



**Helicopters are increasingly must-have accessories for superyachts of a certain size. Frances and Capt Michael Howorth report on the latest regulations governing their operation aboard.**

# budgie on the back deck?

**H**elicopters have been in existence in their present form for something over 50 years and for airborne versatility nothing comes close. So, not surprisingly, they naturally complement superyachts of a certain size, providing

exceptionally efficient point-to-point travel for owners and their guests. And they get used for a multitude of additional services too, from beach reconnaissance and fun rides to a vital safety role. For instance, they could be extremely useful should it come to spotting someone lost overboard.

They have everything going for them. They're fast, relatively quiet, comfortable, fashionable, practical and, providing crews have created an environment conducive to safety, they are generally seen as incident free. Yacht crews often refer to them as the 'petrol budgies'.

In 2004 the UK's Maritime and Coastguard Agency (MCA) became aware of the need to address safety standards for the rising number of modern large yachts using helidecks. As a consequence, carefully considered amendments to the Large Yacht Code (LY2) were deemed necessary to cover

this relatively new and expanding area. Helideck operations have been covered by the amended LY2 code since late last year, which is designed to ensure the safest possible take-off and landing conditions and minimise the likelihood of accident or injury.

Until this, guidelines for helicopter use at sea were primarily concerned with structures and vessels servicing the oil industry.

In March 2007 the Helideck Certification Agency (HCA) was formally appointed as the 'Aviation Inspection Body' for the MCA. It was given the responsibility of verifying inspections, certificating helidecks, and implementing operational limitations (or restrictions) as necessary. The HCA has also been given responsibility for inspection and verification of the landing area size, marking and lighting, sector-clearance zones, and crew training, among other key areas.

Under the new rules, the size of the helideck is regulated and must now provide sufficient space for a number of key factors such as clearance from obstacles and sufficient room to allow the pilot to access all parts of the helicopter. The rules also specify turbulence criteria and lay down rules for required training and helideck lighting and marking.

Full details of the technical standards for helicopter landing areas on board large commercial yachts are included in MSN1792 Edition 2, which can be downloaded from the MCA website [www.mcga.gov.uk](http://www.mcga.gov.uk).

**Standards for on-board helicopter landing-zones now have to comply with regulations laid down by the Helideck Certification Agency.**



**“Few captains realise that by permitting aircraft to land they are accepting full responsibility.”**



**Helidecks now need to be designed so there is sufficient area to allow the pilot safe access to all parts of the aircraft.**

### Training

The importance of training large yacht crews in the handling of helicopters and emergency onboard response procedures can never be underestimated. Familiarity with helicopter operations is now strongly recommended for all the crew aboard any large yacht to ensure they are aware of potential risks associated with operating the aircraft to — or from — such a vessel. With the new regulations coming into force, fresh entrepreneurial opportunities have opened up for those with relevant expert knowledge.

For instance, in the UK, Grange International Aviation, in a joint venture with the Empire Test Pilots' School at Boscombe Down, has created a short course for pilots and bridge officers serving on board yachts aimed at establishing a common single standard for the safe operation of helicopters flying to and from superyachts.

Formed in 2006 by former Royal Navy officers Commander Kevin Mathieson and Lieutenant David Simms, Helidecks Training Solutions is another new British consultancy aimed at helping yacht owners, designers and captains get to grips with new regulations.

Between them they have 7,000 hours of embarked operations. Mathieson has been a pilot for 26 years and holds a commercial pilot's licence and both men are qualified yacht surveyors. They have been appointed helideck experts to the International Institute of Marine Surveyors and their current superyacht projects include work for a number of designers and yards throughout Europe.

With most projects based around private helicopter operations, there are a few seeking commercial compliance. Some of these projects are particularly exciting and mostly concern yachts from 55m-130m (180ft-426ft). All have design challenges, and each development is completely bespoke.

Building and certifying a helideck is, of course, only half the story: ISM (International Safety Management) helicopter procedure development and crew training also needs to be thorough and appropriate before it can be instigated onboard.

### Turbulence

Most helicopter landing sites ashore stay still while the pilot completes landings or take offs. None of them squirt hot gas into the air; nor is the manoeuvre impeded by radio aerials waving in the breeze inches away from the pad. Yet, routinely, this is the environment pilots face aboard yachts fitted with what are called 'touch and go' landing facilities.

Professionals in the industry believe there is no such thing as a so-called 'touch and go' helideck. Many admit the term is readily used in this industry, but most are desperate to outlaw it. They hold that a helideck is a helideck whether the helicopter is going to shut down or not, and that the criteria for size and obstructions should be the same.

Few captains realise that by permitting aircraft to land aboard their vessel they are in fact accepting full responsibility for the action and will, in theory, bear the consequences should the manoeuvre go wrong. Turbulence and hot exhaust gases caused by superstructure exhaust funnels — not to mention antennae at the upper aft region of a large yacht — are likely to be present when the vessel is powered into the wind. Minimum acceptable turbulence criteria relating to airflow across helidecks have now been put in place and should ensure risks are reduced.

Clearly before yachts are built with helipads, wind-tunnel testing or CFD (computational fluid dynamics) studies should be undertaken at the design stage to minimise such effects.

Naturally, there are still significant engineering challenges to be overcome by superyacht builders if design is not to be compromised by the inclusion of a fully compliant helicopter landing area. With the new regulations still in their infancy this area of development will be fascinating to watch. □

### Useful contacts

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