International Association of Oil & Gas Producers

REPORT 697 | APRIL 2025

Offshore helidecks and facilities

Acknowledgements

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About

Report 697 – *Offshore Helidecks and facilities* provides recommended practices that will assist in the safe and effective management of offshore commercial helicopter operations by ensuring that helidecks on offshore facilities are built to an approved design and maintained and operated in a safe manner.

Feedback

IOGP welcomes feedback on our reports: publications@iogp.org

REPORT
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APRIL
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Offshore helidecks and facilities

Revision history

VERSION	DATE	AMENDMENTS
1.0	June 2023	First release
1.1	November 2023	Addition of Section 9 and Appendix A
1.2	April 2025	Numerous changes based on implementation feedback; see Introduction for details

Contents

Introduction

This Report forms part of IOGP's Oil and Gas Aviation Recommended Practices (OGARP). The OGARP, developed in collaboration between oil and gas companies, aviation industry associations, and aircraft operators, provides a framework for effective management of key material risks to the safety of personnel. Please see IOGP Report 69X – *Oil and Gas Aviation Recommended Practices Overview* for a full description of the OGARP series and its implementation in the industry.

This Report, covering the operation of offshore commercial helicopter operations, covers five subject areas: design, maintenance, operations, personnel and contracting. These are further divided into sections covering the main activities associated with the delivery of aviation services to include technical elements. Each element is presented with a Title, Purpose, Expectations, and Recommended Processes and Practices. A "responsible party" for each element is identified either as "Company", meaning the entity which engages the services of an aircraft operator, or "Contractor" which may be the aircraft operator, airfield, heliport, vessel or rig operator or other subcontracted party, such as a provider of ground support services.

Summary of significant changes

IOGP Report 697 – *Offshore Helidecks and Facilities* V1.2 differs from the previous version of Report 697.

Key differences include:

- Helideck inspection reports to be retained by the owner of the installation.
- Greater detail on the positioning and orientation of helidecks.
- A recommendation that helideck cameras are able to be viewed remotely from control rooms/radio rooms/bridges.
- A recommendation that modifications to helidecks are made to the latest requirements.
- A recommendation that weather information for NUIs may be provided by suitably equipped installations if they are within 10 miles of the installation.
- A recommendation that passenger baggage is confirmed not to contain prohibited items.
- Safety briefings are conducted in the primary language of the region and in dual languages where necessary.
- A recommendation that recurrent training includes participation in helideck ERPs.
- A recommendation that cargo manifests identify Dangerous Goods.
- Corrections to the recommended sizes of lettering on helidecks and maximum height of equipment on the helideck at the Sizes/Dimensions Diagrams in Appendix A.
- V1.2 textual content changes compared to V1.1 have been marked with a vertical bar on the left side.
- Editorial (minor) amendments are not marked.

1. General

1A. Purpose

Ensuring that helidecks are built to an approved design and maintained and operated in a safe manner.

1B. Expectations

The helideck owner/operator and the aircraft operator agree to work together in accordance with documented and approved procedures.

1C. Processes and practices

1C.1 All appropriate organizational and National Aviation Authority (NAA) approvals and certificates are in place.

1C.2 Company appointed competent persons are accountable for the helideck and associated equipment design, maintenance, and safe operation (including the appointment of Offshore Installation Managers (OIMs), Helicopter Landing Officers (HLOs), and emergency response team members).

1C.3 Where applicable, the helidecks are approved and/or registered with the country of operation NAA or other recognized authority.

1C.3.1 If there is no national/local approval process in place, the Company has an approval process in place.

1C.4 The Company and helicopter operator conducts the initial and periodic approvals for fixed platform and vessel helidecks.

1C.4.1 See Appendix A – Offshore Helideck Review Checklist

1C.4.2 Inspection/acceptance reports are retained by the installation owner for the life of the installation.

1C.5 A process is in place to report to the contract holder (if applicable) and helicopter operator, or appropriate NAA, any incident or unsafe condition regarding the helideck or associated installation.

1C.5.1 Reports are submitted in accordance with Company or NAA requirements.

Guidance Documents

- ICAO Annex 14, Aerodromes Volume I, Aerodrome Design and Operations.
- ICAO Annex 14, Aerodromes, Volume II, Heliports.
- ICAO Heliport Manual DOC 9261.
- International Chamber of Shipping (ICS) Guide to Helicopter/Ship Operations
- ISO 19901-3, Petroleum and Natural Gas Industries. Specific requirements for offshore structures - Topsides structure

- IMO MODU CODE, Construction and equipment of Mobile offshore drilling units.
- ICAO Annex 18,"Safe Transportation of Dangerous Goods by Air".
- IATA Dangerous Goods Regulations Manual.
- IOGP Report 322 – *Offshore Helideck Checklist*
- Regulatory/industry requirements specific to the region/country of operation that are a legal or contract requirement, such as:
  - UK CAP 437, Standards for offshore helicopter landing areas
  - HSAC RP 161, New Build Helideck Design Guidelines
  - HSAC RP 163, Inspection, Maintenance and Operation of Offshore Helidecks
  - JIG Standard 1.2 and 4 and EI JIG Standard 1530 for Aviation Fuel installations
  - OPITO HLO/HDA/HERTL/HERTM/Aircraft Refueller Training Syllabus
  - HeliOffshore Master Minimum Helideck Equipment List

2. Design

2A. Purpose

Ensuring that helidecks are in the appropriate location and of the correct size and mass for safe helicopter operations.

2B. Expectations

Helidecks will be designed to accommodate the largest helicopter anticipated for use during the design of the structure.

2C. Processes and practices

2C.1 As a minimum, a helideck is built in accordance with ICAO Annex 14 Vol II and applicable NAA requirements for the country of operation.

2C.2 Helidecks are sufficient in size (D value) and load bearing (T value) to accommodate the MTOM and rotor diameter of the largest helicopter using the landing area for single helicopter operations.

2C.3 New build (any helideck designed for construction post publication of any applicable regulations) helidecks conform to ICAO Annex 14 Vol II, unless regional NAA guidance provides for variances.

2C.4 Where a parking or run off area is included in the installation design, this area and any transition area towards it, will accommodate the D value and T value of the largest/heaviest helicopter using the helideck.

2C.5 Helideck location on an installation will be sufficient to provide a clear 210° obstacle free and 180° falling gradient sector for helicopter approach, landing, and take-off.

2C.6 Helideck orientation is determined by reviewing the platform configuration, equipment arrangement, and prevailing wind direction with the objective of orientating the helideck such that the helicopters can take-off and land into prevailing winds.

- 2C.6.1 Where applicable, helidecks are positioned such that gas discharge booms have the least impact on helicopter operations.
- 2C.6.2 The impact of environmental effects (turbulence/thermal effects/chemical emissions) induced by surrounding structures, power plant and hydrocarbon emissions are assessed using Computational Fluid Dynamics (CFD) methodology, including wind tunnel testing, during the design phase, to provide optimum conditions for safe helicopter operations.

2C.7 The marking and lighting of the helideck will be in accordance with ICAO Annex 14 Vol II unless regional NAA regulations are more restrictive.

2C.8 Helideck installations are equipped with a means to provide present weather information.

2C.9 Mobile/vessel/floating helidecks are equipped with a Helideck Motion System (HMS) that provides the following:

- Helideck inclination
- Pitch, Roll, and Heave (PRH)
- Significant Heave Rate (SHR) information
- Significant Wave Height

2C.10 Helideck rescue equipment and firefighting facilities, including portable fire extinguishers, are installed and maintained in accordance with manufacturer's instructions.

2C.11 There are a minimum of two access/egress routes to/from the helideck to provide alternative options of escape should one exit be blocked.

2C.11.1 When collapsible handrails are installed at egress points, they do not block the stairs when stowed.

2C.12 Helidecks on fixed and mobile platforms/vessels have a minimum surface friction coefficient accepted by the NAA. Where there is no local requirement, the values stated in ICAO Annex 14 Vol II apply.

2C.13 Helidecks have adequate surface drainage to include a means to capture any release of firefighting foam or aviation fuel to prevent environmental impact or hazards to below decks of platform/vessel.

2C.14 Manned helideck installations have a recordable aeronautical communication and navigation system installed that provides present position/location.

2C.14.1 Communications recording systems are capable of recording for 24 hours and data is retained for a minimum of 48 hours or in accordance with NAA requirements.

2C.15 Helicopter refuelling systems, where installed, adhere to NAA and national regulatory requirements as a minimum. (See further details in Guidance Documents)

2C.16 Helidecks are equipped with helideck facing recordable cameras enabled for live view from remote areas including control rooms/radio rooms/bridges.

2C.16.1 Video recording systems are capable of recording for 24 hours and data is retained for a minimum of 48 hours or in accordance with NAA requirements.

2C.17 A dedicated passenger handling area is provided that includes:

2C.17.1 A suitable passenger holding area that separates inbound and outbound passengers, baggage, and cargo.

2C.17.2 A designated area for the passenger and freight check-in process and security checks, that is, for weighing and manifesting all outgoing passengers, baggage, and freight on calibrated scales. Once baggage is weighed, it is separated to prevent passenger access.

2C.17.3 A dedicated area for passenger video safety briefing, security/baggage checks and donning of safety equipment/PPE.

2C.17.3.1 This includes a designated area for the display of written and graphic information related to aircraft safety and local procedures.

2C.18 The hazards identified in Section 6 of this document are considered in the design phase.

Guidance Documents

- ICAO Annex 14, Aerodromes Volume I, Aerodrome Design and Operations.
- ICAO Annex 14, Aerodromes, Volume II, Heliports.
- ICAO Heliport Manual DOC 9261
- International Chamber of Shipping (ICS) Guide to Helicopter/Ship Operations
- ISO 19901-3 Petroleum and Natural Gas Industries. Specific requirements for offshore structures - Topsides structure
- IMO MODU CODE, Construction and equipment of Mobile offshore drilling units.
- IOGP Report 322 - *Offshore Helideck Checklist*
- Regulatory requirements specific to the region/country of operation that are a legal requirement, such as:
  - UK CAP 437, Standards for offshore helicopter landing areas
  - HSAC RP 161, Helideck Design
  - JIG Standard 1.2 and 4 and EI JIG Standard 1530 for Aviation Fuel installations

3. Design review

3A. Purpose

Ensuring that qualified experts have reviewed the design plans for proposed helidecks and modifications to legacy helidecks and associated facilities (including fuel supply systems).

3B. Expectations

All aspects of heliports, offshore helidecks, and facilities used for offshore helicopter operations, including structural integrity, meteorological equipment, fire and rescue protection/equipment and emergency evacuation, aircraft refuelling systems, passenger/baggage/freight handling, and security are verified fit for purpose and compliant with regulations and industry standards.

3C. Processes and Practices

3C.1 A Company's designated aviation advisor and/or technical authority for air transport will participate in all preliminary and critical design reviews for the construction or modification of the Company's airfields, heliports, helidecks, and supporting facilities used for offshore helicopter operations.

3C.2 This participation includes other levels of expertise as appropriate to ensure operational and safety considerations are identified and addressed at the design stage.

3C.3 Modifications to existing helidecks comply with the latest requirements.

Guidance Documents

- ICAO Annex 14, Aerodromes Volume I, Aerodrome Design and Operations.
- ICAO Annex 14, Aerodromes, Volume II, Heliports.
- ICAO Heliport Manual DOC 9261.
- International Chamber of Shipping (ICS) Guide to Helicopter/Ship Operations
- IMO MODU CODE, Construction and equipment of Mobile offshore drilling units.
- IOGP Report 322 - *Offshore Helideck Checklist*
- Regulatory requirements specific to the region/country of operation that are a legal requirement, such as:
  - UK CAP 437, Standards for offshore helicopter landing areas
  - HSAC RP 161, Helideck Design
  - JIG Standard 1.2 and 4 and EI JIG Standard 1530 for Aviation Fuel installations

4. Maintenance

4A. Purpose

Ensuring helideck/helideck equipment installed is inspected and maintained in accordance with an approved maintenance programme.

4B. Expectations

There is an approved helideck and associated equipment maintenance and inspection programme in place.

4C. Processes and practices

4C.1 An inventory of equipment installed or located on the helideck is available and includes clearly defined maintenance, inspection, testing and calibration intervals.

4C.2 A maintenance programme is in place that includes inspection, calibration, and replacement of critical components (such as fuel filters) according to the specific manufacturer's published procedures or NAA requirements.

4C.3 All installed navigation aids contain aeronautical navigation frequencies that are provided by the country of operations' NAA or authorized communications agency.

4C.4 Specialist equipment such as fuel systems, navigation aids, etc., are inspected and maintained in accordance with OEM specifications and by Company approved vendors.

4C.5 Operating instructions are available for complex systems/equipment, i.e., fuel system, HMS.

4C.6 Helidecks and supporting facilities used for offshore helicopter operations, (fuel systems, hangars, fire suppression, passenger handling areas, etc.) are subject to periodic (minimum of annual, unless alternative approved by the NAA) safety, operational and quality assurance reviews by the appropriate NAA or a qualified Aviation Advisor and by the helicopter operator.

4C.7 Periodic reviews and inspections are conducted by a structural engineer to assure that the structural integrity of the helideck on offshore facilities and vessels remains within design limitations in accordance with NAA requirements.

4C.8 A process is in place to notify the contract holder (if applicable) and helicopter operator of unserviceable helideck equipment.

Guidance Documents

- ICAO Heliport Manual DOC 9261.
- IOGP Report 322 - Offshore Helideck Checklist
- Regulatory requirements specific to the region/country of operation that are a legal requirement, such as:
  - UK CAP 437, Standards for offshore helicopter landing areas
  - HSAC RP 163, Inspection Maintenance and Operation of Offshore Helidecks
  - JIG Standard 1.2 and 4 and EI JIG Standard 1530 for Aviation Fuel installations
  - HeliOffshore Master Minimum Helideck Equipment List (MMHEL)

Appendix 3. IOGP Report 697, Section 5 and additional items to Annex A.

5. Operations - process

5A. Purpose

Ensuring technical and operational information is available for all helideck team members and other staff in support of helicopter operations.

5B. Expectations

Helideck operational procedures, hazards, emergency response capability etc. specific to the installation are documented in a local procedures manual.

5C. Processes and practices

5C.1 Helideck operations processes and practices are documented in a controlled manual relevant to the installation/vessel to include operational hazard and risk management processes.

5C.2 The helideck operator provides the aircraft operator with weather and deck condition reports (including possible hazards) from offshore locations pre-flight and on approach.

5C.2.1 Personnel trained as competent aviation weather observers using Automated Weather Observing Systems (AWOS) e.g. offshore installed AUTOMETARS and regional meteorological forecasting systems, or AWOS, are used to provide weather information.

5C.2.1.1 Wind speed and direction.
5C.2.1.2 Barometric pressure.
5C.2.1.3 Air temperature and dew point temperature.
5C.2.1.4 Visibility.
5C.2.1.5 Cloud base.
5C.2.1.6 Present weather
5C.2.1.7 Sea state

5C.2.2 All reporting equipment is maintained and calibrated in accordance with original equipment manufacturer's instructions and the results recorded in a register.

5C.2.3 HMS is monitored during helicopter approach, landing and take-off.

5C.2.4 The 210° obstacle free sector and the 180° 5:1 falling gradient sector/500m zone are free from vessels.

5C.2.5 Deviations from established helideck operational requirements or abnormal situations are recorded on the weather and deck condition report.

5C.2.6 For Normally Unoccupied Installations (NUIs) that are satellite installations within 10 miles of a manned facility equipped with an AWOS, no dedicated weather measuring equipment is required, provided that weather patterns do not generally differ from the manned installation.

5C.2.7 Where weather information is provided by NUIs, the weather report includes as a minimum: wind speed and direction, barometric pressure, air temperature and dew point.

5C.3 The helideck operator has a dedicated radio channel to communicate with helicopter flight crew.

5C.4 The helicopter crew are notified immediately by radio if any of the following occurs:

5C.4.1 The vessel heading deviates by 10° or more.

Appendix 3. IOGP Report 697, Section 5 and additional items to Annex A.

5C.4.2 There is a vessel/installation or station keeping/handling problem.
5C.4.3 Helideck Motion exceeds the limits in the Helideck Certification Agency's Helideck Limitations List Part C or other national limits.
5C.4.4 There is a significant change in the relative wind of 30° or more.
5C.4.5 The monitoring equipment indicates a red deck.
5C.4.6 There is any other abnormal event.

5C.5 During helicopter operations, crane jibs, A frames etc in the vicinity of the helideck are stowed in a safe position clear of the obstacle protected surfaces and flight paths.

5C.6 A passenger check-in process is established to include the following:

5C.6.1 Verification that passengers are fit to travel.
5C.6.2 Checks to prevent passengers under the influence of alcohol or non-prescription drugs from boarding any aircraft.
5C.6.3 Pre-flight briefings, including details of the aircraft in use, and any operator specific requirements, including the carriage of Portable Electronic Devices (PED)s.

5C.6.3.1 Safety briefings are conducted in the primary language specific to the region and bilingually where necessary.

5C.6.4 Verification that passengers are trained and equipped with appropriate Personal Protective Equipment (PPE) for the offshore environment.
5C.6.5 The assignment of seats, no more than one seat away from a push out window or emergency exit and in line with the Extra Broad (XBR) process.
5C.6.6 Confirmation that passenger baggage does not contain prohibited items, including dangerous goods.

5C.6.7 Confirmation that PEDs are carried in accordance with a policy agreed between the Company and the aircraft operator.

5C.7 A passenger and cargo manifest is raised for each flight.

5C.7.1 Actual weights are used for passengers, baggage, and cargo.

5C.7.2 Dangerous goods are identified.

5C.8 Passengers, baggage, and cargo are properly controlled on helidecks

5C.8.1 A baggage handling process for incoming/outgoing passengers is available.

5C.8.2 When a helicopter's anti-collision beacon is operating, the helideck remains clear of all personnel.

5C.9 The helideck operator has an appropriate dangerous goods programme in place.

5C.9.1 The helideck operator has a process in place to notify helicopter crew of dangerous goods shipments.

5C.10 The installation or vessel has an ERP that covers helideck/helicopter emergencies.

5C.10.1 An ERP interface is in place between the helideck operator and the helicopter operator.

5C.10.2 Drills are conducted to test emergency response capability.

5C.11 Helideck lighting and associated warning systems (status/wave off/repeater lights) are energised/armed prior to helicopter operations.

5C.12 Helidecks and surrounding areas are marked/sign posted for helicopter hazards, to include downdraft impact.

Appendix 3. IOGP Report 697, Section 5 and additional items to Annex A.

5C.13 Pre- and post-flight checks are performed on the helideck and surrounding areas impacted by rotor downdraft. Such areas are to be free from FOD, with no unusual evidence of fluid/oil leakage/spill from helicopter on departure.

Guidance Documents

- ICAO Heliport Manual DOC 9261.
- https://www.stepchangeinsafety.net/workgroups/helicopter-safety/
- IOGP Report 322 - Offshore Helideck Checklist
- Step Change for Safety XBR Process
- Regulatory requirements specific to the region/country of operation that are a legal requirement, such as:
  - UK CAP 437, Standards for offshore helicopter landing areas
  - HSAC RP 163, Inspection Maintenance and Operation of Offshore Helidecks
  - ICAO/IATA Dangerous Goods
  - HeliOffshore Master Minimum Helideck Equipment List (MMHEL)
  - HCA HLL Part C

6. Operations - hazards

6A. Purpose

Providing details for operating or closing helidecks in response to particular hazards.

6B. Expectations

Documented risk assessments and operational procedures are in place to warn and react to hazards to helicopter operations at offshore facilities.

6C. Processes and practices

6C.1 Procedures are in place for hazards such as, but not exclusively for, the following:

- 6C.1.1 Night operations.
- 6C.1.2 Crane - helicopter operational procedures.
- 6C.1.3 Simultaneous operations:
  - 6C.1.3.1 Tanker/Flotel coupled.
  - 6C.1.3.2 Helicopter parked in designated parking area.
- 6C.1.4 Perforating operations.
- 6C.1.5 Gas venting/Cold Flaring.
- 6C.1.6 Hydrogen Sulphide gas (if applicable for the area).
- 6C.1.7 Bird activity.
- 6C.1.8 Helideck operational hazard(s) warning procedure for equipment unserviceability.
- 6C.1.9 Adverse weather on helideck. Excessive wind over helidecks prohibiting personnel movement to and from the helicopter.
- 6C.1.10 Helicopter in "Aircraft On Ground" (AOG) condition on helideck.
- 6C.1.11 Helicopter ditching in close proximity to the helideck.

6C.2 Risk assessments are in place for identified hazards that determine any mitigating measures and reduce the overall risk to ALARP.

Guidance Documents

- ICAO Annex 14, Aerodromes Volume I, Aerodrome Design and Operations
- ICAO Annex 14, Aerodromes, Volume II, Heliports
- ICAO Heliport Manual DOC 9261
- International Chamber of Shipping (ICS) Guide to Helicopter/Ship Operations
- IMO MODU CODE, Construction and equipment of Mobile offshore drilling units
- IOGP Report 322 - *Offshore Helideck Checklist*

- Regulatory requirements specific to the region/country of operation that are a legal requirement, such as:
  - UK CAP 437, Standards for offshore helicopter landing areas
  - HSAC RP 161, Helideck Design
  - HSAC RP 163, Inspection Maintenance and Operation of Offshore Helidecks

7. Operations – aviation fuel

7A. Purpose

Ensuring that fuel suppled from helideck fuel facilities is fit for purpose and not contaminated with debris/water.

7B. Expectations

Fuel facilities are inspected and fuel is sampled and tested on a regular basis.

7C. Processes and Practices

7C.1 Records are retained of transit fuel tanks supplied from onshore, supported by inspection/ fuel quality certificates of conformity, that clearly indicate the quantity supplied.

7C.2 Sampling is conducted of transit and static tanks on a daily basis and when fuel transfers occur, and records retained at the offshore facility.

7C.3 The helideck operator has an established risk assessment and procedure for helicopter refuelling/Rotors Running Refuelling (RRF) if applicable.

7C.4 A process for recording helicopter fuel uplift is in place.

Guidance Documents

- ICAO Heliport Manual DOC 9261.
- IOGP Report 322 - Offshore Helideck Checklist
- Regulatory requirements specific to the region/country of operation that are a legal requirement, such as:
  - UK CAP 437, Standards for offshore helicopter landing areas
  - HSAC RP 161, Helideck Design
  - HSAC RP 163, Inspection Maintenance and Operation of Offshore Helidecks
  - JIG Standard 1.2 and 4 and EI JIG Standard 1530 for Aviation Fuel installations
  - HeliOffshore Master Minimum Helideck Equipment List (MMHEL)

8. Personnel - training

1A. Purpose

Ensuring competent personnel are available to manage safe offshore helicopter operations.

1B. Expectations

Nominated personnel are trained and provided in sufficient numbers to manage offshore helicopter/helideck operations safely.

8C. Processes and practices

8C.1 All personnel engaged in helideck operations, helicopter ground operations, helicopter and helideck firefighting, radio communications, passenger/baggage/freight handling, weather observation, aircraft refuelling, and helideck inspection require:

- 8C.1.1 Initial training
- 8C.1.2 Recurrent training, including participation in ERP drills as detailed at 5C.10
- 8C.1.3 Workplace competency assessment
- 8C.1.4 Language proficiency required by the NAA in the country of operation for personnel using radio communication

8C.2 Training is provided in accordance with the OPITO standard or nationally/company approved equivalent.

8C.3 Personnel roles and responsibilities are documented.

8C.4 Roles can include, but are not limited to the following:

- 8C.4.1 Helicopter Landing Officer (HLO)
- 8C.4.2 Helideck Emergency Response Team Leader (HERTL)
- 8C.4.3 Helideck Assistant (HDA)
- 8C.4.4 Helideck Emergency Response Team Member (HERTM)
- 8C.4.5 Helicopter Administration
- 8C.4.6 Passenger / Baggage / Freight Handler
- 8C.4.7 Carriage of Dangerous Goods by Air Inspector/Shipper
- 8C.4.8 Radio Operator
- 8C.4.9 Weather Observer
- 8C.4.10 Aircraft Refueller

8C.5 Roles and numbers of personnel are assigned, as applicable to NAA regulations and the specific helideck operation/installation/emergency response capability.

- 8C.5.1 Helidecks crew composition includes a dedicated HLO/HERTL as team lead and additional HDAs according to the Fire Fighting System (FFS) design (Deck Integrated Fire Fighting System (DIFFS) or basic FFS) during helicopter

operations, plus a dedicated HERT to control installation specific FFS.

8C.6 Personnel involved in passenger/baggage/freight handling are trained in dangerous goods by air awareness.

8C.7 Helicopter administration staff are trained to recognize the signs of substance abuse and alert their management for appropriate action to remove the passenger from the flight.

8C.8 Helicopter administration staff and helideck personnel are aware of helicopter types/seat configurations in operation.

Guidance Documents

- OPITO HLO/HDA/HERTL/HERTM/Aircraft Refueller Training Syllabus.
- ICAO Annex 14, Aerodromes Volume I, Aerodrome Design and Operations.
- ICAO Annex 14, Aerodromes, Volume II, Heliports.
- ICAO Heliport Manual DOC 9261.
- International Chamber of Shipping (ICS) Guide to Helicopter/Ship Operations
- IMO MODU CODE. Construction and equipment of Mobile offshore drilling units.
- ICAO/IATA Dangerous Goods
- IOGP Report 322 - Offshore Helideck Checklist
- Regulatory/industry requirements specific to the region/country of operation that are a legal or contract requirement, such as:
  - UK CAP 437, Standards for offshore helicopter landing areas
  - HSAC RP 161, Helideck Design
  - HSAC RP 163, Inspection Maintenance and Operation of Offshore Helidecks
  - JIG Standard 1.2 and 4 and EI JIG Standard 1530 for Aviation Fuel installations
  - OPITO HLO/HDA/HERTL/HERTM/Aircraft Refueller Training Syllabus
  - HeliOffshore Master Minimum Helideck Equipment List

9. Contract interface – helideck facilities and associated systems

9A. Purpose

Ensuring that the responsibility for the helideck and all associated systems is assigned and managed for the duration of aviation operations.

9B. Expectations

Helideck facility owners/operators and helicopter operators are accountable for the effective management of the helideck.

9C. Processes and Practices

9.C1 For all contracts, the helideck facility owner/operator and the helicopter operator[1] ensure that the requirements of Table 1 below are applied.

Table 1: Contractual responsibilities

	Facility owner/operator ensures conformance with the following clauses of IOGP Report 697	Helicopter operator ensures conformance with the following clauses of IOGP Report 697
1. General	1C.1 through 1C.5	1C.4 and 1C.5
2. Design	2C.1 through 2C.18	2C.6
3. Design Review	3C.1 and 3C.2	3C.2 for new helidecks only
4. Maintenance	4C.1 through 4C.9	4C.6 and 4C.9
5. Operations - Process	5C.1 through 5C.13	5C.2 through 5C.13
6. Operations - Hazards	6C.1 through 6C.2	6C.1 through 6C.2 as related to 5C.10
7. Operations – Aviation Fuel	7C.1 through 7C.4	7C.1 through 7C.4 if fuel system(s) are owned and/or managed by helicopter operator
8. Personnel Training	8C.1 through 8C.8	8C.1 through 8C.8 if personnel are provided by the helicopter operator

[1] Helideck owner/operator – the platform or vessel hired through a third-party contract, or the platform or vessel organization employed as part of the Company.
Helicopter operator – the helicopter company hired through a third-party contract, or the helicopter organization employed as part of the Company.

Appendix A - Offshore helideck review checklist

Introduction

This helideck inspection checklist provides inspection personnel with basic criteria to follow to establish if operational helidecks are conformant with industry requirements for safe operations. The checklist is not intended to override any specific regulation required by the country of operation and should be adapted to reflect regional requirements.

Originally published in 2011, with a revision in 2019, this tool has been updated to reflect the most recent industry guidance, in particular that of ICAO and the most recent version of IOGP Report 697 - *Helidecks & Facilities*, and is now incorporated into IOGP Report 697 as Appendix A.

Siginificant changes in this version are:

- Update of the checklist to introduce new 697 requirement references
- Update of ICAO Annex 14 Vol II Doc 9261 references
- One addition - Item 30 helideck-facing CCTV cameras
- Some editorial changes to numbering
- "Blue text guidance" taken out of the response boxes and added to the questions for ease of use

General information			
Name of facility, installation or vessel			
Owner/operator			
Type (Refer to ICAO Doc 9261 Offshore Heliport Manual Chapter 1)		If other, please describe	
Country of operation			
Regulatory authority			
Approval certificate			
Limitations (Helicopter Landing Limitations Plate)			
Periodic review category or interval		If other, please state periodicity	

Reviewer/inspector	
Review date	
Previous review date	
Signature	

Item	Item description	IOGP - 697	ICAO Annex 14 Vol II Heliport Manual	Reviewer/Inspector comments
General Requirements				
1	Helideck procedures manual *Details of documents, e.g., Helideck procedures, ERP* *Verify content of documents presented cover offshore helicopter operations and passenger handling including radio communications and crane operations. Procedures manual should include, but not be limited to, details of key personnel, minimum manning levels, roles and responsibilities, hazard identification, risk management, incident reporting, self-verification and identification of key areas/equipment requiring inspection at defined intervals.*	5B 5C.1	2.2	
Helideck location, physical characteristics & dimensions (include parking areas)				
2	Size *Confirm helideck size is acceptable for helicopter type operated and approved by the national authority.* *Where Sub 1D or 1.25D, as applicable in country of operation, ire in use, an applicable risk assessment should be verified to be in place and any mitigations noted.*	2C.1 2C.2	3.1 1.4 Table I- 1-1 2.1 3.3 5.5	"D" Value (ft/m)
3	Structural integrity *Confirm helideck structural integrity is acceptable for helicopter type operated, inclusive of any legacy approval (operational safety case) and T value clearly painted and visible on helideck surface.*	2C.2 4C.7	3.1 1.4 Table I-1-1 2.1 5.4	"T" Value (tonnes)

Item	Item description	IOGP - 697	ICAO Annex 14 Vol II Heliport Manual	Reviewer/Inspector comments
4	Hazard considerations within A. Landing area I. 210° OFS II. 150° sector of LOS clear III. 180° falling gradient B. Parking area C. Hazards identified on HLL plate. *Further guidance:* *1) For Shipboard/Tankers heliports the provision of two LOS (2 x 150°) may be considered; refer to ICAO Heliport Manual Sect 4.2 Figure 1. Parking area should have a clear zone equivalent to the LOS.* *2) Performance considerations for a single engine failure after take-off decision point will assume the resulting trajectory to be in the falling gradient range 2:1 to 3:1 should infringements occur a 5:1 gradient should be considered and clearly indicated on approach plate.*	2C.4 2C.5 6C.1	2.1 (e) 3.2.1 4.2	A. Landing area B. Parking area C. Hazards identified on HLL plate
Helideck Surface ICAO Heliport Manual Chapter 3.5				
5	Type & Material of construction *State surface profile/material used for main helideck surface e.g. aluminium. Record if helideck surface profile includes "safedeck" perforated surface.*	2C.3	3.1 3.5	
6	Colour *If main helideck surface painted state principle background colour, e.g., blue, green.*	2C.7	3.1 5.1 8.1.2	
7	Condition of surface / area	5C.13	3.5	
8	Friction resistance a) Fixed helideck 0.6mu Inside TD/PM circle inclusive of circle & H painted markings b) Moving helideck 0.65mu Inside TD/PM circle inclusive of circle & H painted markings c) 0.5mu outside TD/PM *Note: 0.5mu is acceptable for entire surface of installations with a helideck landing net fitted* *Confirm test equipment used is calibrated and stated on certificate.*	2C.12	3.5.4 3.6.4	Fixed helideck Moving helideck 0.5mu outside TC/PM Certification Test date Result

Item	Item description	IOGP - 697	ICAO Annex 14 Vol II Heliport Manual	Reviewer/Inspector comments
9	Landing net (if fitted) A. Type B. Tie down straps every 1.5m C. Conditions / service life remaining *Squares of net should be a maximum of 200mm. Helideck nets are not recommended where skidded helicopters are likely to be used in operations or where DIFFS is fitted.*	2C.12 5C.2.5	3.5	A. Type: Rope or Webbing Interlaced Knotted Threaded B. Tie down straps every 1.5m? C. Conditions
10	Helicopter Tie down points	2C.1	3.5.6 3.6.6	
11	Surface sloped (Gradient 1:100) or perforated to facilitate drainage. All drainage channels clear. *Perform deluge test to confirm, if possible, or verify records of last test completed.*	2C.13	3.5.2 3.6.2	
12	Objects required by function of the helideck i.e. lighting or fire monitors around the perimeter of or on the helideck must not exceed safe operating height limitations. *Enter details of any equipment/ object within the helideck area that exceeds maximum permissible height restrictions. Height restrictions are a) articles around perimeter must not exceed 150mm above the height of the helideck surface for new build installations and 250mm for legacy helidecks and b) helideck integrated surface lights or helideck nets must not exceed 25mm above the helideck surface.*	2C.1	3.5.1 3.6.1	
Helideck Markings & Visual aides ICAO Heliport Manual Chapter 5				
13	Painted or lit helideck zones a) TDM "H" b) OFS (210°/180°/150°) c) Parking area *Enter details of size, condition of visual markings/painted surface and any discrepancies noted, refer to Appendix figures for guidance. Where TDM lighting is attached to helideck surface net, ensure this does not introduce any additional obstacle.*	2C.7	5.1 5.3, 5.7 5.9 8	Painted Lighted Combination

Item	Item description	IOGP - 697	ICAO Annex 14 Vol II Heliport Manual	Reviewer/Inspector comments
14	Windsock *Windsock should be able to rotate freely.* a) Location b) Condition c) Illumination	2C.8	5.2	
15	Prohibited Landing Sector *No nose, Clearly marked and visible to helideck/helicopter crew and relevant sector marked is sized to reflect obstacle that is causing infringement.*	2C.7	5.11	
16	Helideck name and "D" / "T" *Value clearly marked and visible to helideck/helicopter crew.*	2C.7	5.3 5.4 5.7	
17	Cranes / flare tip booms / jack up legs are painted / lit	2C.7 2C.18 6C1.2	5.16	
Lighting ICAO Heliport Manual Chapter 5				
18	General lighting – all working with no dazzle.	2C.7	5.12	
19	a) Flood Lighting b) Perimeter Lighting c) TD Circle / H Lighting	2C.7	5.13 5.14	
20	Obstruction marking / lighting for structures 15m above helideck-all working with no dazzle. a) Crane b) Flare stack / tip *Describe for all high structures, but in particular for a) Crane, b) Flare stack/ tip.*	2C.7	5.16	
21	Status Lights a) Quantity b) Location c) In working order	2C.9 5C.11	8.3.4	 a. b. c.
Helideck Access and Perimeter Safety ICAO Heliport Manual Chapter 3				
22	Perimeter Net a) Material b) Condition *Describe material condition.* *Helideck perimeter net should be fit for purpose, free from obvious visual deterioration/corrosion with anchor points secure and periodic load test in place.*	2C.1 2C.3	3.6.7 3.6.8 3.6.9	Wire mesh Textile net Load Test date Load Test result

Item	Item description	IOGP - 697	ICAO Annex 14 Vol II Heliport Manual	Reviewer/Inspector comments
23	Handrails a) Fixed / foldable / removable b) Painted conspicuously *Note: Foldable type handrails should be positioned not to impede emergency escape routes.*	2C.11.1	3.3.8 3.4.9 3.5.11 3.6.11	Fixed Foldable Removable
24	Safety notices - a)displayed in a prominent location b) indicate direction of exit / entry *Describe, including a & b aspects*	2C.11 5C.12	3.6.10	
Weather Reporting ICAO Heliport Manual Chapter 8.2 & 8.3				
25	Weather system a) Wind speed & direction b) Air temperature & Dew point c) Pressure (QNH/QFE) d) Cloud amount & height e) Visibility f) Present Weather *Describe, including a-f aspects* *Enter details of equipment and calibration / serviceability status inclusive of any back up equipment retained.*	2C.8 4C.1 5C.2	8.2	
26	Helideck Monitoring System Pitch Roll & Heave; a) Traffic light indication b) Inclination (pitch & roll) c) Heave rate (vertical linear motion) *Describe, including a-c aspects* *Enter details of equipment and calibration / serviceability status*	2C.9 5C.2	3.2.5 8.3	
27	Personnel are trained on present weather reporting and evidence available.	8C.1 8C.4.9	2.2.1.5.j 8.2.3	
Communications & Navigational Aids ICAO Heliport Manual Chapter 8.4				
28	Radio telecommunications *Verify call sign is simple, unique and radio equipment is registered with NAA.*	2C.14 5C.3	2.2.1.5.g 5.8.2 8.4	
29	Portable handsets for helideck team *Verify ability for HLO to have two-way communication with helicopter flight crew*	5C.3 5C.4	8.4.1	
30	Helideck-facing CCTV cameras *Cameras should be recordable and capable of data retention.*	2C.16		

Item	Item description	IOGP - 697	ICAO Annex 14 Vol II Heliport Manual	Reviewer/Inspector comments
Turbulence / Downdraft ICAO Heliport Manual Chapter 3				
31	Turbulence factors created by proximity of turbine exhaust stacks or flare. Is there a completed CFD assessment for the installation / vessel? *Enter details of any completed CFD assessment for new build and confirm any known hazard entered on HLL.*	2C.6 2C.18	2.2.1.5.e 3.2.6.2 3.2.6.3 3.2.3 3.2.4	
32	Zones impacted by downdraft are a) clearly identified b) have warnings displayed *Confirm zones identified and any aspects of concern.*	5C.12	3.2.6 3.4.4 4.1.9	
FOD / Bird Control ICAO Heliport Manual Chapter 8.6				
33	Precautions in place to prevent loose articles in vicinity of helideck during helicopter operations.	5C.13	2.1.4.3	
34	Bird scaring device installed and operational. *Required on NUI's and verify need on fixed paltforms/vessels by risk assessment.*	2C.18 6C.1.7	2.2.1.5.e.3 8.6	
Refuelling ICAO Heliport Manual Chapter 8.5				
35	Fuel system maintenance a) last inspection b) Procedures available	2C.15 5B 4C.2 7C.3	8.5	
36	Fuel Quality control	7C.2	8.5.5 8.5.6	
37	Fuel storage & transportation a) Drummed fuel b) Portable offshore fuel tanks *Confirm method of storage and total capacity available.*	7C.1	8.5.2	
Emergency Response ICAO Heliport Manual Chapter 6 &11				
38	ERP Manual / Bridging document	5C.10	6.11.1	
39	Last ER exercise *Ensure all helideck personnel are captured in at least one exercise per year and scenarios are varied.*	5C.10.2		

Item	Item description	IOGP - 697	ICAO Annex 14 Vol II Heliport Manual	Reviewer/Inspector comments
Fire Protection ICAO Heliport Manual Chapter 6				
40	Fixed Monitor, DIFFS and hydrants inclusive of hose reels serviceable. *Combinations of systems are permissible provided complete cover of helideck area is maintained. Confirm system when deployed covers whole of helicopter landing area e.g. fire monitors intersect in middle of helideck ensuring maximum coverage.*	2C.10 4C.6	2.2.1.5.f 6 8.6	Fixed monitor DIFFS
41	Foam type, quantity & testing	4C.6	6.2	Foam type/delivery mix Quantity Available Last tested Report/Certificate
42	Portable AFF/ DP/CO2 appliances	2C.10	6.4	Quantity available Inspection Date
Rescue Equipment ICAO Heliport Manual Chapter 6				
43	Location	2C.10	6.7	
44	Contents of Crash box and condition *Enter details of any equipment missing or unserviceable*	2C.10	11 Table 1-6-1	
45	Rescue boat *Rescue boat should be available and ready for launch within 5 minutes of an incident*			
Personnel (Helideck / Helipad ground crew)				
46	HLO / HDA – Confirm all helideck personnel trained to OPITO or equivalent, with a recurrent training program inclusive of firefighting. *Verify that personnel engaged in the conduct of helideck operations are formally trained and subject to periodic competency assessment.*	8C.1 8C.2 8C.4	2.2.1.5.j 6.1 6.8	
47	Certified weather observer	8C.4.9	2.2.1.5.j 8.2.3	
48	Radio Operator	8C.4.8	2.2.1.5.j 8.4.1	
49	Refuelling personnel	8C.4.10	2.2.1.5.j 8.5.4	
50	Installation Emergency Response Team Leader identified	8C.4.2	6.11	
51	Dangerous goods awareness training completed by offshore dispatcher / helideck team members.	5C.9 8C.4.7 8C.6		

Item	Item description	IOGP - 697	ICAO Annex 14 Vol II Heliport Manual	Reviewer/Inspector comments
Personal Protective Equipment / Clothing				
52	Sufficient for all helideck crew members. *Helmets, boots, gloves, jackets and fire protection suits should be readily available and subject to periodic inspection.* *Fire crew breathing apparatus: minimum 2 sets + 2 reserve cylinders. Located close to the helideck*		6.9 2.2.1.5.f	
53 54	Helmet / coverall should be distinguishable between HLO and HDA Storage & Condition *Clothing should be hung, and other equipment stored tidily in a quick access, clean and dry store near the helideck.*			
Passenger & Baggage / Cargo Handling				
55	Passenger briefing & helicopter safety awareness *Confirm the video briefing in use is representative of helicopter type operated and safety awareness posters are displayed in passenger waiting area.*	5C.6.3	2.2.1.5.i	
56	Passenger marshalling area	2C.17		
57	Weighing scales a) Calibrated b) Max weight (lbs/kg)	2C.17.2 4C.1 5C.7	2.2.1.5.i (7)	
58	IATA Dangerous Goods Regulations available. *Current copy of IATA DG regulations and associated addenda available to personnel involved in passenger, cargo or baggage handling.*	5C.9		
59	Dangerous goods procedure and safety awareness posters available.	2C.17.3.1 5C.9		
Helicopter Ground Support Equipment				
60	Chocks- available / quantity		2.2.1.5.i (5)	
61	Tie down straps / ropes. *Note quantity available (minimum 4, depending on load capacity) and load capacity (minimum 5000kg depending on quantity) recorded.*		2.2.1.5.i (6)	
62	Helicopter start unit (optional) *Helicopter battery start unit should be compatible with helicopter type operated*		2.2.1.5.i (8)	

Post-inspection Actions

Action #	Requirement/description	Comment	Target closure date	Responsible person
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Size/Dimension diagrams

FATO D-Value	Mininum height of characters for D and T values painted on helideck surface
>30 metres	1.5 meters
15-30 meters	0.9 meters
<15 meters	0.6 meters

Helideck nameplate characters painted on helideck surface should be a minimum height of 1.2 meters.

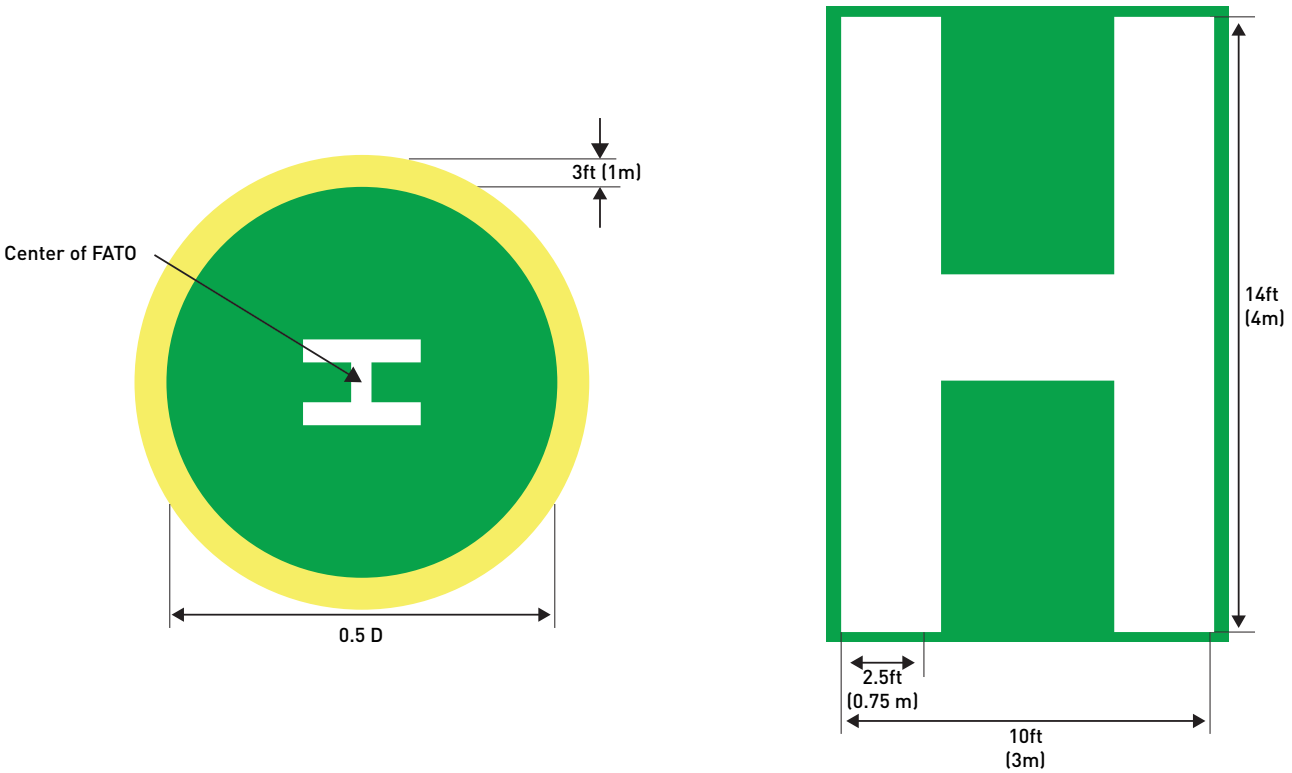

Figure 1: Helideck Circle & H standard dimensons - reproduced with permision from *HSAC Recommended Practice (RP) 2016-1 Revision 2, New Build Helideck Design Guidelines, 2 November 2017*

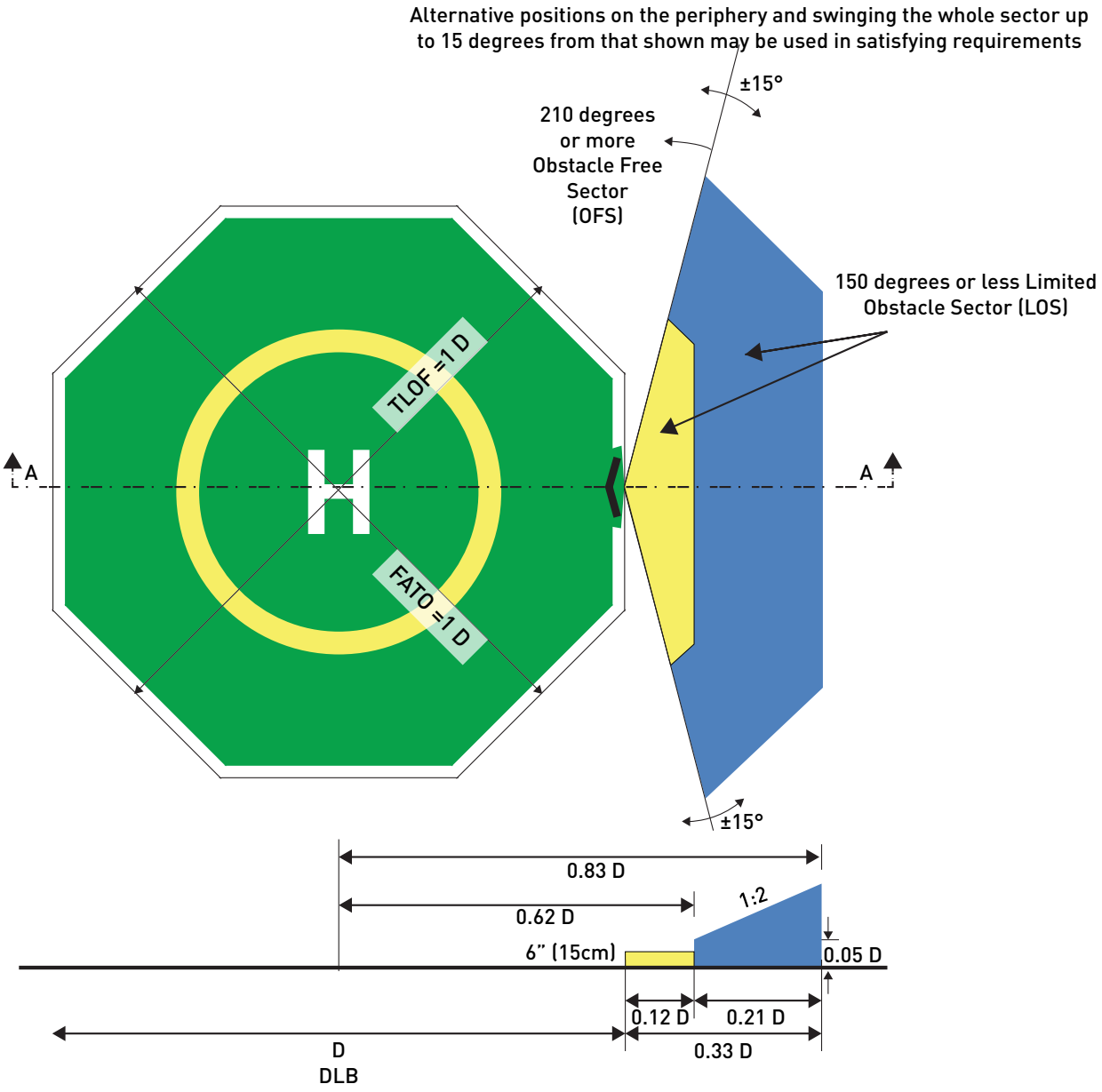

Figure 2: Centralised touchdown markings *HSAC Recommended Practice (RP) 2016-1, Revision 2, New Build Helideck Design Guidelines, 2 November 2017*

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International Association of Oil & Gas Producers

Report 697 – *Offshore Helidecks and facilities* provides recommended practices that will assist in the safe and effective management of offshore commercial helicopter operations by ensuring that helidecks on offshore facilities are built to an approved design and maintained and operated in a safe manner.

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