Quality in the healthcare environment

NHS National Services Scotland

Safety Action Notice

Reference: SAN2404 Issued: 13 September 2024 Review Date: 13 September 2025

NHS Helipad / hospital helicopter landing sites: safeguarding advice, with reference to incidents, relevant guidance, information & training resources.

Summary

The Air Accident Investigation Branch (AAIB) report into a fatal downwash accident at Plymouth Derriford Hospital (Nov 2023) makes several recommendations to address safeguarding measures that need to be in place at Hospital Helicopter Landing Sites (HHLS) used by NHS Scotland, UK Search and Rescue (SAR), Scottish Ambulance Service (SAS) and other bodies. NHSScotland (NHSS) Assure are specifically given an action, "to review all existing hospital helicopter landing sites for which it has responsibility against the latest guidance and instigate appropriate actions to minimise the risk of injury from downwash to uninvolved persons."

In addition, UK Civil Aviation Authority (CAA) issued new CAP1264 hospital helipad guidance (April 2024). Bristow UK SAR air operator also recently issued a letter and list of 23 'red' HHLS in Scotland where they are not currently assured that NHS Board safeguarding is in place (August 2024). Consequently, SAR services are withdrawn for these 23 'red' HHLS for the time being until Board safeguarding duty is assured as compliant with CAP1264.

For avoidance of doubt, NHS Chief Executive has overall responsibility for the safeguarding and operational management of any HHLS used in NHS patient delivery to hospital, irrespective of HHLS land ownership. Although the immediate impact is the SAR 23 site withdrawals (Appendix 'red' list), CAP1264 has a wider NHS safeguard impact and duties for each HHLS's range off air operators such as SAS, SCAA, Police, Coastguard. Also, particularly in inclement weather, SAR provide 'back-up' role for SAS transfers (~10% of 4000 annual SAS organised NHSScotland helitransfers were operated by SAR).

Action

 Direct this notice to appropriate HHLS managers, staff and stakeholders; such as Chief Executives, Clinical / ED / Trauma Network leads, heads of Facilities / Safety / Security leads, Community leaders

Actions for all NHS Boards using any HHLS (irrespective of land ownership)

- 2. Review existing HHLS governance, safeguarding protocols, risk assessments and resource, considering CAP 1264 (April 2024) new duties and any relevant adverse incidents (see below Background Information and Appendix for summary of IRIC data, NHSS Assure Notes/ FAQs).
- 3. Ensure written appointment(s) for Accountable Manager (AM) and Responsible Person (RP). Ensure Competent Person (CP) familiar with risks associated with each HHLS, the latest Guidance such as CAP1264, and each HHLS anticipated air operators/ helicopters /downwash parameters; undertake full safety assessments. Update or create documentation, such as Heliport Operations Manual (HOM) and Standard Operating Procedures (SOPs), training and governance, including monitoring and regular reviews for resilience.

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4. Where an HHLS is considered as no longer required/ closed, or down-gradable, this is to be agreed in writing by all key stakeholders, including clinicians, SAS etc. Other air operators are to be notified / consulted in advance, such as SAR, SCAA, Police, Coastguard. Any alternative/ replacement air and land transportation should be identified and agreed by stakeholders.

- 5. Where an HHLS safeguarding or design is found as non-compliant with the current guidance, such as CAP1264 for its clinical function or air operators; the NHS Accountable Manager (AM) is responsible to coordinate and develop a safety action plan to mitigate risks and safeguard.
- 6. AM to report on points 4, 5, 7 & 8, initial findings and outcomes to NHSScotland Assure and SAS Air Ambulance to ensure national overview and support if required (email links below).

Further actions for NHS Boards impacted by SAR withdrawal at 23 HHLS in the Bristow letter (see Appendix for copy of letter, a list of HHLS and NHSS Assure Notes / FAQs)

- 7. As a matter of priority, where an NHS Board is responsible for HHLS 'red' listed by Bristow so SAR is withdrawn, contact Bristow SAR Ground Operations Manager Mr Robin Latcham robin.latcham@bristowgroup.com to update and arrange "opportunity to reassess your HHLS with the intention of re-instating it as operationally safe" at their earliest convenience. Simultaneously, contact SAS and NHSS Assure, to support the Health Board at this initial SAR meeting and ensure national overview and agree prioritisation of HHLS SAR 'green' or open reinstatements; or as 4. above agree to down-grade or agree not required/ closed.
- 8. As a matter of priority for HHLS SAR reinstatements, apply points 5 and 3 above. Such as, appoint AP / RP and CP(s) to coordinate and develop a safety action plan, and to ensure CAP1264 compliance, resource and documentation for NHS safeguarding of HHLS used by SAR in NHS patient delivery to hospital, (irrespective of HHLS land ownership). Given specialist design and SAR priority, this initial CAP1264 report is most likely to need an external CP procurement.

Hospital Helicopter Landing Site - guidance and references

- AAIB Nov23 report into the accident at Plymouth Derriford Hospital on 04 March 2022, <u>Aircraft Accident Report AAR 2/2023 Sikorsky S-92A, G-MCGY GOV.UK (www.gov.uk)</u>
- UK Civil Aviation Authority (CAA) guidance, (supersedes HBN 15-03, withdrawn 2016):
 <u>CAP1264: helicopter landing areas at hospitals | Civil Aviation Authority (caa.co.uk)</u>; and
 <u>CAP 738: Safeguarding of Aerodromes | Civil Aviation Authority (caa.co.uk)</u>
 <u>CAP 793: Safe Operating Practices at Unlicensed Aerodromes | (caa.co.uk)</u>
 <u>Advisory publications | Civil Aviation Authority (caa.co.uk) such as CAP168 & 791</u>
- Training: such as <u>Hospital Helipad Aviation Awareness | CAP1264 UK CAA</u> (caainternational.com)
- Videos: <u>Helicopter Downdraft Danger | bp (youtube.com)</u>; <u>Helicopter delivers to rooftop helipad</u>
 | BBC 'Scotland's Superhospital' (youtube.com)

Background Information

CAP 1264 first published in 2016 supersedes HBN 15-03 and contains comprehensive guidance about downwash risks and states that a downwash zone for large helicopters should extend 50 to

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65 metres from the edge of a ground level hospital helicopter landing site (HHLS). Prior to 2016, HBN 15-03 provided guidance to healthcare organisations on helicopter landing. It noted that there should be a 30m downwash helipad zone, marked by fencing and signs, that should be kept clear of people, parked cars and buildings. The downwash danger zone varies depending on the helicopter size and power, and distance to the ground or other surfaces.

IRIC Data Sample Analysis

The Incident Reporting and Investigation Centre (IRIC) conducted a data sample request across NHSScotland Boards (all territorial health boards and some special Boards such as SAS and NHS National Waiting Times Centre). IRIC asked Boards to report incidents involving HHLS recorded on local risk management systems going back 15 years but also to conduct a specific search for downdraft incidents. 11 NHS Boards responded to the request, reporting 124 incidents in total. Initially 9 downdraft incidents were reported, this was revised to 7 in total, once duplicates were removed. 6 of these 7 were near misses, and 1 resulted in minor injury. All figures are based on the reported information to Boards and to IRIC, such incidents are typically underreported. Brief summary of each incident:

- downdraft blew a temporary metal roadside barrier into a bystander minor injury caused
- downdraft causing fencing to be blown onto cars causing damage no injury reported
- downdraft blew up lots of loose debris, breaking car rear windscreen and denting panels no injury reported
- downdraft blew a small child up into the air was caught by the father no injury reported
- downdraft blew a pushchair / stroller from the car park across grass onto the helipad, ~80 meters in a few seconds no injury reported
- 2 incidents of downdraft blowing off eye glasses / visors no injury reported

The top 3 themes identified in the 124 helicopter incident reports, (note multiple themes can arise in one report):

- Communication (54)
- Staffing (46)
- Member of public (MoP) / staff / animals on / near helipad (30)

Communication theme examples are:

- Hospital had no warning prior to landing
- Miscommunication about landing times
- Helicopter arrival awareness, but all relevant staff not informed / called-in; such as porters

Staffing theme examples are:

- No fire crew on helipad
- No porter staff at helipad
- Ambulance did not turn up to meet helicopter

Member of public (MoP) / staff / animals on / near helipad theme examples are:

- Children attempted to access helicopter on helipad
- Contractor working on helipad landing aborted
- Cars not stopping for lights / security during helicopter take off / landing

Enquiries – further contact details

- NHSS Assure: Louisa Fielding, Estate & Asset Management Advisor, <u>louisa.fielding@nhs.scot</u> / <u>nss.DEandAMTeam@nhs.scot</u>
- SAS: Andy Moir, Head of Air Ambulance Service, andrew.moir@nhs.scot

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 Bristow Search and Rescue: Robin Latcham, Ground Operations Manager <u>robin.latcham@bristowgroup.com</u>

Suggested onward distribution (may not include all affected departments)

Chief Executives, NHS Heads of Estates and Facilities, Risk Management, Health & Safety, Ambulance Services, Fire Safety Advisors, Security & Portering Services; Community leaders

Information about IRIC

Incident Reporting & Investigation Centre (IRIC), Facilities Division, NHSScotland Assure NHS National Services Scotland, Tel: 0131 275 7575, email: nss.iric@nhs.scot

Accessibility: Please contact us using the above details if you are blind or have a sight impairment and would like to request this alert in a more suitable format.

IRIC remit: general information about adverse incidents, safety alerts and IRIC's role can be found in <u>CEL 43 (2009)</u>, Safety of Health, Social Care, Estates and Facilities Equipment: NHS Board and Local Authority Responsibilities, issued 30 October 2009.

To find safety alerts:

scan the QR code or <u>click this link</u> to visit our website



To report an incident: scan the QR code or click this link to visit our website



NHS National Services Scotland is the common name for the Common Services Agency for the Scotlish Health Service https://www.nss.nhs.scot/

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Appendix A- COPY OF BRISTOW LETTER (page 1)



<u>Bristow Helicopters Search and Rescue - AAIB report relating to the Plymouth</u> <u>Derriford Hospital incident 4th March 2022.</u>

Dear Sir, Madam,

The Air Accident Investigation Branch report into the accident at Plymouth Derriford Hospital on 4th March 2022, <u>Aircraft Accident Report AAR 2/2023 - Sikorsky S-92A, G-MCGY - GOV.UK (www.gov.uk)</u> makes a number of recommendations to address safeguarding measures that need to be in place at NHS Trust Hospital Helicopter Landing Sites (HHLS).

Bristow Helicopters Search and Rescue (SAR) has carried out a review of Risk Assessments for HHLS. This review has focused on the HHLSs we have operated to in the last two years. The prime focus of which was to identify sites where members of the public/staff could be exposed to the effects associated with Helicopter downwash and whether safeguarding measures are in place.

I write to advise that your HHLS has been identified as one where we are not currently assured that safeguarding is in place around the HHLS. We are left with no option but to withdraw it from Operational use for the time being until a full assessment can be made. For a casualty requiring onward medical care there may be a requirement for an ambulance transfer from an alternative landing site which may include the SAR aircraft base.

As you will be aware, guidance is published in the CAA Civil Air Publication (CAP) 1264, Standards for Helicopter Landing Areas at Hospitals. The 3rd Edition was published in April 2024.

I should emphasise that CAP1264 as a whole provides essential guidance to Hospital Trusts, and I would encourage you to ensure that it is read in full by those persons responsible for the operation of your helicopter landing site. If they are unable to understand it fully, then you should access competent advice.

I draw your attention to the following Sections/Chapters in the document which are of particular importance to Bristow Helicopters in providing mitigations to ensure the safe operation of the UK SAR S92, AW189 and AW139 helicopters.

- Section1, Chapter 1.7 1.10. Planning considerations and safeguarding arrangements.
 Further information on Safeguarding is available in CAP738, and of note is that the NHS trusts are to safeguard both the HHLS and an alternate site where applicable.
- Section 1, Chapter 1.11/1,12. Information relating to Helicopter Downwash/outwash.
- Section 1, Chapter 1.18. NHS responsibility/oversight and site management.
- Section 1, Chapter 1.33. Heliport Security.
- Section 1, Chapter 2. Helicopter Performance Considerations.
- Section 1, Chapter 6. General Precautions. Safety relating to persons approaching a helicopter.
- Section 2, Chapter 1. Operational Management. Important guide to an accountable NHS management structure to ensure safe Helicopter Operations.

Bristow Helicopters Ltd. Duce Avenue, Duce Aberdeen, AB21 0LQ, UK

44 (0)1224 723151 f +44 (0)1224 770120 www.bristowgroup.com

Registered Office: Redhill Aerodrome, Redhill, Surrey RH1 5JZ

Registered in England No: 551102

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Appendix A- COPY OF BRISTOW LETTER (page 2)



- Section 2, Chapter 2 Mitigation of Downwash / Outwash. A safe zone of approximately 50-65m from the edge of the landing pad is required for a heavy type helicopter such as our S92.
 The AW189, although medium to heavy presents similar downwash characteristics. The understanding of the effects of downwash/outwash will play a key part in your risk-based assessments.
- Section 2, Chapter 3. Risk Assessments.
- Section 2, Annex A Helicopter Operations manual (HOM). Detailed guidance on the suggested HOM to encompass all aspects of the HHLS and nominated alternate HHLS sites (eg Sports field) Operations.
- Section 2, Annex B, Bibliography. Other useful reference documents (links provided).

You will also note that in Annex B page 135, information is provided on the recently introduced CAA HHLS Awareness Courses. All personnel involved in HHLS Operations are encouraged to attend and a link to the CAA is provided accordingly. Hospital Helipad – Aviation Awareness | Training Course by the UK CAA (caainternational.com).

I understand that the HSE wrote to all NHS Trust and Board Chief Executives in May 2023 to remind them that workers, visitors and members of the public can all be affected by hospital helipad operations and the helipad operator has a duty to ensure the health and safety risks from these operations are effectively managed.

We are keen to work with the Trusts to assist their understanding of the risks arising from the use of their helicopter landing sites by our search and rescue helicopters so that effective measures are put in place to control them. Our aim is to reach a position where the recommendations in CAP1264 are implemented, and that appropriate, robust safeguarding procedures are adopted I would ask you to reach out to our Ground Operations Manager Mr Robin Latcham—robin.latcham@bristowgroup.com

This would provide Bristow SAR the opportunity to reassess your HHLS with the intention of reinstating it as operationally safe.

Yours faithfully

Graham Hamilton

Director, UK Search and Rescue.

16th August 2024

Bristow Helicopters Ltd. Dwca Avenue, Dwca Aberdeen, AB21 0LQ, UK

44 (0)1224 723151 f +44 (0)1224 770120 www.bristowgroup.com

Registered Office: Redhill Aerodrome, Redhill, Surrey RH1 5JZ

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Appendix B- LIST OF BRISTOW 'red' and 'green' HHLS

HHLS 'red' (Bristow SAR operations withdrawn) and 'green' (Bristow SAR operations unchanged).

| Bristow SAR 'red' NHS HHLS | | | | |
|----------------------------|-------------------------------------|-------------------|-----------------------------------|--|
| Health Board | Hospital HHLS | Bristow FMS ID | SAR landings (May 22 - May 24) | |
| NHS Grampian | Aberdeen Royal Infirmary | HARI | 58 | |
| NHS Western Isles | Stornoway, Western Isles | N/A | 52 | |
| NHS Lothian | Edinburgh Royal Infirmary (Ground) | HERI | 21 | |
| NHS NWTC | Glasgow, Golden Jubilee | N/A | 20 | |
| NHS Highland | Campbeltown | HCAMP | 13 | |
| NHS A&A | Ayr | HAYR | 9 | |
| NHS Tayside | Dundee, Ninewells | HEASB | 6 | |
| NHS D&G | Dumfries and Galloway | HDUND | 5 | |
| NHS A&A | Arran, Knockenkelly | HKNOK | 0 | |
| NHS A&A | Arran, Ormidale | HARNR | 0 | |
| NHS Western Isles | Barra St Brendan's | N/A | 0 | |
| NHS Highland | Broadford, Skye | SKYE | 0 | |
| NHS Lothian | Edinburgh Royal Infirmary Helipad | N/A | 0 | |
| NHS Highland | Fort William, Belford | HFPHO | 0 | |
| NHS GG&C | Glasgow, Paisley Royal Alexandria | N/A | 0 | |
| NHS A&A | Kilmarnock Crosshouse | N/A | 0 | |
| NHS Borders | Melrose | HMTPC | 0 | |
| NHS A&A | Millport | N/A | 0 | |
| NHS D&G | Moffat | N/A | 0 | |
| NHS Highland | Mull and Iona Community (Craignure) | HNFRE | 0 | |
| NHS Highland | Oban | N/A | 0 | |
| NHS Highland | Rothsay, Bute | HSALF | 0 | |
| NHS D&G | Stranraer Hospital | HSWMO | 0 | |

Bristow SAR 'green' NHS HHLS

| Health Board | Hospital HHLS | Bristow FMS ID | SAR landings (May 22 - May 24) |
|-------------------|-----------------------------------|-------------------|-----------------------------------|
| NHS Highland | Inverness, Raigmore | HRAIG | 162 |
| NHS GG&C | Glasgow, Queen Elizabeth | HQEUH | 147 |
| NHS Shetland | Lerwick, Gilbert Bain (Clickimin) | HCLIK | 127 |
| NHS Highland | Bute Landing Strip | BUTLS | 20 |
| NHS Western Isles | Borve | BORVE | 19 |
| NHS A&A | Arran, Brodick | HARNG | 10 |
| NHS Highland | Glenforsa, Mull | HGFOR | 9 |
| NHS D&G | Stranraer Hospital, Alternate | HSTRR | 2 |
| NHS Highland | Lochgilphead | HLGIL | 1 |
| NHS Highland | Dunoon | HDOON | 0 |

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Appendix C- NHSS Assure guidance notes & extracts of CAP 1264 v3

CAP1264: helicopter landings at hospitals (caa.co.uk) V3 April 24 (189 pages) Extracts in blue:

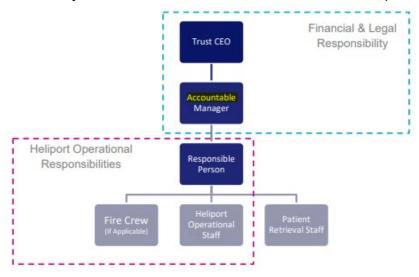
Over decades, helicopter specification has increased in size and power, with the number of operators and landings increasing. The result, culminating in an avoidable fatality at Derriford Hospital March 2022 incident, is incrementally increased risks from Hospital helicopter landing sites (HHLS), along with weaker management controls / awareness / communications of risks.

AAIB Nov23 report provides details of the fatal incident, findings and recommendations. Both CAP1264 Version3 Apr24 and Bristow SAR withdrawal Aug24 letter are a direct result of the AAIB recommendations, to clarify and strengthen risk management to avoid future fatal incidents from any hospital helicopter landings. Our other NHS key air operators, with higher volumes but slightly smaller aircraft, such as SAS, and SCAA are also assessing their CAP1264 response and risks. On completion this will also impact NHS HHLS.

The NHS is likely to encounter significant legal, logistical/ planning and resource challenges for new CAP1264 implementation, particularly in older HHLS. Bristow Aug24 list 33 legacy HHLS in Scotland, and state withdrawal of Search and Rescue (SAR) service to 23 HHLS. Priority should be established for those HHLS of highest clinical need, such as Trauma Centres, Cardiac Centres, but also NHS facilities local to rescue needs. Usefully table above from Bristow, lists SAR landing volumes for each HHLS from May22 – May24.

CAP1264 summary of key NHS Duties & Roles for HHLS

Hospital helicopter landing sites (HHLS) are ANY site a helicopter delivers patients for NHS treatment. This includes grounds not in NHS ownership, such as schools, parks, community sites, which may host an air movement for the onward transport of persons to a hospital/ health facility.



(extract CAP1264 p109)

- H&S Duty Holder the NHS Chief Executive Officer (CEO) has overall responsibility for the safe operational management of any HHLS used in NHS patient delivery to hospital
- Accountable Manager (AM) the NHS Senior Manager appointed by CEO in writing, as
 responsible for appropriate resource (such as budget, staff, training) for the safe operation of
 one or more HHLS (typically an NHS Director of Facilities or General Manager)
- Responsible Person (RP) delegated by AM to manage day-to-day HHLS operation (typically an NHS Helideck Manager, Security Manager or Facilities Manager)
- Competent Person (CP) qualified to undertake NHS & CAP1264 initial/ regular risk
 assessments. CP for initial assessment of an existing HHLS, or a new design, will require an indepth CAP1264 knowledge or equivalent helipad design experience, likely from outside NHS.
 Following CAP1264 initial set up requirements, plus CAP1264 NHS awareness training, an
 HHLS operation may be maintained/ managed annually by NHS CP(s), unless major change.

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Appendix C- NHSS Assure guidance notes & extracts of CAP 1264 v3 (cont)

"advice could be sought from an independent helicopter consultant, or via an aviation consultancy organisation, given in tandem with specific advice from end-users e.g. the local air ambulance, Search and Rescue (SAR) and/or HEMS operators." (extract CAP1264 p19)

• In summary, responsibility for HHLS operations, production of documentation, ongoing safeguarding and regular safety reviews, is managed by the RP under the direction of the AM, with input from CP(s). The overall H&S legal and financial duty lies with the NHS CEO; to identify and keep up-to-date their HHLS. Also to confirm clinical requirement and therefore air operator(s) for each HHLS. Any surplus to requirements to be declared 'closed' to air operators.

"The safety of helicopter operations is clearly paramount to any design for an HLS at a hospital and there can be no alleviations from the regulations due to the emergency nature of an operation. In the interests of most easily assuring the optimum operating environment for helicopters, this CAP promotes the design of elevated (rooftop) heliports," (extract CAP1264 p10)

- HHLS CAP1264 documentation requirements include:
 - o Regular Risk Assessments annually, or if a reportable incident or near miss occurs
 - o Heliport Operations Manual (HOM) template in Annex A, should include
 - Air Operator list/ Liaison & acceptance as 'open' HHLS
 - Safety Performance Indicators (SPIs) setting and monitoring
 - Maintenance management
 - Security & Incident management
 - Emergency & Major Incident management
 - Change management
 - Training & Qualification records
 - Where required, HHLS Standard Operating Procedures (SOPs)

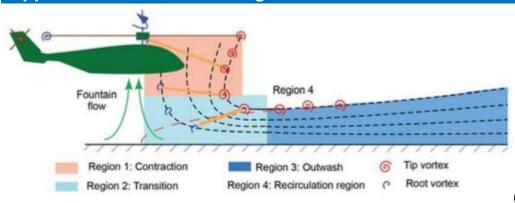
"The Heliport Operations Manual [HOM] is the all-encompassing document for a hospital heliport operation, owned by the AM it sets the standards, procedures and best practise of the Heliport's Operation and Maintenance. Note – It is the legal responsibility of the Air Operator to determine initial and ongoing suitability of a HHLS and its compliance with the Performance Class 1 (PC1). As part of the work of the Onshore Safety Leadership Group (OnSLG), a template Heliport Operations Manual (HOM) can be found at Annex A." (extract CAP1264 p110)

CAP1264 summary of key HHLS design / technical implications for exiting helipads Many existing Hospital helicopter landing sites (HHLS) are ground level and designed to older guidance such as 2008 HBN 15-03, and pre-April 24 version 3 of CAP1264. Although all versions state the same minimum 30m 360° clear zone from HHLS (concrete pad) perimeter; and need to risk assess based on likely helicopters to be used; there are significant changes in new April 24 CAP1264 to risk management approach and mitigations to reflect increased aircraft power, air operators, and Derriford recommendations. A typical NHS existing ground HHLS clear zone is 40-50m 360o with a heavily constrained flight path, often further encroached upon by new developments over the decades. See HHLS example diagrams below for some typical sites, with both a red 60m and a yellow 50m clear zone impact.

• CAP1264 states each air operator is responsible for confirming safety prior to each landing. NHS are responsible for safeguarding and safe operation of HHLS (irrespective of land ownership), that may deliver patients for treatment. Each air operator sets the key criteria, specific to their aircraft/ functions, for an HHLS to be 'open' / accepted as safe for their service.

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Appendix C- NHSS Assure guidance notes & extracts of CAP 1264 v3 (cont)



(extract CAP1264 p117)

 NHS Board to identify and keep up-to-date HHLS documentation; and confirm clinical requirement / air operator(s) for each. Key NHS facilities, such as Trauma Centres to consider a second HHLS site for resilience/ major incidents. NHS to declare 'closed' to air operators any HHLS not required.

"For a surface level heliport operating exclusively light-medium air ambulance helicopters it is recommended that a minimum 30m downwash/outwash zone, measured from the edge of the heliport, be established around the heliport which is kept clear of people, property, or parked vehicles (typically 2 to 3 rotor diameters of the helicopter). If heavy or extra heavy helicopters are to be utilised at surface level, the downwash/outwash zone established around the heliport should be considerably larger; typically between 50m and 65m measured from the edge of the heliport for the largest helicopters. In the case of a surface level heliport the provision of downwash fencing may assist in dissipating the effects of downwash/outwash." (extract CAP1264 p118)

- Bristow provide UK Search and Rescue (SAR), their August 23 letter requires NHS to confirm each HHLS is safeguarded, and suitable for SAR safe operation, per CAP1264. Along with documentation, it should demonstrate for SAR a 60m 360o clear zone from HHLS perimeter, plus clear flight path(s).
- Other air operators are still to assess CAP1264 and provide NHS with their specific aircraft and functional criteria for an HHLS to be 'open' / accepted as safe for their service. Some such as Coast Guard may be 60-65m, others such as Police ~45m. SAS/ SCAA may be 50-55m zones.
- NHS staff resource impact to safeguard a 50-60m clear zone, such as roads, paths, buildings.
- NHS to identify capital & revenue cost impacts, such as signage, barriers, alarms, training, surveys, staff.

"Risk assessments should be carried out annually or sooner if a reportable incident or near miss occurs. The assessment should be completed by a competent person [Qualified to undertake NHS Risk Assessments], alongside the Responsible Person (RP) / Accountable Manager (AM), and should in consultation with the air operator factor in risks related to, but not necessarily limited to:
• Risks to the public • Risks to hospital staff (including ambulance service) • Risks to patients (walking or stretchered) • Heliport staffing shortages • Infrastructure failures or unserviceability. All of these factors should be considered across a range of conditions not just normal operations." (extract CAP1264 p120)

"This [11-page Appendix A] checklist provides an example of an inspection profile for an elevated helideck; this does not include operator approvals...[plus] does not capture obligations for staff and visitor safety under the guidance of the Health & Safety Executive." (extract CAP1264 p137-147)

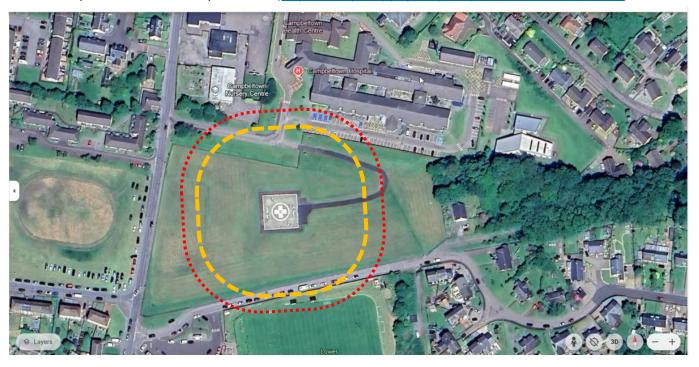
Appendix H – Assessment for dedicated heliport rescue & fire-fighting service (RFFS) needs."

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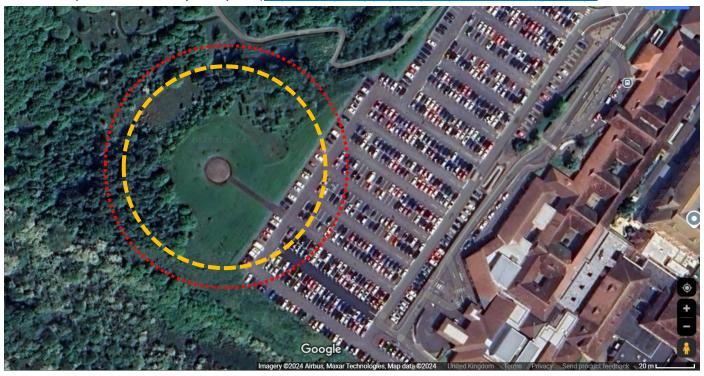
Appendix D- NHSS HHLS typical examples for further review

NHSScotland 6 typical Hospital Helicopter Landing Sites (HHLS), showing both a red dotted 60m and a yellow dashed 50m clear zone from edge of helipad, (indicative only as from Google maps).

HHLS example 1: NHS HL - Campbelltown (https://maps.app.goo.gl/d4pSKT61ZGnwLAUM9)



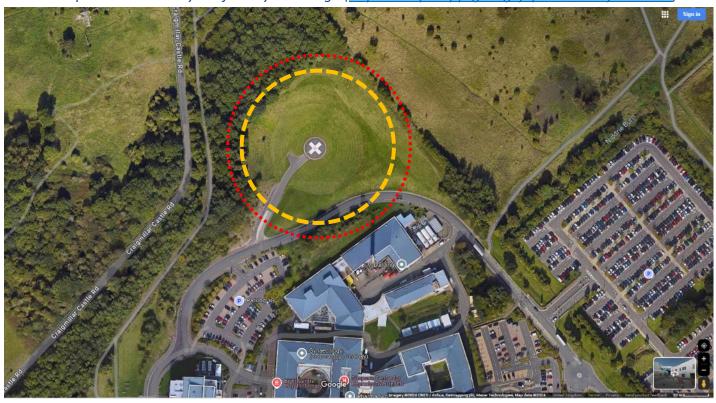
HHLS example 2: NHS AA - Ayr Hospital (https://maps.app.goo.gl/eqmEC4YscLnyaQvq6)



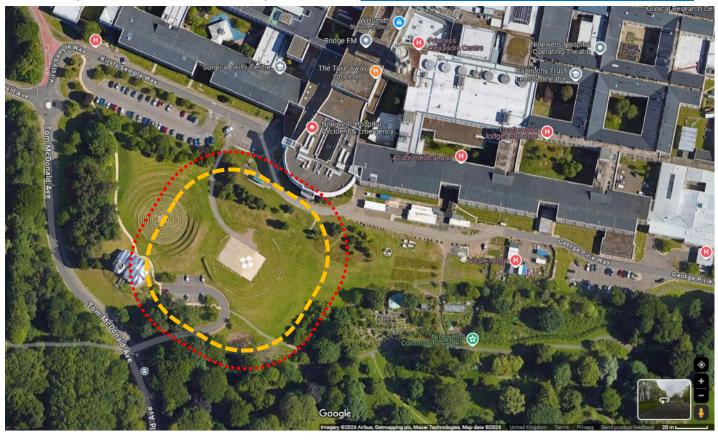
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Appendix D- NHSS HHLS typical examples for further review (cont)

HHLS example 3: NHS LT - Royal Infirmary Edinburgh (https://maps.app.goo.gl/jhpCmSttRBjDeMc9A)



HHLS example 4: NHS TS - Ninewells Hospital, Dundee (https://maps.app.goo.gl/JSUaYoJF52U9uw6X9)



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Appendix D- NHSS HHLS typical examples for further review (cont)

HHLS example 5: NHS SH -Gilbert Bain Hospital, Lerwick (https://maps.app.goo.gl/dLSHyyFuBZWmA1PK9)



HHLS example 6: NHS WI -Western Isles Hospital, Stornoway (https://maps.app.goo.gl/vapCpKHbnxAhrwic9)



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Appendix F- NHSS Assure Frequently Asked Questions

1. What happened / is impact of Derriford Hospital helicopter March 2022 incident?

Downwash from a landing Search and Rescue (SAR) helicopter at a Hospital helicopter landing sites (HHLS) resulting in fatal injury to an uninvolved person, in car park of Derriford Hospital (DH), Plymouth, Devon, on 4 March 2022. The subsequent Nov23 AAIB, <u>Aircraft Accident Report AAR 2/2023 - Sikorsky S-92A, G-MCGY - GOV.UK (www.gov.uk)</u>, found:

- The HHLS was designed and built to comply with the guidance available at that time, but that guidance did not adequately address the issue of [modern] helicopter downwash.
- The hazard of helicopter downwash in the car parks adjacent to the HHLS was not identified, and the risk of possible injury to uninvolved persons was not properly assessed.
- A number of helicopter downwash complaints and incidents were recorded and investigated.
 Action was taken in each case, but the investigations did not identify the need to manage the downwash hazard in car parks, so was not effective in preventing future occurrences.
- CAP1264 additional guidance on downwash, was published after the HHLS at DH was constructed; was not well known to NHS staff. CAP1264 was not retrospectively applicable.
- UK SAR air operator (Bristow) was not fully aware of the DH HHLS Response Team staff's
 roles, responsibilities, and standard operating procedures. SAR pilot believed that the car park
 near the DH HHLS was secured by NHS staff, but co-pilot believed only HHLS.
- The DH staff managing the HHLS only considered the risk of downwash harm to public within the HHLS space. Mitigation focus was limiting HHLS space access and not the car park.
- The DH staff responsible for the management of the HHLS had insufficient knowledge about helicopter operations to safely manage downwash risk all around the site, including car parks.
- The HHLS safety management processes at DH did not result in effective interventions to address the downwash hazard to people immediately outside the HHLS.
- HHLS safety management processes at DH did not identify that mitigations for the downwash hazard were not working well enough to provide adequate control of the risk from downwash.
- Communication between helicopter operators and DH was ineffective in ensuring that all the risks at the DH HHLS were identified and appropriately managed.
- HHLS UK safety requires effective collaboration between NHS HHLS Site Keepers and helicopter air operators. At the time of the incident, AIIB saw no easy mechanism to do so. Following this accident, Safety Action was taken by the helicopter operator, Derriford Hospital and NHS UK to manage risk. The specific action taken is detailed in paragraph 4.2.1 of this report. Version3 Apr24 CAP1264 published. Plus, additional action is either planned or in progress. It is essential that the risks associated with helicopter operations into areas accessible by members of the public are fully understood by the NHS HHLS Site Keepers, and that effective communication between all the stakeholders involved is established and maintained. Therefore, nine Safety Recommendations address this, and these are listed in paragraph 4.1 of AIIB report.

2. What is a Hospital helipad (HHLS) and CAP1264?

A Hospital helicopter landing sites (HHLS) includes any place used in the delivery of patients to NHS sites. CAP1264 is the UK Civil Aviation Authority detailed guidance for HHLS technical design requirements plus guidance on HHLS operation, management and safeguarding. It states the NHS Trust/ Board is responsible for safeguarding ground operations of any HHLS, including land outwith NHS ownership, such as schools, public park or community sites, which may host an air movement for the onward transport of persons to a hospital/ health facility. CAP1264 Version3 published April 24, introduced significant changes on risk management approach, duties, documentation and mitigations to reflect increased aircraft power, air operators, plus Derriford HHLS March 22 fatal incident AAIB report. The NHS is likely to encounter significant legal, logistical/ planning and resource challenges for new CAP1264 implementation, particularly in older HHLS or those not in NHS ownership.

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Appendix F- NHSS Assure Frequently Asked Questions (cont)

3. What is impact in NHSScotland of Bristow SAR withdrawal August 2024 letter?

Bristow Aug24 letter lists 33 total HHLS in Scotland, and states withdrawal of UK Search and Rescue (SAR) service to 23 'red' HHLS. A priority list should be established for those withdrawn HHLS of highest clinical need, such as Trauma Centres, Cardiac Centres, but also NHS facilities local to rescue needs. Usefully, Bristow lists SAR landing volumes for each HHLS from May22 – May24. Some NHS facilities may have alternate, local secondary HHLS or a licensed Aerodrome in close proximity that can be used, thus reducing immediate impact of SAR withdrawal, although patient total transfer times will inevitably increase.

10 retained 'green' HHLS, require NHS Board resource to implement CAP1264, such as new risk assessments, documentation and appointments.

The Bristow letter will also bring forward inevitable assessments of CAP1264 by other air operators, such as SAS, SCAA, Police, Coastguard. Their specific aircraft and functional CAP1264 criteria for an HHLS to be 'open' / accepted as safe for their service. May include a clear zone from helipad perimeter: such as Coast Guard ~ 60-65m, Police ~45m, SAS and SCAA ~50-55m; and stated 60m SAR zone for Bristow.

4. What are NHS duties / roles in new CAP1264 V3 April 2024?

NHS Boards have key responsibilities under the new CAP1264 for the safeguarding of a HHLS.

Overall Responsibility

The NHS Chief Executive Officer (CEO) holds the ultimate accountability for the safe operational management of Hospital Helicopter Landing Sites (HHLS). This includes ensuring that all HHLS are regularly assessed and maintained according to the latest safety standards.

Accountable Manager

An Accountable Manager (AM) is appointed in writing by the CEO to oversee the resources necessary for the safe operation of HHLS. This typically could be an NHS Director of Facilities or General Manager, whomever is designated to ensure that appropriate budgets, staff, and training are in place.

Day-to-Day Management

A Responsible Person (RP) is designated by the AM to manage the daily operations of the HHLS. This role may be filled by an NHS Facilities Manager, Helideck Manager, or Security Manager; whomever is tasked with its operation, ensuring compliance with safety protocols and operational guidelines.

Risk Assessments

Regular risk assessments are mandated, to be conducted annually or sooner if an incident occurs. These assessments must be carried out by a Competent Person (CP) in collaboration with the RP and AM, focusing on various risks associated with helicopter operations.

Documentation and Compliance

The NHS is responsible for confirming clinical requirements and maintaining up-to-date documentation for each HHLS. Any legacy HHLS deemed not required should be declared as 'closed' to air operators.

These duties are crucial for safeguarding the operational integrity and safety of helicopter landings at or for hospitals.

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Appendix F- NHSS Assure Frequently Asked Questions (cont)

5. What are the likely key CAP1264 design / technical impacts for older helipads / HHLS?

Many existing Hospital helicopter landing sites (HHLS) are ground level and designed to older guidance such as 2008 HBN 15-03, and pre-date Apr24 version 3 of CAP1264. Therefore, the NHS is likely to encounter significant legal, logistical/ planning and resource challenges for new CAP1264 implementation, particularly in older helipads / HHLS.

Responsibility for Safety:

Each air operator is responsible for confirming the safety of where they land. This includes determining / accepting whether an HHLS meets their safety criteria for use, such as CAP1264. The NHS is responsible for safeguarding and ensuring the safe operation of each of their 'open' HHLS, including liaison, maintenance, up-to-date documentation and risk assessment. Consider the need for secondary HHLS for resilience or key clinical services, such as trauma centres.

Clear Zone Requirements:

The previous and current guidance require a minimum 30m clear zone around the HHLS perimeter, but typically most existing NHS ground-level sites have a 40-50m clear zone. However, the new CAP1264 introduces stricter risk management and mitigation approaches, considering factors like increased aircraft power, air operators and recommendations from Derriford Hospital. Example diagrams show the impact of both a potential red 60m and a yellow 50m clear zone on typical sites. Note also, air flight paths are often further constrained by surrounding recent infrastructure, construction or temporary developments

SAR (Bristow) Requirements:

Bristow provide UK Search and Rescue (SAR), requires the NHS to demonstrate that HHLS are safeguarded and suitable for SAR operations, with a clear 60m zone and clear flight paths.

Other Air Operators Requirements:

Other air operators are still assessing CAP1264 and will follow up with their specific criteria. Requirements may vary, but most operators will need larger clear zones; such as Coast Guard 60-65m, Police ~45m, SAS/SCAA 50-55m.

NHS Resource Implications:

The NHS to consider the staffing needed to manage the clear zones and the capital and revenue financial impact, such as new signage, barriers, alarms, plus CAP1264 surveys, training and roles.

6. What do we need to do to re-open / keep open a key hospital helipad/ HHLS?

Review of this SAN and its references, such as Bristow letter, AAIB report and CAP1264

- Understand & accept NHS duties & roles for HHLS, including AM / RP appointments & training
- NHS Boards to identify and keep up to date their HHLS list
- Confirm clinical, SAS and other stakeholder requirement(s); and therefore, agree air operator(s) for each HHLS (confirm nationally via SAS & NHSS Assure / Scot Gov)
- Identify / agree legacy HHLS surplus to requirements to be declared 'closed' to air operators
- Implement surveys, risk assessments and prepare documentation per CAP1264
- Appoint external CP to undertake initial CAP1264 compliance work, where required
- Liaise with each air operator for each HHLS to ensure their criteria are understood / agreed
- Confirm with each air operator for their HHLS acceptance, that it is 'open' / green
- Establish regular review of safe operational management (annually or if an incident)

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