PART697 Offshore helidecks and facilities

Additional Compliance Criteria & Guidance Material

Shell Group Requirements for Aircraft Operations (SGRAO) Issue 02

Document Revision Information

Version	Date	Amendment
1.0	01/07/2024	Initial Release

Contents

Introduction

SGRAO PART-697 is part of the SGRAO suite of documents and must be read in conjunction with:

SGRAO Implementation Guide

IOGP Report 697 Version 1.1 for "Offshore helidecks and facilities"

This document provides additional guidance and expectations on how the IOGP Report 697 Version 1.1 for "Offshore Helidecks and Facilities" (R697) must be implemented by the Contracted Air operators and Shell Businesses.

SGRAO PART-697 covers the operation of offshore commercial helicopter operations, and is comprised of nine modules and an Offshore helideck review checklist (Appendix A):

1. General
2. Design
3. Design Review
4. Maintenance
5. Operations - process
6. Operations – hazards
7. Operations – aviation fuel
8. Personnel – training
9. Contract interface – helideck facilities and associated systems

Appendix A – Offshore helideck review checklist

These modules further detail the main activities associated with Offshore Helidecks and include technical elements. Each element is presented with a Title, Purpose, Expectations, and Recommended Processes and Practices.

Offshore Energies United Kingdom (OUEK) has developed "Guidelines for the Management of Helideck Operations", which has been published on its website:

OEUK Guidelines for the Management of Helideck Operations | Offshore Energies UK (OEUK)

This is an extensive and detailed document and provides additional guidance in many of the areas listed below.

A 'responsible party' for most elements is identified either as 'Company,' meaning the entity which engages the services of an offshore helicopter operator, or 'Contractor' which may be the aircraft operator, vessel or rig operator, or other subcontracted party such as a provider of ground support services.

DEFINTION OF COMPANY in the context of this document, where it is not referred to the TA/1 e.g. – 1C.4.1 Inspection/acceptance reports are retained by the Company; Reports are submitted in accordance with Company or NAA requirements. This means the Business Unit with accountability for the work, inspection etc.

List of Additional Compliance Criteria

Report	Chap	ACC	Description	ACC Threshold
697-2	2C.1	2ACC.1	Design	To meet the Shell requirements for 2C.1: The relevant Shell Technical Authority (TA/1) applies the following design standards, in order of precedence, to Company new build, owned, operated, and contracted offshore helidecks: • UK CAA CAP 437 – Standards for Offshore Helicopter Landing Areas – Latest Version. • See: https://www.caa.co.uk/our-work/publications/documents/content/cap-437/ • Shell Design and Engineering Practices, General Functional Standard (GFS) 34.85.00.12-Gen. • To access the latest GFS document, go to Shell DEPs Online search for GFS 34.85.00.12-Gen
697-8	5C.10.2	5ACC.1	Operations - Process	Shell requirements to fully meet 5C.10.2 are: The facility/vessel completes monthly (or once per rotation if less frequent) helideck team exercises, covering the operation of normal and emergency equipment and procedures. Helideck team exercises: • Are specific to helideck team operations, and supplement facility level exercises; and • Include all assigned helideck team members Helicopter Landing Officer (HLO), Helideck Assistant (HDA) and other personnel as appropriate.

Report	Chap	ACC	Description	ACC Threshold
697-8	8C.1.2	8ACC.1	Personnel - Training	Shell Requirements to fully meet 8C.1.2 are: Refresher Training is carried out aligned with OPITO requirements. The Shell requirement is every two years as minimum.

697-8	8C.5	8ACC.2	Personnel - Training	Shell requirements to fully meet 8C.5 are:
				The **MINIMUM** number of fully trained Helideck Team members, with an in-date assessment, to carry out helicopter operations onboard a helideck equipped installation or vessel is:
				• Permanently Attended Installation (PAI):
				  ○ One Helideck Landing Officers (HLO) and three Helideck Assistants (HDA) to attend to a helicopter landing/take off with 15 or more aircraft occupants, including pilots; and,
				  ○ During refueling, unless Helicopter is shut down between flights with no passengers present on helideck.
				  ○ HLO and two HDAs for helicopter landing/take off with fewer than 15 aircraft occupants, including pilots.
				• On Normally Unattended Installations (NUI):
				  ○ HLO and two HDAs for helicopter landing/take off with 15 or more occupants, including pilots.
				  ○ HLO and one HDA on Normally Unattended Installations (NUI) for helicopter landing/take off less than 15 occupants, including pilots.
				• On Minimally Manned Installations (MMI) - defined as facilities with at least three and no more than 20 Persons on Board (POB):
				  ○ HLO and one HDA for helicopter landing/take off with eight or fewer aircraft occupants, including pilots.
				  ○ Flights with greater than eight are prohibited.
				
				Business Units can specify **HIGHER** numbers, and the installation or vessel shall demonstrate that sufficient personnel numbers are available, to account of local requirements, such as, operational hours (Daylight/24 Hours Coverage), number of helicopter rotations expected, shuttling, weather, baggage handling, escort duties, fire cover, specific installation fuel systems.
				
				Helideck Manning less than these minimums requires the relevant Shell Technical Authority – Air Transport (TA/1) to file a Shell Performance Framework (SPF) Exception.

Table 1; Additional Compliance Criteria

Guidance Material

Guidance Material (GM) is non-binding explanatory and interpretation material issued by Shell Aircraft which helps to illustrate the meaning of a requirement or specification in the IOGP 690-series and the R697 Mandatory requirement. It contains information, including examples, historic context and considerations to assist the user in the interpretation and application of the IOGP 690-series.

IOGP R697 Bow-Tie Set

TBD.

Definitions & Acronyms

For definitions and acronyms used in the IOGP R690-series, IOGP R69X offers comprehensive explanation.

Variations

Variation means a minor deviation to the mandatory requirements as defined in IOGP R690-X series. Consult the SGRAO Implementation guide for more information.

Where variations are indicated in the split boxes in the Guidance section, these are to be locally managed and registered.

List of TA1 Variations

Report	Chapter	Description	Variation Details
697	1	General	Shell requirements to meet 1C.2, are that the relevant Shell Technical Authority (TA/1), can agree not to have a refuel installation fitted.
697	2	Design	Shell requirements to meet 2C.1, the relevant Shell Technical Authority (TA/1), and relevant Business Unit Leader, to file a Shell Performance Framework Exception for the operation of helicopters that to an undersized helideck, of a value of less than 1D or otherwise, subject to a detailed documented, As Low as Reasonably Practicable (ALARP) demonstration, Risk Assessment.
697	2	Design	Shell requirements to meet 2C.6.1, are that the relevant Shell Technical Authority (TA/1) reviews and approves the Helideck Environmental Study Computational Fluid Dynamics (CFD) Report.
697	2	Design	Shell requirements to meet 2C.16, the relevant Shell Technical Authority (TA/1) can vary this requirement to allow operations without a camera, for visiting vessels, drilling rigs, on Limited Exposure Assessments, as per Implementation guide.

Report	Chapter	Description	Variation Details
697	6	Operations – Hazards	Shell requirements to meet are 6C.1.3.2 are that the relevant Shell Technical Authority (T/A1) can allow Multi-Helicopter Operations on a Single Helideck in an Emergency Operations, and to prepare to support offshore maintenance and recovery of disabled helicopters.
697	8	Personnel – Training	Shell requirements to meet 8C.1.2 the relevant Shell Technical Authority – Air Transport (TA/1), can vary the two-year training, subject to local requirements and training knowledge retention demonstration.
697	8	Personnel - Training	Shell requirements to meet 8C.1.3 the relevant Shell Technical Authority – Air Transport (TA/1) can endorse personnel delegated to conduct HLO and Helideck Team Member competency assessment
697	8	Personnel – Training	Shell requirements to meet 8C.2 the relevant Shell Technical Authority – Air Transport (TA/1) can endorse HLO and Helideck Team Member training for OPITO equivalence.
697	8	Personnel – Training	To vary 8ACC.2 the Business Units, Helideck Manning **less** than the listed minimums, requires the relevant Shell Technical Authority – Air Transport (TA/1) to file a Shell Performance Exception, supported by a relevant Risk Assessment, or similar.
697	Appendix A	Checklist	Shell requirements to meet App A the relevant Shell Technical Authority – Air Transport (TA/1) can use a Shell Approved assessment document.

Table 2; List of TA1 variations

R697	Offshore Helidecks and Facilities
1	General
MR	1B, 1C.1, 1C.2, 1C.3, 1C.4, 1C.5.
Guidance Material	
1B	No Guidance.
1C.1	Should a conflict between Company standards and National Regulation be identified, the relevant Shell Technical Authority (TA/1) should be consulted.
1C.2	Shell Aviation and the relevant Shell Technical Authority (TA/1) should be consulted early in the installation / vessel design stage for any fuel system requirements. If an aviation fuel system will not be installed, the relevant Shell Technical Authority TA/1 agrees that the operational requirements allow this, see 1VAR.1.
1C.3	No Guidance.
1C3.1	**See 2C.2 and 2VAR.2**
1C.4	Inspections should be carried out at a schedule in alignment with the relevant National Authority requirements, and the Advisory Procedures Manual.
1C4.1	Shell uses a bespoke Checklist – See Appendix A.
1C4.2	Reports should be filed in accordance with Business Unit procedures, and validated by Shell Aircraft in accordance with Advisory Procedures Manual
1C.5	Incidents etc. should be recorded in the relevant systems, Shell, Aircraft Operator and Facility.
1C.5.1	Reports should be filed in accordance with Business Unit procedures and the Advisory Procedures Manual, where relevant.
1ACC.1	None
1VAR.1	Shell requirements to meet 1C.2, are that the relevant Shell Technical Authority (TA/1), can agree not to have a refuel installation fitted.

R697	Offshore Helidecks and Facilities
2	Design
MR	2B, 2C.1, 2C.2, 2C.3, 2C.4, 2C.5, 2C.6, 2C.7, 2C.8, 2C.9, 2C.10, 2C.11, 2C.12, 2C.13, 2C.14, 2C.15, 2C.16, 2C.17, 2C.18
Guidance Material	
2B	No Guidance.
2C.1	See 2ACC.1 for Shell requirement for new build helideck/facility. Helidecks that may be intended for use as cargo staging areas (i.e., flare tip staging for helicopter flare tip replacements) should consider the static load of the anticipated staged cargo when computing dynamic and static load bearing capacity of the helideck. Consideration should also be given in the design to other types of loading such as personnel, snow, freight, and fueling equipment. For some specific helicopter types, studies have been completed by contracted companies, to justify operating to existing helidecks that do not meet the load bearing requirements. Use of these studies should be endorsed by the local regulator and Business Unit design staff, (if applicable).

R697	Offshore Helidecks and Facilities
2	Design
2C.2	Operations to helidecks less than 1 "D": The relevant Shell Technical Authority (TA/1) can apply for a Shell Performance Framework Exception for the operation of helicopters that to an undersized helideck, of a value of less than 1D or otherwise, subject to a detailed documented As Low as Reasonably Practicable (ALARP) demonstration, or Risk Assessment. The documented ALARP demonstration, or Risk Assessment, includes the following details: • There is a significant specific operational requirement. • The helideck was designed prior to 1st January 2005. • After completion of a survey and evaluation of the helideck which includes, but should not be limited to obstacle clearance, environmental, construction, configuration, and helicopter performance class considerations. • Operational restrictions and/or controls are to be defined, where necessary, as part of the ALARP demonstration. • This also covers helidecks that have been "inherited" through acquisition and/or joint venture, and the assessment covers planned remedial improvements, specifically addressing design shortfalls in the design as compared to the Shell requirements, 2AAC1. See 2VAR.2
2C.3	See 2C.1 and 2AAC.1
2C.4	Parking Areas, if assessed as being required, should be designed with reference to local/Shell requirements, e.g., CAP 437, relevant HSAC RP, and Shell Design Guide. A movement plan should be developed that considers the method of moving the helicopter to parking, and that sufficient space is available to maneuver the helicopter into parking position. For larger types, a mechanical handler may be required, along with suitably trained staff. For smaller types, movement by pushing may be possible. This may require liaison with the helicopter operators. For US regulated offshore areas, CAP 437 helideck markings may be amended in accordance with the relevant HSAC RP.
2C.5	No Guidance.

R697	Offshore Helidecks and Facilities	
2	Design	
2C.6	Helideck Environmental Studies: The relevant Shell Technical Authority (TA/1) should apply the UK CAA CAP 437 Chapter 3, the UK HSE Offshore Helideck Design Guide, and CAA paper 2008/03 Helideck Design Considerations – Environmental Effects at the earliest possible stage of the design process. See Shell Design Guide – HELIDECK DESIGN REQUIREMENTS FOR OFFSHORE FACILITIES (AMENDMENTS/SUPPLEMENTS TO CAA CAP 437) GFS 34.85.00.12-Gen. Current Version See 2C.6.1	
2C.6.1	The relevant Shell Technical Authority (TA/1) for Air Transport reviews and approves the Helideck Environmental Study Computational Fluid Dynamics (CFD) Report. See 2VAR.2	
2C.7	Helideck Marking: For US regulated offshore areas, CAP 437 helideck markings may be amended in accordance with the relevant HSAC RP. Lighted Aiming Circle and Landing "H": Due to retrofit difficulties, the aiming circle and "H" lighting scheme may not be required for helidecks built before 2014 but is recommended as a significant enhancement to pilot visual cues, particularly for operating areas with significant night flying, and should be considered during installation/vessel modification.	Where CAP437 deck marking requirements are modified due to other local regulation, the responsible Shell Technical Authority – Air Transport (TA/1) can approve, and differences communicated to helicopter operators. **This requirement is managed and recorded locally.**
2C.8	See also IOGP 690- 3, Section 14. Helideck – reporting. Where a fixed installation is within 10 nautical miles of another installation that is equipped with an automated means of ascertaining the meteorological information should also makes this information routinely available to others, a manual means of verifying and updating the visual elements of observation, i.e., cloud amount and height of base, visibility, and present weather, may also be used.	

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2	Design
2C.9	The Helideck Motion System (HMS) should be capable of integrating sensors for measuring helideck movement, wind and weather and should be able to transmit this data electronically to the helicopter operation center. • Where an integrated HMS is not available, separate measuring systems may be used if the facility / vessel can demonstrate that complete timely reporting compliant with the relevant section in CAP 437 is possible. Maximum vessel motion should be the lowest of: • The maximum vessel motion established by the vessel, which is applied by the vessel if properly published to the pilots. • The maximum motion limit established by the Aircraft Operator. • The limits listed in the Helideck Certification Agency Helideck Limitations List, Part C – Pitch, Roll & Heave which is available from their website download page (www.helidecks.org). Weather and motion monitoring systems should be considered safety critical equipment and included as recurrent items in the installation/vessels planned maintenance system. Unserviceability of the systems should also be reflected or equivalent operational limitations document.
2C.10	The Shell recommended system for continuously attended (manned) new build facilities is a passive fire-retarding helideck equipped with a Deck Integrated Fire Fighting System (DIFFS). See GFS 34.85.00.12-Gen.
2C.11	Helideck Access: To restrict unauthorized entry to the helideck, each access stairs should have either frangible chains, removable barriers, or other devices, fitted, along with a suitable warning notice. Each access point should also have a notice board with the information for passengers displayed: • Personnel should not be permitted on the flight helideck when helicopters are landing or taking off. • Personnel should approach the helicopter as directed by the helideck crew and in view of the pilot; and • Personnel should not approach the helicopter when the anti-collision light is flashing - this may not be applicable in all Regions.
2C.11.1	No Guidance.
2C.12	When testing helideck surface friction, a recognised means such as the use of a surface friction measuring device should be used. Where a helideck landing net is installed, helideck friction should still be maintained to a level that prevents personal injury from slips, trips, and falls.

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2	Design
2C.13	No Guidance.
2C.14	No Guidance.
2C14.1	No Guidance.
2C.15	Shell Aviation is the Company Subject Matter Expert for matters relating to aviation fuels and fueling systems and should be consulted in the design of a new system or major system modification.
2C.16	The relevant Shell Technical Authority (TA/1) should assess the time required for implementation of this requirement. The relevant Shell Technical Authority (TA/1) can vary this requirement to allow operations without a camera, for visiting vessels, drilling rigs, on Limited Exposure Assessments, as per Implementation guide. See 2VAR2.
2C.16.1	Video recording should be made available to the relevant Shell Technical Authority (TA/1).
2C.17	See IOGP 690–3 - 2. Offshore passenger holding areas
2C.17.1	See IOGP 690-3, Section 2. Offshore passenger holding areas, Section 5. Passenger and handling and Section 17. Helideck – passenger control.
2C.17.2	See 890-3, Section 19. Ground operations staff – training and competence. Security screening personnel should be trained on the operation of screening equipment as mandated by National Regulation or Service Provider's security plan. See relevant Business Unit Requirement for Facility health and security risk assessments as per Shell Requirements.
2C.17.3	The designated passenger waiting area may serve as a viewing room for video safety briefings and provide an area to weigh and manifest all outgoing passengers, baggage, and cargo.
2C.17.3.1	No Guidance.
2C.18	No Guidance.

2ACC.1	To meet the Shell requirements for 2C.1, the relevant Shell Technical Authority (TA/1) applies the following design standards, in order of precedence, to Company new build, owned, operated, and contracted offshore helidecks:
	• UK CAA CAP 437 – Standards for Offshore Helicopter Landing Areas – Latest Version.
	  ○ See:https://www.caa.co.uk/our-work/publications/documents/content/cap-437/
	• Shell Design and Engineering Practices, General Functional Standard (GFS) 34.85.00.12-Gen.
	  ○ To access the latest GFS document, go to Shell DEPs Online search for GFS 34.85.00.12

R697	Offshore Helidecks and Facilities
2	Design
2VAR.1	Shell requirements to meet 2C.1, the relevant Shell Technical Authority (TA/1) and relevant Business Unit Leader, can apply for a Shell Performance Framework Exception for the operation of helicopters that to an undersized helideck, of a value of less than 1D or otherwise, subject to a detailed documented ALARP demonstration, Risk Assessment.
2VAR.2	The relevant Shell Technical Authority (TA/1) can vary 2C.16 requirement to allow operations without a camera, for visiting vessels, drilling rigs, on Limited Exposure Assessments, as per Implementation guide.
2VAR.3	Shell requirements to meet 2C.6.1, the relevant Shell Technical Authority (TA/1) reviews and approves the Helideck Environmental Study CFD Report.

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3	Design Review
MR	3B, 3C.1, 3C.2
Guidance Material	
3B	Operational design considerations should include: • The largest size/weight helicopter anticipated for use throughout the life of the installation/vessel. • The requirement for a helicopter fueling capability. • The requirement for a parking area or second helideck or restricted concurrent operations with a disabled helicopter on the helideck; and • Prevailing weather conditions. See Also Section 3 – Design Review.
3C.1	Helideck design should be driven by operational requirements. Operational design decisions should be made in conjunction with the DCAF Operating Phase Logistics Manager and the relevant Shell Technical Authority, Air Transport (T/A/1) and endorsed by the relevant Discipline Controls and Assurance Framework (DCAF) Managers. See 2VAR.1, above.
3C.2	See 3C.1 above.
3ACC.1	None.
3VAR.1	None.

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4	Maintenance
MR	4B, 4C.1, 4C.2, 4C.3, 4C.4, 4C.5, 4C.6, 4C.7, 4C.8, 4C.9
Guidance Material	
4B	Maintenance requirements for Helideck Equipment are contained in the following documents: • UK CAA CAP 437 – latest edition • HSAC Helideck Recommended Practices – latest edition. • Local NAA requirements – if applicable These should form the basis for any Helideck Maintenance Plan.
4C.1	Equipment re-certifications should be performed by persons or organisations trained to conduct this work and should be conducted as part of the maintenance plan. The maintenance plan and intervals may also need to be based on equipment OEM recommendations.

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4	Maintenance
4C.2	The helideck maintenance plan should normally cover the satisfactory continued operation of items designated Safety Critical Equipment (SCE). These are determined by the installation and typical cover: • Landing area, structures, and associated appliances • Firefighting and rescue equipment • Safety equipment and Personal Protective Equipment (PPE) i • Refueling equipment • Landing area marking • Helideck drainage • Lighting (including lighting of dominant obstacles / obstructions, and status light systems) viii. Access points • Safety netting • Telecommunications and avionics • Meteorological equipment sensors (particularly cleaning the lenses and sensor heads for cloud height instruments and viscometers)
4C.3	No Guidance.
4C.4	No Guidance.
4C.5	See also Section 5C.1 – Documented Processes
4C.6	See also 690-3, 14. Helideck – reporting.
4C.7	No Guidance
4C.8	Auditable records of the routine helideck inspections and maintenance activities should be maintained.
4C.9	When SCE is degraded or only partially effective (e.g., individual perimeter light inoperative) the facility should review risks with the Shell Technical Authority - Air Transport (TA/1) and the operator servicing the facility and implement operational restrictions may be required. Notices to Airmen (NOTAMs), or similar, flight safety issues related to degraded SCE should be issued.
4ACC.1	None
4VAR.1	None

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5	Operations - Process
MR	5B, 5C.1, 5C.2, 5C.3, 5C.3, 5C.4, 5C.5, 5C.6, 5C.7, 5C.8, 5C.9, 5C.10, 5C.11, 5C.12, 5C.13
Guidance Material	
5B	No Guidance
5C.1	The documented "operations processes and practices "for Helideck Operations should be available to facility/vessel personnel, and typically cover: Daily Helideck and Helideck Equipment Readiness Inspections should be in place, for normally manned platform, this can be varied for Normally Unmanned Installation (NUI). • A Daily inspection • A Weekly Helideck and Helideck Equipment Readiness Inspection. The documented procedures should also cover: • Passengers' identification and training • Briefings, Seating, XBR, Pax PPE • For further Guidance – See OEUK "Guidelines for the Management of Helideck Operations". Abbreviated Helideck Operations checklists aligned with the facility's published procedures should be provided to persons filling Helideck Roles.
5C.2.1	Installations and vessels should be strongly encouraged to supply meteorological information and weather report forms produced from the automated sensors to web-based systems that are operated by the National Weather Service or on behalf of helicopter operators or local industry bodies. These systems should enable helicopter operators, installation duty holders and others to access the latest weather information in real time.
5C.2.2	Weather and motion monitoring systems should be considered safety critical equipment and be included as recurrent items in the installation/vessels planned maintenance system. Unserviceability of the systems should also be reflected in the Manual of Permitted Operations (MOPO), Simultaneous Operations (SIMOPS) matrix or equivalent operational limitations document which outline restrictions to facility operations when specific systems are degraded.

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5	Operations - Process	
5C.2.3	The Helideck Monitoring System (HMS) should be capable of integrating sensors for measuring helideck movement, wind and weather and should be able to transmit this data electronically to the helicopter operation center.	Alternative compliance procedures should meet the guidance in the latest version, of CAP 437, Chapter 6, and be accepted by the relevant Shell Technical Authority T/A1. **This variation is tracked and recorded locally.**
5C.2.4	No Guidance.	
5C.2.5	No Guidance.	
5C.3	No Guidance.	
5C.4	No Guidance.	
5C.4.1	No Guidance.	
5C.4.2	No Guidance.	
5C.4.3	No Guidance.	
5C.4.4	No Guidance.	
5C.4.5	No Guidance.	
5C.4.6	No Guidance.	
5C.5	Beacons/High Intensity Strobe Lights (HISL) and high visibility paint schemes should comply with national regulation for marking aviation obstructions. When using HISL to indicate that a crane is operating, the strobe light should not blind pilots operating to the helideck. All cranes and their location should be noted in the pilot's facility guide.	
5C.6	No Guidance.	
5C.6.1	No Guidance.	
5C.6.2	No Guidance.	
5C.6.3	No Guidance.	
5C.6.4	No Guidance.	
5C.6.5	See IOGP 690-3, 5. Passenger handling.	
5C.7	No Guidance.	
5C.7.1	See IOGP 690-3, Section 4. Passenger and baggage weights	
5C.8	No Guidance.	
5C.8.1	No Guidance.	
5C.8.2	No Guidance.	
5C.9	No Guidance.	
5C.9.1	No Guidance.	

R697	Offshore Helidecks and Facilities	
5	Operations - Process	
5C.10	The Emergency Response Plan (ERP) should cover: • Possible Helicopter accident on the facility/vessel. • Possible Helicopter fire on the helideck. • Helicopter ditching which could be in the rescue range of the facility or vessel. • Helicopter ditching is beyond local rescue range, overdue aircraft, and loss of contact with an aircraft • Fuel or oil spillage on the helideck.	
5C.10.1	ERP drills should be scheduled regularly, as defined in the interface document, yearly is normal practice.	An ERP interface is developed and to meet the location requirements and is accepted by the relevant Shell Technical Authority T/A1. **This variation is tracked and recorded locally.**
5C.10.2	The facility/vessel is accountable for completion of monthly (or once per rotation if less frequent) helideck team exercises, covering the operation of normal and emergency equipment and procedures. Helideck team exercises: • Are specific to helideck team operations, and supplement facility level exercises; and • Include all assigned helideck team members (HLO/HDA) and other personnel where appropriate. **See 5ACC.1**	
5C.11	No Guidance.	
5C.12	No Guidance.	
5C.13	No Guidance.	
5ACC.1	The facility/vessel is accountable for completion of monthly (or once per rotation if less frequent) helideck team exercises, covering the operation of normal and emergency equipment and procedures. Helideck team exercises: • Are specific to helideck team operations, and supplement facility level exercises; and • Include all assigned helideck team members (HLO/HDA) and other personnel where appropriate.	
5VAR.1	None.	

R697	Offshore Helidecks and Facilities
6	Operations - Hazards
MR	6B, 6C.1,6C.2
Guidance Material	
6B	The facility SMS/HSE Case and procedures, should address all aspects of helicopter operations on offshore installations, Mobile Offshore Drilling Units (MODU) and vessels. • All helideck activities should be adequately controlled and recorded within the management system. • Procedures should be developed to confirm that activities remain appropriate, are being properly implemented and remain in accordance with Company policy; and • Responsibilities should be assigned, and a custodian identified to ensure that aviation procedures are updated at prescribed intervals
6C.1	See 6B.
6C.1.1	See 690 – Appendix A
6C.1.2	See 690-3, Section 15. Crane operations. Guidance on cranes that can reach into any portion of the helideck Obstacle Free Sector (OFS) or restricted portion of the helideck Limited Obstacle Sector (LOS): • During helicopter operations the crane should be stopped (static) and the cab unmanned from initial helicopter radio check-in through helicopter departure from the installation. ○ If the helicopter shuts down on the helideck, crane operations may resume, but should be coordinated with the HLO so the crane can be cradled/positioned and stopped prior to helicopter start up. • If possible, the crane boom should be cradled when stopped. ○ If not cradled, it should be positioned clear of the OFS and restricted portion of the LOS. ○ Notify the helicopter pilots of uncradled crane booms during check-in radio communications. • When the crane is running/energized during helicopter operations, the crane operator should wear a conspicuous jacket or vest and should stand outside of and adjacent to the crane cab in a position visible to the helicopter pilots.
6C.1.3	See 6C.1.3.1, and 6C.1.3.2
6C.1.3.1	For information on combined operations of vessels and equipment in the helideck 5:1 clearance sector should refer to the following documents: • For vessel infringements of the 5:1 sector, the Helideck Certification Agency (HCA) Helideck Limitations List (HLL) limitations from the relevant HLL Table; and • Brazil's NORMAM 27/DPC Annex 4-D-2 provides alternative mitigations for FPSO offload hoses infringing the Helideck 5:1 sector that are mandatory in Brazil and which may be allowed for operations outside of Brazilian jurisdiction. • For turbulence or hot/cold gas emission from vessels alongside, the HCA HLL limitations from the relevant HLL Table should be applied.

R697	Offshore Helidecks and Facilities
6	Operations - Hazards
6C.1.3.2	Multi-Helicopter Operations on a Single Helideck: More than one helicopter should not simultaneously occupy a single helideck unless: • Conducting aircraft maintenance recovery; or • The helideck is constructed with a designated parking or apron area which is large enough to position the parked helicopter such that a minimum 1/3rd D-value clearance can be maintained between the D-area of the landing helicopter. The practice of parking a helicopter on one side of the helideck Safe Landing Area (SLA) and landing another helicopter outside of the Touchdown/Positioning Marking Circle (TD/PM) should be prohibited in normal Shell operations. The relevant Shell Technical Authority (TA/1) can allow Multi-Helicopter Operations on a Single Helideck in an Emergency Operations, and to prepare to support offshore maintenance and recovery of disabled helicopters including. • Transfer of maintenance personnel, tools, equipment, part, and supplies to the facility/vessel by vessel-to-vessel transfer. • Concurrent maintenance recovery landings (two aircraft on a single helideck with the disabled aircraft not positioned completely within a properly sized parking area). • Helicopter winching of maintenance personnel to the facility/vessel where there is a helicopter winching capability in place; and • Removal of unserviceable helicopters from the facility/vessel by crane See 2VAR.1
6C.1.4	No Guidance
6C.1.5	No Guidance
6C.1.6	The use of helicopters for rescue during gas release, with or without H2S, should be carefully considered. Helicopters should not be allowed to land until the area is made safe. Guidance on Hydrogen Sulfide (H2S) Gas releases in most installation procedures designates the helideck the muster area or similar, as it is the normally the highest point. Reference should be made to specific installation instructions – see also 5C.1
6C.1.7	See 690-2, Section 37. Bird strike avoidance.
6C.1.8	See 4C.9.

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6	Operations - Hazards
6C.1.9	See 690-2, Section 22. Aviation weather – adverse weather policy A decision by the Offshore Installation Manager (OIM), or Vessel Master to curtail offshore flights because of adverse conditions should take precedence in the event the helicopter operator/aircraft captain advises that the weather is still within Flight Operations Manual limits. Similarly, the helicopter operator/ aircraft captain should retain the prerogative to suspend routine flying if conditions are judged to be unsafe, regardless of whether Flight Operations Manual limits have been reached.
6C.1.10	No Guidance.
6C.1.11	See Additional Shell ACC, 5ACC.1 – ERP.
6C.2	No Guidance.
6ACC.1	None.
6VAR.1	Shell requirements to meet are 6C.1.3.2 are that the relevant Shell Technical Authority (T/A1) can allow Multi-Helicopter Operations on a Single Helideck in an Emergency Operations, and to prepare to support offshore maintenance and recovery of disabled helicopters.

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7	Operations – Aviation Fuel
MR	7B, 7C.1,7C.2. 7C.3, 7C.4
Guidance Material	
7B	Each offshore facility / vessel equipped with a helicopter fuel system should publish site specific procedures for the maintenance of helicopter fuel systems, including: • Regular inspection and periodic maintenance of the fueling equipment, hoses, couplings, bonds, tanks, and ancillary equipment. • Transportable fuel tank acceptance and handling. • Fuel quality sampling and inventory tracking. • Tracking and recording of fuel system inspections, maintenance, and sampling results; and • Special fuel sampling following an aircraft accident.
7C.1	Unless the fuel system manufacturer specifies sampling from different locations or at different frequencies, the fuel system should be sampled daily from: • Bulk fuel tank sump. • Online (connected) transportable tank sump. • Fuel filter/water separator sampling points. • Filter monitor sample points. • Hose-end nozzle; and • Any additional points specified by the system manufacturer.
7C.2	Records should be retained as required by the National Aviation Authority (NAA) and be auditable.
7C.3	See 690-3, 18. Rotors Running Refueling.
7C.4	Records should be retained as required by the NAA and be auditable.
6ACC.1	None
7VAR.1	None.

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8	Personnel - Training
MR	8B, 8C.1, 8C.2, 8C.3, 8C.4, 8C.5, 8C.6, 8C.7, 8C.8
	Guidance Material
8B	Helideck Manning, overall personnel numbers and training should be developed with reference to: CAP 437 – Latest issue HSAC RP 163 – latest issue OEUK, Guidelines for the Management of Helideck Operations. Manned helideck equipped facilities/vessels should provide: • An emergency response capability at the helideck during helicopter landing, deck operations, and take off. • A firefighting capability at the helideck during helicopter landing, deck operations, and take off. See also 690-3, Section 16. Helideck - Staff Training
8C.1	HLO/HDA training and competence records should be retained in an auditable form, including training certificates, offshore familiarization training records, and competence assessment records, as required by the NAA.
8C.1.1	Initial Training is carried out with an OPITO approved organisation, or alternative approved courses and aligned with the requirements in the operating location. See HSAC RP163, latest Amendment – Section 12 Training, and OEUK, Guidelines for the Management of Helideck Operations, 5.1 Offshore Competence.
8C.1.2	See 8ACC.1 and 8VAR.1 for recurrent interval requirements. Minimum recurrent requirement is 2 years. The relevant Shell Technical Authority (TA/1) can vary the two-year training, subject to a Risk assessment to assure training knowledge retention demonstration. See HSAC RP163, latest Amendment – Section 12 Training, and OEUK, Guidelines for the Management of Helideck Operations, 5.1 Offshore Competence.
8C.1.3	Contractor staff operating as an HLO/HDA should achieve competence using the same process as Company staff, including training course requirements, familiarization training, competence assessment, and record keeping. Workplace Competency Assessments carried out aligned with OPITO and SPF requirements, which are every two years. See HSAC RP163, latest Amendment – Section 12 Training, and OEUK, Guidelines for the Management of Helideck Operations, 5.1 Offshore Competence.
8C.1.4	No Guidance.

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8	**Personnel - Training**
8C.2	The relevant Shell Technical Authority – Air Transport (TA/1) can endorse HLO and Helideck Team Member training for OPITO equivalence, subject to a documented process, such as a gap assessment against the OPITO syllabus. See 8VAR.2.
8C.3	Personnel roles could be documented in the controlled Helideck Procedures, see 5. Operations – process, Section 5C.1.
8C.4	Helideck team exercises are required to be carried out – See 5ACC1:
8C.4.1	HLO/HDAs should have verifiable training records, through OPITO training or documented equivalence, such as: • Completion of the OPITO HLO/had training syllabi from initial training, including prerequisites, through workplace experience and competence assessment, and • Completion of the OPITO HLO/HDA further/refresher training syllabi including competence assessment. • See HSAC RP163, latest Amendment – Section 12 Training, and OEUK, Guidelines for the Management of Helideck Operations, 5.1 Offshore Competence.
8C.4.2	See 8C.2, and 8C.4.1.
8C.4.3	See 8C.2, and 8C.4.1.
8C.4.4	See 8C.2, and 8C.4.1.
8C.4.5	OPITO has developed a Heli Admin Course, and this could be used to meet this requirement Staff should be competent to accurately collect payload weights and prepare aircraft manifests using local systems and procedures.
8C.4.6	See UK CAA CAP 437
8C.4.7	See also 690-3, Section 9. Cargo – dangerous goods and 8C.7.
8C.4.8	Staff should be licensed or authorized to operate VHF radios on aeronautical frequencies in accordance with national regulations, and competent to perform relevant normal and emergency procedures for aviation operations.
8C.4.9	Staff should be certified in accordance with national regulation and trained in the use of facility vessel weather instrumentation and the conduct of visual observations. See UK CAA CAP 437, for additional guidance for persons providing offshore aviation weather observations.
8C.4.10	Refueling personnel (if not also assigned (HLO/HDA) should be provided helicopter type specific fuel system and refueling procedures training, coordinated with local helicopter operators. Refueling training for offshore personnel is available through Shell Aviation, or OPITO, which could be used as a training resource.

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8	Personnel - Training
8C.5	Guidance has also been developed to assist in determining the required numbers of personnel onboard a vessel – see Helideck Manning, available from Shell Aircraft AS. Also see CAP 437 – Latest issue, HSAC RP 163 – latest issue, OEUK, Guidelines for the Management of Helideck Operations. The **MINIMUM** number of fully trained Helideck Team members is defined in **8ACC2**, Business Units can specify **HIGHER** numbers, and the installation or vessel shall demonstrate that sufficient personnel numbers are available, to account of local requirements, such as, operational hours (Daylight/24 Hours Coverage), number of helicopter rotations expected, shuttling, weather, baggage handling, escort duties, fire cover, specific installation fuel systems. Helideck Manning less than the minimums listed in **8ACC2**, requires the relevant Shell Technical Authority – Air Transport (TA/1) to file a Shell Performance Exception. See **8ACC.2**.
8C.6	See also 690-3, Section 9. Cargo – dangerous goods. Staff should be certified in accordance with national regulation, and should be trained to recognize, prepare, package, label/placard, document, and properly handle declared and undeclared dangerous goods submitted for shipment by air.
8C.7	See also 690-3, Section 8, 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	See 690-3, Section 5. Passenger handling.
8ACC.1	Shell Requirements to fully meet 8C.1.2 are: Refresher Training is carried out aligned with OPITO requirements. The Shell requirement is every two years as minimum.

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8	Personnel - Training

8ACC.2	Shell requirements to fully meet 8C.5 are:
	
	The **MINIMUM** number of fully trained Helideck Team members, with an in-date assessment, to carry out helicopter operations onboard a helideck equipped installation or vessel is:
	• Permanently Attended Installation (PAI):
	  ○ One Helideck Landing Officers (HLO) and three Helideck Assistants (HDA) to attend to a helicopter landing/take off with 15 or more aircraft occupants, including pilots; and,
	  ○ During refueling, unless Helicopter is shut down between flights with no passengers present on helideck.
	  ○ HLO and two HDAs for helicopter landing/take off with fewer than 15 aircraft occupants, including pilots.
	• On Normally Unattended Installations (NUI):
	  ○ HLO and two HDAs for helicopter landing/take off with 15 or more occupants, including pilots.
	  ○ HLO and one HDA on Normally Unattended Installations (NUI) for helicopter landing/take off less than 15 occupants, including pilots.
	• On Minimally Manned Installations (MMI) - defined as facilities with at least three and no more than 20 Persons on Board (POB).
	  ○ HLO and one HDA for helicopter landing/take off with eight or fewer aircraft occupants, including pilots.
	  ○ Flights with greater than eight prohibited.
	
	Business Units can specify **HIGHER** numbers, and the installation or vessel shall demonstrate that sufficient personnel numbers are available, to account of local requirements, such as, operational hours (Daylight/24 Hours Coverage), number of helicopter rotations expected, shuttling, weather, baggage handling, escort duties, fire cover, specific installation fuel systems.
	
	Helideck Manning **less** than these minimums requires the relevant Shell Technical Authority – Air Transport (TA/1) to file a Shell Performance Framework Exception.

8VAR.1	Shell requirements to meet 8C.1.2 & 8ACC.1 the relevant Shell Technical Authority – Air Transport (TA/1), can vary the two-year training, subject to a Risk assessment to assure training knowledge retention demonstration.
8VAR.2	Shell requirements to meet 8C.1.3 the relevant Shell Technical Authority – Air Transport (TA/1) can endorse personnel delegated to conduct HLO and Helideck Team Member competency assessment.
8VAR.3	Shell requirements to meet 8C.2 the relevant Shell Technical Authority – Air Transport (TA/1) can endorse HLO and Helideck Team Member training for OPITO equivalence, subject to a documented process, such as a gap assessment against the OPITO syllabus.
8VAR.4	To vary 8ACC.2 the Business Units, Helideck Manning less than the listed minimums, requires the relevant Shell Technical Authority – Air Transport (TA/1) to file a Shell Performance Exception, supported by a relevant Risk Assessment, or similar.

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9	Contract interface – helideck facilities and associated systems
MR	9B, 9C.1.
Guidance Material	
9B	No Guidance
9C.1	No Guidance

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App A	Appendix A - Offshore helideck review checklist
Guidance Material	
App A	The OIM/Vessel Master should: • Formally appoint the HLO and Helideck Team Members. • Assure completion of HLO and Helideck Team Member training prior to their initial appointment to act independently in role.
9VAR.1	To meet Appendix A, the relevant Shell Technical Authority – Air Transport (TA/1) can use a Shell Approved assessment.