



**Offshore Helicopter Flight data Monitoring
– Guidance On Best Practice**

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Background

- Objective:

To generate HFDM best practice guidance material specifically targeted at offshore helicopter operations.

- Drivers:

- To improve safety by promoting more efficient and effective application / use of HFDM.
- EASA SPA.HOFO.145 mandate (by 01 January 2019) for HFDM - to provide a 'yardstick' / 'level playing field'.
- UK review of offshore helicopter operations (CAP 1145) – to provide improved information in relation to operational cause occurrences (under-reported in MORS / ECCAIRS).
- UK AAIB Safety Recommendations 2016-009 and 2016-010.

General Approach (1)

- Review and utilise (where appropriate) existing material:
 - UK CAA - CAP 739, Flight Data Monitoring, 2nd Edition, June 2013.
 - UK CAA - CAA Paper 2002/02, Final Report on the Helicopter Operations Monitoring (HOMP) Trial, September 2002.
 - UK CAA - CAA Paper 2004/12, Final Report on the Follow-on Activities to the HOMP Trial.
 - Global HFDM Steering Group – Helicopter Flight Data Monitoring Industry Best Practice, Version 1.1, 01 April 2012.
 - EASA – Developing Standardised FDM-Based Indicators, December 2013.

General Approach (2)

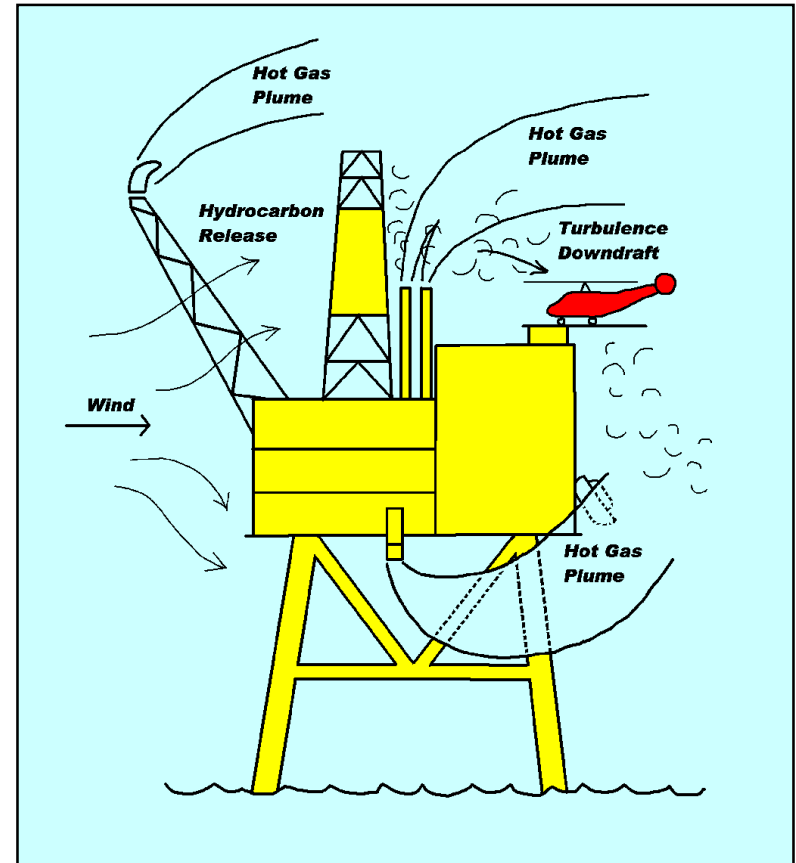
- Review existing events and measurements:
 - Adherence to RFM limits.
 - Adherence to SOPs.
 - Analysis of 'critical operations', e.g. approaches, (application of EOFDM WGA and WGB methodology).

- Develop new material for:
 - Environmental monitoring.
 - Usage monitoring.
 - HTAWS.
 - Supporting Evidence-Based Training (EBT).

Environmental Monitoring (1)

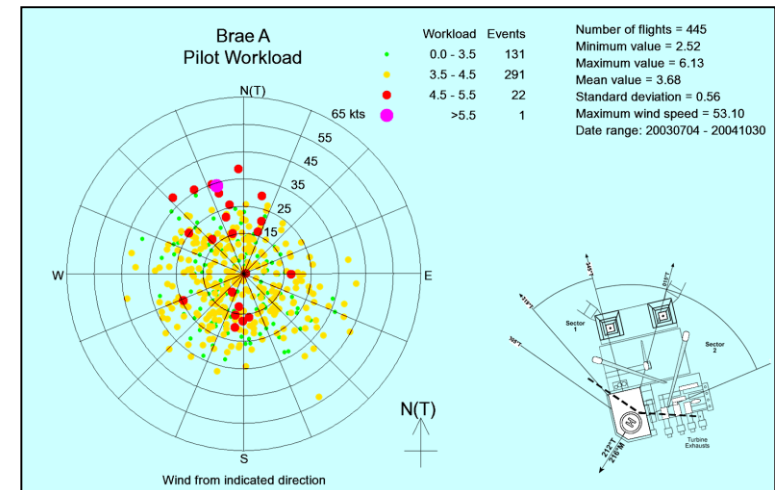
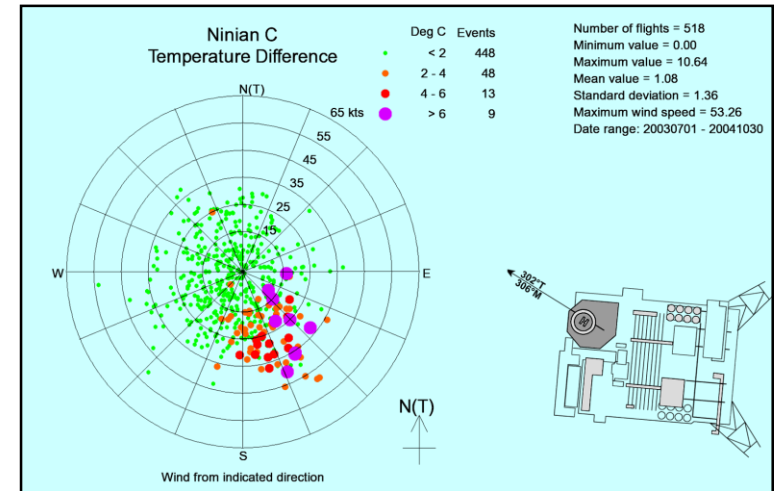
Significant hazards presented by:

- Temperature rise above reported ambient due to:
 - Platform-mounted gas turbine exhausts;
 - Flaring.
- Turbulence due to:
 - Platform-mounted gas turbine exhausts;
 - Platform structure.



Environmental Monitoring (2)

- Produce derived parameters based on:
 - Temperature - OAT sensor;
 - Turbulence - collective & cyclic control inputs.
 - Use derived parameters to:
 - generate events, and
 - collect measurements
- for each approach as a function of platform, wind speed and wind direction.
- Add Aerad information, e.g. plan view.
 - Add Helideck Limitations List (HLL) information, e.g. restricted sectors.



Environmental Monitoring (3)

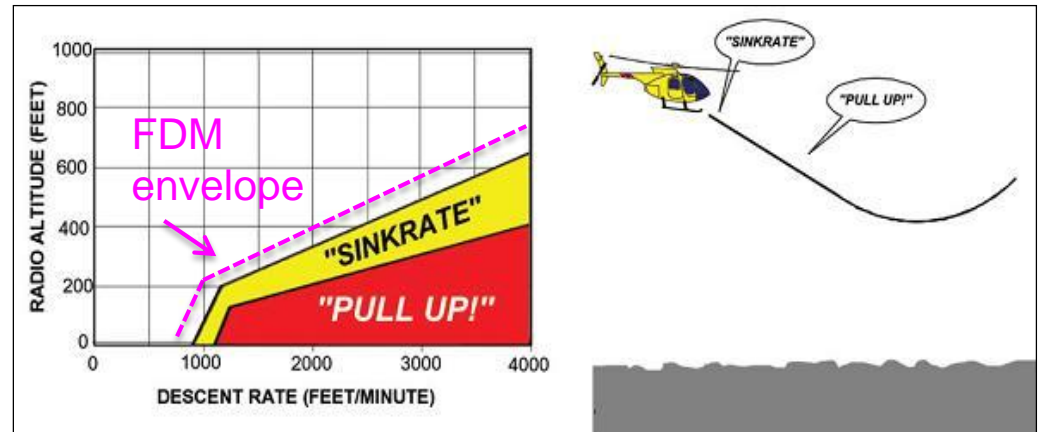
- Review plots and adjust operating limits as and when required:
 - Validate/refine existing HLL entries.
 - Add or delete HLL entries.
 - Monitor for significant changes to platform topsides, and review limits and / or procedures.
 - Identify ‘problem’ platforms to platform operator/owner for rectification / mitigation.



HTAWS (1)

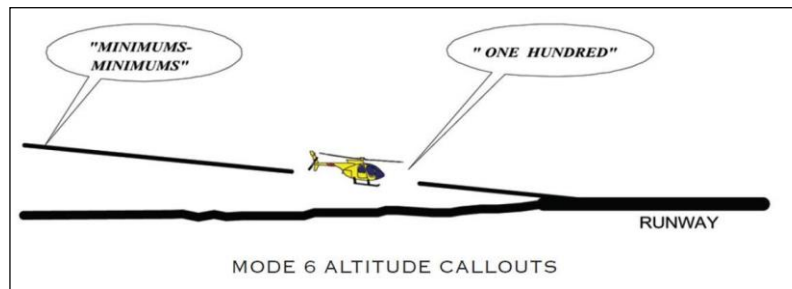
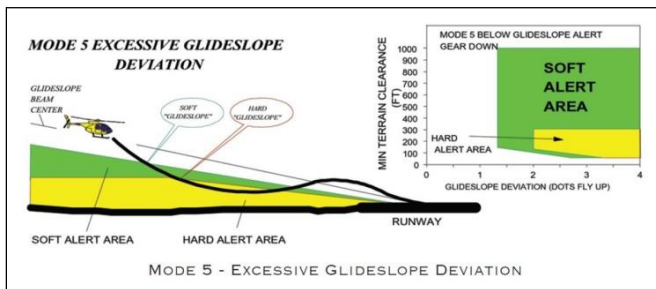
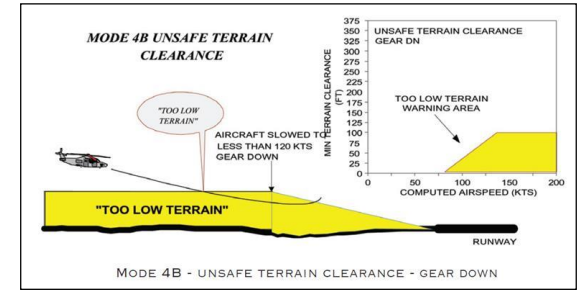
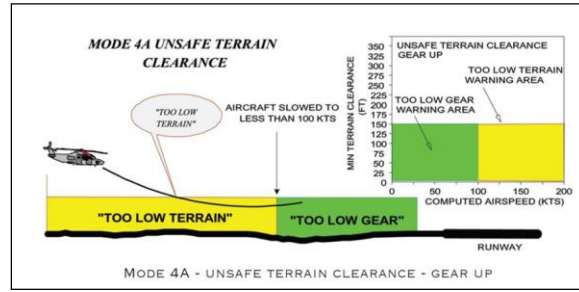
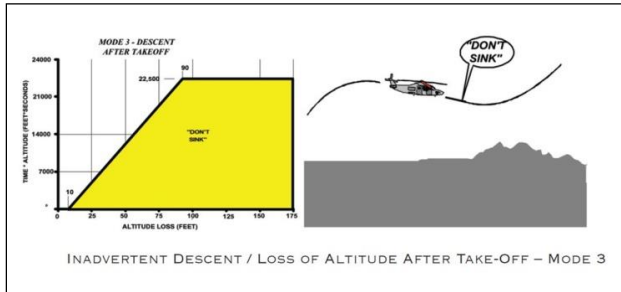
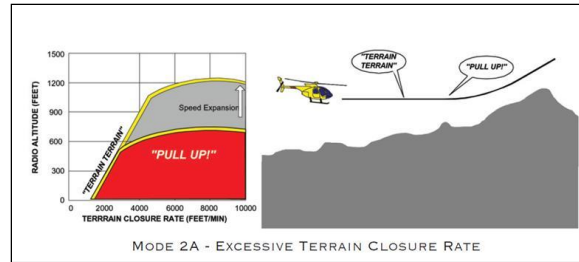
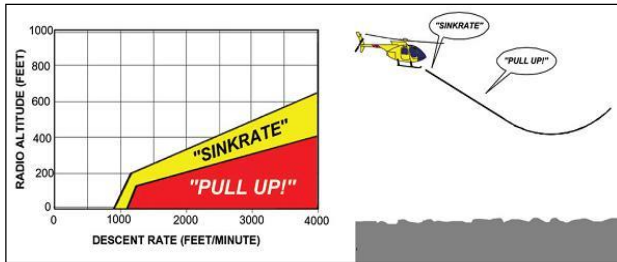
HTAWS = Helicopter Terrain Awareness & Warning System.

- EASA SPA.HOFO.160 c) mandate (new registrations from 01 January 2019).
- New HTAWS standard to be voluntarily implemented by industry early 2018.
- Warnings and cautions deliberately set to minimise alert rate during normal operations – HTAWS alert means the helicopter is potentially seconds from impact.
- HFDM needs to monitor proximity to HTAWS alerts and not HTAWS alerts.



HTAWS (2)

- There are a number of alert 'envelopes' to monitor (current envelopes shown).



Thank you for your attention...

Any questions?