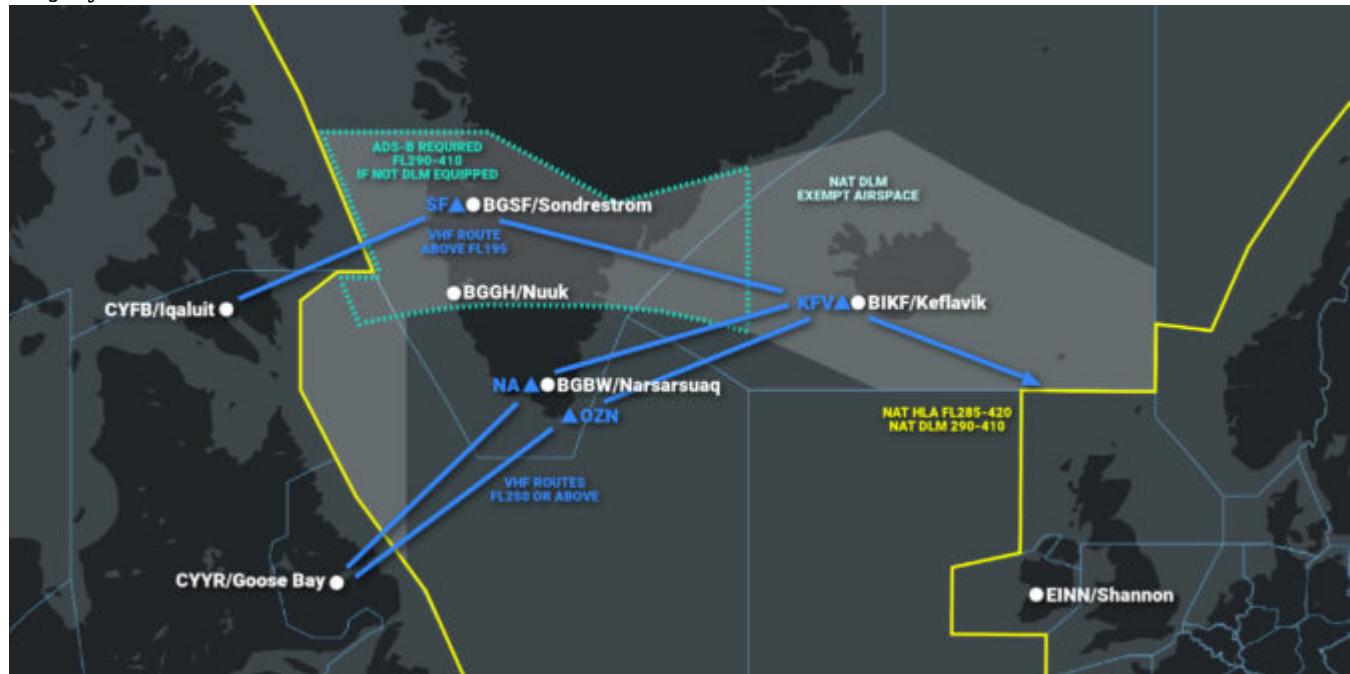


Blue Spruce Routes Are Gone (But You Can Still Fly Them)

Robbie Moon & OPSGROUP Team
28 July, 2025



The Short Story

The Blue Spruce Routes are gone — but if you don't have all the equipment, there are still ways to get across the Atlantic. What you can do depends on what's on board:

Fully equipped? (2 LRNS, CPDLC RCP240, ADS-C RSP180, HF, LOAs)

- You can go anywhere in the NAT HLA.

No datalink?

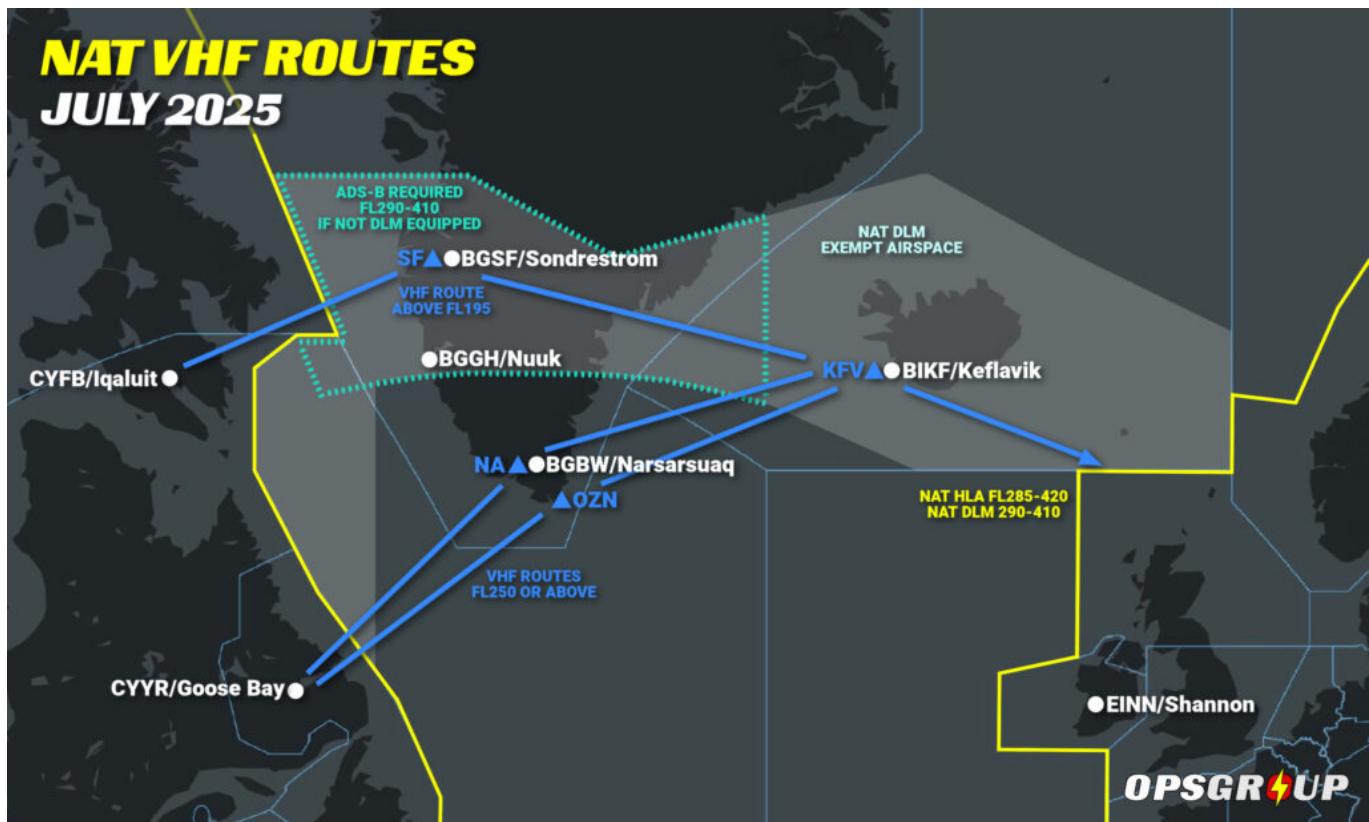
- Avoid FL290-410 unless you're in the DLM Exemption Area (e.g. Iceland-Greenland Corridor) and have ADS-B.

No HF radios?

- You can only cross via specific VHF-only routes:
 - Above FL195: YFB-SF-KFV
 - FL250 and above: YYR-OZN-KFV

Only one LRNS?

- Stay below FL285 to avoid HLA nav and datalink rules — but unless you're on a Gander-approved VHF route (e.g. via OZN or SF), you'll still need two long-range comms systems.
- Want to climb into HLA airspace? You'll need VHF coverage, ATS surveillance, State approval, and a compliant routing like the Iceland-Greenland corridor.



The Longer Story

As of March 20, 2025, the Blue Spruce Routes have been officially removed from the North Atlantic. These routes—once the lifeline for aircraft with limited navigation or communication capability—are now a thing of the past. The change is part of the latest update to **NAT Doc 007**, which you can read more about [here](#).

Technically established in 1976, the Blue Spruce Routes allowed aircraft with only one **Long Range Navigation System (LRNS)** to transit the **NAT High Level Airspace (HLA)** under special routing and coverage provisions. Over time, however, the need for them faded. The reasons:

- Almost no aircraft that have the mandated CPDLC equipment have only one LRNS. Or put another way, if you have CPDLC, you have dual LRNSs unless broken. With the addition of CPDLC requirement, relief for a single LRNS became outdated.
- Ground-based nav aids along the routes have largely disappeared.
- Datalink Mandated Airspace now covers most of NAT HLA.
- The Iceland-Greenland Corridor, with reliable VHF and ATS surveillance, provides a more flexible and better-supported fallback option.

While the Blue Spruce name may still pop up informally (especially among ferry operators), it no longer refers to any officially recognized ICAO routes. But crucially, **some of the old routings remain usable**—just under new conditions.

For example, Canada now allows aircraft operating with only VHF to cross via specific routes:

- **Above FL195 via YFB-SF-KFV** (*this one currently says “below” FL195 in the Canada AIP, but that’s been confirmed as a typo, and will be getting updated shortly!*)

- **FL250 or above via YYR-OZN (or NA)-KVF**

These are the only routes where **VHF coverage is considered sufficient** for oceanic ops without HF radios. Everywhere else, HF is still required outside VHF range.

So while the Blue Spruce Routes are gone in name and publication, **practical exemptions remain**—especially for aircraft with partial equipage. What's changed is how you plan and justify the crossing.

Let's walk through what you can still do today, based on what your aircraft has (or doesn't).

Standard Ops

Most traffic crossing the North Atlantic Airspace (NAT) occurs from **FL290-410 through the North Atlantic High Level Airspace (NAT HLA)**. Over the years, advances in navigation, communication, and surveillance equipment have led to additional requirements for operators so ATC can safely reduce aircraft spacing and pack more aircraft through the airspace.

For unrestricted access to the NAT HLA, operators need:

- 2 Long Range Navigation Systems (LRNSs)
- Outside VHF areas 2 LRCS are required – either 2x HF, or HF & Satcom/or CPDLC, for the other.
- FANS 1/A equipment for the NAT Datalink Mandated airspace
- Super-duper datalink for the coveted PBCS Tracks (i.e. CPDLC capable of RCP240 + ADS-C capable of RSP180)

And for US operators, that equipment list is a prerequisite for several required LOAs:

- A056 CPDLC Enroute, and Oceanic and Remote (PBCS)
- B036 Oceanic and Remote Continental Navigation Using Multiple Long-Range Navigation Systems (M-LRNS), Aka. RNP 4 (and RNP 10)
- B039 NAT HLA
- B046 RVSM
- D195 MEL (not technically required for a crossing, but might as well throw this one in)

The above is the ideal setup. But what if I fly old stuff, or new stuff, or broken stuff, or little stuff?

Old Stuff

To the formerly early adopters without the benefit of factory standard state-of-the-art equipment: let's say your aircraft has LRNSs that are only capable of RNP 10, or your FANS equipment is RCP400 and RSP400. All else being equal, the only limitation would be **no PBCS tracks**. And **no T9/T290** either. All other tracks or random routes through the HLA are approved.

Is your equipment so old it doesn't even have the above equipment? **Consider yourself the same as broken**, and keep reading...

New Stuff

You just closed on a shiny, new, well-equipped jet and have to ferry it across the pond, but you have no LOAs. In this case, you are altitude and route are limited. No RVSM or NAT HLA LOAs means the airspace from FL290-410 is off limits for you. If traffic permits, ATC may let you climb through the HLA above FL410, but you might want to plan fuel and route at FL280. Route-wise, without B036, **you're flying the Iceland-Greenland Corridor.**

If you only have some of the above-listed LOAs, **also consider yourself broken.**

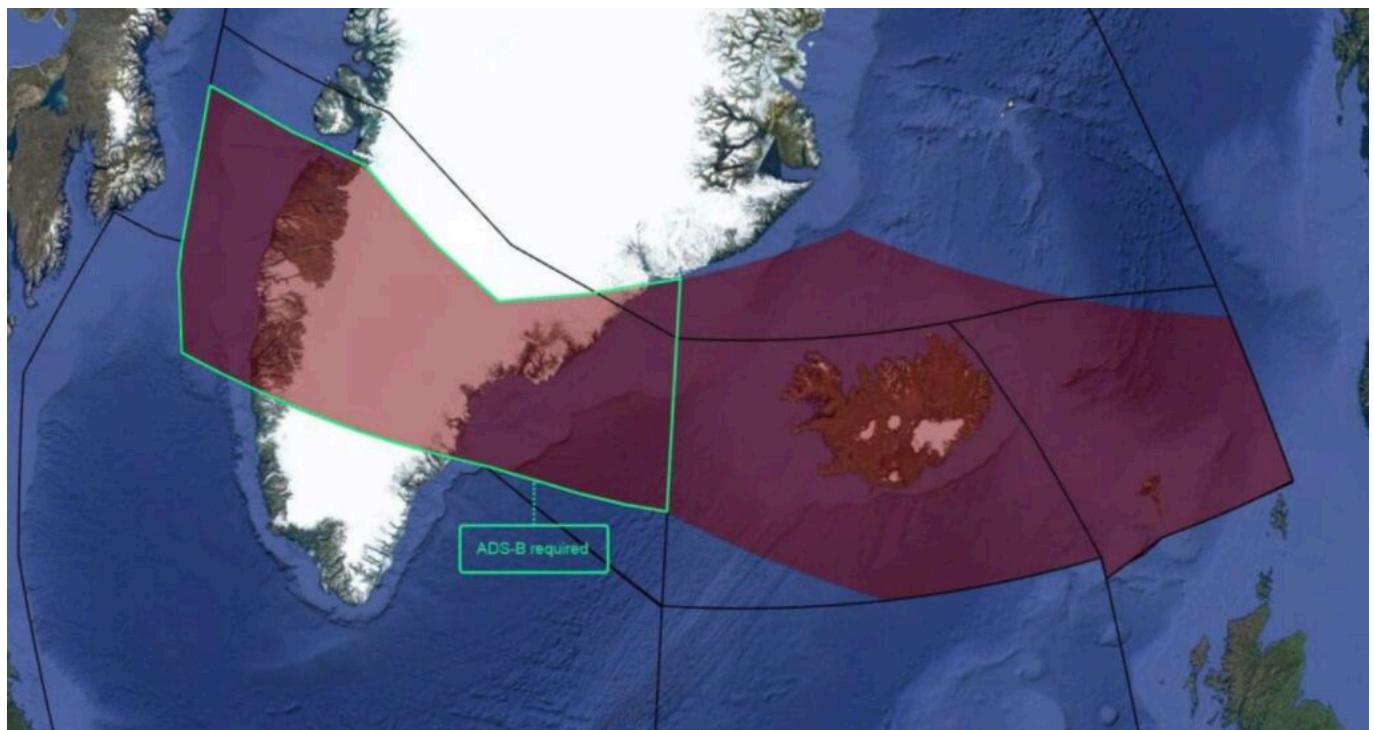
Now, it gets a little more nuanced...

Broken Stuff

You've been spoofed, but only one GPS came back? When down to one LRNS (or you don't have B036), fly the Iceland-Greenland Corridor. With only one LRNS, you could fly through the NAT HLA along the corridor with approval if you stay within surveillance and VHF coverage and have the equipment to fly the assigned route. Otherwise, fly above or below the NAT HLA.

You're down to one HF or lost both? You can still cross via the Iceland-Greenland Corridor or the old southern Blue Spruce routing via OZN – but only between FL250-280, where VHF coverage is sufficient and you're still below DLM airspace. Just make sure to stay clear of Shanwick OCA, which still requires HF.

HFs are back, but your Datalink konks out (CPDLC or ADS-C), or you don't have A056. There are two options: stay within the Data Link Mandate (DLM) exemption area (the corridor) and fly any altitude. The DLM exemption area exists because you don't need CPDLC in that area if you have ADS-B. Radio reception is pretty good throughout there! The second option is to fly above or below the NAT HLA.



DLM Exemption Area (ie. Iceland-Greenland Corridor)

Little Stuff

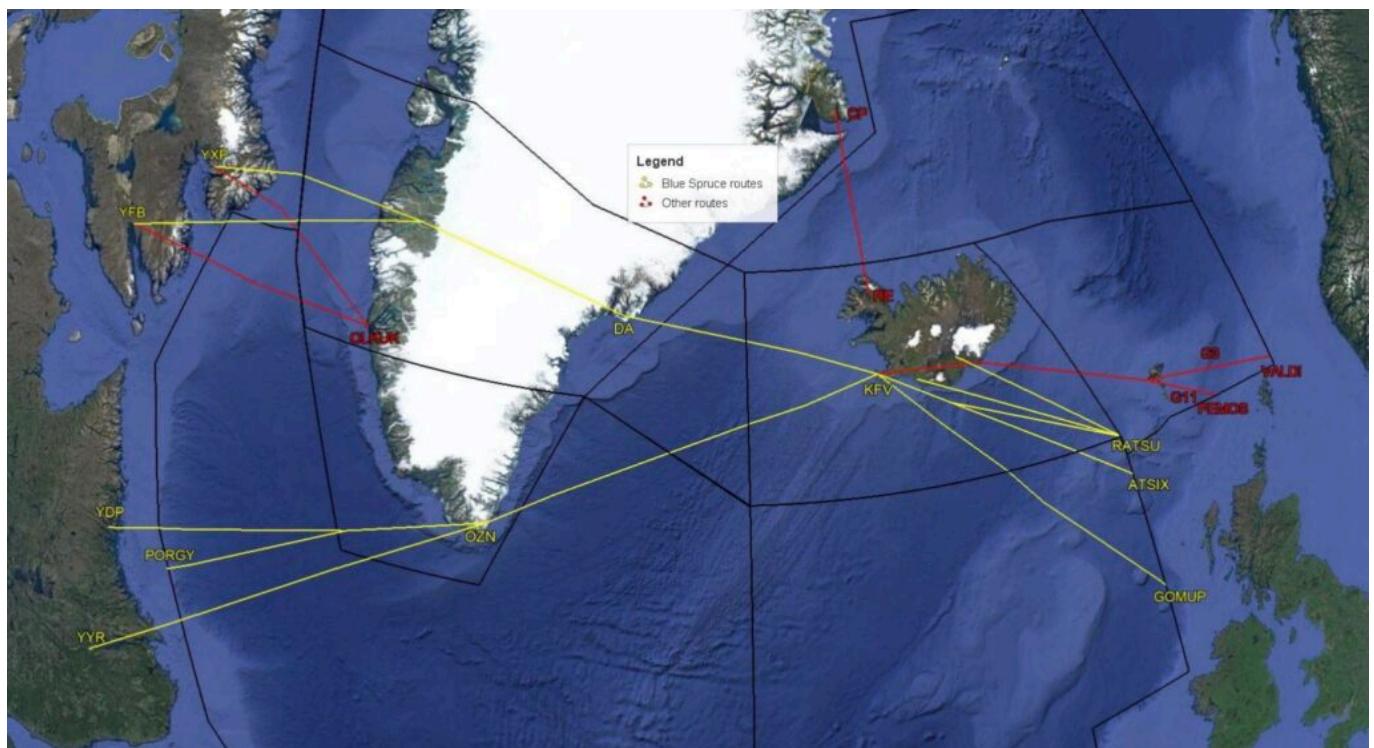
And if you get a wild hair to cross the Atlantic in an aircraft with **only one LRNS, no HF radios, no**

Datalink, no LOAs, without the range to fly non-stop (like me), you still have options. You'll need to stick to the Iceland-Greenland Corridor, or the specific VHF-approved routes via OZN or SF.

What's a Blue Spruce?

It's a Christmas tree native to the Rocky Mountains that you won't see across the Atlantic on any of your stops. However, the Blue Spruce Routes are routes in and around the Atlantic connecting Canada, Greenland, Iceland, and the UK.

Why were they called the Blue Spruce Routes? Back when military aircraft had wooden propellers (sometimes made of spruce), they painted the tips blue. These aircraft had to make the trans-Atlantic journey along the now-known Blue Spruce Routes.



Nostalgia Map.

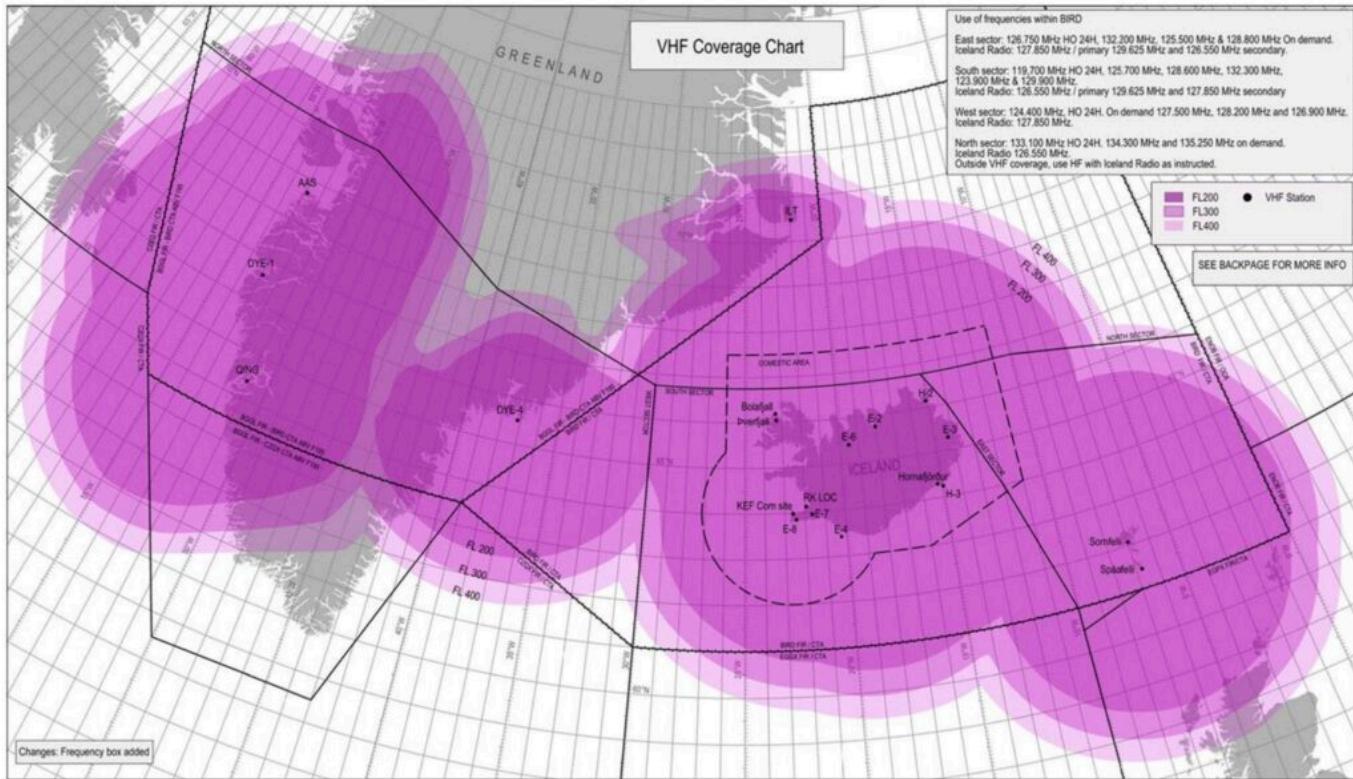
Gray Areas

The Iceland-Greenland Corridor provides exemptions from equipment and operational requirements because land-based radio transmitters along the route provide decent coverage, and route legs are short enough to complete a crossing without necessitating equipment redundancy.

Now, there are exemptions from the rules, and then there are gray areas. Despite all the relief these routes provide, one regulation remains: you must maintain two-way radio communication with ATC.

So far, much of the discussion is how high you can go, **but what about how low?**

VHF communications have improved significantly in the Atlantic in the last ten years. Both the northern and southern routes have VHF reception at appropriate altitudes. The longest stretch of water is between Canada and Greenland. On the southern route over this stretch of water, I have experienced adequate communication at FL250 and up. The northern route is good down to FL200. Iceland is fantastic – it's almost like you're in domestic airspace.



The gray area is when you plan to operate **below these altitudes and are counting on using another aircraft to relay position reports**. By the letter, this is a no-no. The up-and-up solutions would be to rent a portable HF unit or containerize and ship the aircraft to Europe, both of which can be about \$20k.

You can see the incentive to count on relays.

Are ferry pilots bending the rules? Let us descend, inception-style, one further layer down the list of the exceptions: ATC can waive the HF requirement for ferry, delivery, and special event flights. Ferry pilots have all the fun. ☺

What About Aircraft with Only One LRNS?

Back in the day, the Blue Spruce Routes were the go-to option for aircraft with only one **Long Range Navigation System (LRNS)** crossing the Atlantic. Now that those routes are gone, what are your options?

If you're staying below the NAT HLA (below FL285), you're in the clear:

- You don't need two LRNSs to operate below FL285.
- You're also free from NAT HLA requirements like RNP 10 and Datalink etc.
- Just make sure your one LRNS (typically GPS-based) is suitable for the route you're flying.
- You still need two long-range communication systems (HF + HF or HF + Satcom), unless you're on one of the VHF-only routes approved by Gander that we talked about above (ie. via OZN or SF)

If you want to enter the NAT HLA (FL285-420), it gets more tricky:

You'll need to qualify under the NAT Doc 007 1.4.1 exception, which says aircraft can operate in the NAT HLA with fewer than the standard requirements only if:

- You stay within ATS surveillance,
- You remain within VHF communication coverage,
- Your navigation system is suitable for the planned route,
- And you have specific State approval to operate with reduced navigation capability.

In practical terms, this means you might be able to fly the Iceland-Greenland Corridor at HLA altitudes, but only if your authority signs off – and probably not straight across via the likes of OZN.

Summing up

You can operate with one LRNS, no HF radios, no CPDLC, and no LOAs using the **Iceland-Greenland Corridor or the designated VHF routes published by Canada.**

Outside of these specific altitudes and routings, aircraft operating in the NAT Region must normally carry two long-range communication systems, one of which must be HF, when operating beyond VHF coverage – unless a specific exemption has been granted by the State of the Operator or Registry (eg. for ferry or delivery flights).

If you want to learn more, check out myaircraftmanagement.com for a 101-level walkthrough of a Blue Spruce operation.

Happy Crossings! ↗ ⟲ ↘ ↙

NAT Changes 2025: No More Blue Spruce Routes

Robbie Moon & OPSGROUP Team
28 July, 2025



- A new NAT Doc 007 takes effect from 20 March 2025.
- Blue Spruce Routes are being removed. Aircraft with only 1 x LRNS will have to go via GOTA and the Iceland-Greenland corridor instead.
- There are new super fun chapters on Space Weather Contingencies and GNSS Interference Events.
- **Other NAT news:** Shanwick does not expect to implement the removal of Oceanic Clearances before summer 2025.
- **Other NAT news:** There's a big military exercise coming in May which will close large parts of the Shanwick FIR.
- **Other NAT news:** Greenland airport BGGH/Nuuk now more viable NAT alternate with a brand new runway (7200'/2200m) opened in Nov 2024.

Once (or sometimes twice) every year, ICAO update their **NAT Doc 007 - the main guidance doc for ops over the North Atlantic**. All the specifics about how to operate your aircraft safely through the complex airspace of the region are here.

There's a **new one that takes effect from 20 March 2025**, which contains a few important changes to know about if you're planning a flight across the NAT.

You can download the new NAT Doc 007 in full, but here's a summary of the main changes...

Deletion of Blue Spruce Routes

If you're new to the NAT, the Blue Spruce Routes have been around since forever. These are special routes that go via Greenland and Iceland, designed to help aircraft with limited navigation capabilities.

The Blue Spruce Routes will be officially deleted in March 2025. The team behind this (the Blue Spruce Routes Project Team) has decided the following:

- There aren't enough ground-based navigation aids anymore to reliably support these routes.
- Hardly anyone uses them, as very few aircraft with single LRNS rely on them.
- The Iceland-Greenland surveillance corridor is a good enough alternative for aircraft with navigation issues.
- The difference in flight distance between Blue Spruce Routes and alternative corridors is so small it's not worth keeping them.

So from March 20, the **Iceland-Greenland corridor** will replace Blue Spruce Routes as the backup option. A review is also underway to decide whether to keep or remove remaining ground-based navigation aids.

Updated NAT Doc 007

Here's some of the other stuff in the newly updated version of this, effective 20 March 2025:

Deleted sections, New sections, and Chapter Switcheroos

Deleted sections:

- **Chapter 12** on *Guarding Against Common Errors*
- **Chapter 13** on *The Prevention Of Lateral Deviations From Track*

New sections:

- **Chapter 10** on *Special Procedures For In-Flight Contingencies* now includes a section to help crews handle **space weather contingencies** (explains how to manage impacts on communications, navigation, and surveillance systems caused by solar activity) and **GNSS interference events** (guidance on what to do in case of GPS jamming or spoofing, based on lessons from recent incidents).

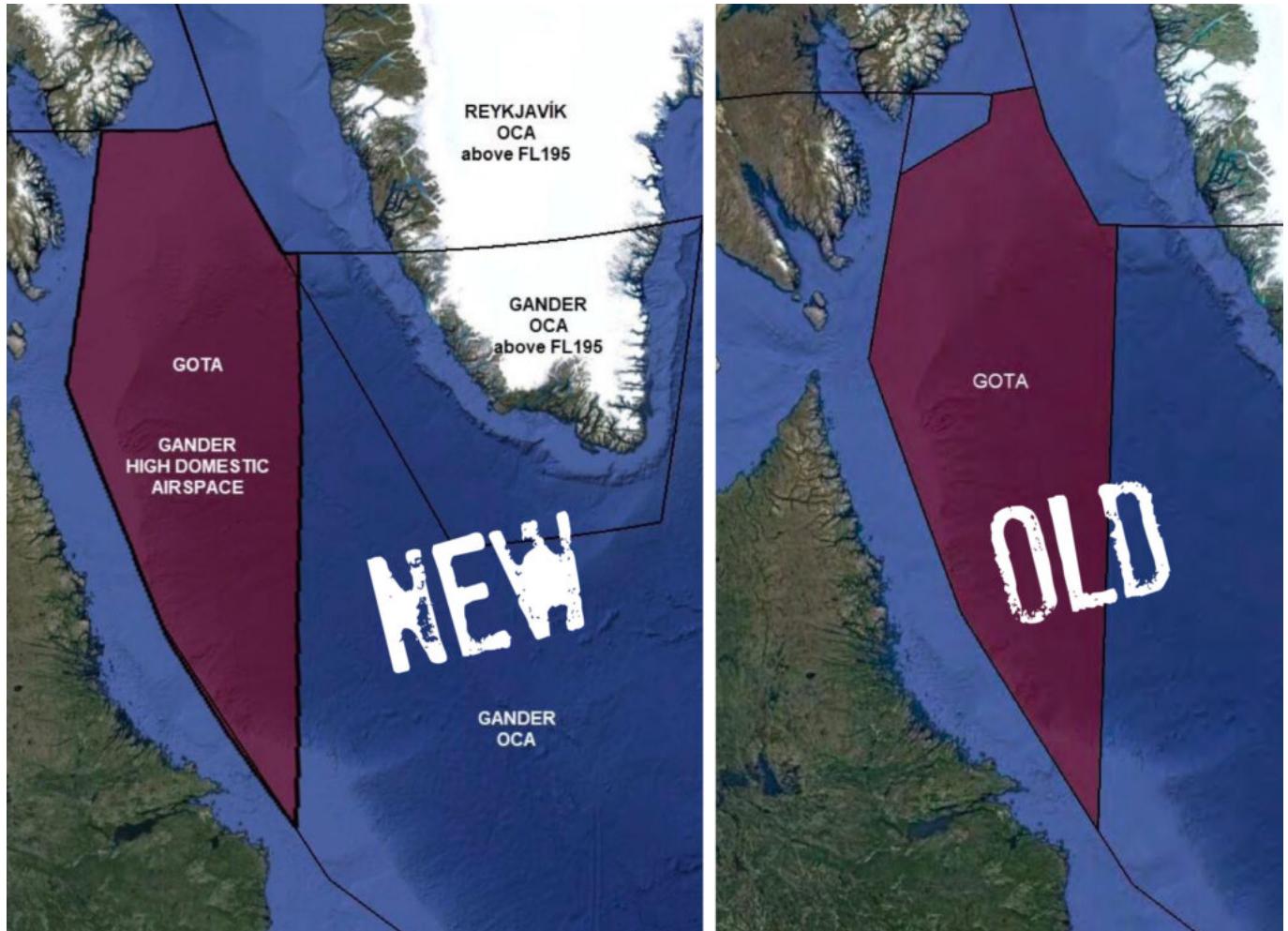
Chapter Switcheroos:

Not that interesting. Same content just in different places now. *Over to ChatGPT for a summary of this one:*

- Monitoring of Aircraft Systems & Flight Crew Performance moved to the end of the document and renumbered as Chapter 13.
- Navigation System Failure Procedures is now Chapter 9 (was Chapter 10).
- In-Flight Contingencies Procedures is now Chapter 10 (was Chapter 11) and includes the new space weather and GNSS interference guidance.
- Dispatchers' Guidance is now Chapter 11 (was Chapter 14).
- Flight Operations Below NAT HLA is now Chapter 12 (was Chapter 15).

GOTA

The picture of the airspace boundaries for GOTA has been corrected slightly from the previous NAT Doc. (The GOTA boundaries haven't changed, they just had the wrong pic in before!)



RCL timings & Squawking 2000

A couple of minor updates here:

- In the Reykjavik OCA, you must now send your RCL **no earlier than 15 minutes** prior to the OEP (it used to be 20 minutes).
- They've also updated the bit about squawking 2000 10 minutes after passing the OEP - you should do this everywhere except the Reykjavik CTA **and when transitioning through Bermuda radar** (it didn't mention Bermuda before). Squawking 2000 is not required in these areas as they have you on radar!

Prior to oceanic entry

Send RCL message

6.2.26 An RCL is a voice or data link message via ACARS used to provide ETA at OEP, requested flight level, and speed. There is a requirement to send an RCL message prior to the OEP as follows:

- Gander OCA 90-60 minutes;
- Shanwick OCA 90-30 minutes;
- Santa Maria OCA at least 40 minutes;
- Bodo OCA at least 20 minutes;
- Reykjavik OCA **no earlier** than 15 minutes;
- New York OCA East no requirement for RCL.

Gander: Flights departing airports less than 45 minutes flying time from the OEP should send RCL 10 minutes prior to start-up.

Reykjavik: Due to coverage limitations, aircraft equipped with Inmarsat data link won't be able to send an RCL message via ACARS data link when north of 82°N. Aircraft equipped with Iridium and/or HF ACARS data link should be able to send an RCL message via ACARS data link regardless of location.

Continued confusion about the Removal of Oceanic Clearances

The new version of the NAT Doc 007 tries to consolidate all the changes made after the March 2024 roll-out of OCR procedures. The only problem is that it now says that **“No oceanic clearance is required”** without pointing out that **this doesn't yet apply to Shanwick!**

OCEANIC CLEARANCE REMOVAL

FEB 2025 UPDATE

ENO/Bodo
OCR: Changed Dec 2024

BIRD/Reykjavik
OCR: Changed Mar 2024

CZQX/Gander
OCR: Changed Dec 2024

EGGX/Shanwick
OCR: Postponed UFN

KZWY/New York
OCR: No change

LPPO/Santa Maria
OCR: Changed Mar 2024

OPSGROUP

Everything about the Removal of Oceanic Clearances so far has been **quite confusing for crews**. What is happening, when it's happening, what is changing, the constant implementation date changes, plus the fact that there has been a bunch of confusing documentation out there with incorrect dates and procedures that are not yet in place.

So here's the lowdown!

- **Reykjavik and Santa Maria** = removed Oceanic Clearances in March 2024
- **Gander and Bodo** = removed Oceanic Clearances in Dec 2024.
- **Shanwick** = still has Oceanic Clearances!

So, Shanwick is the only NAT ANSP still to make the change - and the main news at the moment is that **Shanwick does not expect to implement the removal of Oceanic Clearances before summer 2025.**

Until then, westbound flights entering Shanwick from domestic airspace will continue to be the only flights on the NAT that will still require an Oceanic Clearance. For more info on all this, OPSGROUP members should check this post in their Dashboard.

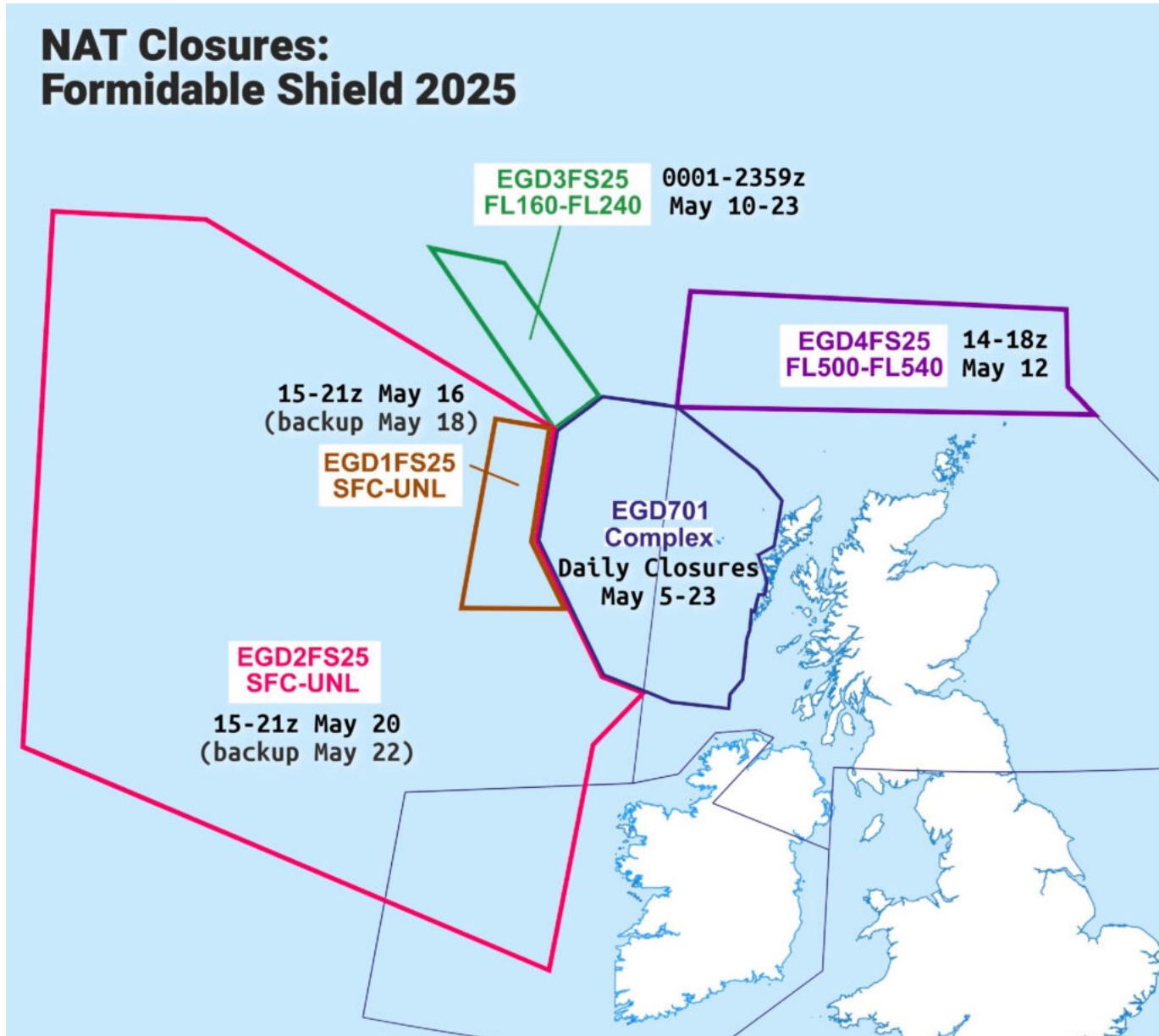
Other important NAT stuff to look forward to

Formidable Shield military exercise expected in May 2025

Remember that big NAT military exercise a couple of years ago? Formidable Shield is happening again soon, and **this year will be a fairly bad vintage.**

There will be daily closures in the D701 area off the coast of Scotland from May 5-23, but the big one to watch out for is a **large closure of airspace across the northern half of the EGGX/Shanwick FIR** on May 20 between 15-21z (with May 22 as the backup day).

The map below shows everything we know about this. For more info, check this UK SUP.



Changes to Greenland NAT alternates

BGGH/Nuuk airport's brand new runway (7200'/2200m) opened in Nov 2024, with ILS at both ends, which on the face of it makes Nuuk a more viable diversion option for NAT traffic.

But since it opened, we've had reports of **a few things to watch out for at BGGH/Nuuk:**

- ATC may **delay your arrival and put you into a hold** as only one ILS approach can be handled at a time, and 15 min separation is being applied between international arrivals. So carry up to half an hour of extra fuel if possible.
- In practical terms the airport is **effectively closed overnight**. Because it's a brand new airport, night opening is unrealistic at the moment – especially in winter. In the summer months, when there's no snow and it's daylight almost all day every day, there won't be the same need for runway sweeping and using the airport as a diversion alternate might be more possible.
- Aircraft larger than A330 should **consider continuing using BGSF/Sondrestrom as an alternate instead** – it may make more sense to divert here with the longer runway and less traffic compared to the marginal runway in BGGH/Nuuk.

Also watch out for changes potentially coming at **BGSF/Sondrestrom**, where they're considering downgrading ATC to AFIS at the end of 2025. More info [here](#).

Did we miss anything?

If you spotted anything important in the new NAT Doc 007 which we missed in this summary, please let us know! Email us at news@ops.group

More help with North Atlantic ops

- Download the OPSGROUP NAT Guide ("My First North Atlantic Flight is Tomorrow")
- Download the OPSGROUP NAT Plotting & Planning Chart
- Explanation of what you need to know about the NAT Datalink Mandate
- An overview of NAT Emergency Divert Airports