteorological conditions (IMC), KAAN AIR will select a **takeoff alternate** aerodrome within **one hour flying time** at normal cruising speed if it is not possible to return to the site of departure due to meteorological reasons.

(b) At the planning stage, for each instrument flight rules (IFR) flight, KAAN AIR shall select and specify in the operational and air traffic services (ATS) flight plans **one or more aerodromes or operating sites** so that **two safe-landing options are available** during normal operation, except as provided for under point SPA.HOFO.120(b).

(c) KAAN AIR shall apply appropriate **safety margins** to flight planning to take into account a possible deterioration of the available forecast meteorological conditions at the estimated time of landing.

(d) For each IFR flight, KAAN AIR shall ensure that **sufficient means are available to navigate to and land at** the destination aerodrome or at any destination alternate aerodrome **in the event of loss of capability** for the intended approach and landing operation.

(01.01.12.02)- Use of Aerodromes And Operating Sites (Defining Operation Sites - Helicopters)

Revizyon No: 5 Revizyon Tarihi: 28.02.2020

CAT.OP.MPA.105 / AMC1 CAT.OP.MPA.105

Additional Reference: SHT-HELIPORT

KAAN AIR will only use aerodromes and operating sites that are adequate for the type(s) of aircraft and operation(s) concerned.

The use of operating sites will only applied to **helicopters.**

When defining operating sites (including **infrequent or temporary sites**) for the type(s) of helicopter(s) and operation(s) concerned, KAAN AIR should take account of the following:

(a) An adequate site is a site that KAAN AIR considers to be satisfactory, **taking account of the applicable performance requirements** and **site characteristics** (guidance on standards and criteria are contained in directive SHT-HELIPORT).

(b) KAAN AIR will have in place a procedure for the survey of sites by a competent person. Such a procedure should take account for **possible changes** to the site characteristics which may have taken place since last surveyed.

(c) Sites that are **pre-surveyed** has specifically specified in this manual, containing diagrams or/and ground and aerial photographs, and depiction (pictorial) and description of:

(1) the overall dimensions of the site,
(2) location and height of relevant obstacles to approach and take-off profiles, and in the maneuvering area,
(3) approach and take-off flight paths,
(4) surface condition (blowing dust/snow/sand),
(5) helicopter types authorised with reference to performance requirements,
(6) provision of control of third parties on the ground (if applicable),
(7) procedure for activating site with land owner or controlling authority,
(8) other useful information, for example appropriate ATS agency and frequency, and
(9) lighting (if applicable).

(d) For sites that are **not pre-surveyed**, KAAN AIR have in place procedure explained below that enables the **pilot** to make, **from the air**, a judgment on the suitability of a site. **(c)(1) to (c)(6)** should be considered.

If there is no aerodrome or heliport at the destination area, ground operation team will be dispatched to destination to find a suitable landing spot, ground support etc. Otherwise the commander shall assume all responsibility:

(1) Location and coordinates of unprepared site is determined,
(2) A review done for this site if available there are photos or google earth image,
(3) Uncontrolled area's property owner or the area where it is located is coordinated with permission from the property authorities,

(4) After taking the necessary permissions, landing and departure is planned,
(5) Before descending to this area, landings are completed by making aerial reconnaissance high, low and final approach,
(6) Land and safety reconnaissance are made after landing. If there is a security officer standing at the close of the helicopter is taken to safety, otherwise the helicopter and the environment is provided by the pilots.

(e) Operations to **non-pre-surveyed** sites **by night** is **not be permitted.**

(01.01.12.03)- List of used OPERATION SITES

Revizyon No: 8 Revizyon Tarihi: 13.07.2021

AMC1 CAT.OP.MPA.105

List of Used OPERATON SITE; all diagrams or/and ground and aerial photographs, depictions (pictorial) and description forms are at Appendix OM-C.01.01.12.03 and subs, attached to manual.

KAAN AIR

LIST OF USED OPERATIONAL SITES

Appendix to OM-C 01.01.12.03

NO	OPERATION SITE	CITY / ARE	PURPOSE OF USAGE	AERODROME CATEGORY
1	KAAN Heliport	ISTANBUL / Sariyer	MAIN Base	C
2	SILIVRI / Ciftlik	ISTANBUL / Silivri	Air Taxi	C
3	CIRAGAN Palace Hotel	ISTANBUL / Besiktas	Air Taxi	C
4	REGNUM Hotel Antalya	ANTALYA / Kadriye	Air Taxi	C
5	REGNUM Base BODRUM	MUGLA / Bodrum	Air Taxi	C
6	ULU RESORT / PINE Hotel	MERSIN / Akkuyu	Air Taxi	C
7	OFFSHORE Istanbul Ataturk	LTBA Ataturk Airport	Air Taxi & Offshore Main	A
8	OFFSHORE Filyos TPAO	ZONGULDAK / Filyos	Offshore Main	C
9	OFFSHORE Antalya	LTAI Antalya Intl Airport	Air Taxi & Offshore Main	A
10	OFFSHORE Ship – FATİH	KARADENİZ	Offshore	C
11	OFFSHORE Ship - YAVUZ	KARADENİZ	Offshore	C
12	OFFSHORE Ship – KANUNİ	KARADENİZ	Offshore	C
13	OFFSHORE Ship – ABDULHAMITHAN	AKDENİZ	Offshore	C
Z	ZORLU Holding Landing Sites Booklet	TURKEY	Air Taxi	DHMI Airports: A Others: C

All diagrams or/and ground and aerial photographs, depictions (pictorial) and description forms are at Appendices C.01.01.12.03 subs, attached to manual.

Cemil PEKDEMİR
Uçuş İşl.Md., Kpt.Plt.
KAAN Hvcl. San. Tic. A.S.

KAAN AIR

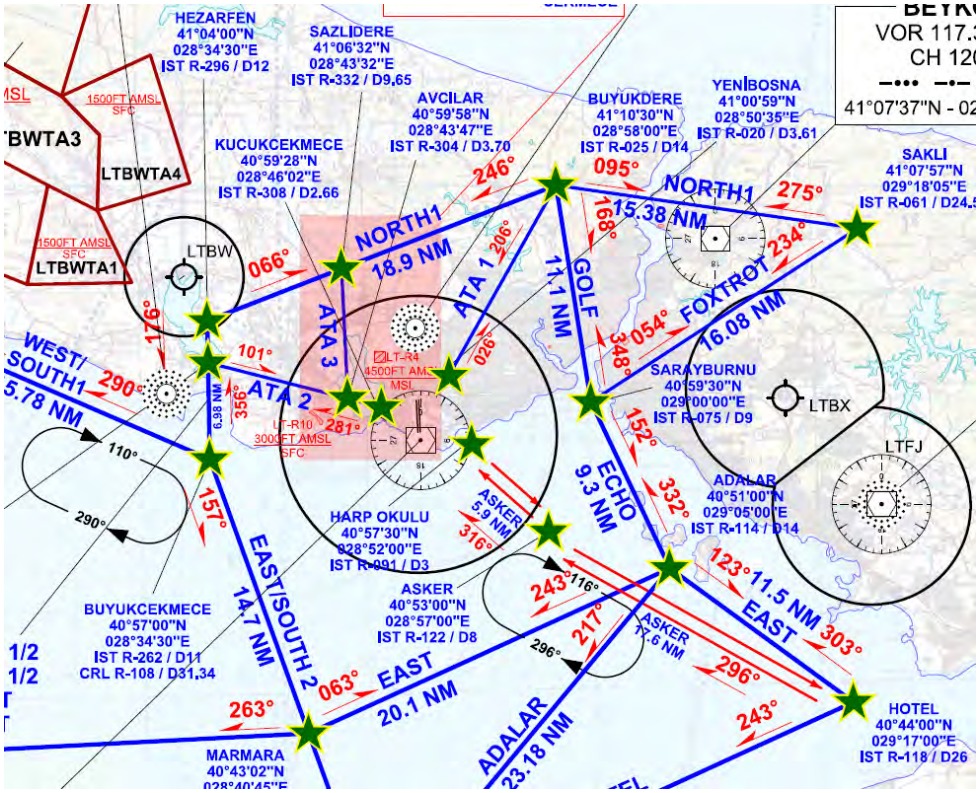
OPERATING SITE

(1) KAAN HELIPORT

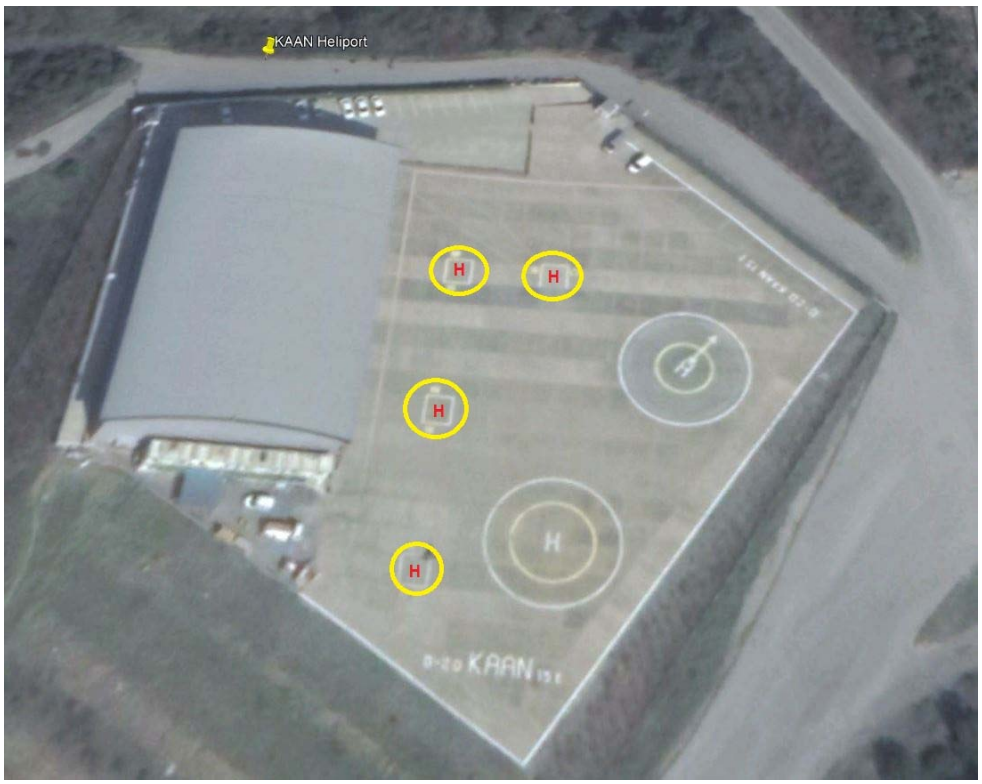
N41° 07.552' E028° 59.019' 360 Feet

1	The Overall Dimensions of site	D-20 / 15 t
2	Location and Height of Relevant Obstacles to Approach and Take-off profiles, and in the Manoeuvring Area	There is a hangar on the West of landing site
3	Approach and Take-off Flight Path	Landing and take-off from North-east and South-west (030-210)
4	Surface Condition	Concrete
5	Helicopter Types Authorized with Reference Requirements	Max 15 ton
6	Provision of Control of Third Parties on the Ground (if applicable)	--
7	Procedure for Activating Site with Landowner or Controlling Authority	It should be coordinated with KAAN Heliport authority
8	Other Useful İnformation,	The landing site is suitable for parking up to four helicopters outside, twelve helicopters in the hangar
9	Lighting	Night lighting is available.

ISTANBUL TMA VFR CHART



KAAN Heliport PARKING AREAS



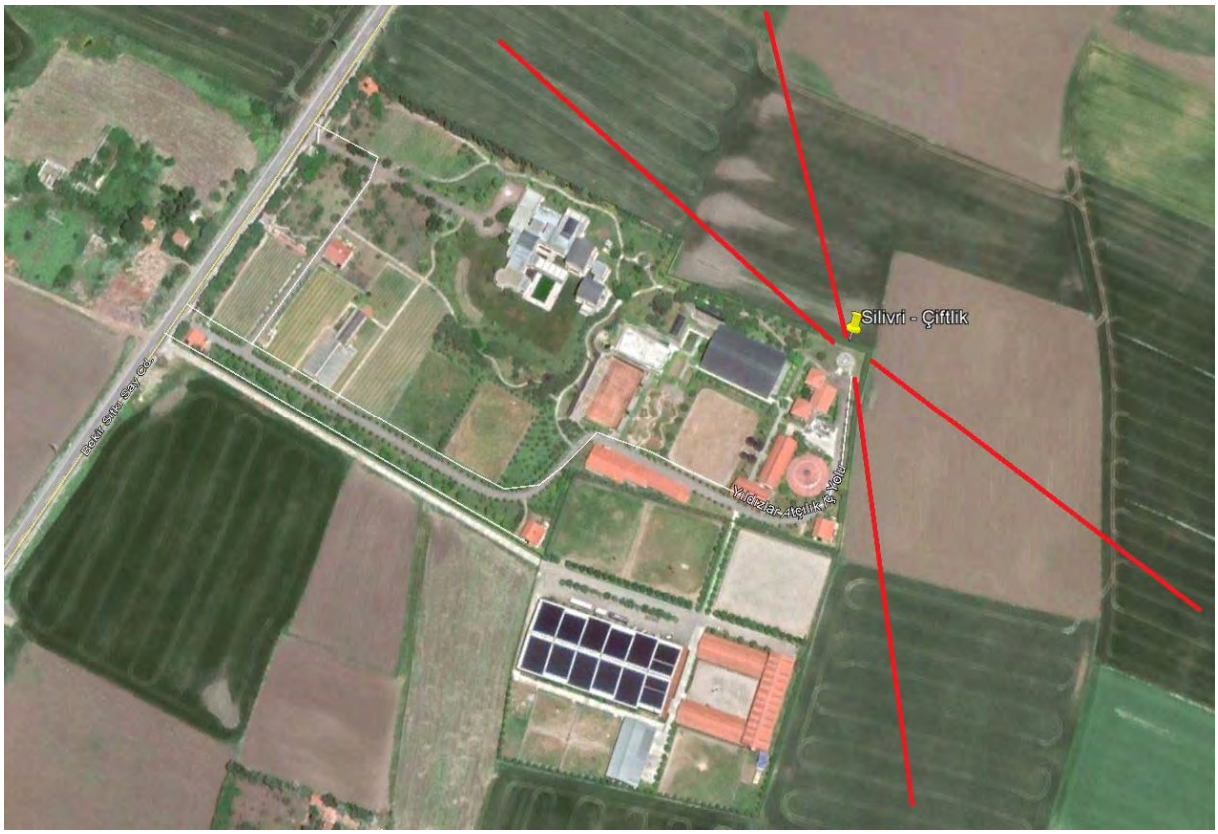
KAAN AIR

OPERATING SITE

(2) SİLİVRİ – Çiftlik / İSTANBUL

N41° 07' 48'' E028° 16' 45'' 220 Feet

1	The Overall Dimensions of site	12 m-Diameter Circle
2	Location and Height of Relevant Obstacles to Approach and Take-off profiles, and in the Manoeuvring Area	There is a building on the Southwest of landing spot.
3	Approach and Take-off Flight Path	Landing and take-off from and to Northwest-North-East-Southeast directions are possible.
4	Surface Condition	Concrete
5	Helicopter Types Authorized with Reference Requirements	--
6	Provision of Control of Third Parties on the Ground (if applicable)	--
7	Procedure for Activating Site with Landowner or Controlling Authority	It should be coordinated with the KAAN AIR Management
8	Other Useful Information,	The landing site is suitable for parking for only one helicopter.
9	Lighting	No



KAAN AIR

OPERATING SITE

(3) ÇIRAĞAN OTEL – Beşiktaş / İSTANBUL

N41° 01' 34'' E029° 00' 51'' 5 Feet

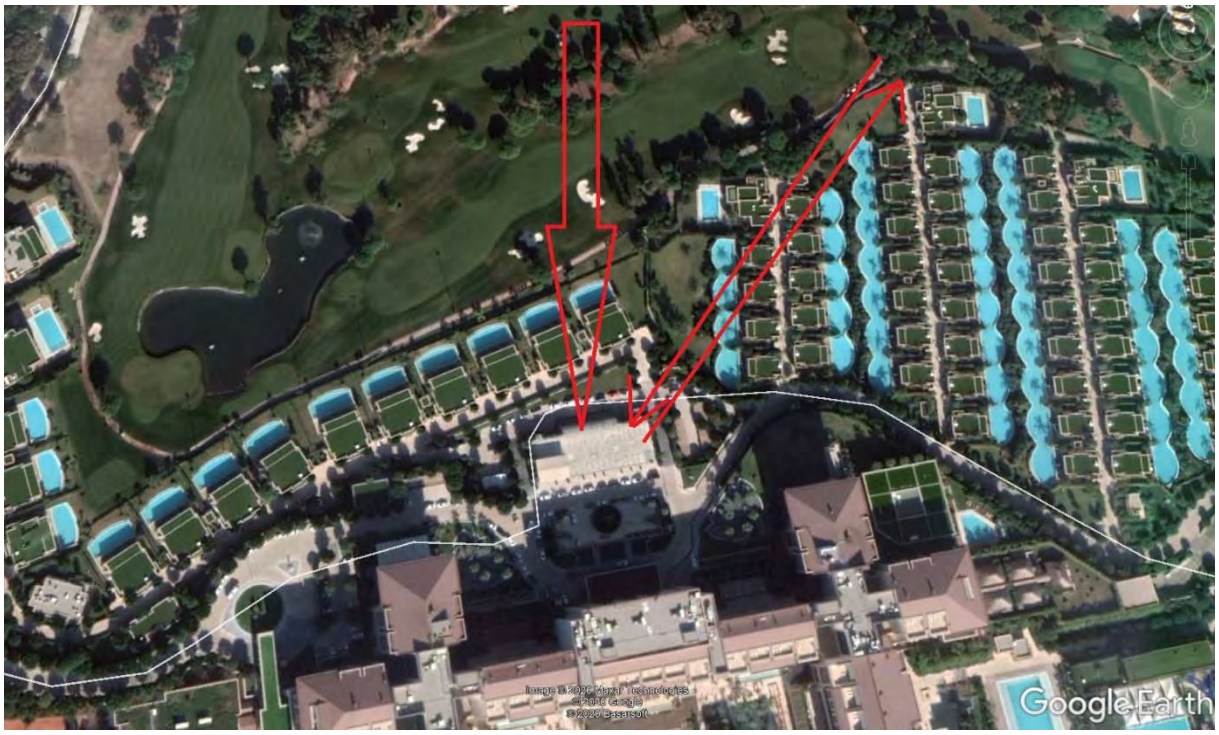
1	The Overall Dimensions of site	18 M X 18 M
2	Location and Height of Relevant Obstacles to Approach and Take-off profiles, and in the Manoeuvring Area	There is hotel building on the Northeast of landing area and ascending landscape at North-Northwest side.
3	Approach and Take-off Flight Path	Landing and take-off from and to East-Southeast-South-Southwest directions are possible.
4	Surface Condition	Asphalt
5	Helicopter Types Authorized with Reference Requirements	--
6	Provision of Control of Third Parties on the Ground (if applicable)	--
7	Procedure for Activating Site with Landowner or Controlling Authority	It should be coordinated with the Ciragan Kempinsky Hotel Management
8	Other Useful Information,	The landing site is suitable for parking for only one helicopter.
9	Lighting	No

OPERATING SITE

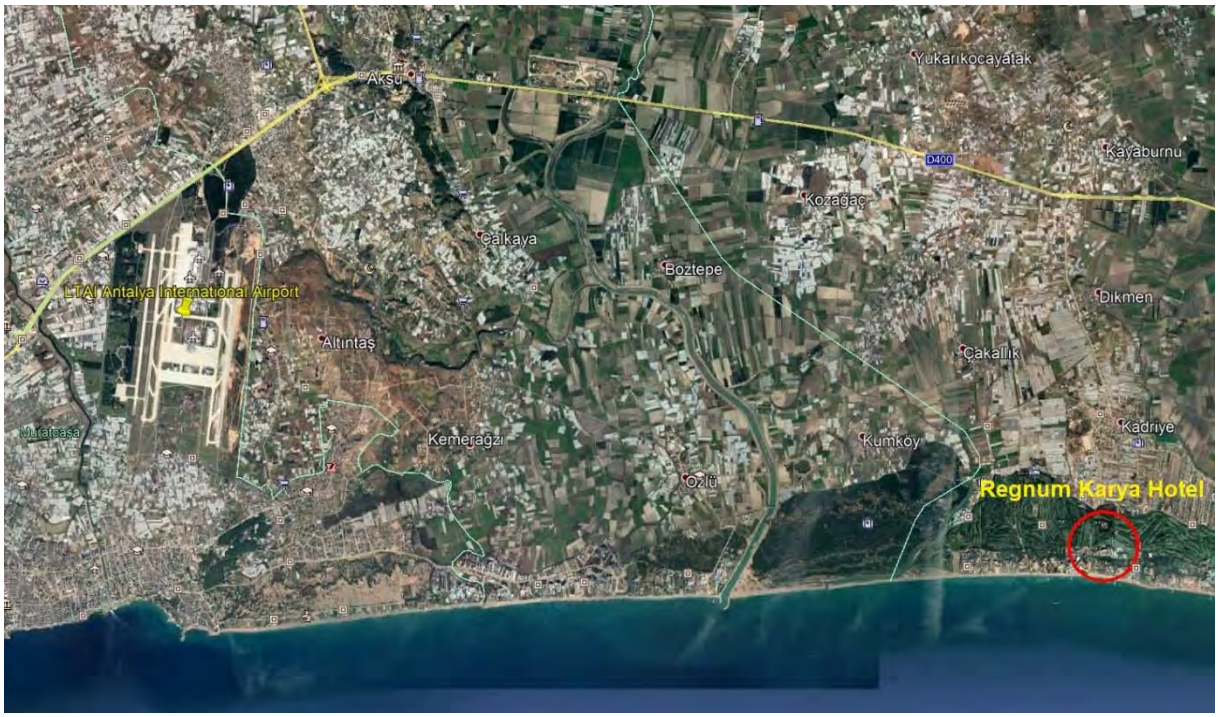
(4) REGNUM HOTEL – ANTALYA / KADRİYE

N36° 51' 48'' E031° 00' 24'' 3 Feet

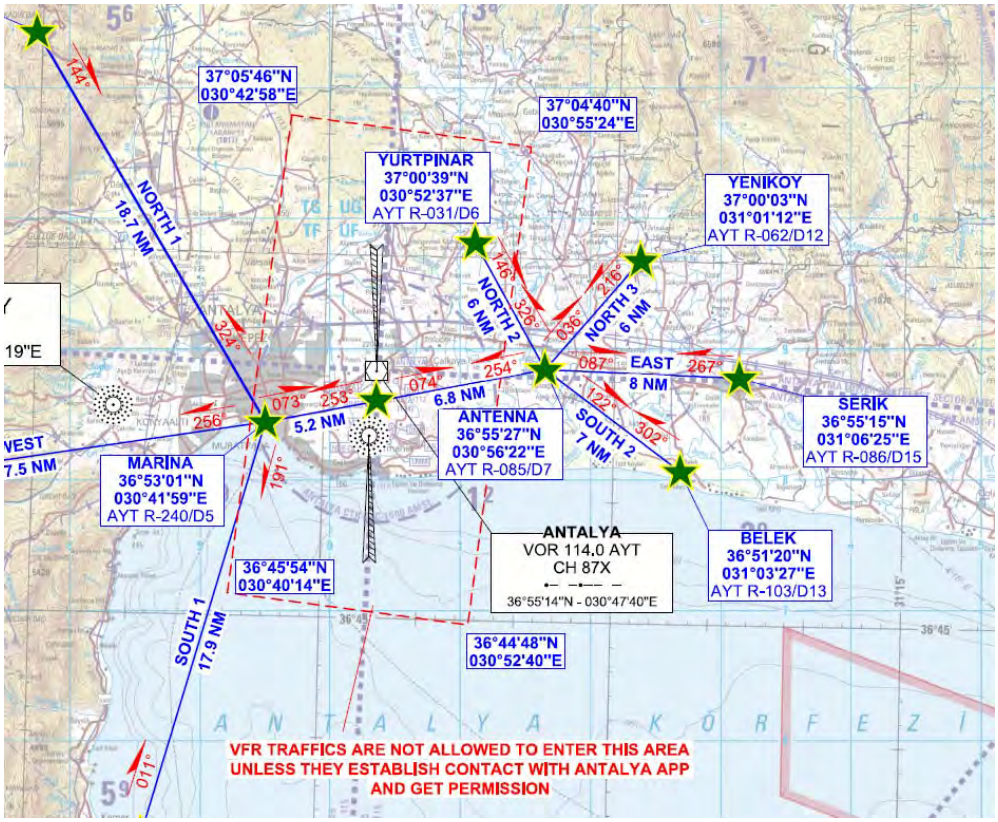
1	The Overall Dimensions of site	20 M X 35 M
2	Location and Height of Relevant Obstacles to Approach and Take-off profiles, and in the Manoeuvring Area	Except for the north-north eastern direction, there are buildings that prevent landing and take-off in other directions.
3	Approach and Take-off Flight Path	Landing and take-off from north and north east directions are possible.
4	Surface Condition	Concrete
5	Helicopter Types Authorized with Reference Requirements	--
6	Provision of Control of Third Parties on the Ground (if applicable)	--
7	Procedure for Activating Site with Landowner or Controlling Authority	It should be coordinated with the Regnum Karya Hotel Management
8	Other Useful Information,	The landing site is suitable for parking up to two helicopters.
9	Lighting	--



OPERATING SITE



ANTALYA AIRPORT VFR CHART



ANTALYA AIRPORT PARKING AREAS

(5) Regnum Karya OPET Otelcilik BODRUM

N37° 05' 33'' E027° 33' 12'' 500 Feet

1	The Overall Dimensions of site	20 x 35 m
2	Location and Height of Relevant Obstacles to Approach and Take-off profiles, and in the Manoeuvring Area	There is a building on the East of landing area.
3	Approach and Take-off Flight Path	Landing and take-off from and to Southwest-North-East directions are possible.
4	Surface Condition	Concrete
5	Helicopter Types Authorized with Reference Requirements	--
6	Provision of Control of Third Parties on the Ground (if applicable)	--
7	Procedure for Activating Site with Landowner or Controlling Authority	It should be coordinated with the REGNUM KARYA OTELCILIK A S Management
8	Other Useful Information,	The landing site is suitable for parking for two helicopters.
9	Lighting	No

(6) Ulu Resort / PINE Otel – Mersin Akkuyu

N36° 09' 03'' E033° 29' 55'' 10 Feet

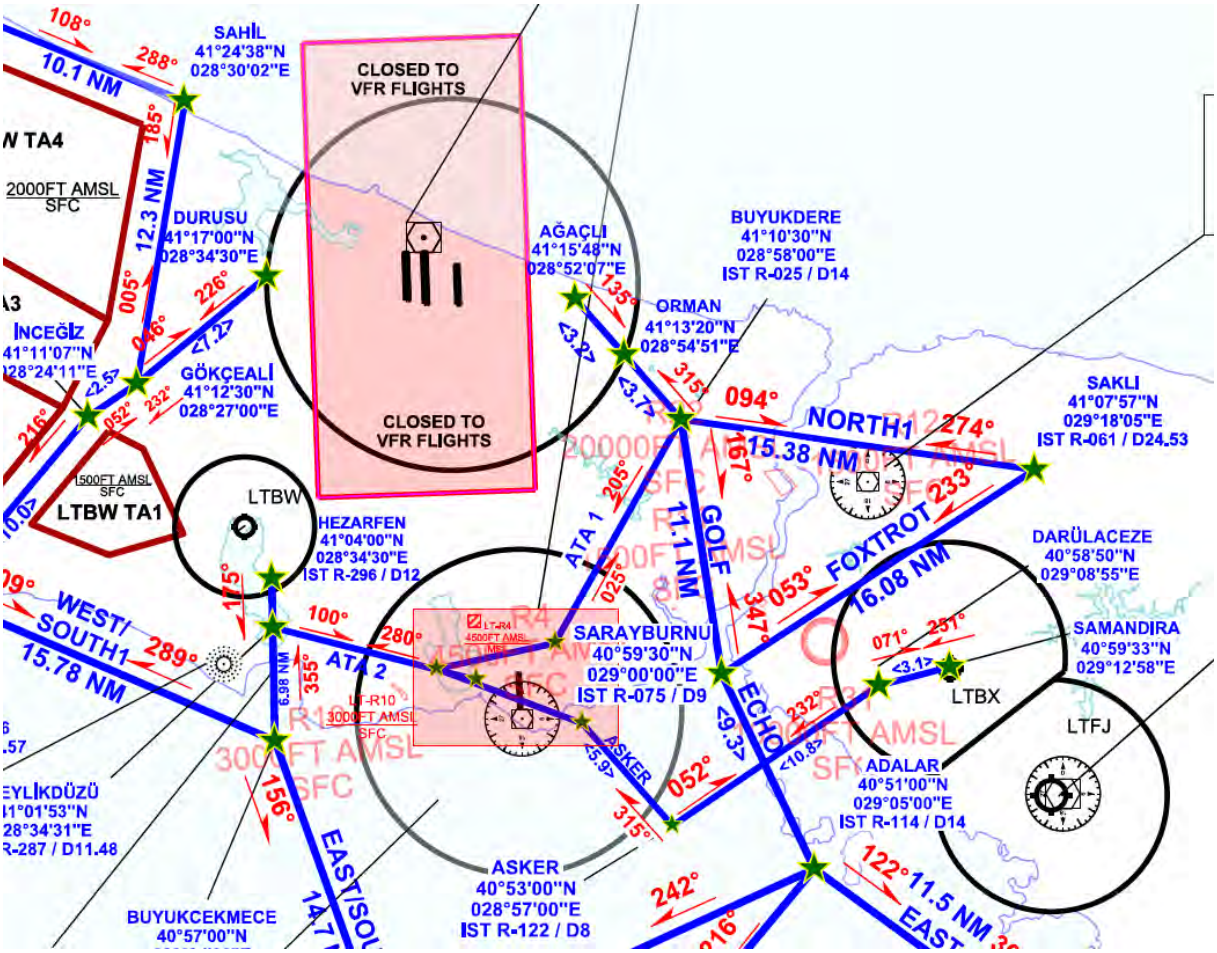
1	The Overall Dimensions of site	23 x 23 m square
2	Location and Height of Relevant Obstacles to Approach and Take-off profiles, and in the Manoeuvring Area	There is a building on the Northwest of landing spot.
3	Approach and Take-off Flight Path	Landing and take-off from and to Southwest-Southeast directions are possible.
4	Surface Condition	Asphalt
5	Helicopter Types Authorized with Reference Requirements	--
6	Provision of Control of Third Parties on the Ground (if applicable)	--
7	Procedure for Activating Site with Landowner or Controlling Authority	It should be coordinated with the ULU RESORT PINE HOTEL Management
8	Other Useful Information,	The landing site is suitable for parking for only one helicopter.
9	Lighting	No

(7) LTBA ATATURK OFFSHORE BASE

N40° 59.662' E028° 48.271' 160 Feet

1	The Overall Dimensions of site	50 x 50 m
2	Location and Height of Relevant Obstacles to Approach and Take-off profiles, and in the Manoeuvring Area	LTBA Ataturk International Airport
3	Approach and Take-off Flight Path	Under airport tower discretion
4	Surface Condition	Concrete
5	Helicopter Types Authorized with Reference Requirements	--
6	Provision of Control of Third Parties on the Ground (if applicable)	--
7	Procedure for Activating Site with Landowner or Controlling Authority	It should be coordinated with Ataturk International Airport authority
8	Other Useful İnformation,	The landing site is suitable for parking variable helicopters under Airport Authority approval
9	Lighting	Night lighting is available.

ATATURK AIRPORT VFR CHART



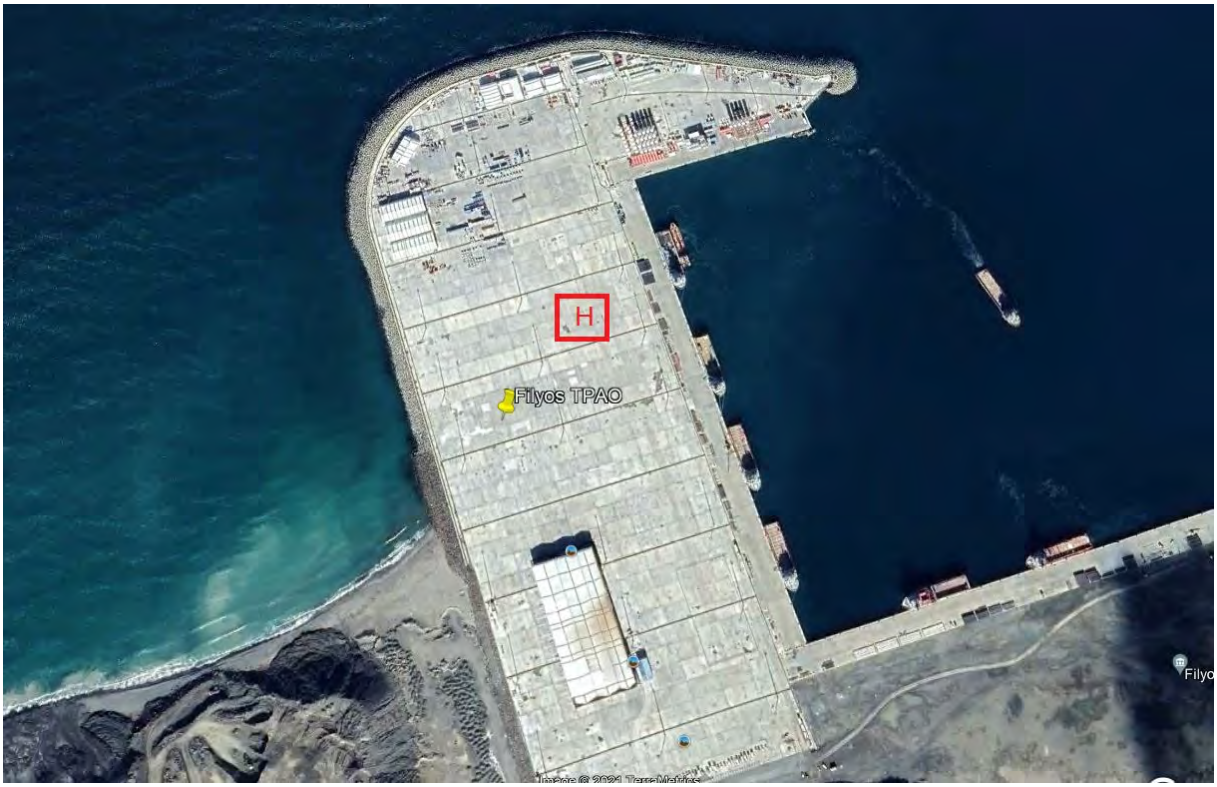
(8) ZONGULDAK Filyos OFFSHORE BASE

N41° 35.218' E032° 03.904' 10 Feet

1	The Overall Dimensions of site	60 x 60 m
2	Location and Height of Relevant Obstacles to Approach and Take-off profiles, and in the Manoeuvring Area	There is a management building, barracks and fences on both North and South side, and several lighting towers at close around.
3	Approach and Take-off Flight Path	Landing and take-off from; South / North directions are possible.
4	Surface Condition	Concrete
5	Helicopter Types Authorized with Reference Requirements	--
6	Provision of Control of Third Parties on the Ground (if applicable)	--
7	Procedure for Activating Site with Landowner or Controlling Authority	It should be coordinated with the TPAO Flight Coordinator / Management
8	Other Useful İnformation,	The landing site is suitable for parking up to 3 (three) helicopters.
9	Lighting	Night lighting is NOT available.

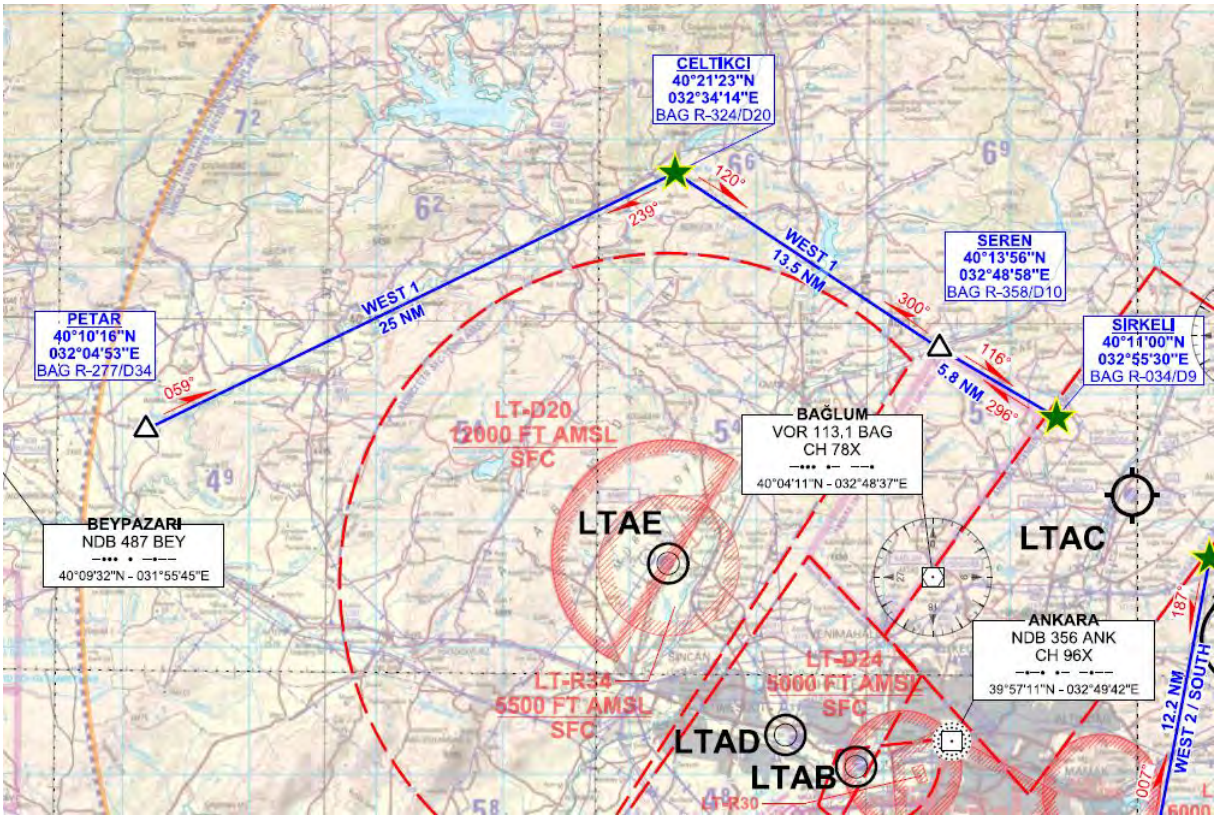
OPERATING SITE

FİLYOS OFFSHORE Base HARBOUR



LTAS ZONGULDAK CAYCUMA AIRPORT PARKING AREAS

ANKARA TMA VFR CHART



LTAC ANKARA ESENBOGA AIRPORT PARKING AREAS

KAAN AIR

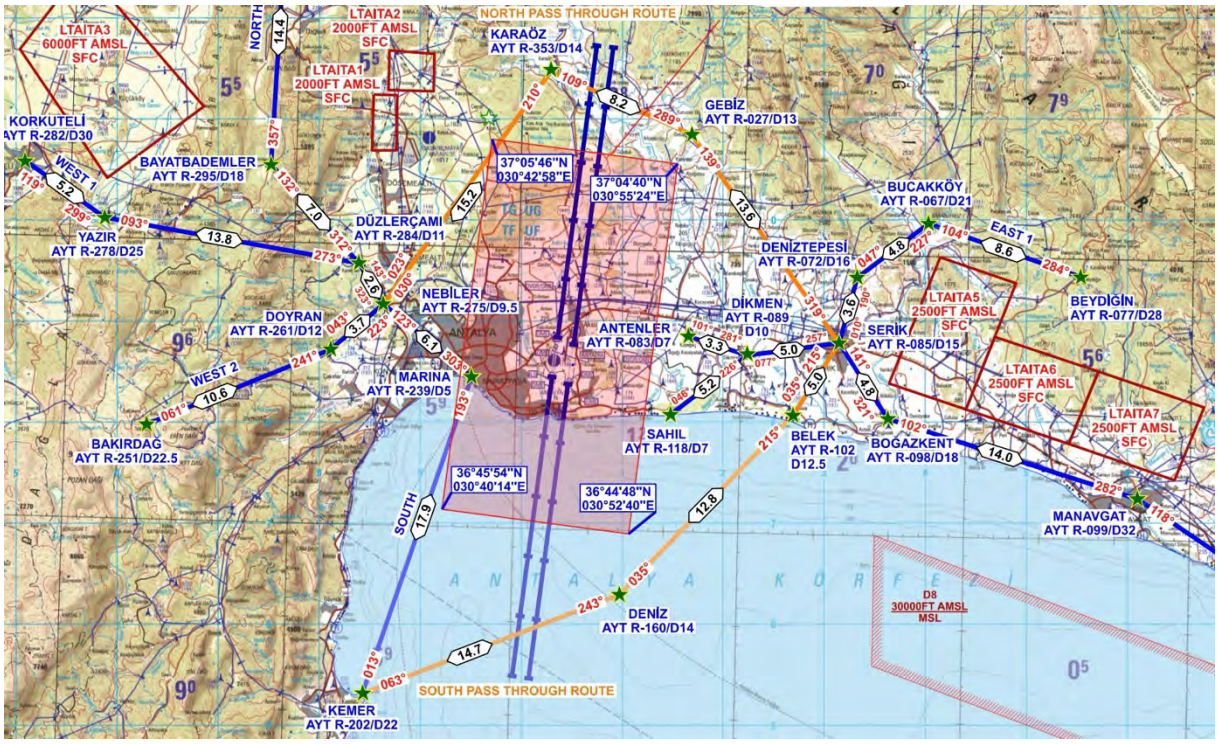
OPERATING SITE

(9) LTAI ANTALYA OFFSHORE BASE

N40° 59.662' E028° 48.271' 160 Feet

1	The Overall Dimensions of site	50 x 50 m
2	Location and Height of Relevant Obstacles to Approach and Take-off profiles, and in the Manoeuvring Area	LTAI Antalya International Airport
3	Approach and Take-off Flight Path	Under airport tower discretion
4	Surface Condition	Concrete
5	Helicopter Types Authorized with Reference Requirements	--
6	Provision of Control of Third Parties on the Ground (if applicable)	--
7	Procedure for Activating Site with Landowner or Controlling Authority	It should be coordinated with Airport authority
8	Other Useful İnformation,	The landing site is suitable for parking variable helicopters under Airport Authority approval
9	Lighting	Night lighting is available.

ATATURK AIRPORT VFR CHART



KAAN Identifier :	Position:	R/T Callsign:
FATIH – 1	N 35 24 E 034 33	"Fatih Radio"
Status: Stationary or	YES / NO	
Status: Moving	YES / NO	
If yes, in what direction and speed:	Direction: - - - - degrees Speed: - Knots	
Ships heading:	070 degrees	
Wind:	Direction: 297 degrees Speed: 4.5 Knots	
Pitch:	0.2 degrees	Down
Roll:	0.5 degrees	Port
Max Heave; heave-rate	Heave: 0.0 meters Heave-rate: 0.0 second	
Helideck Height	36.4 meters	

COM:	Fatih Radio (Bridge)	VHF	118.000Mhz & Marine Vhf Ch. 16	Wx:	Vis:	9999 meters	
		STATUS	Working Properly		Clouds:	Light/half/ Overcast	Sc-St
	HLO	VHF	118.000 Mhz		Cloud-height:	2500 ft	
NAV:					Water Temp / OAT	26.5Celcius 22.7Celcius	
	NDB beacon		Working Properly 400 KHZ		Precipitation:	Dry/Rain	DRY
					Time of observation:	07:30 LT	

Battery pack charged:	Fuelling ready:	Fire Fighting Equipment:
YES / NO	YES / NO	YES / NO
HLO's name: Clayton Bright/ HLO Radio Operator's name: Ali Rıza Doğruöz / Radio Operator REMARKS: N/A		

KAAN AIR

HELIDECK INFORMATION CHART

KAAN Identifier :	Position:	R/T Callsign:
YAVUZ – 1	N 34 00 00 E 032 12 00	"Yavuz Radio"
Status: Stationary or	YES / NO	
Status: Moving	YES / NO	
If yes, in what direction and speed:	Direction: __ __ __ degrees Speed: __ __ Knots	
Ships heading:	__ __ ___degrees	
Wind:	Direction: __ __ __ degrees Speed: __ __ Knots	
Pitch:	__ __ degrees	
Roll:	__ __ degrees	
Max Heave; heave-rate	Heave: __ meter Heave-rate: __ meter/second	
Helideck Height	_____meters	

COM:	Fatih Radio (Bridge)	VHF	_____	Wx:	Vis:	_____meters	
		STATUS			Clouds:	Light/half/ Overcast	
	HLO	VHF	_____		Cloud-height:	_____feet	
NAV:					Water Temp / OAT	_____Celcius _____Celcius	
	NDB beacon		_____		Precipitation:	Dry/Rain	
					Time of observation:	_____loc.time	

Battery pack charged:	Fuelling ready:	Fire Fighting Equipment:
YES / NO	YES / NO	YES / NO
HLO's name: Radio Operator's name : REMARKS:		

KAAN AIR

HELIDECK INFORMATION CHART

14/04/2023

REDSTAR Identifier :	Position: TURKALI #08	R/T Callsign:
KANUNI	LAT: 42° 49.970'N - LONG: 031°15,622 E	"Kanuni Radio"
Status: Stationary or	YES / NO	
Status: Moving	YES / NO	
If yes, in what direction and speed:	Direction: --- degrees Speed: --- Knots	
Ships heading:	240 degrees	
Wind:	Direction: 200 degrees Speed: 20.0 Knots	
Pitch:	0.3 degrees UP	
Roll:	0.0 degrees PORT	
Max Inc:	0.0 degrees	
SHR:	0,4 m/s	
Max Heave; heave-rate	Heave: 0,0 meters Heave-rate: 100.3 second	
Helideck Height	40.8 meters	

COM:	Kanuni Radio (Bridge)	VHF	131.450 Mhz & Marine Vhf Ch. 16	Wx:	Vis:	20.000 meters	
		STATUS	Working Properly		Clouds:	CLR	
	HLO	VHF	131.450 Mhz		Cloud-height:	// FT	
NAV:					Water Temp OAT	12,1 Celcius 11.3 Celcius	
	NDB beacon		Working Properly 410 KHZ		Precipitation:	Dry/Rain	DRY
					Time of observation:	1040 LT	

Battery pack charged:	Fuelling ready:	Fire Fighting Equipment:
YES	YES / NO rob **3946 lts**	YES / NO

HLO's name: **KRESO VUKOSA (2400-1200) - NIKO LAHOVS (1200-2400)**
Radio Operator's name: **CEM YILMAZ**
REMARKS: Nil

KAAN AIR

HELIDECK INFORMATION

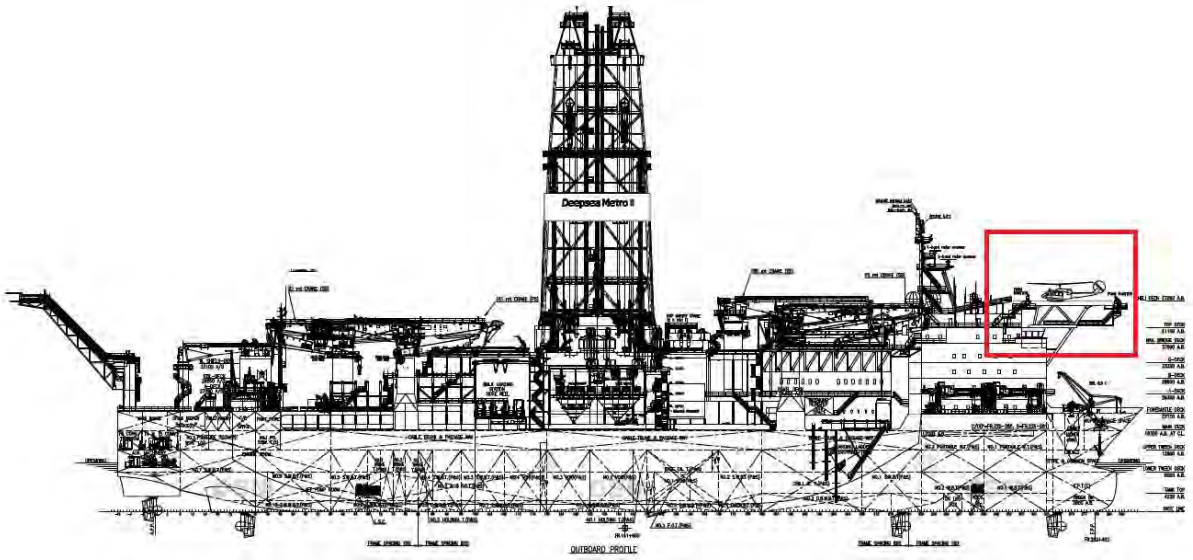
Date : 10.10.2023

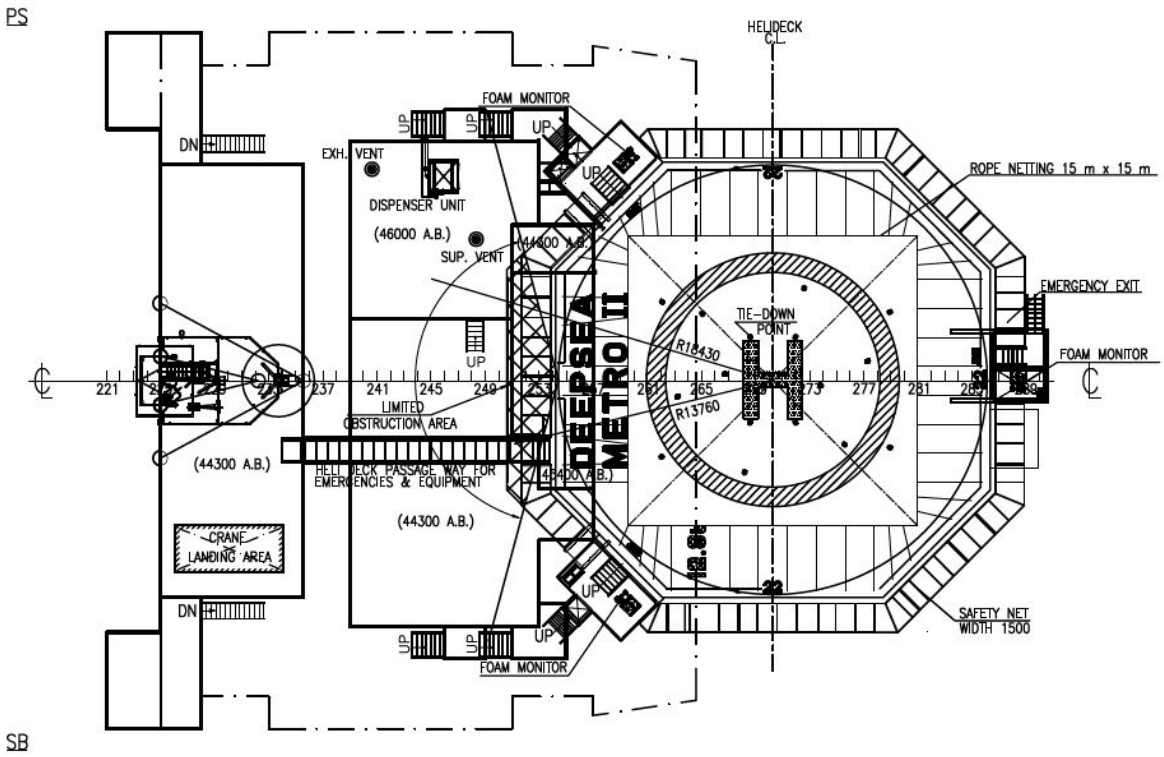
KAAN Identifier :	Position: Akseki-1
ABDULHAMID HAN	35° 22,6`” N 30° 05,5`” E
R/T Callsign: TCA7090	“ABDULHAMID HAN ”
Status: Stationary or	YES / ~~NO~~
Status: Moving	~~YES~~ / NO
If yes, in what direction and speed:	~~Direction: degrees~~ ~~Speed: Knots~~
Ships heading:	270°
Wind Direction: Speed:	270° 4 Kts
Pitch:	0.0°
Roll:	0.1°
Max Heave; heave-rate	Heave: 0.0 m SHR: 0.0 m/s Heave period : 20 sec
Helideck Height	34 m

COM:	Bridge	VHF	123.000 Mhz Ch. 16	Wx:	Vis:	20,000 m
		STATUS	Operational		Clouds:	CLEAR
	HLO	VHF	123.000Mhz		Cloud-height:	
NAV:					Sea Temp Wave Height Wave period	27°C 0.7m 4s
	NDB Beacon	+	Operational 400 KHZ		Precipitation:	DRY
					Time of observation:	0600 LT

Battery pack charged:	Fuelling ready:	Fire Fighting Equipment:
YES / NO	YES / ~~NO~~	YES / ~~NO~~
HLO: Steven Middleton Bridge Marcin Daniel Bielan REMARKS: ROB Fuel : 3526lts (1 Tank, Quantity of L shall be Confirmed).		

Pictorial Presentations - FATIH and YAVUZ and KANUNI





KAAN AIR

Date:

Inspection Checklist	
A General Helideck Information	
1 Name of installation/vessel	
1a IMO No.	
1b Call sign	
2 Type	
3 Owner	
3a Contractor/operator	
3b Shipping company	
4 Helideck approval certificate available?	Date:
4a Are any limitations noted?	
5 Previous report (if available)	Date: Non-compliances rectified?
6 Helideck height (in feet) (for mobile structures give variable range and normal operating height)	Height:
7 Installation/vessel identification (locations of name; is full name displayed; size of letters; background; illumination; clearly visible from the air from all 4 sides?)	
8 Helideck plans (see Annex A) (drawing No., date and revision, strength test. Do the plans accurately show the detail in Annex A. If not, state omissions.	Drawing: Revision: Date: Strength test:
9 Helideck procedures manual (HLO; fire; passenger handling; blocked helideck; unattended installation; fuel; emergency response; weather; adverse weather etc.)	Date:

B Helideck surface	
2 Condition (both paint and cleanliness)	
3 Non-slip characteristics (estimate)	
4 Last friction test	
5 Gutter or raised curb (give detail: around all of the perimeter?)	
6 Drainage (sufficient number of downpipes; slope; debris; filter fitted?)	
7 Deck sealed?	
8 Aircraft tie-down points? (location; quantity; flush; bar diameter – 20mm, condition)	
C Helideck dimensions	
1 Overall helideck (dimension in metres)	
2 Safe landing area (dimensions, contains D circle)	

D Helideck markings	
1 Installation/rig (state name painted on deck)	
(Height 1.2m, colour-white, position, outlined [aluminium decks only]	
(Are other names on deck, e.g. block #, oil company, logo? If so give details)	
Are there side identification panels? (visible at all angles and directions of approach)	
2 Perimeter line (colour white, width 0.3m, location)	
3 Aiming circle (colour yellow, width 1m, inner diameter 0.5D, location 0.1'D' outboard	
4 Chevron mark (for obstacles clearances) Length/width 0.79m/0.01m, colour black, angle 210º, location – edge of D circle)	
5 Actual D value (height 0.1m, colour black, location, inboard of chevron) (does it match physical measurements?)	
6 Perimeter 'D' value (value, quantity 3, colour white, height 0.6m, location, orientation)	
7 'H' (size 4m x 3m x 0.75m) Location; orientation (concentric with bisector); swung ± 15º max.	
8 Max allowable mass (value, size, 0.9m, colour white, location. Design load calculations confirm value?)	
9 Prohibited landing sector (if used: provide location; angle; colours red/white hatching, reason)	

E Surface net (not required in all areas if surface friction is adequate)	
1 Material [recommend sisal (no polypropolene)]	
2 Type	
3 Coverage (covers aiming circle, clear of name and t value)	
4 Age/condition	
5 Rope diameter	
6 Mesh size	
7 Net size	
8 Tension	
9 Tie down points	
10 Method of securing	

F Perimeter safety net	
1 Material	
2 Width from deck edge	
3 Condition/securely attached	
4 Last drop load test	
5 Hammock effect (no bounce effect)	
6 Drop down area protected	
7 Slope (slope at least 10 degrees; highest point above deck level: 250mm)	
8 Covers drop down areas (unless adequate structural protection exists)	
G Perimeter lighting	
1 Colour	
2 Serviceability (all working, brightness, condition of lens)	
3 Height & distance apart (<250mm, <3m)	
4 Power rating candelas 25	
4a Connected to uninterrupted (second generator) emergency power supply?	
5 Location	
6 Limit of safe landing area	

(have red lights been temporarily employed to delineate unsafe sectors? If so, state how the situation is going to be rectified)	
7 Switching (controlled from radio room/bridge or HLO)	

H Flood lighting	
1 Position, height & quality (position, quantity, height, adequate illumination, brightness meets 10 lux & 8:1 ratio)	
2 Serviceability (all working)	
3 Dazzle protection (what method is employed to avoid dazzle & type of unit)	
4 Switching (controlled from radio room by HLO)	
5 Emergency power supply (in addition to the perimeter lights, are the floods connected to the uninterrupted (second generator) emergency power supply?)	

I General lighting	
1 Installation flood lights (all flood lights angled so as to not dazzle pilots)	
2 Structures >15m above deck level (omni-directional red lights every 10m above deck level; to include all crane booms)	
3 Highest point (omni-directional, colour, intensity)	
4 Light pollution	

J Obstruction marking & lighting	
1 Obstructions (list and give colour scheme)	
2 Crane colours (colour [if close to helideck or 150º sector boundary])	
3 Lighting (give detail)	

K Status lights	
1 Visible from all approach directions	
2 Connected to emergency supply/UPS	
3 Switching (automatic and manual activation with connection to emergency power supply)	

L Obstruction environment	
1 210º sector obstructions (state items, location & height, max 0.25m within 1000m above deck level)	
2 150º sector obstructions ((state items, location & height above deck level) up to 0.62 'D' (or 0.12 from edge of safe landing area) = 0.05 'D' 0.62-0.83 'D' (or 0.33 from edge of safe landing area) = gradient of 1.2	
3 180º 5:1 falling gradient (11.4º) for obstructions below the helideck level (state items , location, distance from the edge of netting and height below deck level)	

M Turbulence	
1 Structure (state items likely to cause turbulence)	
2 Hot emissions (state emissions, e.g. flares, turbine exhausts)	
3 Cold emissions (state emissions, e.g. vents, blow down)	
4 Air gap beneath helideck (state height & obstruction environment)	
5 Prevailing wind (state any restrictions in landing/take-off weight/APP-DEP directions	

N Refuelling systems	
General comments only (use Refuelling System Inspection Form)	

O Access points	
1 Locations (Primary and secondary)	
2 Handrails (foldable if height poses an obstacle; height)	
3 Safety notices (recommended tail rotor, clear deck, hearing protection, in dual language if necessary)	
4 Control of passengers (system employed to prevent inadvertent access to helideck, frangible chain; secondary access points)	

P Fire protection	
1 Foam monitors (quantity; type)	
If non-aspirated, state what aspirated available	
2 Delivery rate (litres/min of applied foam)	
3 Concentrate (capacity of tank; quantity in tank; type; percentage [marked container])	
4 Certificate of conformity Cert. of conformity; test report on concentrate; water & produced foam [if applicable]	
5 Back-up concentrate (quantity)	
6 Hydrant points (quantity; location)	
7 Hand lines (quantity; location, hand-controlled spray/jet nozzles)	
8 Foam hand branch (quantity; location; delivery rate)	
9 Foam inducers (quantity; location; concentrate-quantity; percentage setting; connection)	
10 Dry powder (DP) No. & capacity of each unit; location; access to helideck; lance; last test date)	
11 CO^2 No. & capacity of each unit; location; access to helideck; lance; last test date)	
12 Back-up DP & CO^2 (Back-up requirement determined by duty fireman, taking into account the circumstances; No. & capacity; locations	

Q Rescue equipment	
1 Rescue equipment box(es) (location, quantity; condition; lighting)	
Layout of the equipment	
Accessibility from all helideck access points	
2 Checklist	
3 Adjustable wrench (quantity; location)	
4 Large rescue axe (non-wedge or aircraft type)	
5 Bolt cutters (quantity, location)	
6 Large crow bar (quantity; location)	
7 Grab or salving hook (quantity; location)	
8 Heavy duty hacksaw (quantity; location)	
9 Heavy duty blades (quantity; location)	

10 Fire resistant blanket (quantity; location)	

11 Ladder (quantity; location)	
12 Life-line/rescue harness (quantity; location)	
13 Side cutting pliers (quantity; location)	
14 Set of assorted screwdrivers (quantity; location)	
15 Harness knife c/w sheath (1 per deck crew)	
16 Self-contained breathing apparatus (quantity; location; storage; spare bottles)	
17 Portable safety lamp (quantity; location; operating life)	

R Protective clothing (RFF)	
1 Stowage type (location; condition)	
2 Helmet with visor (quantity; type; BS/EN code; condition)	
3 Gloves (quantity; type; PREN code; condition)	
4 Boots (quantity; type; PREN code; condition)	
5 Fire tunic & trouser, or one-piece (quantity; type; PREN code; condition)	

S Additional	
1 Chocks (NB: sandbag type best on decks with a deck net; quantity)	
2 Tie down strops/ropes (type; quantity – 6 minimum; break strength of min wt. of helo)	
3 Scales for baggage, freight, passengers (type; max wt. calibration date)	
4 Helicopter start unit (type; location; voltage; can the lead reach aircraft in any position; included in maintenance programme?)	
5 Snow/ice clearing equipment (if needed)	
6 Equipment for showing passenger brief (type; location; dual language or subtitles?)	
7 Prohibited landing marker	
8 Windsock (location; condition; illumination; in clear air?)	

T Radio equipment	
1 VHF main (call sign; location; quantity – min. requirement varies, e.g. 2 in N. Sea; ATSSD approved; details; connected to emergency supply/UPS)	
2 VHF portable (quantity; min. 1, with headset)	
3 NDB (ATSSD approved; details; identifier; frequency)	
4 AIP ENR 1-15 available	
5 Radio log (written or electronic; kept for 28 days; detailing no. of PAX; PAX wt; baggage/freight wt.)	

U Weather equipment	
1 Anemometer (location; calibration; date)	
2 Air temperature (calibration)	
3 Precision barometer (position of a sensor relative to h/deck level)	
4 Visibility, cloud base & cover (give details of equipment if available)	
5 Pitch/roll/heave & sea state (give details of equipment if available)	
5a Can the equipment record the max. value measured during the preceding 10 minutes?	
6 Location of the readouts (can the radio operator access all weather information?)	
7 Are personnel trained in weather observation?	
8 Are helideck/bridge personnel knowledgeable about weather limitations and also on adverse weather policy?	
9 AWOS? Provide telephone or comms link available)	

V Emergency response	
1 Helicopter emergency diagrams (location; which types are covered?)	
2 Emergency procedures (is there an emergency procedures manual detailing helicopter emergencies?)	

W Helideck crew (note: OPITO or equivalent standard)	
1 Total number Helideck Landing Officer (HLO) per shift	
Completed: Basic Offshore Safety Induction & Emergency Training (BOSIET) programme	
Further offshore emergency training programmes	
Previously acted as HLA or have previous suitable experience	

Hold a helicopter refuelling certificate meeting industry standard	
Hold an RT licence	
Hold current Offshore Emergency Helideck Team Member certificate (OEHTM)	
Completed an initial HLO training programme	
2 Helideck Assistant (HLA) (total number; number per shift?)	
Completed: Basic Offshore Safety Induction & Emergency Training (BOSIET) programme	
Further offshore emergency training programmes	
Have previous experience of handling helicopters	
HDA: have completed an initial training programme covering routine operations (including refuelling)	
Hold a helicopter refuelling certificate meeting industry standard	
Have completed an Offshore Emergency Helideck Team Member course (OEHTM)	
HLOs/HDAs: Training records available?	

X General (exercises & drills)	
1 Date of last practice in use of foam agents on simulated fuel spill	
2 Date of last practice in use of portable equipment (including DP & CO^2) on simulated engine fires	
3 Date of last test of fire fighting systems	
4 Aircraft evacuation drills, including removal of casualties, with or without smoke and breathing apparatus	
5 Crash drills/briefings, to include high and low impact. On/off helideck incidents (preplanning, priorities, actions, techniques & problems likely to be encountered).	

Y Summary of non-compliances	

Z Remarks & actions to be taken	

Annex A	
Plans required – to scale	**Provided: Yes/No?**
GA of the entire platform/rig	
Elevation – clearly showing the 180º 5:1 sector	
Plan view of the h/deck and the obstacle environment	
Detail to be shown	
All helideck markings, giving dimensions and colour	
Deck net location	
Tie down points	
Perimeter net	
Lighting – both perimeter and floodlighting	
Location of RFFF	
Refuelling system	
Guttering and downpipes	
Access points	
Windsock(s)	
210º, 150º & 180º sectors to be clearly shown	
All obstruction non-compliances to be detailed, stating height above/below deck level	
Colour scheme of above	
Structures that might cause turbulence over the helideck	
Hot emission sources e.g. flares, turbine exhausts	

OPERATIONS MANUAL

PART C
APPENDIX 01.01.12.03
OPERATING SITES

Prepared by:

Ufuk IŞIKÖNDEŞ
Captain Pilot

INDEX

Chapter 0 Definitions

Heliport means an aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

Surface level heliport means a heliport located on the ground or on the water.

Elevated heliport means a heliport located on a raised structure on land.

Helideck means a heliport located on a floating or fixed off-shore structure.

Operating Site means a site, other than an aerodrome or an approved heliport, selected by the operator or commander/PIC for landing and take-off.

Approach means a series of predetermined manoeuvres for the orderly transfer of an aircraft to a point either where a landing may be made or where an aircraft may drop, off-load or pick up persons or load of any description.

Final approach and take-off area (FATO) means a defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the takeoff manoeuvre is commenced.

Elevated Final Approach and Take-off Area (Elevated FATO) means that the FATO is at least 3m above the surrounding surface.

Touchdown and lift-off area (TLOF) means a load bearing area on which a helicopter may touch down or lift off.

Aiming point means a triangular marking, displayed on a FATO, to which point a pilot is required to make the final approach before proceeding to a TLOF.

Performance Class 1 helicopter means a helicopter with performance such that, in case of engine failure, it is able to land on the rejected takeoff area or continue the flight to an appropriate landing area.

Obstacle limitation surfaces means surfaces extending outwards and upwards from the FATO or safety area at angles compatible with the flight characteristics of the helicopter, used to evaluate approach and takeoff climb surfaces for clearance of obstacles.

Safety area means a defined area on a heliport surrounding the FATO which is free of obstacles, other than those required for air navigation purposes, and intended to reduce the risk of damage to helicopters accidentally diverging from the FATO. It should be capable of supporting the weight of a helicopter.

Overall helicopter length means the maximum length of a helicopter including rotors, measured through the fore and aft centre line of the aircraft.

Overall helicopter width means the diameter of the main rotor.

CHAPTER 1 APPROVED HELIPORTS WITH ICAO DESIGNATOR

SHY-14B
SHT-14B/01
AIP AD3

1.1 General

These heliports are approved by Turkish DGCA and a unique ICAO designator has been allocated. All necessary information regarding administration, operational procedures, facilities and services provided, firefighting and rescue capabilities, physical characteristics, obstacle environment, communication and navigation aids can be found in AIP AD3 Heliports.

The commander/PIC shall ensure that the heliport intended to be used is adequate for take-off and landing, in terms of performance, size and characteristics, by reviewing the relevant part of AIP and contacting the heliport administration for recent information, as part of the pre-flight preparation. The ICAO codes of heliports shall be filled in departure and destination sections of ATS flight plan, as applicable.

CHAPTER 2 APPROVED HELIPORTS WITHOUT ICAO DESIGNATOR

These heliports are approved by Turkish DGCA iaw SHY 14B which provide adequate obstacle clearance for safe take-off and landing. AII necessary information regarding administration, operational procedures, facilities and services provided, firefighting and rescue capabilities, physical characteristics, obstacle environment, communication and navigation aids can be found in their approved heliport operations manual upon request.

The commander/PIC shall ensure that the heliport intended to be used is adequate for take-off and landing, in terms of performance, size and characteristics, by reviewing Heliport Operations Manual or the Operations Manual, Part C, Appendix 1 and contacting the heliport administration for recent information as part of the pre-flight preparation.

Since there is no ICAO code has been allocated for these heliports, ZZZZ shall be filled in Section 13. Departure and Section 16. Destination of ATS flight plan and the name of the heliport together with the coordinates shall be filled in Section 18.

2.1. Zorlu Center Heliport/İSTANBUL

Zorlu Center Heliport / İSTANBUL

HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Elevated Heliport
Bearing Strength	7 ton
Heliport reference point	41° 04.07'N– 029° 1.09'E
Elevation	774 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	Circle of Diameter; 17 m
Touchdown and lift-off area (TLOF)	White **H** in yellow circle
Final approach Direction	All direction
Safety Area	5 m
Windsock	Located next to passenger exit
Heliport Obstacles	Windsock next to passenger exit
Fire Fighting	H2

Surface Condition	Concrete
Direction and distance from (city)	5 nm NE of City
Heliport Administration, address, telephone, telefax, telex, AFS	Zorlu Center, Levazım Mahallesi, Koru Sokak No:2, 34340 Beşiktaş/İstanbul Telefon : 0 212 924 01 33 – 34 Fax : 0 212 353 66 69 E-mail : zc.heliped@zorlu.com
Types of traffic permitted (IFR/VFR)	VFR (Day)
Lightning	FATO Lights, Apron Projector, Windsock Light
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	N/A
Handling	SR/SS
Security	SR/SS
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE.

2.2. L199 Heliport/İSTANBUL

L199 Heliport / İSTANBUL

HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Elevated Heliport
Bearing Strength	7 ton
Heliport reference point	41° 04.86'N – 029° 00.65'E
Elevation	1086 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	Circle of Diameter; 18 m
Touchdown and lift-off area (TLOF)	White **H** in yellow circle
Final approach Direction	020-200 Degrees
Safety Area	3 m
Windsock	Over corner of building structure next to FATO
Heliport Obstacles	High Building north of the heliport
Fire Fighting	H2

Surface Condition	Concrete
Direction and distance from (city)	6 nm NE of City
Heliport Administration, address, telephone, telefax, telex, AFS	Zorlu Tesis Yönetim A.Ş. Esentepe Mh. Büyükdere Caddesi, No: 199, Levent, Şişli, İstanbul, Türkiye 0533 253 0360 0212 336 9160
Types of traffic permitted (IFR/VFR)	VFR (Day)
Lightning	FATO Lights, Apron Projector, Windsock Light
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	N/A
Handling	SR/SS
Security	SR/SS
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE.

2.3. Kaan Heliport/ İSTANBUL

KAAN Heliport / İSTANBUL	
	
HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Surface level Heliport
Bearing Strength	15 ton
Heliport reference point	41° 07.55'N – 028° 59.02'E
Elevation (MSL)	350 ft
Final approach and take-off markings	2 FATO and TLOF
Final approach and take-off area (FATO)	Circle of Diameters; 18 m
Touchdown and lift-off area (TLOF)	White **H** in yellow circle
Final approach Direction	360-180 Degrees
Safety Area	Available
Windsock	Over hangar
Heliport Obstacles	Hangar west of FATO
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	7 nm North of City

Heliport Administration, address, telephone, telefax, telex, AFS	Kaan Havacılık San. Ve Tic. A.Ş. 208. Sok. Kemerburgaz Cad. No.1 Sarıyer/İSTANBUL Tel;+90 530 232 8370
Types of traffic permitted (IFR/VFR)	VFR (Day/Night)
Lightning	FATO Lights, Apron Projector, Windsock Light
OPERATIONAL HOURS	
Heliport Administration	H24
Fueling	Available
Handling	H24
Security	H24
Hangar space for visiting helicopter	Available
Repair facilities for visiting helicopter	Available
Remarks	Operations shall be performed by helicopters having performance OGE

2.4. Amerikan Hastanesi Heliport/İSTANBUL

Amerikan Hastanesi Heliport / İSTANBUL

HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Elevated Heliport
Bearing Strength	7 ton
Heliport reference point	41° 03.16'N – 028° 59.73'E
Elevation (MSL)	400 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	17,5 X 17,5 m
Touchdown and lift-off area (TLOF)	Red **H** in yellow circle
Final approach Direction	All Directions
Safety Area	Available
Windsock	Over building next to FATO
Heliport Obstacles	Higer buildings around the heliport
Fire Fighting	H2
Surface Condition	Steel
Direction and distance from (city)	2,6 nm NW of City

Heliport Administration, address, telephone, telefax, telex, AFS	Güzelbahçe Sok, No:20, 34365 Nişantaşı İstanbul, Türkiye Tel;444 3 777
Types of traffic permitted (IFR/VFR)	VFR (Day/Night)
Lightning	FATO Lights, Apron Projector, Windsock Light
OPERATIONAL HOURS	
Heliport Administration	H24
Fueling	N/A
Handling	H24
Security	H24
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE.

2.5. Kadıköy İspark Heliport/İSTANBUL

Kadıköy İspark Heliport / İSTANBUL	
	
HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Surface level Heliport
Bearing Strength	10 ton
Heliport reference point	40° 59.36'N – 029° 01.13'E
Elevation (MSL)	13 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	24 X 24 m
Touchdown and lift-off area (TLOF)	White **H** in yellow circle
Final approach Direction	All Directions
Safety Area	5m
Windsock	50 m east of FATO, on grass area
Heliport Obstacles	There is a parking lot close to FATO
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	2,7 nm SW of City

Heliport Administration, address, telephone, telefax, telex, AFS	Kısıklı Heliport İşletme Şefliği Tel;+90 506 904 2194
Types of traffic permitted (IFR/VFR)	VFR (Day/Night)
Lightning	FATO Lights, Apron Projector, Windsock Light
OPERATIONAL HOURS	
Heliport Administration	H24
Fueling	N/A
Handling	N/A
Security	N/A
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE

2.6. Arçelik Heliport/Tuzla-İSTANBUL

Arçelik Heliport / Tuzla-İSTANBUL


HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Surface level Heliport
Bearing Strength	20 ton
Heliport reference point	40° 49.31'N – 029° 21.53'E
Elevation (MSL)	164 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	24 X 24 m
Touchdown and lift-off area (TLOF)	White **H** in yellow circle
Final approach Direction	All direction
Safety Area	-

Windsock	Over Hangar Building
Heliport Obstacles	- Hangar Building (East of FATO) - Upward Hill (West of FATO)
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	21 nm SE of City
Heliport Administration, address, telephone, telefax, telex, AFS	Arçelik Fabrikası Tuzla/İSTANBUL Tel;+90 216 585 88 70 helicopter@setair.com.tr
Types of traffic permitted (IFR/VFR)	VFR Day/Night (H24)
Lightning	FATO Lights, Apron Projector, Windsock Light
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	N/A
Handling	H24
Security	H24
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	N/A

2.7. Çırağan Palace Kempinski Heliport

Çırağan Palace Kempinski Heliport / İSTANBUL	
	
HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Surface level Heliport
Bearing Strength	10 ton
Heliport reference point	41° 02.56'N – 029° 00.85'E
Elevation (MSL)	10 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	17 X 17 m
Touchdown and lift-off area (TLOF)	White **H** in yellow circle
Final approach Direction	Only northerly direction
Safety Area	N/A
Windsock	West of FATO
Heliport Obstacles	- trees west of FATO - Building NE of FATO
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	3 nm NE of City
Heliport Administration, address, telephone, telefax, telex, AFS	Çırağan Palace Kempinski Istanbul Ciragan Caddesi 32, 34349 Istanbul Türkiye Tel; +90 212 326 4646

	security.ciraganpalace@kempinski.com
Types of traffic permitted (IFR/VFR)	VFR Day/Night (H24)
Lightning	TLOF Lights, Apron Projector, Windsock Light
OPERATIONAL HOURS	
Heliport Administration	H24
Fueling	N/A
Handling	H24
Security	H24
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE

2.8. Acıbadem Hastanesi Heliport/Bodrum-MUĞLA

Acıbadem Hastanesi Heliport / Bodrum-MUĞLA	
	
HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Elevated Heliports
Bearing Strength	7,5 ton
Heliport reference point	37° 03.29'N – 027° 20.86'E
Elevation (MSL)	233 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	14X14 m
Touchdown and lift-off area (TLOF)	H in white circle
Final approach Direction	All directions
Safety Area	Available
Windsock	Next to FATO
Heliport Obstacles	-
Fire Fighting	H1
Surface Condition	Concrete
Direction and distance from (city)	50 nm SW of City
Heliport Administration, address, telephone, telefax, telex, AFS	Acıbadem Sağlık Hizmetleri Tic. A.Ş. Ortakent Mah. Gölbaşı Sok. No11 Bodrum/MUĞLA ersin.ozcelik@acıbadem.com.tr

	Tel;+90 505 742 1500
Types of traffic permitted (IFR/VFR)	VFR Day
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	N/A
Handling	SR/SS
Security	SR/SS
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE

2.9. D-Marin Turgutreis Marina Heliport/Bodrum-MUĞLA

D-Marin Turgutreis Marina Heliport / Bodrum-MUĞLA	
	
HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Surface level Heliport
Bearing Strength	10 ton
Heliport reference point	37° 00.16'N – 027° 15.50'E
Elevation (MSL)	6 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	Circle of Diameter; 17 m
Touchdown and lift-off area (TLOF)	H in yellow circle; 12 m
Final approach Direction	All Directions
Safety Area	5 m
Windsock	N/A
Heliport Obstacles	Tennis courts south of FATO
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	63 nm SW of City
Heliport Administration, address, telephone, telefax, telex, AFS	Doğuş Turgutreis Marina İşletmeciliği A.Ş. Gazi Mustafa Kemal Bulvarı, No 26 Turgutreis/Bodrum/MUĞLA Tel;+90 252 382 9200

Types of traffic permitted (IFR/VFR)	VFR
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	N/A
Handling	SR/SS
Security	H24
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE

2.10. Çağdaş Heliport/Bodrum-MUĞLA

Çağdaş Heliport / Bodrum-MUĞLA

HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Elevated Heliport
Bearing Strength	35 ton
Heliport reference point	37° 01.46'N – 027° 26.42'E
Elevation (MSL)	39 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	Circle of Diameter; 18 m
Touchdown and lift-off area (TLOF)	H in yellow circle
Final approach Direction	160 - 300
Safety Area	Safety Net
Windsock	Next to FATO
Heliport Obstacles	-There are Lighting Poles around Heliport
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	28 nm N of City
Heliport Administration, address, telephone,	Kumbahçe Mah. Liman Cad.

telefax, telex, AFS	Bodrum – MUĞLA muratpehlivan@cagdasair.com Tel; 533 283 83 75, 530 148 77 83
Types of traffic permitted (IFR/VFR)	VFR Day
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	Available
Handling	SR/SS
Security	H24
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE

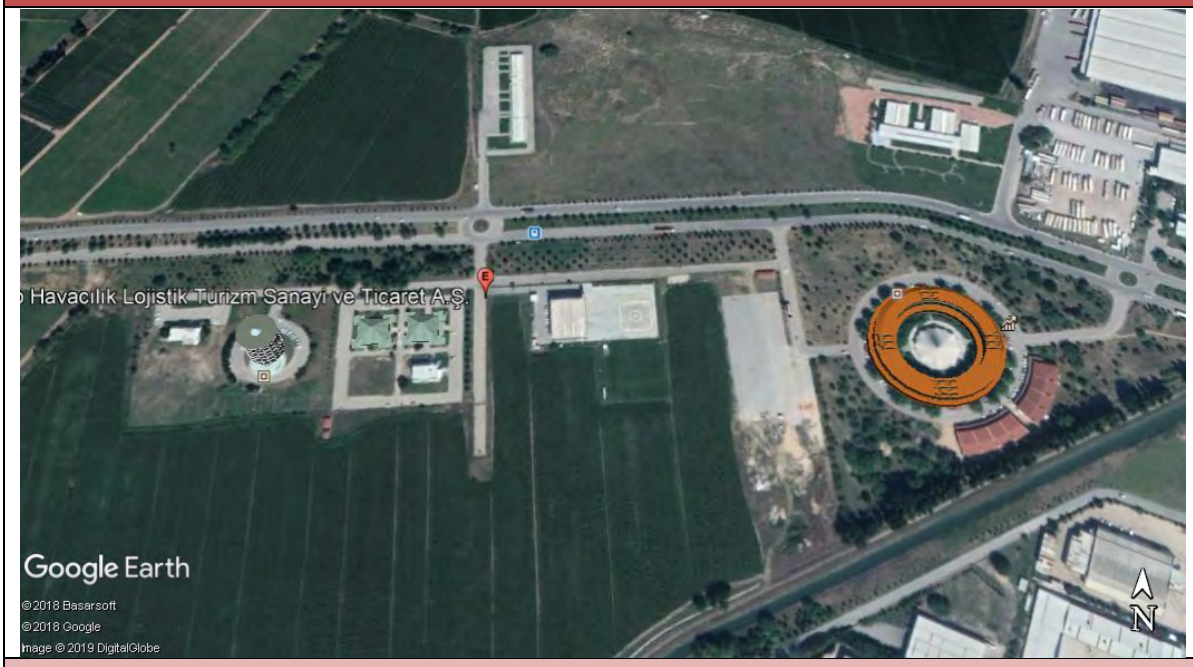
2.11. Hilton Otel Heliport/İZMİR

Hilton Otel Heliport / İZMİR


HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Elevated Heliport
Bearing Strength	5 ton
Heliport reference point	38° 25.60'N – 027° 08.26'E
Elevation (MSL)	689 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	16,90 m X 16,40 m
Touchdown and lift-off area (TLOF)	H in yellow circle
Final approach Direction	310-130 Degrees
Safety Area	Safety Net
Windsock	Corner of FATO
Heliport Obstacles	Sport Area Fence (west of FATO)
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	2 nm SW of City

Heliport Administration, address, telephone, telefax, telex, AFS	İzmir Hilton Oteli, 2.Kordon Konak/İZMİR Tel;+90 232 497 60 79
Types of traffic permitted (IFR/VFR)	VFR Day
OPERATIONAL HOURS	
Heliport Administration	H24
Fueling	N/A
Handling	SR/SS
Security	H24
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE

2.12. Sarp Heliport/ESKİŞEHİR

Sarp Heliport / ESKİŞEHİR


HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Surface level Heliport
Bearing Strength	10 ton
Heliport reference point	39° 45.15'N – 030° 38.29'E
Elevation (MSL)	2582 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	24X24 m
Touchdown and lift-off area (TLOF)	H in white circle; 10 m
Final approach Direction	360-180 Degrees
Safety Area	Available
Windsock	Over hangar
Heliport Obstacles	Hangar west of FATO
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	6 nm S of City
Heliport Administration, address, telephone, telefax, telex, AFS	Sarp Havacılık Loj. Tur. Ve Tic. A.Ş. OSB Bilim Cad.

	Odunpazarı/ESKİŞEHİR Tel;+90 222 221 2000
Types of traffic permitted (IFR/VFR)	VFR Day
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	Available
Handling	SR/SS
Security	H24
Hangar space for visiting helicopter	Available
Repair facilities for visiting helicopter	Available
Remarks	Operations shall be performed by helicopters having performance OGE

Chapter 3 Zorlu Air Operating Sites

Operation to sites that are not pre-surveyed, the commander shall assume all responsibility and make a judgment on the suitability of a site from the air taking account of the (c)(1) to (c)(6).

Zorlu Air Operation Sites pre-surveyed are specified in the Operations Manual, Part C, Appendix 1 in detail. The Operations Manual, Part C, Appendix 1 contains diagrams, ground and aerial photographs, depiction (pictorial) and description of operating site. The Commander shall go over the sites before the flight and assume all responsibility. Operations to heliports that have a night operation certification authorized by DGCA and specified in the Operations Manual, Part C, Appendix 1 in detail shall be performed at night.

Operations to heliports that have not a night operation certification and not specified in the Operations Manual Part C, Appendix 1 shall not be performed at night.

When defining operating sites (including infrequent or temporary sites) for helicopter operations, Zorlu Air shall take account of the following;

(a) An adequate site is a site that Zorlu Air considers to be satisfactory, taking account of the applicable performance requirements and site characteristics (guidance on standards and criteria are contained in ICAO Annex 14 Volume 2 and in the ICAO Heliport Manual (Doc 9261-AN/903)).

(b) Zorlu Air should have in place a procedure for the survey of sites by a competent person. Such a procedure should take account for possible changes to the site characteristics which may have taken place since last surveyed.

(c) Sites that are pre-surveyed should be specifically specified in the operations manual. The operations manual should contain diagrams or/and ground and aerial photographs, and depiction (pictorial) and description of:

(1) The overall dimensions of the site;
(2) Location and height of relevant obstacles to approach and take-off profiles, and in the manoeuvring area;
(3) Approach and take-off flight paths;
(4) Surface condition (blowing dust/snow/sand);
(5) Helicopter types authorised with reference to performance requirements;
(6) Provision of control of third parties on the ground (if applicable);
(7) Procedure for activating site with land owner or controlling authority;
(8) Other useful information, for example appropriate ATS agency and frequency; and
(9) Lighting (if applicable).

3.1. Zorluteks Heliport/LÜLEBURGAZ

Zorluteks Heliport/LÜLEBURGAZ	
	
HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Surface Level Heliport
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	Circle of Diameter; 18 m
Touchdown and lift-off area (TLOF)	H in yellow circle; 14 m
Final approach Direction	360-180
Safety Area	5 m.
Windsock	Over building
Heliport Obstacles	Factory Buildings around approach directions.
Fire Fighting	H2
Heliport reference point	41° 16.76'N - 027° 35.07'E
Surface Condition	Concrete
Direction and distance from (city)	12 nm SE of City
Elevation	327 ft.
Heliport Administration, address, telephone, telefax, telex, AFS	Büyükkarıştıran Kasabası, Tayyare Meydanı Mevkii Lüleburgaz – Kırklareli Tel; 0288 427 30 00, info@zorlutekstil.com.tr

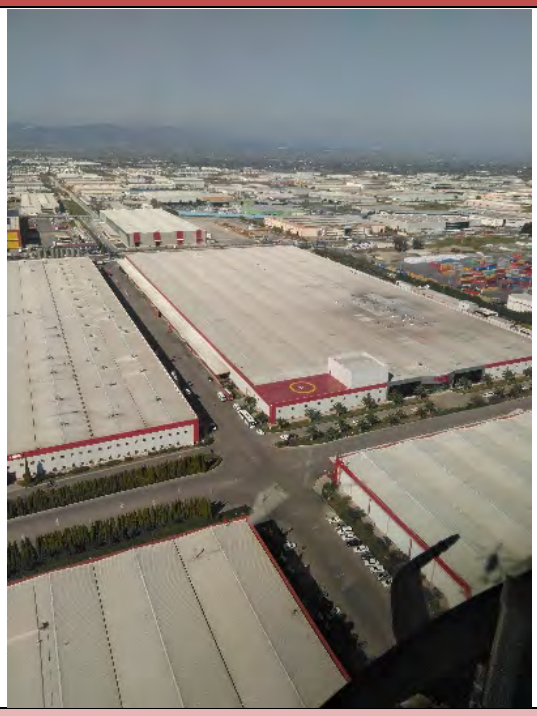
Types of traffic permitted (IFR/VFR)	VFR Day
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	N/A
Handling	SR/SS
Security	SR/SS
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	- Only two-way approach, - Operations shall be performed by helicopters having performance OGE

3.2. Korteks Heliport/BURSA

KORTEKS Heliport /BURSA	
	
HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Elevated Heliports
Heliport reference point	40° 14.12'N – 028° 57.67'E
Elevation	270 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	50 X 45 m
Touchdown and lift-off area (TLOF)	**H** in yellow circle; 12 m
Final approach Direction	All Directions
Safety Area	N/A
Windsock	Over Hangar
Heliport Obstacles	Hangar Building
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	3 nm NW of City
Heliport Administration, address, telephone, telefax, telex, AFS	Korteks İplik Organize Sanayi Bölgesi Sarı Cad. No:3 Bursa – TÜRKİYE +90 (224) 219 11 00
Types of traffic permitted (IFR/VFR)	VFR Day

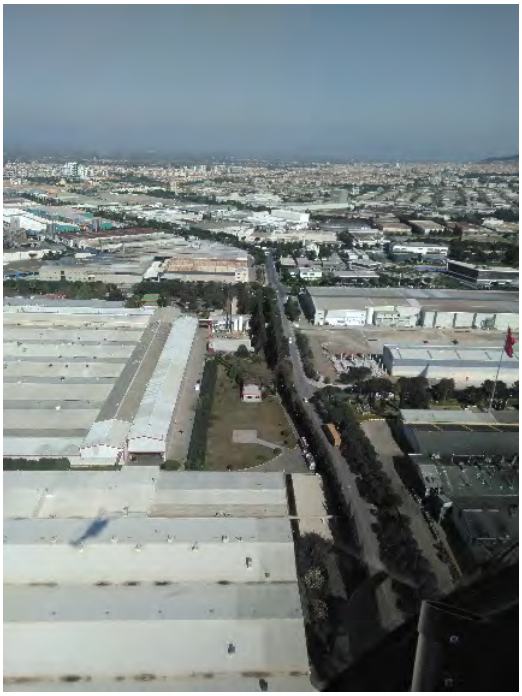
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	Available
Handling	SR/SS
Security	H24
Hangar space for visiting helicopter	20 X 15 m
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE

3.3. Vestel High-End Heliport/MANİSA

Vestel High-End Heliport /MANİSA	
	
HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Elevated Heliport
Heliport reference point	38° 37.45'N – 027° 20.60'E
Elevation	240 ft.
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	39 X 20 m
Touchdown and lift-off area (TLOF)	**H** in yellow circle; 12 m
Final approach Direction	045-135 Degrees.
Safety Area	N/A
Windsock	Over Factory next to FATO
Heliport Obstacles	Hangar Building
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	3,5 nm W of City
Heliport Administration, address, telephone, telefax, telex, AFS	Vestel High End Factory Ahmet Tütüncüoğlu Cd., 45030 Keçiliköy Osb/Manisa Merkez/Manisa

	Tel;+90 236 233 01 31
Types of traffic permitted (IFR/VFR)	VFR Day
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	Available
Handling	SR/SS
Security	SR/SS
Hangar space for visiting helicopter	20 X 20 m
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE

3.4. Vestel Elektronik Heliport/MANİSA

Vestel Elektronik Heliport /MANİSA


HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Surface level Heliport (Confined Area)
Heliport reference point	38° 37.01'N – 027° 21.67'E
Elevation	320 ft.
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	10 X 10 m
Touchdown and lift-off area (TLOF)	**H** in yellow circle; 10 m
Final approach Direction	All Direction
Safety Area	All Direction 5 m, Grass Area
Windsock	Over Factory next to FATO
Heliport Obstacles	Buildings and trees
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	3,5 nm W of City
Heliport Administration, address, telephone, telefax, telex, AFS	Vestel Electronic Factory 45030 Keçiliköy Osb/Manisa Merkez

	Tel;+90 236 233 01 31
Types of traffic permitted (IFR/VFR)	VFR Day
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	Available
Handling	SR/SS
Security	H24
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE

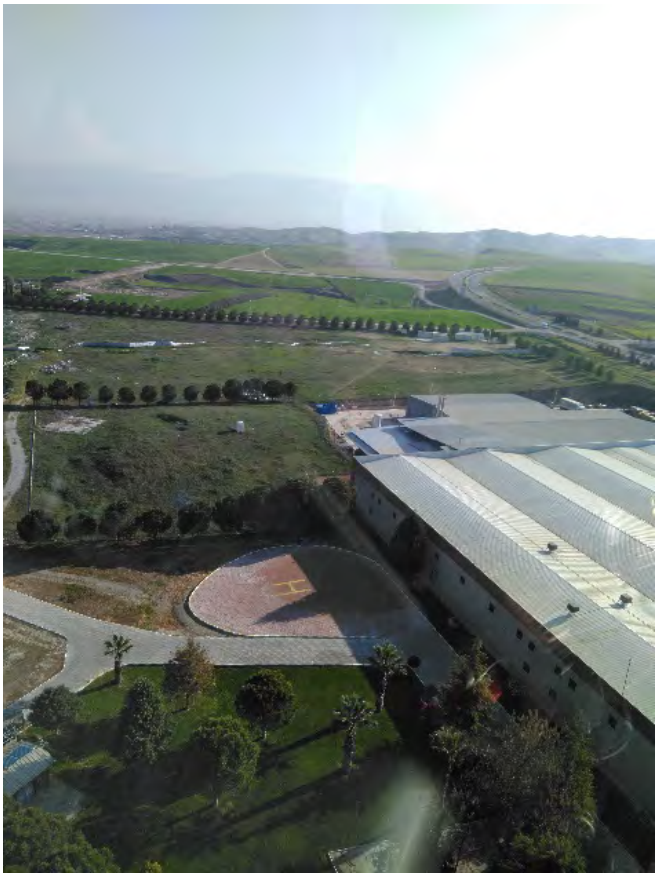
3.5. Meta Nikel Kobalt Heliport/Gördes-MANİSA

Meta Nikel Heliport /Gördes - MANİSA

HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Surface level Heliport
Heliport reference point	39° 01.07'N – 028° 09.26'E
Elevation	3772 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	20X20 m
Touchdown and lift-off area (TLOF)	Only **H**
Final approach Direction	All Directions
Safety Area	5 m
Windsock	There is a big flag pole N of FATO
Heliport Obstacles	- Big flag pole North of FATO - Building Easth of FATO
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	43 nm NE of Manisa
Heliport Administration, address, telephone, telefax, telex, AFS	Kabakoz Köyü Mevkii Gördes / MANİSA Tel: +90 236 226 70 00

Types of traffic permitted (IFR/VFR)	VFR Day
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	N/A
Handling	SR/SS
Security	H24
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE

3.6. Zorlu Hometeks Heliport/DENİZLİ

Zorlu Hometeks Heliport / DENİZLİ	
	
HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Surface level Heliport
Heliport reference point	37° 52.58'N – 029° 1.064'E
Elevation	660 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	32 X 26 m
Touchdown and lift-off area (TLOF)	Only **H**
Final approach Direction	One way approach (125 Degree)
Safety Area	30 meters backside of FATO
Windsock	Over building
Heliport Obstacles	- Factory Building at approach direction. - Trees around the FATO

Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	7 nm NW of City
Heliport Administration, address, telephone, telefax, telex, AFS	Zorlu Hometeks Kumkısık mah, Menderes Blv. No:312, 20060 Merkezefendi/Denizli, Tel;+90 258 382 81 00
Types of traffic permitted (IFR/VFR)	VFR Day
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	Available
Handling	SR/SS
Security	H24
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	- Only one way approach, - Operations shall be performed by helicopters having performance OGE

3.7. Kızıldere Enerji Heliport/DENİZLİ

Kızıldere Enerji Heliport / DENİZLİ

HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Surface level Heliport
Heliport reference point	37° 57.350'N – 028° 50.504'E
Elevation	610 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	Circle of Diameter; 20 m
Touchdown and lift-off area (TLOF)	Only **H**
Final approach Direction	One way approach (210 Degree)
Safety Area	5 meters
Windsock	Over building NW of FATO
Heliport Obstacles	- Electric power lines and poles on final approach segment. - Trees and buildings around the FATO
Fire Fighting	H2
Surface Condition	Concrete
Direction and distance from (city)	15 nm NW of City

Heliport Administration, address, telephone, telefax, telex, AFS	Zorlu Enerji Tel;+90 530 5003325
Types of traffic permitted (IFR/VFR)	VFR Day
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	N/A
Handling	SR/SS
Security	H24
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	- Only one way approach, - Operations shall be performed by helicopters having performance OGE

3.8. Zeytinada Heliport/Göcek-MUĞLA

Zeytinada Heliport /Göcek-MUĞLA

HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA	
Types of Heliport	Elevated Heliport
Heliport reference point	36° 41.97'N – 028° 55.45'E
Elevation	15 ft
Final approach and take-off markings	FATO, TLOF
Final approach and take-off area (FATO)	Circle of Diameter; 12 m
Touchdown and lift-off area (TLOF)	Only **H**
Final approach Direction	195-015 Degrees
Safety Area	N/A
Windsock	Over hill east of FATO
Heliport Obstacles	Upward Hill East of FATO
Fire Fighting	H1
Surface Condition	Concrete
Direction and distance from (city)	3,5 nm South of Göcek
Heliport Administration, address, telephone, telefax, telex, AFS	Zeytinada Göcek/MUĞLA +90 532 507 9626

Types of traffic permitted (IFR/VFR)	VFR Day
OPERATIONAL HOURS	
Heliport Administration	SR/SS
Fueling	N/A
Handling	SR/SS
Security	SR/SS
Hangar space for visiting helicopter	N/A
Repair facilities for visiting helicopter	N/A
Remarks	Operations shall be performed by helicopters having performance OGE