

## HELICOPTER SHIP OPERATIONS: NEW INDUSTRY GUIDANCE

### DEVELOPMENT OF THE INTERNATIONAL CHAMBER OF SHIPPING GUIDE TO HELICOPTER SHIP OPERATIONS (FOURTH EDITION, 2008)

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## ICS International Chamber of Shipping Guide to Helicopter / Ship Operations

- ❖ First published 1979
- ❖ Revised edition 1982
- ❖ Third edition 1989
- ❖ **Fourth edition 2008**

Foreword states: "This guide has been published after wide consultation with both marine and aviation experts", including the following organisations: -

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## Consultation group comprised the following:

- ❖ B W Shipping
- ❖ Civil Aviation Authority (UK)
- ❖ Helideck Certification Agency
- ❖ Maersk Ship Management
- ❖ Maritime and Coastguard Agency
- ❖ Shell (Aviation and STASCO)
- ❖ Stolt-Nielson Limited

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Some Key features of the 4<sup>th</sup> Edition Guide:

- Revised arrangements for helicopter operating areas
1. Ship's side (Non purpose built)



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2. Purpose built amid-ships landing area



Non-purpose built amid-ships landing area



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3. Ship's side Winching Area



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#### 4. Bridge Wing (BW) Winching Area

Winching Areas - Monkey Island/Bridge Wing



Bridge Wing Operations for Marine Pilot Transfer are subject to a comprehensive Risk Assessment (described fully in Appendix H)

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From an aviation perspective, the fourth edition 'ICS Guide' was drafted with reference to the following primary 'requirements' documents:-

- International Civil Aviation Authority (ICAO):
  - Annex 14 Volume II (Heliports) – addresses heliport design requirements.
  - Annex 6 Part III (International Operations – Helicopters) – addresses helicopter operations

UK CAP 437 "Offshore Helicopter Landing Areas – Guidance on Standards"  
– Chapter 9 addresses requirements for Helicopter Landing Areas on Vessels

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As previously illustrated the ICS Guide addresses:

- Landing and Winching areas (Operating areas)
- Centreline and ship's side location arrangements
- Purpose built and non-purpose built structures included

For the case of a non purpose built operating area arrangement, the ICS Guide now recognises that there may be "immovable parts" of a ship's structure e.g. tank lines, Butterworth lid which may encroach on the operating area but may not necessarily prohibit the use of helicopters providing 'obstructions' are properly recorded and physically marked where necessary (obstructions in the clear area are potentially more critical for skid fitted helicopters than wheeled types)

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A new Appendix F "Helicopter Landing / Operating Area Plan" is included.

Helicopter Landing / Operating area plans are created for the purpose of identifying and recording the location of obstructions which may exist on the surface of the operating area and / or encroach into the obstacle protection surfaces of a specific arrangement.

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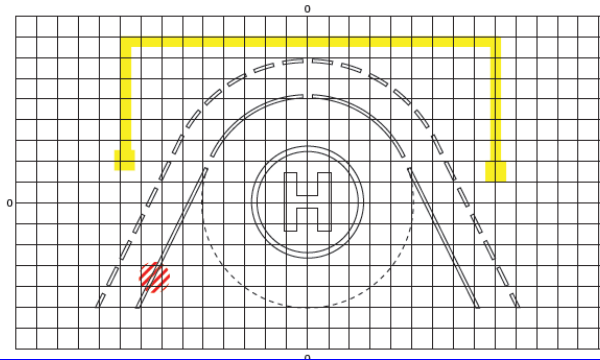
## Centreline / Amidships Helicopter Landing / Operating Area Plan

### Ship details

|                 |                          |
|-----------------|--------------------------|
| Date compiled   | 18 November 2008         |
| Name of Ship    | SAMARINDA                |
| Company Name    | Carthusian Shipping Line |
| Max Deck Height | 26m                      |
| D Value         | 19m                      |
| Contact Name    | Capt David Wilkinson     |

### Obstructions

| Item | Description     | Height |
|------|-----------------|--------|
| ■    | Tank Wash Line  | 0.6m   |
| ■    | Vent            | 2.3m   |
| ▨    | Butterworth Lid | 30cm   |
| ■    | Vent            | 2.3m   |

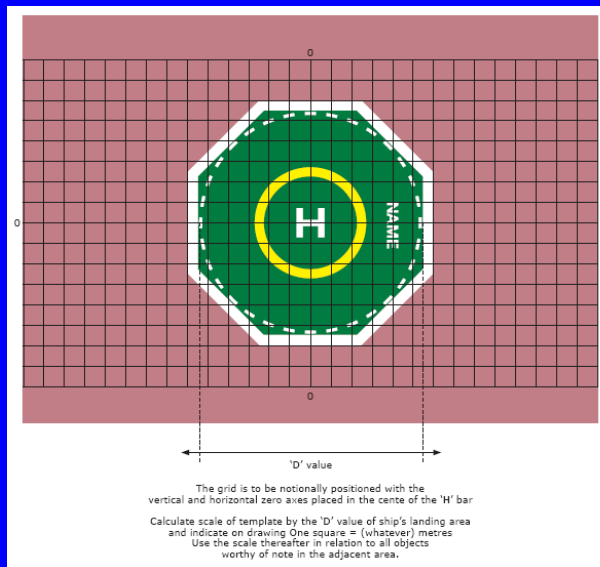


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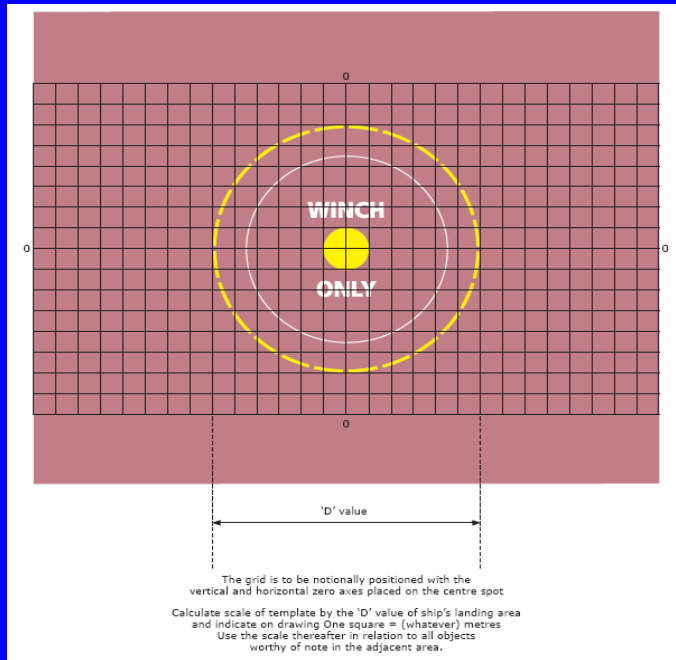
## Centreline / Amidships Helicopter Landing / Operating Area Plan



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## New Appendix H

### Bridge Wing Operations For Marine Pilot Transfer

Where the size of the winching (operating) area precludes the application of existing ICS/ICAO/CAP 437 criteria, and where no practical ship's side alternative exists, it may be possible to conduct the transfer of marine pilot's by helicopter hoist, to the bridge wing of a ship provided this can be supported through an appropriate detailed Risk Assessment

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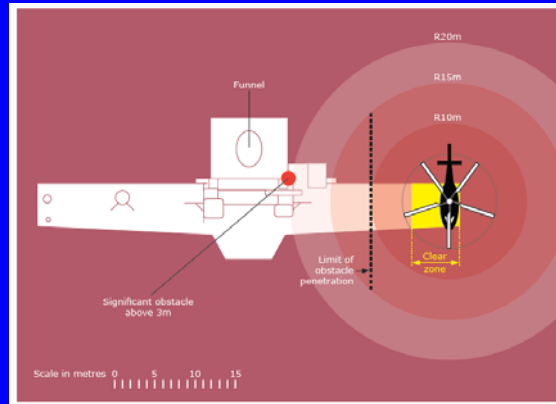
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The acceptance of a Bridge Wing (BW) arrangement is subject to a full risk assessment acceptable to both the helicopter operator and the ship's master which identifies:

- All the threats and controls
- Considers appropriate mitigating measures

One of the primary considerations is the increased threat of obstacle strikes



Obstacles in effect are "moving" due to the motion of the ship, particularly due to the risk of excessive heave or roll.

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To ensure ship motions are accurately measured and recorded it is recommended that serious consideration be given to the fitting of electronic motion sensing devices – in the form of a package of accelerometers which have a real time and predictive function to record motions through the operational window of the task.

The offshore industry has been operating for a number of years using electronic motion sensing systems and this is now a firm requirement for operations to 'moving' helidecks. Commercially available equipment can be sourced which also includes an automated means of recording and processing climatic information (e.g. wind sensor, air-temperature, humidity – pressure sensor).

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SecRec HMS  
Helideck Monitoring System



"Safe and efficient flight planning requires  
correct vessel motion information"

[www.shoreconnection.no](http://www.shoreconnection.no)

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Thus the recommendation for motion monitoring equipment is also recommended (serious consideration) in Chapter 4 for 'standard' Ship Operating Areas (Ship's side or centreline).

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## In Summary

The Fourth Edition ICS Guide to Helicopter Ship Operations.

- Updates best practice guidance within a framework for providing increased flexibility recognising the practice of transferring marine pilots by winch directly to the bridge wing and acknowledging that where immovable 'fixtures' encroach on a helicopter operating area and / or into surfaces established for obstacle protection, with proper annotation and physical marking of obstacles, it may still be possible to operate to the landing or winching area with any necessary restrictions or limitations in place.
- CAA would like to thank ICS for its positive role in managing the update of the Helicopter Ship Guide. It is envisaged that the good practice developed in the ICS Guide will be used to influence the future development of SARPS for 'shipboard heliports' in ICAO Annex 14 Volume II.