General Lighthouse Authorities

Helicopter Services 2027

Concept of Operations

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Amendment Record

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		History redacted
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Abbreviations

Abbreviation	Description
AtoN	Aids to Navigation
CAP	Civil Aviation Publication
CAO	Cargo Aircraft Only
CFM	[Tri-GLA] Coordinated Fleet Management
CONOPS	Concept of Operations
DG	Dangerous Goods
GLA	General Lighthouse Authority
HCA	Helideck Certification Agency
HESLO	Helicopter External Sling Load Operations
HLO	Helicopter Landing Officer
IAC	Irish Air Corps
IFR	Instrument Flight Rules
IL	Irish Lights
ILV	Irish Lights Vessel
LAE	Licenced Aircraft Engineer
NLB	Northern Lighthouse Board
NLV	Northern Lighthouse Vessel
SOPs	Standard Operating Procedures
SQEP	Suitably Qualified and Experienced Personnel
TH	Trinity House
THV	Trinity House Vessel
VFR	VFR

Concept of Operations

Introduction

The Commissioners of Northern Lighthouses (operating as the Northern Lighthouse Board [NLB]), the Commissioners of Irish Lights (operating as Irish Lights [IL]) and the Corporation of Trinity House (operating as Trinity House [TH]), together comprise the three General Lighthouse Authorities (GLAs).

From 1 November 2027, the GLAs require a Contractor to provide a dedicated helicopter service for a 10-year period, with options to extend for up to a further 2 years.

The GLAs helicopter service supports their 2025 and Beyond Marine Aids to Navigation Strategy by providing the means to access and maintain their more remote Aids to Navigation (AtoN). An effective helicopter service is a vital element in the provision of the GLAs service to the mariner: a reliable, efficient and cost-effective network of marine AtoN. Air travel is the only means of access for many of the AtoN sites due to their location and the nature of the work that needs to be undertaken there. Not having an effective helicopter service, even for a short period of time, has the potential to make a serious impact upon the critical, statutory services the GLAs deliver around the UK and Ireland.

The required outcomes of this contract are:

- A reliable, integrated, passenger and cargo service to support Planned Activities.
- A service able to respond quickly and efficiently to AtoN defects (i.e. a light or other navigational aid failures, also called ‘casualties’ or ‘outages’) at any time and in any place in the GLA operational area.

Typical Tasks

Most helicopter flights will involve carrying both passengers and cargo to coastal and offshore lighthouses in support of maintenance and renovation. The passengers are personnel of the GLA, their subcontractors and approved third-parties. The cargo includes their tools, materials and personal equipment and may include Dangerous Goods.

Task examples:

- A smaller task would be to carry two technicians with small tools and emergency overnight kit to a lighthouse in the morning and return later the same day; the radius of action is likely to be between 5 and 100 nm.
- A larger task might require twelve workers, their baggage and several tons of underslung material to be carried out in several trips from a vessel close by or an onshore location nearby and brought back a few days or weeks later.

In practice there are a wide variety of tasks in terms of size, distance and complexity.

A task may change to include underslung loads at any time Underslung loads represent between 15% and 32% of the operational flying tasks per year (averaging 22%). They are usually flown from a GLA vessel close by or from an accessible point on the nearest mainland to reduce the distance and duration of the operation. The support of building and renovation tasks at lighthouses creates the requirement for a great variety of weights, shapes, sizes, and natures of underslung loads with different aerodynamic characteristics.

The helicopter service will be required throughout the operating areas of the GLAs, but principally:

- NLB - North from the Isle of Man through all the Scottish coast and islands, including the Orkney Shetland, Western Isles and south-east to St Abb's Head.
- IL - All around the island of Ireland.
- TH - from Anglesey south and east along the coasts of Wales and South West England, the Isles of Scilly and Channel Islands, English Channel and North Sea coast of England.

Tasking

Routine Planned Activities will be tasked by the Tri-GLA Coordinated Fleet Management (CFM) team planners. This group meets 6-weekly and plans the helicopter programme of Planned Activities for the following 12 to 18 months based on the GLAs requirements and Aviation services Contractor feedback. Once a GLA Helicopter deploys, operations will be controlled by the relevant GLA. However, Planned Activities may overrun or be altered at short-notice due to weather and operational considerations needing regular day to day collaboration between the GLAs to deal with these changes.

Routine operations continue year-round with typically only Christmas and New Year Days free of flying. Each helicopter should be available for flight for at least eight hours each day when assigned to Planned Activities. The ability to vary the start and finish times and very occasionally to increase the duration of the working day (given notice prior to the Planned Activity) is important.

Short-notice AtoN defects (called casualties or outages by the GLAs) involve the failure of an AtoN that require the redeployment of the helicopter at short notice (typically 3 hours' notice during daytime). Decisions on diverting a helicopter from routine operations to a Casualty in another GLA will be made by the CFM planners and communicated to the Contractor Decisions involving a single GLA will be made by the planner of that GLA and communicated to the contractor.

Changeouts deployed of Contractor personnel are to be coordinated with the GLAs to ensure no disruption to operations. Aircrew changeouts will occur prior to or on completion of the planned days' work at an agreed time. Transfer of oncoming/outgoing Contractor personnel is a Contractor responsibility and except where expressly agreed should not involve relocation or diversion of an Aircraft.

It is typical that the helicopter will overnight in the open at a GLA Operating Base, on a vessel, or at a local airport / landing site for the duration of each Planned Activity.

Operations

The Tri-GLA Helicopter Standard Operational Procedures (SOPs) are issued to defined common operational and safety procedures between the GLAs and the Contractor.

Whilst normal support operations will be conducted under Day Visual Flight Rules (VFR), a single pilot Instrument Flight Rules (IFR) capability is required. Night transit flying may be required subject to the Contractor's operational limitations. A Task Specialist, ideally also a Part-66 B1 Type Rated Licenced Aircraft Engineer (LAE), will accompany the GLA helicopters when they deploy, unless otherwise agreed by the GLA for a specific tasking.

The Contractor's provision of Suitably Qualified and Experienced Personnel (SQEP), with the right knowledge, skills and attitude to support a deployed helicopter operating in challenging conditions in close cooperation with GLA vessels and shore-parties are key to the success and safety of the GLA helicopter operation. The demanding weather conditions and topographical constraints at some of the more remote operating sites demand a high standard of piloting, decision making and teamwork.

A proven depth of Helicopter External Sling Load Operations (HESLO) experience is essential as the load configurations will vary greatly and will often involve a ship-borne pick-up to a precision drop point including to immediately beside and atop lighthouses.

The GLAs shall provide and maintain the following:

- Routine and back-up telephone and e-mail contact details for the GLA management personnel.
- Document control of the Tri-GLA Helicopter SOPs.
- Helicopter landing sites (including concrete pads, vessel or lantern top helidecks and rock / grass covered land) at GLA locations and vessels where the services are to be provided.
- Ground Crew and Helicopter Landing Officer (HLO) personnel to assist with marshalling, loading, tie-down, refuelling and communications in support of GLA Helicopter operations who have attended agreed training courses.
    - For unusual operations such as tight locations special loads or alternative aircraft types the Contractor may be asked to provide experienced ground crew for marshalling and other support.
- Underslung load equipment (nets, bags, containers, scaffolding binders etc) to be attached below the hook on the long strop, including maintenance, certification, and replacement when necessary.
- Fuelling facilities as defined separately.
- Communications capability at vessels and GLA locations -
- Firefighting, and rescue equipment on GLA vessels and permanent GLA onshore Operating Bases.
- Survival suits for GLA passengers.
- Dangerous Goods (DG) training (i.e. awareness and shipper training as necessary).
- Training records for GLA personnel involved in helicopter operations.
- Annual vessel helideck inspection reports.

Dangerous Goods

The GLAs routinely need to transport DG including but not limited to batteries, mercury, fire extinguishers, compressed gas, fuel, solvents and oil. To allow the practical and effective delivery of the service, previous GLA aviation Contractors have obtained approvals and exemptions including (but not limited to):

- Exceeding the quantities and weights of specified DG listed in the Technical Instructions.
- Relaxation in the dimensions of hazard warning labels on cylinders of compressed gas.
- Exemption in the use of 'Cargo Aircraft Only' (CAO) labels and also allow the carriage of CAO DG with GLA passengers.
- An exemption to the requirements for emergency response information.
- The use of a combined Shippers Declaration and 'Notification to Captain' documentation to the Aircraft Commander.
- The use of a single set of DG documentation for a series of related flights.
- The inspection of DG and completion of the shippers Acceptance Checklist by the shipper on behalf of the Contractor.

- The carriage of wet filled batteries not packed in accordance with the requirements of the Technical Instructions.
- The carriage of bulk under-slung fuels (Diesel/Gas Oil - Class 3) in non-UN specified containers.
- An exemption for the use of DG paperwork for correctly packaged generators and fuel being returned from an AtoN in exceptional circumstances.

These previous example approvals and exemptions are not exhaustive and future DG arrangements may be influenced by aircraft type and evolving GLA operational requirements.

GLA Operating Bases

Each GLA has principal Operating Bases with offices, communications and storage for GLA equipment, some with an aviation fuel capability. The GLA Operating Bases are at Oban (NLB), St Just (TH), and Blacksod, Castletownbere, Rossaveal and Rosslare (IL).

Landing Sites and Vessels

The Contractor will be responsible for reviewing the register at least annually and updating it as necessary. The GLAs will retain the Intellectual Property Rights (IPR) of the Register.

Many of the landing sites are very small, either on top of lighthouses, on tidal rocks, or close to cliffs. They can be exposed to considerable turbulence. None of the lighthouses or vessels and only a few of the GLA shore stations are equipped with lights for night operations.

The GLAs own and operate four vessels used to deploy buoys and to support work on other AtoN and may lease in suitably equipped contract vessels from time to time. The vessels are used as a base for one helicopter when required, and to mount helicopter flights. They have fuel and overnight accommodation which the Contractor personnel are to utilise as required by the GLA.

The GLAs operate these vessels within the requirements of CAP437: Standards for Offshore Helicopter Landing Areas, through the vessels may have grandfather rights for some legacy design features. GLA helidecks are independently audited by the GLAs Aviation Consultants whose reports will be provided to the Contractor. The Contractor will bear the responsibility of accepting them (and all the other Landing Sites).

The current vessels are:

- NLV Pharos: D value, 12.5 m, t value 3.2 t - with large aft deck for under slinging operations
- ILV Granuaile: D value, 12.5 m, t value 3.2 t - with large aft deck for under slinging operations
- THV Galatea: D value, 12.5 m, t value 3.2 t - with large aft deck for under slinging operations
- THV Patricia: D value, 11.9 m, t value 3.2 t and due to be replaced in late 2026.

The aircraft may be transported by vessel at times weather permitting and pilots will need to position Helicopters fore and aft when requested.

Fuel

The operation requires fuel readily available and close to each operating area to maximise payloads and minimise flights to refuel. GLA vessels are used frequently for refuelling.

TH own two 1,900-litre trailer-bowsers, one based at St Just and one at Swansea. TH personnel will replenish them at St Just or other airports with fuel bought on the Contractor's account. TH will drive the trailer-bowsers to appropriate locations and assist with issuing the fuel.

NLB owns one 30,000-litre static tank and dispensing system at Oban. NLB personnel will dispense fuel to NLV Pharos, GLA Helicopters and GLA approved third parties.

IL own 27,000 litre static tanks and dispensing systems at Casteltownbere and Blacksod and a 5,000 litre static tank at Rossaveal. All tanks have low pressure fuel dispensing systems and the tanks at Casteltownbere and Blacksod also have high pressure fuelling which is used from time to time for Irish Coast Guard (IRCG) and Irish Air Corps (IAC) helicopters, for example. IL personnel will dispense fuel to GLA Helicopters and GLA approved third parties. IL Intend to also utilise bowsers during the course of the next contract.

ILV Granuaile has a single 1,800 litre Jet A1 tank; THV Galatea has a single 6,000 litre tank; NLV Pharos has two 6,000 litre tanks; all three vessels have the associated dispensing equipment. THV Patricia no longer has any refuelling capability.

GLA operated fixed fuel installations, bowsers and vessel fuel installations will be maintained by the relevant GLA.

Forecast Usage

The following usage forecast (including operational and positioning flights) is indicative and provided for guidance only. Actual usage will vary due to many operational factors and also depend on the Contractor's operating base location(s).

GLA	2027 (Part)	2028	2029	2030	2031	2032
NLB	62	562.9	501.5	452.3	470.5	457.3
TH	17.7	271.0	271.0	271.0	271.0	271.0
CIL	17.7	212.8	212.0	202.8	206.4	202.4
Total	**97.3**	**1,046.7**	**984.5**	**926.1**	**947.9**	**930.7**

GLA	2033	2034	2035	2036	2037	2038	2039 (Part)
NLB	392.8	365.0	392.0	362.3	419.5	371.0	353.1
TH	271.0	271.0	271.0	271.0	271.0	271.0	253.3
CIL	229.2	206.0	224.0	210.0	218.8	220.8	215.2
Total	**893.0**	**842.0**	**887.0**	**843.3**	**909.3**	**862.8**	**821.6**