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HI TRANS
THE HIGHLANDS AND ISLANDS TRANSPORT PARTNERSHIP

Report to Partnership Meeting 20th September 2024

RESEARCH AND STRATEGY DELIVERY

Response to Scottish Government Aviation Statement of July 2024

PURPOSE OF REPORT

To share the draft HITRANS response to the Scottish Government's Aviation Statement and invite input and comment on the Statement itself and the HITRANS response.

HITRANS Response to Scottish Government Aviation Statement

The Scottish Government Aviation statement of July 2024 was a welcome initiative that will help focus key effort and action to realise the significant opportunities afforded to Scotland by the ongoing advances to decarbonise Aviation at local, regional and international scale.

Laid out below is a response to the statement that will provide additional support and context to facilitate the outcomes desired. We also layout a wider brief of the potential value, especially in the short-term to local and regional aviation in Scotland as well as a proposal to harness the considerable world-leading expertise that has been developed by a small interdisciplinary team that has a focus in the Highlands and Islands region and was formed and developed through the Sustainable Aviation Test Environment programme (SATE).

We note that the communication was released as a statement rather than the originally planned and expected, "Aviation strategy". The statement is a helpful step to engage all key stakeholders, towards the further development of a more fulsome Aviation strategy and policy, one that would outline actions and potential funding opportunities and strategies to deliver the desired outcomes. The development of an "Aviation strategy" would more explicitly link with the wider strategies for the country e.g. National Transport Strategy and other major related Capital projects.

<u>Strategic context</u>

The strategic context for developments in aviation needs to be considered. We see two broad future pathways or scenarios that help clarify the detailed work and choices that need to be made.

Scenario 1. "Continue". The continuation of the jet age. Incremental improvements to aircraft and airspace management that will lower unit emissions. Reliance on further efficiency gains of existing technologies. Aviation today as a mode for regional and local transport is expensive. Aging aircraft with a high cost to operate are driving a business model that is increasingly characterised by fewer, larger aircraft operating a reduced service. Fewer flights and passengers lead to higher unit costs of operations for airlines and airport operators. This is exacerbated when smaller, significantly older, aircraft are used as 'lifeline' connections which require a

subsidy to operate. The transition to Sustainable Aviation Fuel (SAF) will in the short-term increase cost to the traveller and accelerate the downward demand for local and regional aviation. The likely tactical response in this scenario is to attempt to limit and mitigate Capital and Operational expenditure (evidence the recent decision to abandon refuelling at Benbecula).

The inevitable future in Scenario 1 ("Continue") is for local and regional aviation to coalesce around a very small footprint of viable routes where decisions on investment and operating models are focused on cost reductions to minimise the impact of a smaller aviation sector on both airline and airport operations.

The result will see a reduction in connectivity for both resident passengers and visitors, a continuated 'marginalisation' of remote areas which impacts access to skills development and job opportunities. Business resilience and healthcare provision are negatively affected and ultimately a likely increase in depopulation.

Continuation of these services will increasingly rely on subsidy and painful choices to local communities as services are reduced and the viability of assets questioned.

Scenario 2. "Revolution". The proliferation of new low or zero emission technologies to meet decarbonisation targets that will also operate at significantly lower cost than current operations.

We believe that there is a clear case for Scenario 2. The Highlands and Islands region has been at the forefront of understanding and demonstrating the significant opportunities emerging from a range of decarbonising aviation technologies. The emergence of these technologies will effect a revolution and create a new transport category of "Sustainable Aviation". These technologies offer a low or zero emission alternative to existing transport modes and at significantly lower operating cost than currently achieved. Lower operating costs will reduce fares and promote increased activity and choice. The development of aircraft that have greater operational flexibility (vertical take-off and landing (eVtol) Airship, Seaplanes and heavy lift-drones for example) reduces their dependence on expensive infrastructure and offers higher levels of connectivity and route development. This brings positive benefits to all areas of potential demand: Residents, Business (Cargo and Freight), Local Service delivery and Visitors (tourism).

In this scenario aviation will play a more important role in local and regional connectivity, will drive down fares, increase routes and capacity and see "airports" change in both role and functionality. Aviation will become increasingly attractive when compared to other modes of transport both for the user (lower fares, quicker transit and lower emissions) and local and national Governments looking to optimise Capital investment and infrastructure investments across transport modes. A recent report valued the potential economic boost to Scotland, from a Regional Aviation system built around 9-19 seat zero emission Aircraft at £227m annually.

It is now written in law, the objective to achieve a Net Zero Aviation Region by 2040 and this should not be achieved by flying less and hoping to find the answer in SAF alone. Regional aviation needs to bring forward the aviation technologies that can deliver the required reduction in emissions but also greatly enhance the integrated connectivity across Scotland.

Aviation developments need to be considered in an increasingly integrated transport picture where the service level and cost of connectivity is driven by decisions that trade-off value, convenience and emissions.

Scotland should consider its current competitive advantage to develop at pace this emerging "Sustainable Aviation" mode of transport as it offers in the short-term ;

- Measurable improvements to connectivity in Scotland – Highlands and Islands and central belt connectivity. A prime driver and enabler of economic and social development.
- Leverages the expertise and experience gained in the past 4 years of SATE and other globally leading R&D projects in the region.
- Offers opportunity to grow Aerospace clusters in Scotland.
- Make integrated decisions on transport investment – both infrastructure and equipment – which optimises the value to the public budget.
- Supports connectivity for established as well as emerging industries (oil and gas, renewable energy, tourism, food and drink, spaceports)
- Reduces significantly overall emissions and supports the net zero targets.
- Drives inward investment and skilled employment creation by attracting new technology developers and operators to the region.

Desired outcomes

The desired outcome to improve Scotland's connectivity should be both international, regional and local. A just transition should include a national system that optimises connectivity for all regions. Tourism requires visitors inbound to major airports in the central belt to be efficiently distributed and connected to other regions – conveniently and with a minimum carbon footprint. Much improved national connectivity will generate currently stymied growth potential for businesses located away from central belt hubs. The significant economic opportunity created by Green Freeports, Deep sea ports, Offshore wind, Green Hydrogen and Space (amongst others) will require improved cost competitive, convenient and low emissions connectivity. These economic developments across Scotland are often centred around the remoter areas of the country and require an improved regional connectivity (with a minimal impact on the environment) to be successfully realised.

Consideration of the connectivity to/from key international hubs should be included within the stated actions and this would include the further consideration of Prestwick and other locations in the Central belt to better utilise "Sustainable Aviation" solutions to move freight to the Highlands and Islands. Reducing road miles and road safety exposures, improving time to market and improving the resilience and cost of maintaining the associated infrastructure – delivering a significantly lower unit carbon footprint and supporting net-zero objectives.

Short term outcomes (2025-2030) need to be considered in the light of the strategic context above. We see the opportunity from the introduction, at pace, of new Sustainable aviation solutions. Increasing the contribution made by aviation to todays transport mix and changing the direction of travel for the sector.

1. We support a detailed review of HIAL and the wider operation of airports across the region. Terms of reference for the strategic review of airport operations, its governance and the desire for improved connectivity needs to be informed by local needs and the technology opportunities emerging. The objective is to place the review in the context of what a future optimised transport ecosystem could be capable of delivering.

   The review should look at the governance structures – including Board representation / membership and the capability of the organisation to generate a new mission that articulates its key role as a lever for regional economic and social development. The

review should also look at how regional stakeholders, not least local authorities, regional transport partnerships and other development agencies actively participate and engage in the HIAL board. The review should also consider how to attract and retain staff within HIAL with an emphasis on offering career paths and progression to staff throughout their career. HITRANS would welcome a role in engaging and supporting this review, helping to shape and conduct its successful outcome. This should relate to wider work on reviewing Transport Governance as set out in the NTS and more recently re-stated in the Fair Fares Review.

We think it would be helpful if there were some added reporting and governance mechanisms in place that created more formal links with other regional agencies, such as HITRANS, to help ensure aviation fits in the wider transport mix. Nine of HIAL's Eleven airports are within the HITRANS area. One example, would be an expanded use of the regional aviation stakeholder forum where Sustainable aviation should be a standing item with an expectation on HITRANS / HIAL / TS can report on developments.

These comments are also reflected in the Comhairle nan Eilean Siar submission of 26 February 2024, PE1862/J: Introduce community representation on boards of public organisations delivering lifeline services to island communities

Such an approach would be in keeping with the Verity House Agreement maxim, "local by default, national by agreement," which is seen as vitally important when considering lifeline services.

2. We support the outcome of improved connectivity in the Highlands and Islands. We have an extended group, formed through the SATE project, that is highly expert and invested in this outcome. To accelerate this short term outcome we propose to lead a small and expert team to provide a terms of reference and subsequent report that will elaborate on the actions needed to deliver the outcome – to realise the full environmental, social and economic benefits but also to lay out in detail the considerations for new routes and lower costs that could be offered.

   This work would also include a provision to review current PSO and ADS, and other subsidies to the sector, and how these could be potentially better deployed to assist technology enter service but with a medium to longer term goal to be reduced or withdrawn as lower cost services are embedded.

   This work would be required to consider comparator needs and solutions in other transport categories – as referenced in the Statement (ie Islands Connectivity Plan and other regional and local authority transport strategies).

   We would propose an expert interdisciplinary team to conduct this work, drawing on expertise from HITRANS/SATE, AGS, Loganair and UHI along with selected and 'invested' technology partners.

   The outcome is a document that highlights key connectivity areas that can be serviced by new aviation technologies and that will integrate to the current ecosystem to improve the overall connectivity across the region.

3. We strongly support the work needed to realise the potential benefits of the introduction of Hydrogen-Electric aircraft. Significant work has already been initiated within the SATE

project that brings together expertise from Cranfield Aerospace, EMEC, Loganair and HITRANS. The work currently underway within the SATE project is supporting HIAL to develop the infrastructure, equipment and training for hydrogen-electric aircraft. Work focussed at Kirkwall airport than can be expanded across HIAL and regional airports. This work has been partially funded by UKG (through two iterations of the Future Flight Challenge). It has been challenging to feature HIAL due to match funding challenges not aligning with HIAL's current strategic and budgetary priorities.

Simply put we can expand the scope of this work to accelerate the path to achieve the world's first zero carbon commercial services operating 9-19 seat aircraft and anticipate the outcome date of 2040.

4. The statement should go further to explicitly support the benefits of advancing other categories (other than small 9-19 seat aircraft) of Sustainable Aviation that are poised to offer significant advantages in the Highland and Islands context :

    - The Long-distance, heavy lift autonomous drone capabilities already demonstrated within SATE (BVLOS-Beyond Visual Line of Sight) and the associated airspace developments. This week the CAA announced that SATE, HIAL and technology partner Windracers have been chosen as one of six national projects to progress and demonstrate the integration of manned and unmanned aircraft in 'unsegregated' airspace. Almost the entirety of the Airspace north of the central belt is 'unsegregated' airspace. These aircraft could be in commercial service in a variety of roles by 2025, regulatory frameworks permitting.
    - The use of low/zero-emission airships (technically referred to as "Hybrid Air Vehicles") of which considerable pioneering work has been undertaken in the region as part of the SATE programme. They will be the first very high payload (10-70T) zero emission aircraft operational and will be in service before 2030.
    - The entry to service of eVtol (electric vertical take-off and landing) aircraft (often referred to as "Air Taxi's") – zero emission 4-6 seat aircraft capable of being utilised successfully in a number of commercial and social roles.
    - The continued development of the cross-over technology of Seaplanes, Sea Gliders and Hydrofoils. Zero emission platforms creating greater connectivity due to their design flexibility utilising land and sea operations.

These considerations should be included in the terms of reference for the improved connectivity work referenced above.

In the statement there is an outcome by 2030 to work with our European partners to understand how the combined value of our PSO contracts could help to encourage the use of low and zero emission aircraft. We were unsure if there are specific European partners being referenced here. HITRANS have strong links across Europe from several European projects, with some good connections particularly in aviation across the Nordics. We would be happy to engage further to achieve this outcome, and investigate if HITRANS can be supported financially by TS to engage in European projects with this as a focus.

<u>Concluding comments</u>

We stand at the start of a period of major change and innovation for Aviation locally and regionally. Scotland, particularly the Highlands and Islands, are already 'invested' to realise the

potential of this new transport category given the likely and evident benefits to the region currently challenged to improve connectivity.

The region has developed a world-leading capability and expertise, many 'first's' both for the UK and wider have been completed in the North of Scotland.

- Hybrid Electric passenger aircraft flight
- Long-distance, heavy lift, Beyond visual line of sight (BVLOS) drone operations
- CAA Sandbox for Airspace that will integrate manned and unmanned operations
- Detailed Concept of Operations for Airships (Hybrid Air Vehicles-Airlander)
- MOU to reserve for the region 6 Airlander aircraft in the initial production run
- Hydrogen operations at Kirkwall – airport infrastructure, refuelling and preparation for the first Hydrogen Islander operations
- First flight of an autonomous eVtol heavy-lift, drone.
- Complemented by Project Caelus (AGS led) – use of small drones to assist NHS operations
- AGS led Hydrogen Hub work at Glasgow Airport
- Work in Argyll & Bute and Orkney to look at the use of small drones for the delivery of mail and other functionality (school meals etc).

This regionally developed expertise and experience can be harnessed to fully exploit the value of Sustainable Aviation to the Highlands and Islands and Scotland more broadly. To deliver the improvements to connectivity through development, at pace, of this new transport category.

We propose to work closely with Transport Scotland, HIAL and Scottish Government to conduct and complete the strategic work outlined above to realise the desired outcomes contained in the Aviation Statement.

RISK REGISTER

RTS Delivery
Impact – Positive
Comment – The Aviation Statement represents a key foundation from which to take forward the ambitions set out regarding the journey to net zero aviation. It aligns well with the focus of the RTS on low carbon, embracing innovative technology and connecting communities.

Policy
Impact – Positive
Comment – The Aviation Statement helps articulate opportunities for partnership working that can deliver the Government commitment to the Highlands and Islands becoming a net zero airspace by 2040.

Financial
Impact – Neutral

Equality
Impact – Positive
Comment – The Aviation Statement recognises the importance of securing Highlands and Islands air connectivity as well as embracing new technologies that will improve accessibility.

RECOMMENDATION

Members are asked to:

1. Note the report.
2. Consider HITRANS draft response and suggest any items for inclusion.
3. Delegate the Chair and Director to finalise the response taking on Board comments made at the meeting.

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