

**HELIDECK LIMITATIONS LIST (HLL)**

**PART A**

**1) INTRODUCTION**

Under the Air Navigation Order (ANO) UK helicopter operators are responsible for ensuring that helidecks to which they fly are ‘fit for purpose’. Installation and vessels owners through their Safety Management System (SMS) also have the responsibility for ensuring their helidecks satisfy the helicopter operator’s requirements.

The standards which have to be satisfied are given in the Civil Aviation Authority (CAA) publication CAP 437 ‘Offshore Helicopter Landing Areas – Guidance and Standards’.

HCA is the nominated body with responsibility for inspecting the helideck and its environs to ensure that required standards are met. Subject to satisfactory inspection by a HCA approved helideck inspector, HCA will issue a Helideck Certificate. Helideck Certificates when issued will be valid for a maximum of two years and renewal certificates will be issued subject to a satisfactory re-inspection by a HCA approved helideck inspector.

For each inspection a Helideck Inspection Report (HIR) together with a Summary of Non-compliances will be completed. Items necessitating limitations to be placed on operations as well as comments and non-compliances will be noted and published in the HLL.

**2) CONTENT**

The HLL is broken down into several sections as follows: -

Part A	Introduction and Explanatory notes.
Part B	Table 1/Table 2 Limitations.
Part C	Pitch/Roll/Heave Limitations and Definitions
Part D	Limitations List. This part has information on individual installations/vessels. For ease of use this part is split into <b>various</b> sections:
	<ul style="list-style-type: none"> <li>• <b>Permanent Installations</b> <ul style="list-style-type: none"> <li>- UK-North</li> <li>- UK South</li> <li>- UK West</li> <li>- Norway</li> <li>- Ghana</li> <li>- Holland</li> </ul> </li>   <li>• <b>Mobiles</b> (including semi-submersibles, jack-ups and vessels)</li> </ul>
Part E	Annexes

### 3) DESCRIPTION

#### Part A INTRODUCTION and Explanatory notes.

An explanation of the various pages that make up this document.

#### Part B TABLE 1/TABLE 2 Limitations.

##### TABLE 1

Limits to be applied by aircraft type for take off (T) or landing (L) where there are significant 5:1 infringements. *The decision whether an infringement is significant or not, is made through the Helideck Technical Committee, consisting of senior pilots from the offshore operators and HCA Inspectors.*

##### TABLE 2

Limits to be applied by aircraft type, for landing or take off, where turbulence is a major factor. The winds at which limitations take effect are shown along with limits to be applied for different aircraft types (*an asterisk indicates where a lower figure should be applied*). Note: Turbulence includes both the 'MECHANICAL' effect of wind flow around, through and over structures on the installation/vessel and the 'THERMAL' effects from flares and exhaust gases blowing over the helideck. In some cases both can be present simultaneously; it is therefore essential that turbulence reports are filed by pilots to enable these sectors to be closely monitored.

#### Part C PITCH/ROLL/HEAVE LIMITATIONS AND DEFINITIONS

All vessels listed in the HLL have electronic Helideck Motion Sensing (HMS) equipment fitted as standard. These systems are designed to measure the highest cycle in a 20 minute window and forecast this for the next 20 minutes. When any parameter is exceeded a RED warning light is displayed to the radio operator.

The limitations in the body of the HLL are based on the category of helideck according to the ease of operation to that deck. Three (3) categories are listed:

- **Category 1** = MODUs & Vessels such as FPSO's etc with good visual references
- **Category 2** = Vessels with Stern or mid-ships mounted helidecks giving good visual references
- **Category 3** = Vessels with Bow mounted helidecks with poor visual references

Helicopters are listed as **Category A or B**

Day and night limitations are shown for each aircraft category.

#### Part D LIMITATIONS LIST

This consists of pages in tabular form showing details of each installation/vessel in six column headings with three sub columns to one and two to another.

##### Column 1 (NAME)

Shows the identification of the installation/vessel. (*Where there has been a recent name change the old name will be shown in italics.*)

##### Column 2 (D)

The "D" value. Refers to the list in Part C to ensure it is big enough for your aircraft type. (*where the deck strength is below the requirement for that "D" value this will be indicated in the limitations/comments column*)

**Column 3** ('t')

The 't' value. Refers to the maximum weight at which an aircraft is permitted to operate to the helideck.

- A/C weight less than or equal to t value can operate without restriction
- A/C maximum weight greater than t value may operate to the helideck provided actual weight is less than t value.
- A/C weight greater than t value may operate above t value provided there is a recognised and accepted safety case in place i.e. the Consultavia safety case for the S92 to operate to 9.3t helidecks. Note this will normally be indicated on the Helideck Certificate and/or Plate.

**Column 4** (P/R/H)

Indicates the vessel category identifying in Part C the Pitch/Roll/Heave limits to be applied.

*("F" is a fixed installation)*

**Column 5** (Wind (°T))

This indicates the sector in which the limitations to which sub-column three relates.

*Note 1. The wind is given as TRUE*

- 2. The sector relates to the ships head and should therefore be added to its heading to relate to compass north. This has been necessary to cater for vessels that are able to move to different areas within our total operating area and alter the anchored heading dependent on the work requirement.*

**Column 6** (Kts)

A wind strength which relates to the comment in the Limitations column.

*(it does not necessarily mean that Table 2 is to be applied unless the comment indicates so)*

**Column 7** (Limitations/Comments)

Used to detail any limitation that will effect operations to that deck either due to a non-compliance (Column 9) or weather (e.g. turbulence) or other specific comments that should be noted.

**Column 8** (Sector)

Indicates whether the non-compliance is in the infringement is to the 210°, 150° or 5:1 falling gradient sectors or if it is a miscellaneous item.

**Column 9** (Non-compliant items)

Linked to Column 8. Brief details of the non-compliance are given.

*Note: Listing all non-compliances is intended to help inform the Duty Holder & Helicopter Operator risk assessment e.g for operations to under-sized decks.*

## PART E ANNEXES

Annexes are used where the complexity of the operating restrictions and comments warrant further clarification.

## 4) IMPORTANT NOTES

### 4.1) **5:1 Infringements:**

5:1 infringements are categorized as being any object (e.g. Foam monitor/access platforms, lifeboats, living quarters) that infringes the 5:1 falling gradient.

Depending on the degree of intrusion into the 5:1 falling gradient sector appropriate limitations and/or comments are applied. The Technical Committee have endorsed the following table:

Infringements up to 2.00m from the edge of the declared load bearing area.	Noted as a 5:1 infringement, however, no limitations applied
Infringements in excess of 2.01m from edge of declared load bearing area.	Over flight to be avoided wherever possible. Table 1 to be applied. These items are annotated " <u>5:1</u> " in the HLL.

When other vessels are working close to the destination installation/vessel, although not appearing in the HLL, they should be treated as 5:1 infringements - Table 1. If parts of the vessel are above helideck level and therefore infringe the Obstacle Free Sector additional restrictions may have to be applied.

### 4.2) **Fixed platform with flotel/vessel alongside, combinations:**

There are two main problems when a flotel/vessel is moored alongside a platform:

1. The flotel or other vessel can seriously infringe the falling 5:1 clear area in the direction of take off. If this is the case, and the headwind component is less than 30 kts, restrictions shown in the HLL Table 1, are to be applied.
2. Turbulence created by the platform can affect the flotel/vessel helideck. In this case, restrictions are likely to be applied, as shown in the HLL, Table 2.

### 4.3) **Turbulence reports:**

Whenever turbulence is experienced during the approach or take off which was not indicated in the HLL or turbulence was expected and not experienced, **PLEASE SUBMIT** an HCA Turbulence report so that the situation can be reviewed by the Helideck Technical Committee.

### 4.4) **Cold Flaring:**

When "Cold Flaring" is taking place, TRANSITTING traffic is ADVISED to avoid over flying the installation by either 3nm laterally or 3000 ft vertically. Aircraft intending to operate to an installation during "COLD FLARING" MUST ensure that their approach, landing area and departure path will be well clear of the unlit plume. When this cannot be achieved, the aircraft commander should suspend operations until such time as it is possible to comply with the above procedure

### 4.5) **General:**

Irrespective of the approval status of a helideck, it is the pilot's responsibility to plan the approach to, and go around from, an offshore installation to ensure a safe and comfortable flight path using an appropriate profile. It is important to always consider the engine failure case and any subsequent drop down to gain "fly away" speed. The same principle applies during the take off phase, when, wherever possible, the departure should be over the helideck edge where there is a clear drop down area beneath (CAP 437 falling 5:1 gradient).

### 4.6) **Legend:**

- adl     above deck level
- OFS     Obstacle Free Sector
- LOS     Limited Obstacle Sector
- RFFF    Rescue and Fire Fighting Facilities

**4.7) Helicopter Types**

Type	D Value	Max 't' value	Category
S92	20.88	12.0	A
EC 225	19.50	11.0	A
AS 332L2	19.50	9.3	A
AS 332L	18.70	8.6	A
Bell 214ST	18.95	8.0	A
AW 189	17.60	8.6	A
EC 175	18.06	7.8	B
Bell 412	17.13	5.4	B
Bell 212	17.46	5.1	B
AW 139	16.66	7.0	B
S76	16.00	5.3	B
EC 155	14.30	4.9	B
AW169	15.00	4.8	B
AS365N / N2/ N3	13.68	4.3	B
EC 135	12.00	2.7	B
A 109	12.96	2.6	B