

Air Traffic Management Strategy Impact Assessment

Final Report

for



by



February 2021

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REPORT SUMMARY

S.1 INTRODUCTION

The ATMS (Air Traffic Management Strategy) programme is changing the way in which air traffic management is delivered for the following seven airports:

- Benbecula.
- Dundee.
- Inverness.
- Kirkwall.
- Stornoway.
- Sumburgh.
- Wick John O’Groats.

The overall objective of the research was to assess the economic and community impacts of ATMS and, where relevant, undertake Island Community Impact Assessments (ICIAs).

It is not the role of this assessment to recommend that a specific course of action (in this case the ATMS programme) should or should not be pursued. Nor is it an options appraisal or a gateway review of the ATMS programme.

Desk-based research included:

- Review of figures on changes in direct employment levels and salaries at each airport.
- Profile (age, gender, etc.) of current affected HIAL staff.
- Economic and demographic profiles of the affected areas around each airport.
- Profile of passengers and aircraft using each of the airports.
- Review of data on potential environmental benefits.

An online survey of affected HIAL staff was undertaken. This collected information on household members and their activities, possible employment decisions by the affected staff members, and views on ATMS.

Consultations on the potential impacts of ATMS were undertaken with:

- Affected communities-local authorities, community councils and national politicians.
- Trade union (Prospect).
- Air operators.

S.2 AIR TRAFFIC MANAGEMENT STRATEGY (ATMS)

ATMS comprises two elements:

- A move to centralised, remote air traffic control for Dundee, Inverness, Kirkwall, Stornoway and Sumburgh airports.
- Continued local airport air traffic management at Benbecula and Wick John O' Groats airports but a change to the way this is delivered. In addition, an AFIS (Aerodrome Flight Information Service) centre of excellence would be created at Benbecula.

HiAL believes that it must transform its air traffic management system to meet its operational needs now and into the future, because:

- The air traffic control industry is experiencing staff retention and recruitment challenges. These are challenges for HiAL and addressing them will improve air traffic management resilience.
- Its air traffic management infrastructure is ageing and its operating model requires modernisation.
- The organisation needs to be trained, equipped and ready to meet changing legislation and regulatory requirements within the aviation industry.
- The organisation must ensure best value and operate in the most efficient but effective way.

In January 2018 Scottish Government's Transport Minister approved HiAL to proceed with ATMS. The HiAL Board approved the ATMS Business Case in October 2019 which was subsequently approved by Transport Scotland in December of that year.

S.3 ATMS: DUNDEE, INVERNESS, KIRKWALL, STORNOWAY AND SUMBURGH AIRPORTS

Air traffic control (ATC) is currently provided by staff working at a control tower at each airport. The total associated employment across the five airports is around 76 Full-Time Equivalent (FTE) jobs with gross salaries of c£3.9 million per annum.

ATMS will introduce remote integrated ATC services for the five airports. This will be delivered via a Combined Surveillance Centre (CSC) located in Inverness. A separate contingency facility will also be created.

There will no longer be staff controlling traffic from a tower at each of the five airports. Instead the CSC-based staff will undertake remote monitoring of cameras located at each of the five airports. The transition of air traffic management from each airport to the CSC will require CAA (Civil Aviation Authority) approval before it can go ahead.

One of the issues considered critical to the success of ATMS is the digital connectivity between the CSC and the five airports. At October 2020 HiAL had completed the high level design stage and were proceeding to detailed design to fully test what has been proposed.

ATMS also includes the introduction of controlled airspace around those airports that do not presently have it (Dundee, Kirkwall and Stornoway). Uncontrolled airspace permits aircraft to fly freely without talking to the ATCO. However, in controlled airspace (depending on the exact classification) traffic flying certain flight rules must abide by the controller clearances.

ATMS would also see the introduction of surveillance for Dundee, Kirkwall, Stornoway. That is, a location with a sensor to detect aircraft, which HIAL see as significantly increasing safety from present levels.

Surveillance would also offer the possibility of environmental benefits to the areas around the three airports. That would be through allowing aircraft to reduce fuel consumption and consequent CO² emissions.

The current timetable for the introduction of ATMS is:

- CSC operational-June/September 2022.
- First airport (Inverness) migrates to CSC-December 2022.
- Final airport (Dundee) migrates-June 2027.

HIAL aim to staff the CSC in Inverness primarily with existing ATC staff from all seven airports. They will also look to attract new staff who have the required skills and qualifications.

Illustrative estimates provided by HIAL show that, by 2027, 96 FTE posts would be required at the CSC with associated gross salaries of c£6.2 million per annum. Achieving these staffing levels-and thus providing remote air traffic control from the CSC-would depend on HIAL successfully filling these positions on an ongoing basis.

There would no longer be ATC staff employed at the individual airports. The total loss of employment across Dundee, Kirkwall, Stornoway and Sumburgh would be c48 FTE jobs and c£2.2 million of gross annual salaries.

Apart from airlines, almost all consultees regarding, Kirkwall, Stornoway and Sumburgh were opposed to ATMS and/or concerned about lack of detail on certain aspects of it. In some cases that included what they saw as a lack of transparency on how HIAL had reached the decision to proceed with ATMS.

All of the airlines consulted are generally supportive/in favour of the move to CSC/remote tower.

S.4 THE LOCAL SURVEILLANCE ALTERNATIVE: DUNDEE, INVERNESS, KIRKWALL, STORNOWAY AND SUMBURGH AIRPORTS

HIAL consider that some of the factors they seek to address through the CSC would have to be addressed even if ATMS was not being taken forward. Thus, doing nothing is not an option.

HiAL have stated that the alternative to ATMS would have been the “local surveillance alternative”. That would be the introduction of the same controlled airspace and surveillance abilities as ATMS-but based at each of the five airports rather than via a centralised facility.

According to HiAL’s illustrative figures this would mean a significant increase in air traffic management staff at most of the five airports compared to present levels. Across these airports there would be a total of 135 FTE posts with associated annual gross salaries of £8.5 million. These figures have been challenged by Prospect who view them as significantly overestimated.

While representing a significant change from existing air traffic management, the alternative would be less technically complex and challenging than ATMS.

However, HiAL see the local surveillance alternative as, first, not providing the level of staff resilience, recruitment and retention that ATMS offers. That is because of the need to attract significantly more air traffic management staff to work at Dundee, Kirkwall, Stornoway and Sumburgh airports. That is in the context of what HiAL see as existing recruitment challenges.

Second, the local surveillance alternative is seen as less flexible than ATMS. That is because there would be no means for staff to manage air traffic at more than one airport if that was required-which is the intention for the CSC.

Therefore, HiAL believe that the local surveillance alternative would mean air traffic services at each airport increasingly being reduced or suspended in the light of staff being unavailable-and thus not sustainable over time.

Third, HiAL see the local surveillance alternative as costing more than ATMS because of increased costs relating to staff and other investments.

S.5 CHANGES AT BENBECULA AND WICK JOHN O' GROATS AIRPORTS

S.5.1 Existing Position

ATMS originally included Benbecula and Wick John O' Groats within the Central Surveillance Centre along with the other five airports. However, in October 2019 the HiAL Board approved a different approach.

Air traffic control (ATC) at Benbecula and Wick John O' Groats is currently provided by staff at each airport. They provide an ATC service, where an Air Traffic Controller (ATCO) passes instructions and clearances to the aircraft.

Current permanent staff complement levels are:

- Benbecula: six FTE staff with total gross salaries of >£310,000 < £330,000.
- Wick John O' Groats: four FTE staff with total gross salaries of >£220,000 < £240,000.

In addition there are five part-time AFISOs (Aerodrome Flight Information Service Officers) at Benbecula and six at Wick John O' Groats.

S.5.2 Change from ATC to AFIS

HAL are taking forward a change from ATC to AFIS (Aerodrome Flight Information Service) operations at the two airports. That is, to a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. That is different to ATC which involves controlling aircraft rather than simply talking to them-including, in particular, proactively separating aircraft.

The change will require an Airspace Change Proposal to be undertaken which requires CAA approval. HAL believe the change will provide a level of air traffic management at the two airports which is more proportionate to their level and complexity of air traffic. Thus, air traffic management would be similar to that at other, smaller HAL airports.

It is also HAL's view that the CAA is minded to make controlled airspace a required element for ATC airports. HAL believe that the CAA would be very unlikely to grant controlled airspace for either Benbecula or Wick John O' Groats and thus allow the continuation of ATC there.

HAL have also decided to develop an AFIS centre of excellence at Benbecula. This would manage and coordinate the AFIS function across the relevant HAL airports, along with the delivery of training courses and other activities.

The timescales for the move to AFIS operations are currently forecast as:

- Benbecula: April 2022-although possibly earlier than this.
- Wick John O' Groats: December 2023.

HAL's Illustrative estimate of forecast employment levels are:

- Benbecula: six FTE staff (as at present) with total gross salaries of £250,000.
- Wick John O' Groats: four FTE staff (as at present) with total gross salaries of £170,000.

In addition the existing five part-time AFISOs at Benbecula and six at Wick John O' Groats would be retained.

HAL have stated if there was not a change to AFIS then the two airports would have remained in the centralised air traffic management proposal along with the other five.

Almost all consultees regarding Benbecula were opposed to ATMS and/or concerned about lack of detail on certain aspects of it. In some cases that included what they saw as a lack of transparency on how HAL had reached the decision to proceed with the changes to air traffic management.

None of the airlines consulted raised any general concerns with the move to AFIS operations at Benbecula and Wick John O' Groats.

S.6 UNCERTAINTIES AFFECTING THE ASSESSMENTS

The overall timescales for, and nature of, what HIAL are taking forward mean some significant uncertainties.

First, the number of existing HIAL staff who will transfer to the CSC is not yet known.

Second, the employment and salary levels for the CSC, the local surveillance alternative and AFIS at Benbecula and Wick John O' Groats are simply best estimates with the detail not having been worked through. This creates a degree of uncertainty around the scale of employment impacts and whether the required employment levels can be achieved and sustained. That is in a context where, for HIAL, a key justification for the CSC is that its employment levels can be sustained-unlike the local surveillance alternative.

Third, design of digital connections to/from the CSC is currently only at a high level. While detailed design cannot be completed until the tender is awarded, this still results in some uncertainty on the connectivity issue. That is in a context where resilience is critical to the remote towers' successful operation.

Fourth, the form of surveillance to be procured is still awaiting regulatory decisions by the CAA. These could affect the potential impacts on new developments around some of the airports-particularly windfarms.

Fifth, the full nature of AFIS at Benbecula and Wick John O' Groats will only be known once the safety case has been approved by the CAA.

Given these uncertainties the assessments very much look at *potential* impacts.

S.7 BASIS OF THE ASSESSMENTS

Individual assessments were prepared for each of the areas around the seven affected airports.

For the five airports covered by the CSC (Dundee, Inverness, Kirkwall, Stornoway and Sumburgh) the assessment of impacts is based mainly on a comparison of ATMS and *the local surveillance alternative*. That is because HIAL (and some others) do not view the existing ATC provision as a sustainable option going forward.

The assessments for Benbecula and Wick John O' Groats are based mainly on a comparison of AFIS operations (plus the centre of excellence at Benbecula) *against the two airports otherwise having been included in the CSC*.

A key issue is the difference in the resilience of air traffic management (and thus the resilience of air services) of what HIAL is taking forward through ATMS and what they would otherwise have done. For example, between ATMS and the local surveillance alternative for Dundee, Inverness, Kirkwall, Stornoway and Sumburgh.

As an example, a negative impact on resilience could arise from an inability to recruit and retain sufficient air traffic management staff. That could lead to increased delays and

cancellations of flights, leading on to a reduction in the number of flights and passenger movements made.

However, it is not possible to quantify this with any reasonable accuracy. Even the use of scenarios (i.e. *what if?*) rather than forecasts would involve using an arbitrary figure. That is in a context where, for example, if the performance of either ATMS or the local surveillance alternative was below an acceptable level then it would either not be introduced, or discontinued.

The assessments include some of the economic impacts of the air services at each airport (e.g. inbound tourism). In this we simply note that a lack of resilience of, for example, either ATMS or the local surveillance alternative could have a very significant negative economic impact.

In addition, we have not assessed the safety aspects of ATMS, the local surveillance alternative or AFIS. That is because each one would require CAA approval based on a safety case, and could not be introduced if insufficiently safe.

S.8 INDIVIDUAL AREA ASSESSMENTS

The seven individual assessments are set out in the following pages.

TABLE S.1: UIST ECONOMIC IMPACT ASSESSMENT: COMPARISON OF AFIS/CENTRE OF EXCELLENCE AGAINST INCLUSION OF BENBECULA AIRPORT IN THE COMBINED SURVEILLANCE CENTRE		
Element/ <i>National Islands Plan Criterion</i>	Data/Issues	Potential Impact
Changes in Employment At Benbecula Airport		
Change in employment (direct and induced only) (<i>Economic opportunities for island residents</i>)	Retention of 7.5 FTE jobs compared to CSC alternative-plus five part-time AFISO roles (Loss of 0.4 FTE jobs compared to existing position)	Significant positive impact compared with CSC alternative, with a very slight negative impact compared to existing position
Change in gross salaries (direct and induced only)	Retention of £283,000 compared to CSC alternative-plus part-time AFISO payments (Loss of >£74,000<£84,000 compared to existing position)	Significant positive impact compared with CSC alternative, with a very slight negative impact compared to existing position
Access to high quality employment	Average (mean) salary of c£42,000 lower than existing position [REDACTED]. However, would remain well above averages for the Outer Hebrides and Scotland (full time jobs)	Slight/significant negative impact compared to existing position
Potential Wider Impacts/<i>National Islands Plan Criterion</i>		
Resilience of air traffic management and air services (<i>Economic opportunities for island residents/Adequacy of transport of people and goods</i>)	Dependent on resilience of AFIS in serving the level and complexity of demand compared to CSC alternative Business flights: Estimated c5,800 scheduled return flights in 2019-mostly inbound-includes commuting by Uist residents Non-scheduled flights: freight/cargo volumes are significant, military a specialisation Key sectors: Tourism: estimated 7,600 inbound visitors to Uist in 2019 by scheduled flights-estimated c£1.6 million spend and 27 FTE jobs Qinetiq range: more than 100 jobs at the site	Very significant negative impact under <u>either</u> AFIS <u>or</u> CSC alternative if resilience was lower than present levels and traffic levels fall. There could be a slight/significant positive impact if, compared to the existing position, AFIS is able to offer greater flexibility to accommodate late running schedules and increased numbers of aircraft movements
Reduced number of flights because air operators will not use an AFIS airport (<i>Adequacy of transport of people and goods</i>)	Air operators consulted did not indicate that this would be the case (although only two of them currently use Benbecula)	Uncertain -due to limited number of consultations
Loss of employment and wage spend of other household members if households leave Uist (<i>Economic opportunities for island residents</i>)	All those responding to the staff survey have at least one other household member who is employed in Uist. It could be that 3 to 4 full time jobs prove hard to fill if affected household member leaves Uist	Slight/significant positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist

TABLE S.2: UIST COMMUNITY IMPACT ASSESSMENT: COMPARISON OF AFIS/CENTRE OF EXCELLENCE AGAINST INCLUSION OF BENBECULA AIRPORT IN THE COMBINED SURVEILLANCE CENTRE

Element/<i>National Islands Plan</i> Criterion	Data/Issues	<u>Potential</u> Impact
Population		
Population loss (<i>Population levels</i>)	Estimated 18 people in affected staff households. Context of Uist population decrease of more than 4% between 2011 and 2018. Further population decline forecast for the Outer Hebrides as a whole	Slight/significant positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist
Population loss in key age groups of 16-24 and 25-49 (<i>Population levels and structure -including families</i>)	Estimated that around half of all HIAL household members in one of these age groups. Uist is estimated to have seen a significant fall in 16-49 year olds between 2011 and 2018	Slight/significant positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist
Impact on services-school rolls	Seven children in the affected households attend [REDACTED]	Slight positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist
Community Activity		
Participation in community organisations and activity	Most households responding to the survey are involved in a range of local organisations and activities	Slight positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist
Providing care for other households	Almost all households responding to the survey provide care support to other family members who live elsewhere in their community/area	Slight positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist
Use of Air To Access Activities and Key Services/<i>National Islands Plan</i> Criterion		
Resilience of air traffic management and air services (<i>Adequacy of transport of people and goods. Accessibility of health services</i>)	Visiting friends and relatives trips accounted for a significant share (c40%) of all 2019 scheduled passengers Health access by air for Uist residents is vital to receiving specialist services that are not available locally	Very significant negative impact under <u>either</u> AFIS <u>or</u> CSC alternative if resilience was lower than present levels and traffic levels fall

TABLE S.3: LEWIS ECONOMIC IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE		
Element/National Islands Plan Criterion	Data/Issues	Potential Impact
Changes in Employment At Stornoway Airport		
Change in employment (direct and induced only)/economic opportunities for island residents)	Net reduction of c36 FTE jobs between ATMS and local surveillance alternative. However, dependent on whether local surveillance alternative could attract sufficient staff on an ongoing basis. (Under ATMS a net reduction of c14 FTE jobs compared to the existing position)	Very significant negative impact
Change in gross salaries (direct and induced only)	Net reduction of c£1.9 million (Under ATMS a net reduction of £579,000 compared to the existing position)	Very significant negative impact
Access to high quality employment	Net loss of 27 FTE posts in air traffic services between ATMS and local surveillance alternative with an average (mean) salary of c£63,000. Far above mean salary of in both the Outer Hebrides and Scotland (full time jobs) (Existing posts have a mean salary of c£45,000)	Very significant negative impact
Potential Wider Impacts		
Resilience of air traffic management and air services/Economic opportunities for island residents/Adequacy of transport of people and goods	Business flights: c20,000 scheduled return flights in 2019-mostly inbound-includes commuting by Lewis residents Non-scheduled flights: freight/cargo significant, military flights a specialisation Information and communication is a specialisation in the Lewis economy and one that is air intensive Tourism: estimated c33,000 scheduled inbound visitors to Lewis in 2019-estimated c£8.1 million spend and 135 FTE jobs	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall
Employment and wage spend of other household members/Economic opportunities for island residents)	Almost all respondents to the staff survey have a spouse and/or other household members who work. ATMS could lead to some households to move elsewhere and around one third of their posts could prove hard to fill. Under the local surveillance alternative a number of the additional posts could lead to new staff and their household members moving to Lewis	Slight negative impact

TABLE S.4: LEWIS COMMUNITY IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE		
Element/ <i>National Islands Plan Criterion</i>	Data/Issues	Potential Impact
Population		
Population loss/ <i>Population levels</i>	Staff survey showing average of between 2 and 3 people per household. Suggests between 22 and 33 people across all affected households. Under the local surveillance alternative staff member households could comprise between c60 and c70 people, with some of these having moved to Lewis. Context is an estimated decline of 3% in Lewis' population between 2011 and 2018, with a larger decline forecast for the years to 2028	Significant negative impact
Population loss in key age groups of 16-24 and 25-49 / <i>Population levels and structure - including families</i>)	Clear majority of current staff household members fall within these two age groups. Context is an estimated significant fall in population in these age groups in Lewis between 2011 and 2018. Under the local surveillance alternative new households to Lewis could bring in a number of individuals aged between 16 and 49 (based on current staff's household profile)	Significant negative impact
Impact on services-school rolls	[REDACTED] The surveillance alternative could bring new households to Lewis some of which could include schoolchildren. However, local surveillance alternative impacts also likely to be very slight if new households are distributed across Lewis as per the current air traffic staff.	Very slight negative impact
Community Activity		
Participation in community organisations and activity	Almost all households responding to the survey are involved in a range of local organisations and activities-with an average of two members per household. Local surveillance alternative would offer the possibility of new/retained residents who may be active in the community	Slight negative impact
Providing care for other households	Almost all households responding to the survey provide care support to other family members who live elsewhere in their community/area dependent on number of households that would leave Lewis	Very slight negative impact but could have a significant impact on a number of specific individuals in the community
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services/ <i>Economic opportunities for island residents/Adequacy of transport of people and goods</i>	Visiting friends and relatives trips accounted for 27% of Stornoway's total 2019 scheduled passengers Health access by air for Lewis residents is vital to receiving specialist services that are not available locally	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall
Environmental Impacts		
Reduced CO ² emissions as a result of introduction of surveillance/ <i>Developing the most energy-efficient and climate-friendly transport services possible</i>	Introduction of surveillance would have the potential to reduce CO2 emissions impacts by between 877 and 1,165 tonnes per year. That equates to removing between 414 and 555 cars from the road network. However, environmental benefit per flight would be the same under both ATMS and the local surveillance alternative	Uncertain as would depend on air operators actually choosing to use the climb and descent profiles. Would apply to both ATMS and the local surveillance alternative.

TABLE S.5: ORKNEY ECONOMIC IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE		
Element/National Islands Plan Criterion	Data/Issues	Potential Impact
Changes in Employment At Kirkwall Airport		
Change in employment (direct and induced only) (<i>Economic opportunities for island residents</i>)	Net reduction of up to c36 FTE jobs between ATMS and local surveillance alternative. (Under ATMS a net reduction of c16 FTE jobs compared to the existing position)	Very significant negative impact
Change in gross salaries (direct and induced only)	Net reduction of c£1.9 million. (Under ATMS a net reduction of £653,000 compared to the existing position)	Very significant negative impact
Access to high quality employment	Net reduction of 27 FTE posts in air traffic services between ATMS and local surveillance alternative with an average (mean) salary of c£63,000. Far above mean salary in both Orkney and Scotland (full time jobs). (Existing posts have a mean salary of c£45,000)	Very significant negative impact
Potential Wider Impacts		
Resilience of air traffic management and air services/ <i>Economic opportunities for island residents/Adequacy of transport of people and goods</i>	Business flights: c33,000 scheduled return flights in 2019-mostly inbound to Orkney Non-scheduled flights: freight/cargo volumes significant and a specialisation Tourism: estimated 38,000 scheduled air visitors in 2019 by-estimated spend of c£11.4 million and 190 FTE jobs	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall
Surveillance type constrains development (<i>Economic opportunities for island residents</i>)	Renewables is a specialisation of the Orkney economy and Orkney's role is important both within Scotland and internationally. Physical developments could be constrained by the surveillance that is introduced	Very significant negative impact. Applies to both ATMS and the local surveillance alternative
Employment and wage spend of other household members (<i>Economic opportunities for island residents</i>)	Almost all respondents to the staff survey have a spouse and/or other household members who work. ATMS could lead some households to move elsewhere. Estimated four to five existing jobs could prove hard to fill. Under the local surveillance alternative a number of the additional posts could lead to new staff and their household members moving to Orkney	Slight negative impact

TABLE S.6: ORKNEY COMMUNITY IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE		
Element/National Islands Plan Criterion	Data/Issues	Potential Impact
Population		
Population loss (Population levels)	Some concentration of staff in Kirkwall (Orkney's major settlement). Staff survey showing average of 2.8 people per household. Suggests c40 people across all staff households. Survey suggests that number of children in these households could be around 14. Under the local surveillance alternative staff member households could comprise around 70 people, with some of these having moved to Orkney. Context of growth in Orkney population between 2011 and 2018, and slight growth forecast for the years to 2028.	Significant negative impact
Population loss in key age groups of 16-24 and 25-49 (Population levels and structure - including families)	Around half of existing staff household members fall within these two age groups. Context is that Orkney is underrepresented in 16-49 age group compared to Scotland. Under the local surveillance alternative new households to Orkney would likely bring in a number of people aged 16-49	Significant negative impact
Impact on services-school rolls	Staff survey identified 12 children aged between 0 and 15 years. Those of school age appear to be spread across a number of schools. Under the local surveillance alternative new households to Orkney could bring in children of school age.	Very slight negative impact
Community Activity		
Participation in community organisations and activity	Half of the households responding to the survey are involved in a range of local organisations and activities-with an average of around two members per household. Local surveillance alternative could offer the possibility of new/retained residents who may be active in the community	Slight negative impact
Providing care for other households	Around half the households responding to the survey provide care support to other family members who live elsewhere in their community/area.	Very slight negative impact but could have a significant impact on a number of specific individuals in the community
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services/Economic opportunities for island residents/Adequacy of transport of people and goods	Visiting friends and relatives accounts more than one third (35%) of passengers on external flights Health access by air for Orkney residents is vital to receiving specialist services that are not available locally North Isles residents depend on internal air service to make day trips to mainland Orkney, as do service providers travelling to the North Isles	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall
Environmental Impacts		
Reduced CO ² emissions as a result of introduction of surveillance (Developing the most energy-efficient and climate-friendly transport services possible)	Introduction of surveillance would have the potential to reduce impacts by between 911 and 1,226 tonnes of CO ₂ emissions per year. That equates to removing between 434 and 584 cars from the road network Environmental benefit per flight would be the same under both ATMS and the local surveillance alternative	Uncertain as would depend on air operators actually choosing to use the climb and descent profiles. Would apply to both ATMS and the local surveillance alternative.

TABLE S.7: SHETLAND ECONOMIC IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE		
Element/National Islands Plan Criterion	Data/Issues	Potential Impact
Changes in Employment at Sumburgh Airport		
Change in employment (direct and induced only) (<i>Economic opportunities for island residents</i>)	Net reduction of up to c36 FTE jobs between ATMS and local surveillance alternative. (Under ATMS a net reduction of c17 FTE jobs compared to the existing position) Transport related employment-including at Sumburgh Airport-is a significant employer in Shetland south mainland	Very significant negative impact
Change in gross salaries (direct and induced only)	Net reduction of c£1.9 million (Under ATMS a net reduction of £670,000 compared to the existing position)	Very significant negative impact
Access to high quality employment	Net reduction of 27 FTE posts in air traffic services with an average (mean) salary of c£63,000. Far above mean salary in Shetland and £ Scotland. (Existing posts have a mean salary of c£44,000)	Very significant negative impact
Potential Wider Impacts		
Resilience of air traffic management and air services (<i>Economic opportunities for island residents/Adequacy of transport of people and goods</i>)	Business flights: c34,000 scheduled return flights in 2019-mostly inbound to Shetland Non-scheduled flights: oil charter volumes are significant and a specialisation Energy sector is a specialisation in Shetland and is air intensive, including oil and gas charter flights. Some specialisation sectors are export focused-e.g. fisheries, textiles. Tourism: estimated c49,000 visitors to Shetland on scheduled flights in 2019-estimated spend of c£18.9 million and 315 FTE jobs	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall
Employment and wage spend of other household members (<i>Economic opportunities for island residents</i>)	Almost all respondents to the staff survey have a spouse and/or other household members who work. ATMS could lead to some households to move elsewhere and a number of posts (c6) currently held by household members could prove hard to fill. Under the local surveillance alternative a number of the additional posts could lead to new staff and their household members moving to Shetland	Slight negative impact

TABLE 5.8: SHETLAND COMMUNITY IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE

Element/National Islands Plan Criterion	Data/Issues	Potential Impact
Population		
Population loss (Population levels)	Staff survey showing average of 2.4 people per household. Suggests around 37 people across all staff households, including around 12 children. There is a concentration of affected households in Shetland south mainland. Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these having moved to Shetland.	Significant negative impact
Population loss in key age groups of 16-24 and 25-49 (Population levels and structure - including families)	Staff survey suggests that more than half of all household members fall within these two age groups. Neither mainland Shetland nor Shetland south mainland are particularly underrepresented in 16-49 age groups compared to Scotland. Under the local surveillance alternative any new households to Shetland are likely to bring in a number of individuals aged between 16 and 49 based on current staff's household profile.	Significant negative impact
Impact on services-school rolls	Staff survey identified [REDACTED] nursery/school children in the households that responded	Very slight negative impact
Community Activity		
Participation in community organisations and activity	All the households responding to the survey are involved in a range of local organisations and activities-with an average of around two members per household. Local surveillance alternative could offer the possibility of new/retained residents who may be active in the community	Slight negative impact but could have a significant impact on a number of specific organisations/activities-particularly in Shetland south mainland
Providing care for other households	Slightly more than half the households responding to the survey provide care support to other family members who live elsewhere in their community/area	Very slight negative impact but could have a significant impact on a number of individuals in the community
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services/Economic opportunities for island residents/Adequacy of transport of people and goods	Visiting friends and relatives trips account more than one third of Sumburgh scheduled air passengers. Health access by air for Shetland residents is vital to receiving specialist services that are not available locally	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall

TABLE S.9: CAITHNESS ECONOMIC IMPACT ASSESSMENT: COMPARISON OF AFIS AGAINST INCLUSION OF WICK JOHN O' GROATS AIRPORT IN THE

COMBINED SURVEILLANCE CENTRE		
Element	Data/Issues	Potential Impact
Changes in Employment At Wick John O' Groats Airport		
Change in employment (direct and induced only)	Retention of 5 FTE jobs compared to CSC alternative-plus six part-time AFISO roles (Loss of 0.3 FTE jobs compared to existing position)	Slight positive impact compared with CSC alternative, with a very slight negative impact compared to existing position
Change in gross salaries (direct and induced only)	Retention of £192,000 compared to CSC alternative-plus part-time AFISO payments (Loss of >£62,000<£72,000 compared to existing position)	Slight positive impact compared with CSC alternative, with a very slight negative impact compared to existing position
Access to high quality employment	Average (mean) salary of c£42,000 lower than existing position [REDACTED]. However, would remain above averages for the local area and Scotland (full time jobs)	Slight negative impact compared to existing position
Potential Wider Impacts		
Resilience of air traffic management and air services	Context of no scheduled flights at Wick John O' Groats at present and longer term reduction in employment generated by Dounreay nuclear site Business Flights: 2019 estimated 4,600 scheduled return flights-largely outbound Non-scheduled: private flight volumes significant and a specialisation Tourism: estimated 1,365 visitors in 2019 on scheduled services-estimated spend of £306,000 and 5 FTE jobs Key sector: Energy-including nuclear, oil and gas and renewables which are generally air intensive	Very significant negative impact under <u>either</u> AFIS <u>or</u> CSC alternative if resilience was lower than present levels and traffic levels fall
Reduced number of flights because air operators will not use an AFIS airport	Air operators consulted did not indicate that this would be the case (based on consultations with three air operators each of which currently use/have used Wick John O' Groats)	Uncertain -due to limited number of consultations

TABLE S.10: CAITHNESS COMMUNITY IMPACT ASSESSMENT: COMPARISON OF AFIS AGAINST INCLUSION OF WICK JOHN O' GROATS AIRPORT IN THE COMBINED SURVEILLANCE CENTRE

Element	Data/Issues	Potential Impact
Population		
Population loss	Four affected staff members-likely to have around 10-12 household members in total. Context of local area population decrease of c4% between 2011 and 2018. Population decline could continue as Downreay decommissioning proceeds.	No discernible impact given very low number of affected households and area population
Population loss in key age groups of 16-24 and 25-49	All affected staff members are in the 16-49 year age group. Context of area's population having lower proportions in these age groups than the Scottish average	No discernible impact given very low number of affected households and area population
Impact on services-school rolls	No information on number of children in affected households. However, total number will be low given the low number of affected households	No discernible impact given very low number of affected households and area population
Community Activity		
Participation in community organisations and activity	No information available	No likely discernible impact given very low number of affected households
Providing care for other households	No information available	No likely discernible impact given very low number of affected households
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services	Visiting friends and relatives accounted for an estimated 19% of Wick John O' Groats 2019 scheduled passengers There have been very few health related scheduled passenger flights out of Wick John O' Groats	Very significant negative impact under <u>either</u> AFIS <u>or</u> CSC alternative if resilience was lower than present levels and traffic levels fall

TABLE S.11: INVERNESS ECONOMIC IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE

Element	Data/Issues	Potential Impact
Changes in Employment At Inverness Airport		
Increase in employment (direct and induced only)	Net increase of c93 FTE between ATMS and local surveillance alternative	Significant positive impact
Increase in gross salaries (direct and induced only)	Net increase of c£5 million between ATMS and local surveillance alternative	Significant positive impact
Access to high quality employment	Net increase of c68 FTE posts in air traffic services with an average (mean) salary of c£65,000. Far above the Inverness and Scotland averages (full time jobs)	Significant positive impact given the number of highly paid jobs
Potential Wider Impacts		
Resilience of air traffic management and air services	It can be assumed that the local surveillance alternative would be viable in Inverness as staff numbers would be no greater than at present. Business flights: c140,000 return flights in 2019-largely outbound Tourism: estimated 275,000 on scheduled flights at Inverness in 2019. Previous research indicated £89m related visitor spend in Highland/Moray and 1,775 FTE jobs Large airport catchment area-supporting economic activity in most of Highland and in the west half of Moray Supports region-wide dispersed organisations-especially public sector-through flights to Outer Hebrides and Northern Isles	Very significant negative impact if resilience is lower than present levels and traffic levels fall under ATMS
Employment and wage spend of other household members	The CSC would lead to new staff and their household members moving to Inverness and surrounding areas. Thus, the economic contribution of other household members would increase compared to the local surveillance alternative. Context of a relatively large Inverness labour catchment area	Very slight positive impact

TABLE S.12: INVERNESS COMMUNITY IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE		
Element	Data/Issues	Potential Impact
Population		
Population impacts	ATMS would lead to an increase in population in Inverness and surrounding areas compared to the local surveillance alternative. Context of population growth between 2011 and 2018 and a current population of c70,000 in Inverness city.	Very slight positive impact
Population change in key age groups of 16-24 and 25-49	Numbers in these age groups in Inverness city fell between 2011 and 2018 but their shares are not below the Scottish average. ATMS will increase the numbers aged between 16-49 in Inverness and surrounding areas	No discernible impact
Impact on services	Staff survey identified [REDACTED] school children in the households that responded. Some of the staff moving to the area to work will have school age children. However, the impact will be distributed across Inverness and the surrounding areas	No discernible impact
Community Activity		
Participation in community organisations and activity	Around one in four of the households in the staff survey currently participate	No discernible impact
Providing care for other households	Very few households in the staff survey provide care	No discernible impact
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services	Visiting friends and relative trips accounted for 19% of 2019 Inverness scheduled air passengers	Very significant negative impact if resilience is lower than present levels and traffic levels fall under ATMS

TABLE S.13: DUNDEE ECONOMIC IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE

Element	Data/Issues	Potential Impact
Changes in Employment At Dundee Airport		
Change in employment (direct and induced only)	Net reduction of c34 FTE jobs between ATMS and local surveillance alternative. Context of a large local labour market-c77,000 jobs in Dundee City. (Under ATMS a net reduction of c14 FTE jobs compared to the existing position)	Very slight negative impact
Reduction in gross salaries (direct and induced only)	Net reduction of c£1.9 million between ATMS and local surveillance alternative (Under ATMS a net reduction of £628,000 compared to the existing position)	Very slight negative impact
Access to high quality employment	Net loss of 27 FTE posts in air traffic services with an average (mean) salary of c£63,000. far above mean salary in Dundee and in Scotland (full time jobs) (Existing posts have a mean salary of c£52,000)	Very slight negative impact given the size of the local labour market
Potential Wider Impacts		
Resilience of air traffic management and air services	Business flights: c6,800 scheduled return flights in 2019 Non-scheduled flights: aero club volumes are significant, and specialisation in Executive, Instrument Training and Business Aviation flights Key sectors: education, life sciences and publishing specialisms tend to be air intensive	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall
Employment and wage spend of other household members	Some existing staff households live outside Dundee City so any loss of household member jobs due to household relocations under ATMS likely to be dispersed. Context of a large local labour market-c77,000 jobs in Dundee City alone	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative

TABLE S.14: DUNDEE COMMUNITY IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE

Element	Data/Issues	Potential Impact
Population		
Population loss	Uncertainty as to level of households relocating as a result of ATMS. Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these possibly having moved to Dundee or surrounding areas. Context of population in Dundee City (c150,000) and surrounding areas	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative
Population loss in key age groups of 16-24 and 25-49	Uncertainty as to level of households relocating as a result of ATMS. Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these possibly having moved to Dundee or surrounding areas. Context of population in Dundee City (c150,000) and surrounding areas	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative
Impact on services	Uncertainty as to level of households relocating as a result of ATMS. Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these possibly having moved to Dundee or surrounding areas. Context of population in Dundee City (c150,000) and surrounding areas	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative
Community Activity		
Participation in community organisations and activity	Uncertainty as to level of households relocating as a result of ATMS. Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these possibly having moved to Dundee or surrounding areas. Context of population in Dundee City (c150,000) and surrounding areas	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative
Providing care for other households	Uncertainty as to level of households relocating as a result of ATMS. Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these possibly having moved to Dundee or surrounding areas. Context of population in Dundee City (c150,000) and surrounding areas	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services	No information available on the proportion of Dundee scheduled air passengers that are making Visiting Friends and Relatives trips	Very slight negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall, given likely very limited number of Visiting Friends and Relatives trips
Environmental Impacts		
Reduced CO ₂ emissions as a result of introduction of surveillance	Introduction of surveillance would have the potential to reduce CO ₂ emissions impacts by between 866 and 1,076 tonnes per year. That equates to removing between 412 and 512 cars from the road network	Uncertain as would depend on air operators actually choosing to use the climb and descent profiles. Would apply

		to both ATMS and the local surveillance alternative.
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S.9 ISLAND COMMUNITIES IMPACT ASSESSMENTS

The Islands (Scotland) Act 2018 requires relevant organisations to undertake an island communities impact assessment (ICIA) in relation to “a) policy (b) strategy, or (c) service, which, in the authority’s opinion, is likely to have an effect on an island community which is significantly different from its effect on other communities (including other island communities) in the area in which the authority exercises its functions”.

Based on the area assessments it was concluded that there is the potential of “an effect on an island community which is significantly different from its effect on other communities” for Uist, Lewis, Orkney and Shetland.

That reflected one or more of the following in each case:

- Scale of potential job and salary losses in air traffic management as a result of the changes through ATMS.
- The extent and nature of dependence on air services compared to Dundee and Inverness.
- The nature and extent of economic and demographic challenges that the islands face.

Thereafter, the requirement under The Islands (Scotland) Act is to:

“assess the extent to which the authority considers that the policy, strategy or service (as the case may be) can be developed or delivered in such a manner as to improve or mitigate, for island communities, the outcomes resulting from it.”

Regarding Lewis, Orkney and Shetland HIAL have identified a number of existing policies and potential future initiatives which could mitigate some of the outcomes from ATMS. These are shown at **Table S.15**, over.

S.10 FURTHER RECOMMENDATIONS

It is not certain that HIAL’s proposed mitigations could fully address the potential impacts on local employment and possible loss of population. Therefore, HIAL should also commission an independent report which would identify ways in which their operations can create more economic activity in the communities they serve. This is an overarching recommendation that covers Lewis, Orkney, Shetland and Uist.

To help address consultees’ concerns and issues HIAL should publish much greater information on the ATMS section of their website-which has seen very few updates since early 2020.

That should include more information on the basis of the ATMS Business Case and budget approval in December 2019: such as the detail to which it and the local surveillance alternative had been worked up at that point in time, including estimated employment levels. Similar information should be provided regarding the introduction of FISO at Benbecula.

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TABLE S.15: HIAL'S EXISTING POLICIES AND POTENTIAL FUTURE INITIATIVES FOR MITIGATION OF IMPACTS

Policy/Initiative	Description	Current/Future Discussion With Unions (C/F)	Timescale
Flexible Recruitment Policy	Allows individuals based in remote communities to accept posts that are not required to be based at a specific HIAL site	C Policy in place	Policy in place
Home Working Policy	Allows individuals based in remote communities to accept posts that are not required to be based at a specific HIAL site	Completed	Policy in place
Organisation Change Policy-redeployment procedures and five year pay protection for existing staff	Delays impact of any reduction in salary for five years	Completed	Policy in place
No compulsory redundancies in line with current Scottish Government policy	-	C	Policy in place
ATMS Commuting Policy	Policy to allow staff to remain living in local community and travel to CSC	F	First meeting with trade union February 2021
Flexible Early Severance Policy and Terms	Financial package may be attractive to staff to allow them to remain in existing communities	F	Company Joint Negotiating & Consultative Committee meeting February 2021
Local Airport Liaison roles	This is a new role which increases the airport staffing complement	F	First meeting with trade union February 2021
Staffing to expand simulator capabilities	This is anticipated to provide alternative employment opportunities for some post holders	F	Detailed work required before discussion takes place
Review Air Traffic Engineering options	These are new roles which may increase the airport staffing complement	F	Detailed work required before discussion takes place

1 INTRODUCTION

1.1 INTRODUCTION

This is the final report of an independent impact assessment of Highlands and Islands Airports Limited's (HIAL) Air Traffic Management Strategy (ATMS).

The ATMS programme is changing the way in which air traffic management is delivered for the following seven HIAL airports:

- Benbecula.
- Dundee.
- Inverness.
- Kirkwall.
- Stornoway.
- Sumburgh.
- Wick John O'Groats.

In January 2018 the Scottish Government Transport Minister approved HIAL to proceed with ATMS. That decision was before The Islands (Scotland) Act 2018 was granted Royal Assent in July 2018.

That Act requires relevant organisations to undertake an island communities impact assessment (ICIA) in relation to “a) policy (b) strategy, or (c) service, which, in the authority’s opinion, is likely to have an effect on an island community which is significantly different from its effect on other communities (including other island communities) in the area in which the authority exercises its functions”.

An ICIA must:

“(a) describe the likely significantly different effect of the policy, strategy or service (as the case may be), and

(b) assess the extent to which the authority considers that the policy, strategy or service (as the case may be) can be developed or delivered in such a manner as to improve or mitigate, for island communities, the outcomes resulting from it.”

Given that HIAL had already made the decision to proceed with ATMS before the Islands Bill was granted Royal Assent this is a retrospective assessment. It commenced in April 2020 with the research being completed before Scottish Government published *Island Communities Impact Assessments: Guidance And Toolkit: For Consultation* in October 2020. The final version of this guidance has yet to be published.

However, we have used some of the content of the Scottish Government consultation document to inform and structure the ICIA's included in this report.

Information has been redacted from this report only where it constitutes personal data and is subject to section 38(1)(b) in conjunction with section (38)(2A)(a) of the Freedom of Information (Scotland) Act 2002. HIAL's policy on what information should be considered personal data is based on guidance and the Code of Practice on Anonymisation produced by the Information Commissioner's Office. Further information is available from <https://ico.org.uk/>.

1.2 **METHOD**

1.2.1 Overall Objectives

The overall objective of the research is to assess the potential economic and community impacts of ATMS and, where relevant, to undertake ICIAs.

Guidance was sought from Scottish Government's Islands Team, including on the scope of the impact assessment. HIAL confirmed that the scope of the assessment would not include recommending that a specific course of action (in this case the ATMS programme) should or should not be pursued. Nor would it be an options appraisal or a gateway review of the ATMS programme.

1.2.2 Stage 1

Stage 1 involved discussion with HIAL on the approach and methods for the subsequent research (Stage 2 and Stage 3).

1.2.3 Stage 2

Stage 2 was undertaken between April and June 2020. It comprised:

- Review of HIAL documents about ATMS and HIAL's rationale for the programme.
- Consultations with a number of HIAL staff about the expected types of impacts and the information available to measure them.
- Review of stakeholder feedback to date on ATMS generated by HIAL engagement.
- Review of the Islands (Scotland) Act 2018 and Scottish Government's National Islands Plan to consider their implications for our approach.
- Discussion with Scottish Government's Islands Team on the scope of the impact assessment. That was a point in time when there was no published guidance on how ICIAs should be undertaken.
- Review of a number of previous ICIAs to consider what lessons could be learned.

Stage 2 developed our understanding of the ATMS programme and the types of impacts that it could have. It also informed the approach and method for the research that was undertaken in Stage 3.

1.2.4 Stage 3

Stage 3 was carried out between June and October 2020.

Desk Based

Review of changes in direct employment levels and salary payments at each airport as a result of ATMS. This information, provided by HIAL, is set out at **Chapter 2**.

Environmental impacts for the three airports where these were relevant-i.e. Stornoway, Kirkwall and Dundee. These are included in **Chapters 6, 7 and 11**, respectively, using data from an independent report commissioned by HIAL.

Profile of passengers and aircraft using each of the airports. This is included in each of the local area assessments. Some of this information was provided by HIAL, supplemented with data from CAA Passenger Survey.

Staff profile-information on current postholders at the seven airports in affected positions, including gender, age and place of residence. This is included in each of the local area assessments. This information was provided by HIAL.

Economic and demographic profiles of the affected areas around the seven airports. These are included in each of the local area assessments. The data sources are shown at **Appendix H**.

Survey of Affected HIAL Staff

An online survey of affected HIAL staff was undertaken. It was designed by *Reference*, with the online link distributed by HIAL. This collected information on household members including employment and community participation, possible employment decisions by affected staff members, and views on ATMS. The survey ran for three weeks, between July 30th and August 19th 2020.

Some of the results are included in **Chapter 3**. The others are included in each of the local area assessments.

Consultations on The Impacts of ATMS

A: Local Communities

These encompassed, first, local authorities: Comhairle nan Eilean Siar, Dundee City Council, Highland Council, Orkney Islands Council and Shetland Islands Council.

Second, community councils within the areas around the affected airports. These were identified by staff in each of the five local authority areas who forwarded information about the consultation to the relevant community councils. In Eilean Siar, Orkney and Shetland this included all community councils.

Written Consultation Responses

The local authorities and community councils were issued with a consultation document that described ATMS and HIAL's stated rationale for it. It contained a number of questions that could be used to make a written response to the consultation via an online questionnaire.

Based on feedback from the relevant local authorities, the consultation survey was open for approximately 6½ weeks.

We received 16 written consultation responses. These are broken down at **Table 1.1**, over.

TABLE 1.1: WRITTEN CONSULTATION RESPONSES RECEIVED			
Local Authority Area	Local Authority	Community Council	Total
Dundee City	1	0	1
Eilean Siar	2*	1	3
Highland	1**	1	2
Orkney	1	4	5
Shetland	1	4	5

*Separate submissions were made for Benbecula and Stornoway airports. **A single submission covering both Inverness and Wick John O' Groats airports

Virtual Sessions

The local authorities and community councils were also invited to participate in virtual online sessions. (The original intention was to conduct these sessions face-to-face. However, the Covid pandemic restrictions precluded this).

The sessions were led by *Reference*. They were also attended by an air traffic management subject matter expert within HIAL not directly linked to the ATMS programme. Their role was to answer specific very detailed or technical questions participants had about the changes to air traffic service arrangements.

The sessions were used to, first, allow participants to ask questions they had about the:

- Impact assessment process.
- Consultation document and its content.

Second, participants were able to highlight key points in response to the consultation document, including issues/concerns around ATMS.

Table 1.2 shows attendance by local authority area and type of consultee. It should be noted that a number of these attendees also submitted a written consultation response.

TABLE 1.2: ATTENDANCE AT VIRTUAL SESSIONS					
Local Authority Area	Elected Members	Officers	MP/MSP	Community Council	Total
Dundee City	1	2	-	-	3
Eilean Siar	1	3	1	1	6
Highland	-	1	-	1	2
Orkney	8	2	-	2	12
Shetland	4	1	-	1*	6

*Association of Shetland Community Councils, representing all of Shetland's community councils

Not everyone was able to attend a virtual session-or may only have been available for part of it. They were offered the opportunity for a consultation call with *Reference*. Three calls were undertaken, with:

- Local authority elected members: one (Orkney).
- Community Councils: two (one in Orkney, one in Shetland).

B: National Politicians

Written contact was made with 35 MPs/MSPs who had been identified by HIAL. These were largely ones who represent a constituency or geography containing one or more communities around an affected airport. The MPs/MSPs were offered the opportunity to respond to the consultation by telephone call, virtual session, letter or by completing the consultation survey.

The responses were:

- Four written responses. These covered the views of three MSPs (Shetland, Na h-Eileanan an Iar, Highlands and Islands List MSP) and two MPs (Orkney and Shetland, Na h-Eileanan an Iar).
- One telephone call (Orkney MSP).

One of the MPs who provided a written submission also attended one of the virtual sessions.

C: Trade Union

A virtual session was held with a Prospect officer plus union representatives from five of the affected airports-Benbecula, Dundee, Kirkwall, Stornoway and Sumburgh. Prospect also provided a written consultation submission.

D: Air Operators

HIAL provided a list of the main air operators using the affected airports. Those for whom we could identify the relevant contact were offered a consultation by phone or virtual session. A total of four air operators took part.

In this report the term “community consultees” refers to Community Councils, local authorities and national politicians. “Stakeholder consultees” encompass affected HIAL staff (consulted via the online staff survey), trade union (Prospect) and the air operators.

Discussions With HIAL HQ Staff

The desk research and consultation responses highlighted issues and queries on the detail of ATMS. We discussed these with a number of HIAL HQ staff.

Reporting

Our first draft report was submitted to HIAL on November 30th 2020. They provided a full response on January 21st 2021. That included HIAL checking the first draft report for the factual accuracy of the reporting of information they had provided.

Our second draft report was submitted to HIAL in February 2021. HIAL also checked this for factual accuracy, after which this final report was produced.

1.3 REPORT STRUCTURE

Chapter 2 provides a detailed description of ATMS and HIAL's stated rationale for it. It is based on information provided by HIAL.

Chapter 3 sets out a number of issues that have affected the assessment.

Chapter 4 describes the basis for the assessment.

Chapters 5-11 contain the assessments for the communities around each of the seven airports.

Chapter 12 gives an assessment for the Highlands and Islands as a whole. **Chapter 13** provides an assessment for Scotland as a whole.

Supporting information for each of the local areas impact assessments is contained in the Appendices.

2 **HIAL'S AIR TRAFFIC MANAGEMENT STRATEGY**

2.1 **SUMMARY**

2.1.1 Introduction

This Chapter describes the ATMS programme and HIAL's stated rationale for it. The content shown here is provided by HIAL. Most of it was contained in the consultation document circulated in August 2020 (referred to at **Chapter 1**), but it also includes updated information.

2.1.2 Air Traffic Management Strategy (ATMS)

ATMS comprises two elements:

- A move to centralised, remote air traffic control for Dundee, Inverness, Kirkwall, Stornoway and Sumburgh airports.
- Continued local airport air traffic management at Benbecula and Wick John O' Groats airports but a change to the way this is delivered. In addition, an AFIS (Aerodrome Flight Information Service) centre of excellence would be created at Benbecula.

HIAL believes that it must transform its air traffic management system to meet its operational needs now and into the future, because:

- The air traffic control industry is experiencing staff retention and recruitment challenges. These are challenges for HIAL and addressing them will improve air traffic management resilience.
- Its air traffic management infrastructure is ageing and its operating model requires modernisation.
- The organisation needs to be trained, equipped and ready to meet changing legislation and regulatory requirements within the aviation industry.
- The organisation must ensure best value and operate in the most efficient but effective way.

In January 2018 Scottish Government's Transport Minister approved HIAL to proceed with ATMS. The HIAL Board approved the ATMS Business Case in October 2019 which was subsequently approved by Transport Scotland in December of that year.

2.1.3 ATMS: Dundee, Inverness, Kirkwall, Stornoway and Sumburgh Airports

Air traffic control (ATC) is currently provided by staff working at a control tower at each airport. The total associated employment across the five airports is around 76 Full-Time Equivalent (FTE) jobs with gross salaries of c£3.9 million per annum.

ATMS will introduce remote integrated ATC services for the five airports. This will be delivered via a Combined Surveillance Centre (CSC) located in Inverness. A separate contingency facility will also be created.

There will no longer be staff controlling traffic from a tower at each of the five airports. Instead the CSC-based staff will undertake remote monitoring of cameras located at each of the five airports. The transition of air traffic management from each airport to the CSC will require CAA approval before it can go ahead.

One of the issues considered critical to the success of ATMS is the digital connectivity between the CSC and the five airports. At October 2020 HIAL had completed the high level design stage and were proceeding to detailed design to fully test what has been proposed.

ATMS also includes the introduction of controlled airspace around those airports that do not presently have it (Dundee, Kirkwall and Stornoway). Uncontrolled airspace permits aircraft to fly freely without talking to the ATCO. However, in controlled airspace (depending on the exact classification) traffic flying certain flight rules must abide by the controller clearances.

ATMS would also see the introduction of surveillance for Dundee, Kirkwall, Stornoway. That is, a location with a sensor to detect aircraft, which HIAL see as significantly increasing safety from present levels.

Surveillance would also offer the possibility of environmental benefits to the areas around the three airports. That would be through allowing aircraft to reduce fuel consumption and consequent CO² emissions.

The current timetable for the introduction of ATMS is:

- CSC operational-June/September 2022.
- First airport (Inverness) migrates to CSC-December 2022.
- Final airport (Dundee) migrates-June 2027.

HIAL aim to staff the CSC in Inverness primarily with existing ATC staff from all seven airports. They will also look to attract new staff who have the required skills and qualifications.

Illustrative estimates provided by HIAL show that, by 2027, 96 FTE posts would be required at the CSC with associated gross salaries of c£6.2 million per annum. Achieving these staffing levels-and thus providing remote air traffic control from the CSC-would depend on HIAL successfully filling these positions on an ongoing basis.

There would no longer be ATC staff employed at the individual airports. The total loss of employment across Dundee, Kirkwall, Stornoway and Sumburgh would be c48 FTE jobs and c£2.2 million of gross annual salaries.

2.1.4 The Local Surveillance Alternative: Dundee, Inverness, Kirkwall, Stornoway and Sumburgh Airports

HIAL consider that some of the factors they seek to address through the CSC would have to be addressed even if ATMS was not being taken forward. Thus, doing nothing is not an option.

HiAL have stated that the alternative to ATMS would have been the “local surveillance alternative”. That would be the introduction of the same controlled airspace and surveillance abilities as ATMS-but based at each of the five airports rather than via a centralised facility.

According to HiAL’s illustrative figures this would mean a significant increase in air traffic management staff at most of the five airports compared to present levels. Across these airports there would be a total of 135 FTE posts with associated annual gross salaries of £8.5 million.

While representing a significant change from existing air traffic management, the alternative would be less technically complex and challenging than ATMS.

However, HiAL see the local surveillance alternative as, first, not providing the level of staff resilience, recruitment and retention that ATMS offers. That is because of the need to attract significantly more air traffic management staff to work at Dundee, Kirkwall, Stornoway and Sumburgh airports. That is in the context of what HiAL see as existing recruitment challenges.

Second, the local surveillance alternative is seen as less flexible than ATMS. That is because there would be no means for staff to manage air traffic at more than one airport if that was required-which is the intention for the CSC.

Therefore, HiAL believe that the local surveillance alternative would mean air traffic services at each airport increasingly being reduced or suspended in the light of staff being unavailable-and thus not sustainable over time.

Third, HiAL see the local surveillance alternative as costing more than ATMS because of increased costs relating to staff and other investments.

2.1.5 Changes at Benbecula and Wick John O' Groats Airports

ATMS originally included Benbecula and Wick John O' Groats within the Central Surveillance Centre along with the other five airports. However, in October 2019 the HiAL Board approved a different approach.

Air traffic control (ATC) at Benbecula and Wick John O' Groats is currently provided by staff at each airport. They provide an ATC service, where an Air Traffic Controller (ATCO) passes instructions and clearances to the aircraft.

Current permanent staff complement levels are:

- Benbecula: six FTE staff with total gross salaries of >£310,000 < £330,000.
- Wick John O*’ Groats: four FTE staff with total gross salaries of >£220,000 < £240,000.

In addition there are five part-time AFISOs (Aerodrome Flight Information Service Officers) at Benbecula and six at Wick John O' Groats.

HiAL are taking forward a change from ATC to AFIS (Aerodrome Flight Information Service) operations at the two airports. That is, to a service provided for the purpose of giving

advice and information useful for the safe and efficient conduct of flights. That is different to ATC which involves controlling aircraft rather than simply talking to them-including, in particular, proactively separating aircraft.

The change will require an Airspace Change Proposal to be undertaken which requires CAA approval. HIAL believe the change will provide a level of air traffic management at the two airports which is more proportionate to their level and complexity of air traffic. Thus, air traffic management would be similar to that at other, smaller HIAL airports.

It is also HIAL's view that the CAA is minded to make controlled airspace a required element for ATC airports. HIAL believe that the CAA would be very unlikely to grant controlled airspace for either Benbecula or Wick John O' Groats and thus allow the continuation of ATC there.

HIAL have also decided to develop an AFIS centre of excellence at Benbecula. This would manage and coordinate the AFIS function across the relevant HIAL airports, along with the delivery of training courses and other activities.

The timescales for the move to AFIS operations are currently forecast as:

- Benbecula: April 2022-although possibly earlier than this.
- Wick John O' Groats: December 2023.

HIAL's Illustrative estimate of forecast employment levels are:

- Benbecula: six FTE staff (as at present) with total gross salaries of £250,000.
- Wick John O' Groats: four FTE staff (as at present) with total gross salaries of £170,000.

In addition the existing five part-time AFISOs at Benbecula and six at Wick John O' Groats would be retained.

HIAL have stated if there was not a change to AFIS then the two airports would have remained in the centralised air traffic management proposal along with the other five.

2.2 **ATMS: SCOPE AND OBJECTIVES**

ATMS comprises two elements:

- A move to centralised, remote air traffic control for Dundee, Inverness, Kirkwall, Stornoway and Sumburgh airports.
- Continued local airport air traffic management at Benbecula and Wick John O' Groats airports but a change to the way this is delivered. In addition, an AFIS (Aerodrome Flight Information Service) centre of excellence would be created at Benbecula.

HiAL believes that it must transform its air traffic management system to meet its operational needs now and into the future, because:

- The air traffic control industry is experiencing staff retention and recruitment challenges.
- Its air traffic management infrastructure is ageing and its operating model requires modernisation.
- The organisation needs to be trained, equipped and ready to meet changing legislation and regulatory requirements within the aviation industry.
- The organisation must ensure best value and operate in the most efficient but effective way.

By deploying what HiAL view as a cutting edge solution using proven technology already utilised in a number of areas across the world, ATMS will:

- Deliver a modern and flexible air traffic management operation.
- Improve air traffic management resilience and ease staff recruitment and retention issues.
- Introduce controlled airspace to ensure legislative compliance and planned regulatory requirements.
- Provide a centre of excellence for air traffic management, and training facilities that will be Covid-19 resilient.

2.3 ATMS TIMELINE

Table 2.1, over, shows the ATMS timeline.

2.4 DUNDEE, INVERNESS, KIRKWALL, STORNOWAY AND SUMBURGH AIRPORTS

2.4.1 Development of the ATMS Proposal

The recommended option taken forward from the Helios study was one which would bring the provision of air traffic services into one location, while providing controlled airspace and new surveillance technology at each unit.

The ATMS delivery team assessed and validated the underpinning justifications of Helios's findings. However, Helios' recommended centralisation option was further developed by the delivery team into "centralisation with increased efficiency". That would allow ATMS to be delivered in the same general fashion as Helios's proposal and within the expected timeframe-but at a lower capital and revenue cost.

Benbecula and Wick John O' Groats airports had been included in the centralisation option taken forward from the Helios study. However, "centralisation with increased efficiency" option removed the two airports from the centralisation programme with their future air traffic requirements to be met in another way (described at **2.6**).

TABLE 2.1: ATMS TIMELINE TO DATE

December 2017	Helios air traffic management scoping study* presented to HIAL Board which authorises recommendation for next stage approval
January 2018	Scottish Government Transport Minister approves HIAL to proceed with ATMS
July 2018	ATMS Programme Board established**
July 2018	EKOS study*** on the optimal location for Combined Surveillance Centre (CSC) published. Having been consulted, staff, were they to relocate, expressed a preference for Inverness
September 2018	ATMS Programme Director appointed
January 2019	ATMS Programme delivery team in place
July 2019	FarrPoint study**** exploring HIAL Air Traffic Control airport digital connectivity published
October 2019	ATMS feasibility and options process to validate Helios study completed. ATMS Business Case-including revision of service at Benbecula and Wick John O' Groats-approved by HIAL Board
December 2019	ATMS Business Case and budget approved by Transport Scotland
December 2019	HIAL Board approval to proceed with specific ATMS projects
March 2020	ATMS Programme Board approve concept of Benbecula centre of excellence
March 2020	Joint Negotiating & Consultative Committee approve the organisation of change policy including pay protection arrangement
April 2020	Joint Negotiating & Consultative Committee approve Organisational Change Policy which includes approach to redeployment and five year protection
June 2020	Review of ATMS programme direction undertaken by new HIAL Board which endorses previous decisions
September 2020	Detailed review of revision of service at Benbecula and Wick John O' Groats undertaken by new HIAL Chief Operating Officer who endorses the HIAL Board decision

Source: HIAL. *Helios: Air Traffic Management 2030 Strategy: Scoping Study. **Membership includes Transport Scotland, HIAL Board Non-Executive member and the full-time Prospect Union Officer. ***EKOS: Location Options Appraisal. **** FarrPoint: Highlands & Islands Airports Ltd Connectivity Review

As shown at **Table 2.1** the Business Case for the “centralisation with increased efficiency” option-termed “ATMS Improvement Plan”-plus the revised changes for Benbecula and Wick John O' Groats-were approved by the HIAL Board in October 2019. It was subsequently approved by Transport Scotland in December 2019¹.

2.4.2 Current Air Traffic Management Arrangements

Air traffic control (ATC) at Dundee, Inverness, Kirkwall, Stornoway and Sumburgh is currently provided by staff working at a control tower at each airport. They provide an ATC service, where an Air Traffic Controller (ATCO) passes instructions and clearances to the aircraft.

Sumburgh has controlled airspace (explained later at **2.4.3**) which is also expected soon at Inverness. Both airports have radar-based surveillance (that is, use of radar to detect aircraft). For Sumburgh this is currently outsourced to NATS, operating from Aberdeen. Dundee, Kirkwall and Stornoway do not currently have this surveillance.

Table 2.2, over, shows the number of full-time equivalent posts in air traffic management at each of the five airports and related gross salary payments (i.e. before deduction of income tax and employee national insurance). The Part Time Posts-AFISO (Aerodrome Flight Information Service Officers) are in addition to the ATC posts.

¹ HIAL: Air Traffic Management Strategy Business Case

TABLE 2.2: CURRENT AIR TRAFFIC MANAGEMENT STAFF AND SALARIES: FINANCIAL YEAR 2019-20

Airport	Number of Full Time Equivalent ATC Posts¹	Number of Part Time Posts-AFISO²	Total Annual Salary Payments
Dundee	11	0	£571,000
Inverness	28.5	0	£1,672,000
Kirkwall	12.5	2	£574,000
Stornoway	11	4	£509,000
Sumburgh	13.1	3	£591,000
Total	76.1	9	£3,917,000

Source: HIAL. Notes: ¹ No breakdown of ATC posts by job type is shown to avoid the possibility of an individual staff member's salary being deducted. Salary figures include allowances and shift pay, in addition to basic pay ²Aerodrome Flight Information Service Officer

2.4.3 ATMS

Concept

ATMS will introduce remote integrated ATC services for the five airports. This will be delivered via a single Combined Surveillance Centre (CSC) located in Inverness. It will require significant investment in new air traffic service infrastructure.

There will no longer be staff controlling traffic from a tower at each of the five airports. Instead the CSC-based staff will undertake remote monitoring of cameras based at each of the five airports. (At present air traffic controllers look out of windows from the tower at each airport). In addition, remote delivery of air traffic control will be assisted by the CSC's surveillance capabilities.

A separate contingency facility will also be created. Located in the Inverness area, it will provide cover for the main facility. As a subset of the full CSC, it will offer resilience to enable an ATC service to be provided:

- For a short time after the unexpected withdrawal of the main CSC facility; or
- For an extended period on a planned basis.

The contingency facility will also contain a Training Centre. This will be used to train both existing and new staff on the new equipment and technology used in the CSC.

There are presently a number of remote tower ATC operations outside the UK. Information supplied by HIAL identified:

- Sundsvall (Sweden)-in service for three airports.
- Arlanda (Sweden)-in service for four airports.
- Leipzig (Germany)-in service for one airport, and will expand to three in time.
- Bodo (Norway)-in service for two airports and a further 13 planned within the next two years.

HiAL also told us that there are other remote tower ATC operations in development at:

- Schiphol-for two airports.
- Belgium-for two airports.
- Colorado-for eight airports.
- Dublin-for two airports.

There are also a number in the UK/Channel Isles that act as contingency in case of the failure of ATC provided at an airport site-e.g. Heathrow, Jersey. Prior to the Covid pandemic London City airport was due to open a remote tower some 120 miles away from the airport itself.

Equipment

The specification of the cameras will need to be such that they can deal with the geographical and meteorological conditions at each airport. Potential use of visual aids in low visibility conditions to help enhance operations will be explored.

HiAL stated that a lot of the current equipment providers compress a 360 degrees view to 270 degrees, although this causes the image of the runways to bend only slightly. The decision on whether to have 360 or 270 degree images will be made when HiAL appoint a technology provider. The cameras will give an equivalent level of view as currently, with the opportunity for enhanced views.

HiAL have said that the new technology will not affect other infrastructure such as runways and terminal facilities. As a result, for example, there is no intention to stop using cross runways.

Meteorological observations and evaluation of runway surface status will be undertaken via remote technology based on sensors. If needed then a number of airport staff would be able to go outside to help assess conditions and radio the information to the CSC.

Some other tasks will continue to be undertaken by non-ATCO staff at the airports. For example, checking the road crossing the runway at Sumburgh Airport is clear of public traffic when required.

One of the issues considered critical to the success of ATMS is the digital connectivity between the CSC and the five airports. HiAL told us that they had validated the initial HELIOS work on the connections. In addition, the FarrPoint report concluded that connections between the CSC and the five airports would be possible.

HiAL recognise that current digital links in some of the affected communities are of poor or variable quality. However, the system that HiAL propose to use for ATMS would be of a much greater capacity than those of local households and businesses, with additional redundancy built in. This is reflected in a much higher cost that HiAL will incur for its digital links compared to that paid by other local customers.

The digital links will have to be sufficiently secure and resilient. HIAL will need to demonstrate this as part of the safety case that they will develop to achieve CAA (Civil Aviation Authority) approval. HIAL are also subject to CAP1753: CAA Cyber security oversight process for aviation-which includes the ATMS programme.

At October 2020 HIAL had completed the high level design stage and were proceeding to detailed design to fully test what has been proposed, which is as follows:

There will be three connections between the CSC and each of the airports, with data delivered to both the CSC and its back up site in Inverness. The intended connections will comprise:

1. Main route fibre connection.
2. Back up fibre route, a portion of which will be microwave link.
3. Copper connection providing radio links to the five airports. That would be for use in an emergency situation where aircraft using one of the airports need to be diverted to alternative airports.

There will be two routes into each location from Inverness and two within the local area to reach the airport. For example, for Shetland the two external routes could be Inverness-Caithness-Orkney-Shetland and Shetland-Faroe-Europe-Aberdeen-Inverness.

The fibre connections will use existing cables and routes. HIAL expect a minimum of 99.99% reliability as per the telecoms providers' current systems. The supplier will be engaged to provide a service that will allow for a maximum unplanned outage of no more than four minutes in any month, calculated over a year.

HIAL will decide on the approach for the maintenance of systems after they have obtained quotes from suppliers. This could involve using companies that already have staff in the more remote airport locations.

Change Process (Safety Case)

As part of the consideration of any change to any part of the provision of air traffic service, HIAL will engage with the CAA Safety and Airspace Regulation Group. Initial engagement is undertaken at the conceptual level, to ensure early indication of change is available to the regulator. This is done through regular liaison meetings and allows discussion on the scope of change, in addition to the level of process and oversight the change would require.

This conceptual safety argument is normally enough for a strategic decision to be taken on the direction and viability of a project. After this the more detailed safety cases are produced and follow HIAL's own Safety Management System (which is auditable by the CAA).

HIAL's Safety Management System uses a four-part Safety Case approach to ensure that the Regulator is provided with the appropriate evidence at every stage of the change process. Each of these documents will be discussed in advance with the regulator and then provided, in draft, for comment prior to moving to the next stage of the process.

The transition of air traffic management from each airport to the CSC will require CAA approval before it can go ahead. That is also required before specific equipment such as the surveillance system can enter operational service.

HiAL told us that the CAA usually sign off safety cases for changes a few months before they go live. However, the CAA will have satisfied themselves that the safety case is sound in advance of that.

Controlled Airspace

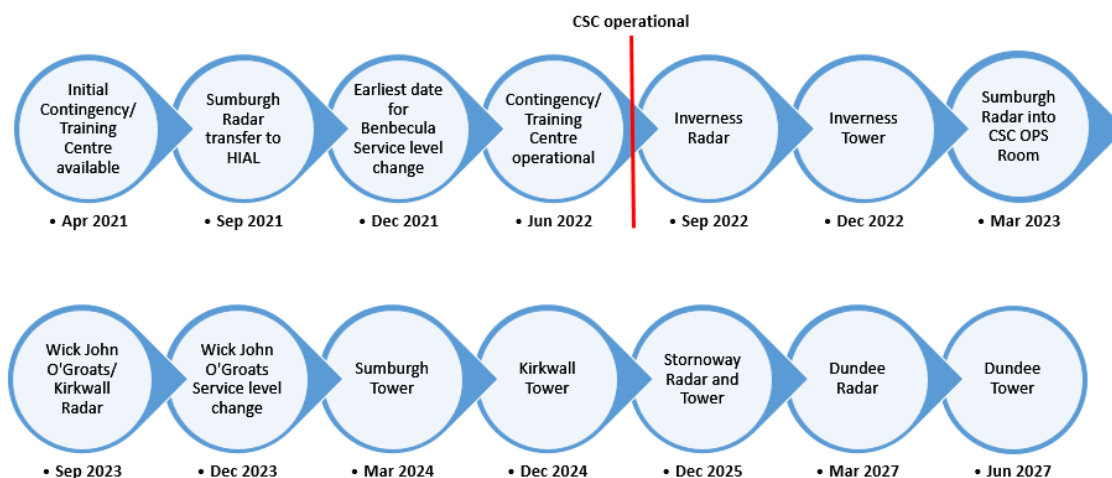
ATMS also includes the introduction of controlled airspace around those airports that do not presently have it. These are Dundee, Kirkwall and Stornoway. Uncontrolled airspace permits aircraft to fly freely without talking to the ATCO, but aircraft that wish to receive a service can do so, subject to the ATCO knowing about them. However, in controlled airspace (depending on the exact classification) traffic flying certain flight rules must abide by the controller clearances.

The implications for non-scheduled aircraft are that pilots would have to talk to ATCOs and some aircraft would need to take on equipment to allow them to be picked up on the radar.

2.4.4 Forecast Timescales

The ATMS programme, as approved in 2019, is currently forecast to be fully delivered by June 2027. Within this, the CSC would become operational around mid-2022. The main milestones are shown overleaf.

It is currently forecast that the move from local airport air traffic management to the CSC would be completed for each airport as follows:



- Inverness-December 2022.
- Sumburgh-March 2024. That includes bringing the provision of Sumburgh Radar in-house at HiAL. That function will be provided by NATS until March 2023.

- Kirkwall-December 2024. A joint Kirkwall/Wick John O' Groats surveillance sector would be provided in the CSC during normal opening hours from September 2023. Wick John O' Groats is included in this along with Kirkwall given the extent of overflights in the area around Wick John O' Groats airport.
- Stornoway-December 2025.
- Dundee-June 2027.

The timescale for approving the introduction of controlled airspace varies according to the size and complexity of the proposal. HIAL are of the view that if this is the lowest level then approval could be done in three to six months. However, if they are medium to low impact changes approval could take between two and three years. HIAL recognise that getting controlled airspace for Inverness Airport-which is currently awaiting CAA approval-has been a protracted process.

2.4.5 Staffing the Combined Surveillance Centre

The primary source of staff for the CSC will be, first, the transfer of *existing* ATC staff from all seven airports included within ATMS. They will have to make a decision between 12 and 18 months in advance of a starting date at the CSC whether or not they wish to transfer.

These staff will require to undergo training to achieve the appropriate qualifications to undertake the work required for most of the posts at the CSC. Some of the posts will not require these qualifications and could be taken up by existing staff who fail to achieve them. However, the majority of posts will require staff to have the appropriate qualifications.

It is intended that the staff will be supported by HIAL to relocate to the Inverness area. However, the actual terms of this are not presently known. HIAL hope to have an agreed policy at some point in 2021.

Alternatively, it may be possible for some staff to commute to the CSC from their current place of residence. Full details of support with this are not yet confirmed. However, HIAL stated that they could not pay for staff members' travel costs indefinitely as this would contravene income tax regulations.

HIAL also stated they do not view commuting travel time as working time hours. However, they have said that this is subject to negotiation with the trade unions.

Some existing affected staff at the seven airports may choose *not* to take up the option of a move to the CSC. Under Scottish Government severance terms for public bodies, the package is currently capped.

HIAL told us that it would be difficult to redeploy affected staff at their current airport. That is because there are few senior jobs at each airport that would pay around their current wage level (e.g. Airport Manager, Airport Fire Manager).

HIAL will also look to attract *new* staff to work at the CSC who have the required skills and qualifications.

The forecast employment levels and gross salaries at the CSC (i.e. before deduction of income tax and employee national insurance) are shown at **Table 2.3**. The successful operation of the CSC is dependent on HIAL successfully filling these positions on an ongoing basis.

TABLE 2.3: COMBINED SURVEILLANCE CENTRE IN INVERNESS: AIR TRAFFIC MANAGEMENT STAFF AND SALARIES AT 2027		
Post	Number of Full Time Equivalent Posts¹	Total Annual Salary Payments²
Air Traffic Controller	63	£5,200,000
Operational support	25	£625,000
Other Centre roles including Management and Administration	3	£177,000-£184,000
Training Centre staff	5	£150,000-£170,000
Total	96	£6,152,000-£6,179,000

Source: HIAL. Notes: ¹Staff numbers are based on all 5 units (Dundee, Inverness, Kirkwall, Stornoway and Sumburgh) having transitioned to the CSC. ²Salaries are in 2020-21 prices

HIAL have stated that these figures have been provided for illustrative purposes. They are current best estimates and the detail has still to be worked though. All staff numbers and salaries will be subject to further discussion, benchmarking, approval from Scottish Government and negotiation with the trade unions.

Within this HIAL do not currently know the number of staff that would be on the third shift of the day. That would include overnight when most of the five airports would be closed but there could be a need to open them for emergency air movements. In part that would depend on the number of staff with endorsements to provide ATC for more than one of the airports and/or able to cover both the tower and radar at the same time.

2.4.6 Changes in Staff Numbers and Salary Payments

Table 2.4, over, shows the net changes in staff numbers and gross salaries by area as a result of the change from existing ATC provision to the CSC in Inverness. The figures are based on the difference between current situation (shown at **Table 2.2**) and the CSC operation (shown at **Table 2.3**).

These impacts do not include the knock on creation of jobs and salaries through staff spending their wages in the local economy (for example, in local shops and restaurants). These are termed *induced* impacts, which are included in the individual impact assessment Chapters.

TABLE 2.4: NET CHANGE IN AIR TRAFFIC MANAGEMENT STAFF AND SALARIES AT			
2027: BY AREA			
Net Employment and Salary Losses			
Airport	Number of Full Time Equivalent Posts	Number of Part Time Posts- AFISO	Total Annual Salary Payments
Dundee	11	0	£571,000
Kirkwall	12.5	2	£574,000
Stornoway	11	4	£509,000
Sumburgh	13.1	3	£591,000
Total	47.6	9	£2,245,000
Net Employment and Salary Gains			
Inverness	67.5	0	£4,480,000- £4,507,000

2.4.7 Air Traffic Management Issues

Addressing Staffing Challenges

HiAL's rationale includes, in particular, addressing what they see as historic and potential future staff retention and recruitment challenges.

They see it as difficult to attract qualified staff who live elsewhere. In part that is because of the limited career path available in HiAL compared to larger organisations.

The population levels in some of the areas served by HiAL airports are also seen as limiting the ability to recruit. Third, the intensive nature of training for ATC posts means that not all trainees attain the required qualification.

This is in a context of resilience due to the:

- Generally small numbers of air traffic management staff at each airport. This means that the absence of a small number of staff on any one day can have a significant impact on operations.
- Length of time required to replace a controller who is absent for an extended period or who leaves the organisation.
- The time it takes to train staff when this is done on the job by qualified air traffic staff members who also provide ATC at the same airport.

Thus, HiAL see current arrangements meaning that staff absences can have a disproportionate impact on aircraft using the airports. This means that resilience needs to be improved.

Table 2.5, over, shows the number of incidents where airport opening or operations have been affected by staff availability issues in the three years between 2017 and 2019. HiAL have confirmed that the numbers shown do not include any incidents due to industrial action.

**TABLE 2.5: NUMBER OF INCIDENTS OF STRATEGIC CLOSURES, REDUCED SERVICES OR
EXTENSION REFUSALS DUE TO AIR TRAFFIC MANAGEMENT RESOURCE
RELATED ISSUES**

Airport	2017	2018	2019
Dundee	0	0	0
Inverness*	0	36	52
Kirkwall	0	12	23
Stornoway	0	48	46
Sumburgh	0	3	0

Sources: HIAL and EKOS *Location Options Appraisal* *HIAL Inverness were not able to provide figures for extension refusals because there is no formal procedure to capture these. However, they expect that such refusals are rare

The information covers three types of incident:

1. Strategic Closure: Short term closures of air traffic service due to ATCOs having to take a break in order to meet CAA fatigue management requirements. Breaks are usually 30 to 45 minutes during which aircraft cannot operate at the airport, and aircraft have only limited advance notice of this. These can lead to aircraft delays with a knock on effect on arrivals/departures at other airports during the rest of the day and thus on passenger travel (including those connecting with other flights).
2. Reduced Services: Periods where the air traffic service is reduced due to staffing and/or equipment limitations resulting in a change of service to that published for the airport.
3. Extension Refusals: Requests from airlines for extended services beyond the airport's published opening hours for late running aircraft are refused. This results in the aircraft having to cancel or divert with negative impacts on passengers and/or freight.

HIAL told us that they do not benchmark the frequency of incidents at their airports against those at airports elsewhere.

Table 2.5 shows no incidents at Dundee and very few at Sumburgh. However, there are greater numbers at Stornoway and Kirkwall in particular.

HIAL do not view the number of incidents at Inverness as due to staff recruitment and retention issues. They told us there have been no such issues at Inverness. This was attributed, in part, to pay at Inverness being higher than at the other HIAL airports.

HIAL Staff Recruitment

Some consultees for this assessment were particularly interested in HIAL's recruitment practices. In particular, the extent of effort in recruiting individuals currently resident in the islands (Uist, Lewis, Shetland and Orkney) in order to maintain staff numbers and thus provide resilient air traffic management.

A number of consultees referred to previous recruitment rounds where local residents had been successfully recruited and trained and were still in air traffic management posts at their local airport.

Table 2.6 describes HIAL's recruitment effort between June 2018 and May 2020.

TABLE 2.6: STAFF RECRUITMENT: JUNE 2018-MAY 2020										
Airport	Positions available -advertised externally		Inter Unit Transfer	Positions recruited		In training		No of positions that validated		Notes
	ATCO	Ab Initio ATCO	ATCO	ATCO	Ab Initio ATCO	ATCO	Ab Initio ATCO	ATCO	Ab Initio ATCO	
Benbecula			[REDACTED]							[REDACTED]
Dundee		2								
Inverness	2	2								
Kirkwall										
Stornoway	1	2								
Sumburgh		2								
Wick John O' Groats		1								

Source: HIAL

It shows over this period:

- 15 new staff into HIAL (i.e. "Positions Recruited").
- [REDACTED]

Of the 15 staff, 12 were recruited through external advertising, with the other three (one at each of Benbecula, Dundee and Kirkwall) recruited directly.

Some nine of the 15 staff were Ab Initio ATCOs who require to be trained from scratch. The other six were those who had already had experience of working in air traffic management.

Given that ten individuals are still in training-not all may pass-it is not possible at this time to say how many recruits in total will become qualified staff working for HIAL.

HIAL told us that they place general adverts for Ab Initio staff. They do not usually state where the actual vacancies are.

HIAL had 109 applications for the Ab Initio posts shown at **Table 2.6**. Shortlisted candidates undertook an aptitude test which generally has a high attrition rate. Those passing the test then attend a specialist College and, if successfully passing there, go to a HIAL airport for further training (which not all recruits manage to pass).

From this HIAL recruited nine of the candidates. Of these:

- [REDACTED] were not local to one of the HIAL airports.
- [REDACTED] were local to one of HIAL's *mainland* airports.
- [REDACTED] were local to one of HIAL's *island* airports.

HIAL do not have records of their local recruitment effort. They told us they attend school career fairs and general career fairs. However, that is to promote HIAL airport jobs in general rather than specifically to recruit air traffic management staff.

They previously advertised available positions in local newspapers. However, they did not do so in their last recruitment round in 2018. That is because, first, job adverts have increasingly moved online. Second, because HIAL found that each previous effort at local recruitment had seen lower numbers applying-and those included some who had previously failed to get through the training process with HIAL.

HIAL see these challenges in a context of air traffic control in general experiencing staffing challenges. They believe that the combination of the five airports' ATC operations in one centre (the CSC)-along with an improved ability to attract and retain staff-will allow absences or resignations to be managed without significant disruption to the provision of air traffic services. In part that would be through staff being trained so that they can provide air traffic management for more than one of the airports covered by the CSC, thus providing greater staff flexibility.

In effect, the CSC is seen as leading to a sufficient staff pool to deliver sustainable air traffic services. This would be heightened by staff being qualified to cover more than one of the five airports and would be able to do so at the same time.

If that is achieved HIAL believe that it would increase the resilience of flights at Dundee, Inverness, Kirkwall, Stornoway and Sumburgh. There would be fewer incidences of aircraft being delayed or unable to land/take off because of reduced staff availability. Thus, the number and timekeeping of flights at the airports would be greater than would otherwise be the case.

Covid Pandemic

Despite the reduction in aircraft activity during the pandemic, HIAL see it as having highlighted the important role their airports play in maintaining connectivity for local communities. Further, they view the pandemic as having underlined the importance of the ATMS programme. That is because it aims to deliver a long-term, sustainable solution to maximise operational flexibility, capability and build resilience wherever possible.

HIAL see ATMS as an established programme and policy, which is under way. They do not anticipate that its funding from Scottish Government will be stopped.

Improvements in Safety and Reduced Risk of Airborne Conflict

While HIAL confirmed the safety of current operations, they view the introduction of surveillance for Dundee, Kirkwall, Stornoway (and Wick) as significantly increasing safety. That is because the provision of surveillance allows the controller to see the aircraft on the screen, plus the aircraft within the area would be talking to one another.

Until recently where a new surveillance site (that is, a location with a sensor to detect aircraft) is created by HIAL there would be a defined circle of c42 nautical miles around it. That would provide safeguarding against physical developments that would have a negative impact on the radar's effectiveness. This could affect planning applications for windfarms in particular, if no mitigating technologies were available.

However, HIAL currently face a period of uncertainty due to potential regulatory reform, with the CAA likely to make a decision on alternative surveillance technologies later in 2021. This will provide HIAL with a range of alternatives.

ADS-B is a system which allows for aircraft, aerodrome vehicles and other objects to automatically transmit and/or receive data such as identification and position in a broadcast mode via a data link. It also relies on aircraft talking to one another.

ADS-B would be a lot cheaper than radar on the ground-around one fifth of the price according to HIAL. It also has the potential for significantly improved coverage with no “gaps”. However, ADS-B requires:

- All aircraft to carry equipment to send/receive data.
- Input from other data sources such as global satellite navigation systems.

HIAL told us that, in simple terms, ADS-B would allow more wind turbines in areas around the airports than would presently be the case with radar. However, there could still be constraints on the number of turbines that could be deployed at a windfarm.

Thus, until HIAL define the solution they cannot satisfactorily assess the impact of a wind farm development on surveillance. This means that surveillance cannot currently be considered in HIAL’s safeguarding criteria and, therefore, they cannot object to a proposed development on that basis. Therefore, HIAL have elected to defer going to procurement for a surveillance solution.

Potential Environmental Benefits

The controllers in the CSC will have improved visibility through surveillance. Thus, they will have the capability to provide aircraft with the most efficient direct climb and descent. HIAL believe that this will enable a significant reduction in aircraft fuel consumption (and thus financial savings to air operators) and consequent CO² emissions. This would, of course, depend on whether air operators actually choose to use the climb and descent profiles provided.

HIAL commissioned independent research² to assess the potential scale of such environmental benefits. The findings of this are reported in the individual impact Chapters for Stornoway, Kirkwall, and Dundee (**Chapters 6, 7 and 11**).

Income Generation for HIAL

HIAL see potential to provide air traffic services to non-HIAL airports, delivery of remote tower operation to external organisations, and delivery of training to non-HIAL airport staff. This would create additional employment.

² Independent assessment of changes to CO² emissions as a result of changes to the arrival procedures at HIAL aerodromes associated with the implementation of the ATM strategy: Trax International Limited (2020)

It would, however, require proof of concept to potential customers. This would be a number of years after the ATMS programme commences. The level of demand would reflect HIAL's offering and the size of the market. At this time, there has been no detailed consideration of these issues by HIAL.

2.5 THE ALTERNATIVE TO THE CSC: LOCAL SURVEILLANCE

2.5.1 Concept

HIAL consider that some of the factors they are seeking to address through the CSC would have to be addressed even if the ATMS programme was not being taken forward. Thus, doing nothing is not an option. Therefore, the impacts of the CSC should be compared not just to HIAL's existing air traffic management arrangements at the five affected airports. Rather, the **full** comparison should be with what HIAL would have done as an alternative to ATMS.

HIAL have stated that the alternative would have been "local surveillance" (which was detailed within the Helios report). That would be the introduction of the same controlled airspace and surveillance abilities as ATMS-but based at each of the five airports rather than via a centralised facility. That would include new/upgraded equipment, and refurbished or completely rebuilt control towers (where required) at the five airports.

2.5.2 Changes in Staff Numbers and Salary Payments

According to figures supplied by HIAL there would be in a significant increase in air traffic staff at most of the five airports compared to the present levels (shown at **Table 2.2**).

The figures are shown at **Table 2.7**. Again, the salary payments are gross (i.e. before deduction of income tax and employee national insurance).

TABLE 2.7: LOCAL SURVEILLANCE: AIR TRAFFIC MANAGEMENT STAFF AND SALARIES		
PER AIRPORT: DUNDEE, INVERNESS, KIRKWALL, STORNOWAY AND SUMBURGH		
Post	Number of Full Time Equivalent Posts	Total Annual Salary Payments
Air Traffic Controller ¹	18	£1,500,000
Operational Support	9	£200,000
<i>Total Per Airport</i>	<i>27</i>	<i>£1,700,000</i>
Total for Five Airports	135	£8,500,000

Source: HIAL. ¹Air Traffic Controller posts =17 ATCOs plus 1 manager. Numbers are based on current Inverness ATC model. Includes unit training, competency and safety roles per unit

Table 2.8, over, shows the net change in staff numbers and gross salary payments that would arise from local surveillance (based on the figures at **Table 2.7**) compared to the establishment of the CSC (see **Table 2.3**).

There would be net increases in staff and salary payments at the airports at Dundee, Kirkwall, Stornoway and Sumburgh compared to the CSC operation, but a net loss in the Inverness area. Again, these do not include induced impacts, as explained at 2.4.6.

HIAL have stated that these figures have been provided for illustrative purposes. They are current best estimates with the detail not having been worked through. All staff numbers and salaries will be subject to further discussion, benchmarking, approval from Scottish Government and negotiation with the trade unions.

TABLE 2.8: NET CHANGE IN AIR TRAFFIC MANAGEMENT STAFF AND SALARIES AT 2027: BY AREA: COMPARISON OF LOCAL SURVEILLANCE AND ATMS (CSC)

Net Employment and Salary Gains		
Airport	Number of Full Time Equivalent Posts	Total Annual Salary Payments
Dundee	27	£1,700,000
Kirkwall	27	£1,700,000
Stornoway	27	£1,700,000
Sumburgh	27	£1,700,000
Total	108	£6,800,000
Net Employment and Salary Losses		
Inverness	69	£4,452,000-£4,479,000

HIAL also told us that the numbers are based on a formula in the CAA publication CAP 670 *Air Traffic Services Safety Requirements*. They also assume that the hours of operation-including providing for overnight emergency call outs-would be the same as for the CSC.

Achieving these staffing levels-and thus the local surveillance alternative-would be dependent on HIAL successfully filling these positions on an ongoing basis.

2.5.3 HIAL's View of the Local Surveillance Alternative

Based on the Helios report HIAL see the local surveillance alternative as having some of the same benefits as ATMS:

- Improvements in safety and reduced risk of airborne conflict at Dundee, Kirkwall, Stornoway and Wick John O' Groats.
- Potential environmental benefits through reduced aircraft fuel consumption and consequent CO² emissions at Dundee, Kirkwall and Stornoway.

While representing a significant change from existing air traffic management, the alternative would be less technically complex and challenging than ATMS.

However, HIAL see the local surveillance alternative as, first, not providing the level of staff resilience, recruitment and retention that ATMS offers. That is because of the need to attract significantly more air traffic management staff to work at Dundee, Kirkwall, Stornoway and Sumburgh airports. This is in a context of what HIAL see as existing recruitment challenges (as described at 2.4.7).

Second, they view the alternative as less flexible than ATMS. That is because there would be no means for staff to manage air traffic at more than one airport if that was required (which would be possible with the CSC).

Overall, this is seen as leading to air traffic services at each airport increasingly being reduced or suspended in the light of staff being unavailable, and therefore not sustainable over time.

Third, HIAL pointed to increased costs relating to staff and other investments, compared to ATMS.

Principally for these three reasons, HIAL rejected the local surveillance alternative and are progressing ATMS. This reflects the recommendations contained in the Helios report.

2.6 BENBECULA AND WICK JOHN O' GROATS AIRPORTS

2.6.1 Introduction

As explained at **2.4.1**, Benbecula and Wick John O' Groats airports had been included in the centralisation option taken forward from the Helios study. However, the “centralisation with increased efficiency” option removed them from the centralisation programme with their future air traffic requirement to be met in a different way.

HIAL's objectives for the two airports are to:

- Change to a more proportionate level of air traffic management.
- Create an Aerodrome Flight Information Service (AFIS) centre of excellence at Benbecula.

2.6.2 Current Air Traffic Management at Benbecula and Wick John O' Groats

Air traffic control (ATC) at Benbecula and Wick John O' Groats is currently provided by staff at each airport. They provide an ATC service, where an Air Traffic Controller (ATCO) passes instructions and clearances to the aircraft.

Table 2.9 shows the current posts in air traffic management at each of the two airports and the related total gross salary payments (i.e. before deduction of income tax and employee national insurance).

TABLE 2.9: CURRENT AIR TRAFFIC MANAGEMENT STAFF AND SALARIES: FINANCIAL YEAR 2019-20		
Airport	Number of Full Time Equivalent Posts	Total Annual Salary Payments
Benbecula	6	>£310,000<£330,000
Wick John O' Groats	4	>£220,000<£240,000
Total	10	>£530,000<£570,000

Source: HIAL. Notes: No breakdown of posts by job type is shown to avoid the possibility of an individual staff member's salary being deducted. Salary figures include allowances and shift pay, in addition to basic pay. Information excludes part-time AFISO posts

The numbers shown exclude one trainee ATCO post at each airport. These were recruited to, in time, move to Inverness and provide resilience for the ATMS programme transition. Thus, they are not part of the ongoing staff complement at each airport.

2.6.3 Changes To Air Traffic Management

Forecast Timescales

The timescales for the move to AFIS operations are currently forecast as:

- Benbecula: April 2022-although possibly earlier than this.
- Wick John O' Groats: December 2023.

Change from ATC to AFIS

The decision for the change of air traffic service level at Benbecula and Wick John O' Groats was taken by the HIAL Board in December 2019.

It is a change from ATC to AFIS (Aerodrome Flight Information Service) operations. That is, to a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

This would be provided by Aerodrome Flight Information Service Officers (AFISOs). That is different to ATC which involves controlling aircraft rather than simply talking to them-including, in particular, proactively separating aircraft.

The change will require an Airspace Change Proposal to be undertaken which requires CAA approval. HIAL believe the change will provide a more proportionate level of air traffic management at the two airports.

They view the traffic as low density and low complexity, which can be handled safely and efficiently through AFIS. In contrast, ATC is appropriate for airports with much higher numbers of movements. HIAL do not envisage the change to AFIS as deterring any air operators that currently use either Benbecula or Wick John O' Groats.

Further, it is HIAL's view that the CAA is minded to make controlled airspace a required element for ATC airports. HIAL told us that the relevant regulations on controlled airspace that were applied by EASA until December 2020 are being enacted by the CAA under transitional arrangements.

HIAL believe that the CAA would be very unlikely to grant controlled airspace for either Benbecula or Wick John O' Groats. That is because the CAA would not see a need or safety case for this given the level and complexity of air traffic.

Thus, HIAL are of the view that air traffic management via AFIS at Benbecula and Wick John O' Groats would be similar to that at other, smaller HIAL airports (Barra, Campbeltown, Islay and Tiree).

In 2019 the number of aircraft movements were:

- Wick John O' Groats: 4,064.
- Benbecula: 3,484.

In comparison the number of aircraft movements at the existing AFIS airports were:

- Islay: 3,199.
- Campbeltown: 1,823.
- Tiree: 1,800.
- Barra: 1,389.

Each airport has its own particular characteristics that need to be accommodated in air traffic management. In the case of Benbecula this includes the presence of the nearby military range.

For Wick John O' Groats, there is a significant amount of air traffic flying over the airport, in addition to traffic that actually uses it. As noted earlier a joint Kirkwall/Wick John O' Groats surveillance sector would be provided in the CSC during normal opening hours from September 2023.

Related Issues

HiAL consider that aircraft will arrive at and depart from the two airports in much the same manner as at present. However, aircraft timeslots will be required. Scheduled aircraft movements would have a 30 minute slot to land and a 30 minute slot to depart (which can be rescheduled if required).

Non-scheduled flights could be fitted in around the scheduled movements. HiAL do not see this as a challenge given current traffic levels at both airports.

HiAL told us that the hours that ATCOs can work are heavily regulated and that an AFIS service would offer greater staff flexibility to accommodate, for example, late running schedules and extend airport opening times. Further, that an AFIS service can accommodate the same amount of traffic as that provided by an ATCO service and could also accommodate any potential increase in aircraft movements.

HiAL also see their proposals as increasing safety compared to the current operations. That would be through:

- Availability of a situational awareness tool for the staff at Benbecula.
- Provision of approach surveillance services to Wick John O' Groats.

Regarding Benbecula, HiAL told us that the range operator (QinetiQ) have an arrangement with NATS for air traffic which controls the aircraft at the range, while Benbecula airport simply allows them to provide access to the range. Also, HiAL have engaged with QinetiQ as part of the development process and they will also be included in development of the safety case for the changes at Benbecula.

HiAL also do not see the change as affecting the proposed development of spaceports in North Uist and Sutherland. That is because that they are quite distant from the two respective airports, and would be used for vertical rather than horizontal launches. As would be the case at any airport there would need to be a letter of agreement between HiAL and the spaceport operators.

AFIS Centre of Excellence at Benbecula

The HIAL Board has also approved Benbecula to become a centre of excellence in the provision of expertise and training for AFIS operations.

When Benbecula and Wick John O' Groats airport transition from ATC to AFIS the number of HIAL AFIS airports will increase to six. Due to this and the fact that the AFIS airports are concentrated on the west coast, HIAL decided to develop an AFIS centre of excellence where the AFIS function across the six airports will be managed and coordinated. The centre will also deliver AFISO training courses, management of the AFISO competency scheme and conduct safety related activities (e.g. auditing, compliance) across the six AFIS airports.

The centre of excellence project will have two full-time AFIS management roles including a Functional Manager and a Training Manager. The proposed model will allow the staff at Benbecula to undertake an operational, training and auditing role on a rotational basis.

HIAL currently employ around 50 AFISOs. They are likely to rotate through the centre for training and development courses that are currently delivered elsewhere in the UK. In the future HIAL may decide to explore the option to deliver AFISO training for third parties.

Development of the centre of excellence and the change to AFIS at Benbecula will run in parallel. However, the two elements are not interdependent.

Changes in Staff Numbers and Salary Payments

The estimated employment and gross salary levels (i.e. before deduction of income tax and employee national insurance) following the move to AFIS operations is shown at **Table 2.10**. For Benbecula, the staff numbers include AFIS operations and the centre of excellence.

TABLE 2.10: AIR TRAFFIC MANAGEMENT STAFF AND SALARIES WITH AFIS OPERATIONS AND AFIS CENTRE OF EXCELLENCE		
Airport	Number of Full Time Equivalent Posts	Total Annual Salary Payments
Benbecula	6	£250,000
Wick John O' Groats	4	£170,000
Total	10	£420,000

Source: HIAL. Salary figures include allowances and shift pay, in addition to basic pay

The successful operation of AFIS is dependent on HIAL successfully filling these positions on an ongoing basis.

HIAL have stated that these figures have been provided for illustrative purposes. They are current best estimates with the detail still having to be worked through. All staff numbers and salaries will be subject to further discussion, benchmarking, approval from Scottish Government and negotiation with the trade unions.

It should also be noted that affected current staff at the two airports would have the opportunity to transfer to work at the CSC in Inverness.

Existing staff who move to the AFIS or centre of excellence roles would have full pay protection (inclusive of salary and allowances) for 12 months followed by protection of salary for a further four years (i.e. five years in total). However, pay protection would be limited to existing post holders. A new recruit would be paid at the salary level for the new role (i.e. reflecting the figures shown at **Table 2.10**).

Table 2.11 shows the change in employment and gross salary payments that would, over time, result from the change in operations.

TABLE 2.11: NET CHANGE IN AIR TRAFFIC MANAGEMENT STAFF AND SALARIES: COMPARISON OF AFIS/CENTRE OF EXCELLENCE AND EXISTING POSITION		
Airport	Number of Full Time Equivalent Posts	Net Loss in Total Annual Salary Payments
Benbecula	0 (no change)	>£65,000<£75,000
Wick John O' Groats	0 (no change)	>£55,000<£65,000
Total	0 (no change)	>£120,000<£140,000

These were calculated by comparing the levels under AFIS and Benbecula centre of excellence operations (see **Table 2.11**) with those under the present ATC operations (shown at **Table 2.10**).

Again, the figures at **Table 2.11** do not include induced impacts (as explained at **2.4.6**).
Alternative to AFIS at Benbecula and Wick John O' Groats Airports

As noted earlier in the Chapter the two airports were originally included in the ATMS proposal for centralised air traffic management. HIAL have stated if there was not a change to AFIS then both Benbecula and Wick John O' Groats would have remained in the centralised air traffic management proposal along with the other five airports.

The inclusion of Benbecula and Wick John O' Groats in the CSC could have had implications for staff levels and salary costs at the CSC: that is, they could be higher than the levels shown at **Table 2.3**. However, HIAL were unable to provide information on this. That is because the detailed analysis included in the December 2019 Business Case did not include Benbecula and Wick John O' Groats being operated from the CSC.

The employment levels of AFIS and centre of excellence compared to the inclusion of Benbecula and Wick John O' Groats in the CSC are shown at **Table 2.12**.

TABLE 2.12: NET CHANGE IN AIR TRAFFIC MANAGEMENT STAFF AND SALARIES: AFIS OPERATIONS AND AFIS CENTRE OF EXCELLENCE COMPARED TO BENBECULA AND WICK JOHN O' GROATS BEING INCLUDED IN CSC		
Airport	Increase In Number of Full Time Equivalent Posts	Increase In Total Annual Salary Payments
Benbecula	6	£250,000
Wick John O' Groats	4	£170,000
Total	10	£420,000

In addition, AFIS would retain the current numbers of part-time AFISOs at the two airports:

- Benbecula: 5.
- Wick John O' Groats: 6.

These posts would no longer exist if Benbecula and Wick John O' Groats had been included in the CSC.

3 **ISSUES AFFECTING THE ASSESSMENTS**

3.1 **INTRODUCTION**

This Chapter sets out a number of issues that have affected the assessment:

- ATMS timeframe.
- Responses to the HIAL staff survey and confidentiality of reporting results.
- Staff decisions about whether or not to transfer to the CSC.
- Employment estimates for the local surveillance alternative.
- Availability of information on purchases of goods and services.
- Consultees' general views.
- COVID pandemic.

3.2 **TIMEFRAME FOR IMPLEMENTATION OF ATMS**

For ATMS, some of the detail that would normally be available for an impact assessment is not yet known. That is because of the long timescale over which it is being implemented (up to 2027). Thus, the likely impacts of some key elements are quite uncertain at this point in time.

As covered in **Chapter 2**, this reflects the current position that:

1

The number of existing HIAL staff who will transfer to the CSC is not yet known.

2

The employment and salary levels for the CSC, the local surveillance alternative and the move to AFIS at Benbecula (including the centre of excellence) and Wick John O' Groats are simply best estimates with the detail not having been worked through.

HIAL told us that that they are based on a high level programme plan which continues to be refined; and they will be subject to formal trade union consultation and negotiation, which is still to take place.

However, this creates a degree of uncertainty around the scale of employment impacts and whether the required employment levels can be achieved and sustained. That is in a context where a key justification for the CSC is that its employment levels can be sustained-unlike the local surveillance alternative.

3

Design of digital connections to/from the CSC is currently only at a high level. While detailed design cannot be completed until the tender is awarded, this still results in some uncertainty on the connectivity issue. That is in a context where resilience is critical to the remote towers' successful operation.

4

The form of surveillance to be procured is still awaiting regulatory decisions by the CAA. These could affect the potential impacts on new developments around some of the airports-particularly windfarms.

5

The full nature of AFIS at Benbecula and Wick John O' Groats will only be known once the Safety Case has been approved by the CAA.

3.3 SOME LIMITED RESPONSES TO STAFF SURVEY AND CONFIDENTIALITY ISSUES

The survey of HIAL staff was an important part of the research. A total of 54 responses were received out of the 92 staff who received the survey link. That is, a response rate of 59%. That would normally be considered a reasonable return. However, our research is required to produce an individual assessment for each of the seven airports.

One effect of this is that we do not know the total number of individuals in the affected households-only those for the households of staff members who responded. This imposes limitations on estimating the scale of some impacts. For example, the loss of population if affected households leave their local area as a result of ATMS.

The number of survey respondents by airport is shown at **Table 3.1**.

TABLE 3.1: NUMBER OF RESPONSES TO STAFF SURVEY BY AIRPORT	
Airport	Number of Respondents
Benbecula	≤10
Dundee	≤10
Inverness	13
Kirkwall	12
Stornoway	11
Sumburgh	≤10
Wick John O'Groats	≤10
Total	54

Source: Survey of HIAL staff

HIAL has a policy on anonymisation of staff information. Every dataset must have a value of at least five to be circulated more widely, and 10 for particularly sensitive data. Anything less should be considered personal data and, as such, should not be reported.

This has limited the depth of reporting of results for [REDACTED]. The number of responses for [REDACTED] means that there has been very limited reporting, [REDACTED].

The number of respondents by job type (as identified by the survey respondent) is set out at **Table 3.2**, over.

TABLE 3.2: NUMBER OF RESPONSES TO STAFF SURVEY BY JOB TYPE

Airport	Number of Respondents
Air Traffic Controller	35
Air Traffic Services Operational Assistant	9
Aerodrome Flight Information Service Officer	≤5
Air Traffic Services Assistant	≤5
Manager ATS	≤5
Not stated	≤5
Total	54

Source: Survey of HIAL staff

The need to maintain confidentiality also imposes some limits on the depth of reporting information on the profile (age, place of residence, etc.) of affected staff. The staff numbers are set out at **Table 3.3**.

TABLE 3.3: NUMBER OF STAFF BY AIRPORT INCLUDED IN STAFF PROFILE DATA (EXCLUDES PART-TIME AFISO)

Airport	Number
Benbecula	7
Dundee	11
Inverness	27
Kirkwall	14
Stornoway	11
Sumburgh	15
Wick John O'Groats	5
Total	90

Source: HIAL

This affects Benbecula and Wick John O' Groats in particular.

[REDACTED]

3.4 **POTENTIAL TO RECRUIT EXISTING HIAL STAFF TO WORK AT THE CSC**

As noted at **Chapter 2** HIAL expect existing staff at the seven affected airports to be the primary source of staff for the CSC.

Our staff survey asked respondents what action they would be most likely to consider in response to the proposed changes under ATMS. The responses are shown at **Table 3.4**, over.

The most common response was "Don't know/unsure at this time" which was stated by slightly less than half (48%) of all respondents.

TABLE 3.4: ACTION STAFF MEMBER IS MOST LIKELY TO CONSIDER IN RESPONSE TO PROPOSED CHANGES UNDER ATMS

Response	Number of Respondents	Share of Total
Don't know/unsure at this time	26	48%
Not continuing to work at current airport of employment or at the new Surveillance Centre	15	28%
Taking up a position within the new Surveillance Centre	6	11%
Redeployment into an alternative role within HIAL at the airport where they currently work	[REDACTED]	
Retire		
Other		
Total	54	100%

Source: Survey of HIAL staff

That was followed by those who “would not continue to work at current airport of employment or at the new Surveillance Centre” (i.e. to leave HIAL employment). This was stated by slightly more than a quarter (28%) of respondents. Of these 15 individuals:

- Seven would look for another job/start business-and their household would remain in its current location.
- [REDACTED] would retire with their household continuing to live in the current location.
- [REDACTED] stated “Don't Know/unsure at this time”.
- [REDACTED] would look for another job/start business but the household would move overseas.

Only 11% of respondents stated they would consider “taking up a position within the new Surveillance Centre”. Of these six respondents:

- [REDACTED] would relocate their household in the process.
- [REDACTED] would commute daily from their current place of residence.
- [REDACTED] would commute less than daily from their current location.

This implies very little interest in less than daily commuting to the CSC. This is reflected in what HIAL told us about their effort to consult staff on this option. Only [REDACTED] individuals expressed interest and [REDACTED] engaged with HIAL's HR team to discuss it.

A further [REDACTED] would consider seeking “Redeployment into an alternative role within HIAL at the airport where they currently work”.

The overall results for current Inverness staff were not markedly different, as follows:

- Don't know/unsure at this time: seven respondents (54% of total).
- Not continuing to work at current airport of employment or at the new Surveillance Centre: [REDACTED]

- Taking up a position within the new Surveillance Centre: three respondents [REDACTED]

However, the results were different for the respondents who are either Air Traffic Services Operational Assistants or Air Traffic Services Assistants, as follows:

- Don't know/unsure at this time: [REDACTED]
- Not continuing to work at current airport of employment or at the new Surveillance Centre: [REDACTED] Seeking to continue to work at the airport where they are currently employed in a different position: [REDACTED]

Thus, none stated "Taking up a position within the new Surveillance Centre".

HIAL also told us that they currently have the following working assumption. All current Inverness staff would take up a post at the CSC, as would 40% of current staff across the other six airports. The latter figure has been reduced by HIAL from a previous level of 60%.

We recognise that our survey has a response rate of 59%. However, within this there is no indication of significant interest in working at the CSC. Even if half of the current staff who stated "Don't know/unsure at this time" were to actually seek to work at the Centre, this would increase the total proportion of current staff who would look to work at the CSC from 11% to 35% (i.e. just over one in three).

3.5 EMPLOYMENT ESTIMATES FOR THE LOCAL SURVEILLANCE ALTERNATIVE

As noted at 3.2 HIAL's figures for employment levels for the local surveillance alternative are simply best estimates with the detail not having been worked through. However, HIAL told us that they are based on CAP 670 Air Traffic Services Safety Requirements.

Prospect's consultation response states that:

"Inverness currently has night time traffic and has a single controller night shift...delivered by one ATCO each night. Even with this flight Inverness is only H20 it is therefore difficult to see where a requirement for 24 hour ATC surveillance has arisen.

In the new operation, HIAL intends to provide an out of hours service by providing a full night shift of 7 including ATCO's, Assistants and supervisors. The cost of this is an order of magnitude higher than the current service provision while not actually being required."

Table 3.5, over, shows Prospect's own estimates of staffing levels required for the local surveillance alternative.

They have-like HIAL-based their figures on CAP 670. However, they have arrived at quite different job numbers. They estimate total employment at 91 FTE posts. That is, some 44 FTE less than estimated by HIAL for the local surveillance alternative and five FTE below HIAL's estimate for the CSC (as per **Table 2.3**).

Prospect state that: "Even if the requirement was to provide an Inverness like service at each site it still appears to be a significant overestimate. Taking this into account our estimate is that the staffing cost is comparable to the figure given for the remote tower centre".

TABLE 3.5: LOCAL SURVEILLANCE: ALTERNATIVE: PROSPECT EMPLOYMENT ESTIMATES
(FULL TIME EQUIVALENT POSTS)

Airport	Current operational complement	Prospect Estimates-CAP 670 (including surveillance position)	HIAL Estimates (as per Table 2.7)	Overestimate
Kirkwall	11	16	27	11
Sumburgh	9.5	17	27	10
Stornoway	11	19	27	8
Dundee	10	18	27	9
Inverness	20	21	27	6
Total	61.5	91	135	44

Source: Prospect submission

3.6 AVAILABILITY OF INFORMATION ON PURCHASES OF GOODS AND SERVICES

3.6.1 Current Position

One of the economic impacts of current air traffic service arrangements is employment created in companies supplying goods and services required to operate the current towers. These are called *indirect* impacts.

However, despite a number of requests for information on this, HIAL said they were unable to do so because their financial systems cannot isolate this category of spend.

HIAL told us they would not expect there to be any material effect on local companies. In part, that is based on feedback received from some of their airport managers. They also referred to expenditure on items such as stationery and cleaning; and that some building and maintenance work on the towers would still be undertaken even after ATC is transferred from the local airport to the CSC. However, no actual figures have been supplied to us.

3.6.2 Future Air Traffic Services Provision

No estimates are available for HIAL's potential future purchases of goods and services for either the remote tower operation or the local surveillance alternative.

3.6.3 Coverage of Economic Impacts

For the changes in air traffic staff employment and salaries we are able to estimate the direct and related induced impacts (as described at **Chapter 2**). However, we are unable to estimate the *indirect* impacts because of the lack of information on purchases of goods and services. Thus, the impact figures shown in later Chapters will understate the total impacts-although there is no means of estimating the scale of this.

3.7 GENERAL VIEWS OF CONSULTEES

3.7.1 Community and Stakeholder Consultees

Apart from airlines, almost all consultees regarding Benbecula, Kirkwall, Stornoway and Sumburgh were opposed to ATMS and/or concerned about lack of detail on certain aspects of it. In some cases that included what they saw as a lack of transparency on how HIAL had reached the decision to proceed with ATMS.

These general points should be borne in mind when reading the individual impact assessment Chapters.

3.7.2 Airlines

Each of the four airlines consulted reported a good current level resilience of air traffic services at the affected HIAL airports.

All four are generally supportive/in favour of the move to CSC/remote tower, albeit that none of the actual consultees had direct experience of this. Their view was largely based on their awareness of remote tower operations having been introduced elsewhere.

Of the two airlines that commented, neither believed that there would be any reduction in passengers' perception of safety. One airline viewed the possibility of 24 hour provision as a really positive development.

None of the airlines raised any general concerns with the move to AFIS operations at Benbecula and Wick John O' Groats.

These general points should be borne in mind when reading the individual impact assessment Chapters.

3.8 **COVID PANDEMIC**

The ongoing Covid pandemic has led to a major reduction in the demand for air travel. It has also had very significant negative impacts for some sectors of the economy.

The individual impact assessment Chapters include information on air services and traffic levels in the period before the pandemic. We recognise that the world has changed since then. However, the data presented still help to identify the various roles that air services have played in each community. Some of these are likely to continue to be important as aviation demand recovers at least to some extent.

Likewise, the economic and population analysis in this report is intended to highlight the underlying strengths and challenges facing each community. These will continue to be relevant going forward. For example, key economic sectors and sustaining a balanced population age structure.

The data presented in subsequent Chapters should be viewed in this light. Their use is not intended to imply that air travel and economic activity will, in the future, simply revert to the levels seen before 2020.

4 **BASIS OF THE ASSESSMENTS**

4.1 **INTRODUCTION**

This Chapter describes the basis of this assessment.

It is entirely independent. It is based on a review of information and the views on the changes to air traffic management provided by HIAL and a range of consultees. Comments from HIAL on the various versions of the report have been limited to issues of factual accuracy rather than the overall findings.

The individual assessments consider the impacts on the relevant *communities* rather than impacts on the specific *individuals* who are directly affected-in this case HIAL staff. That is not at all to say the latter are unimportant. Rather, the focus here is on the community as a whole.

Also, it is not the role of this assessment to recommend that a specific course of action (in this case ATMS) should or should not be pursued. Nor is it an options appraisal or a gateway review of the ATMS programme.

4.2 **GEOGRAPHICAL COVERAGE**

Impacts were assessed at three geographical levels:

- Local-that is, in each of the communities served by one of the airports. These geographies are defined at **Appendix H**.
- Regional-i.e. the Highlands and Islands.
- Scotland.

4.3 **SCOPE OF THE ASSESSMENT**

4.3.1 Approach

Individual impact assessments were produced for the seven affected communities. They use a common structure and content.

The impacts can only be properly understood within their local context. Therefore, each assessment provides information on:

- Profile of flights and passenger numbers at the relevant airport.
- Analysis of the local economy.
- Population profile and trends.
- Consultees' issues and concerns about the changes to air traffic management. These were included based on advice from Scottish Government's Islands Team.

4.3.2 Assessment Framework

Basis for Comparison

For the five airports covered by the CSC (Dundee, Inverness, Kirkwall, Stornoway and Sumburgh) the assessment of impacts is based on a comparison of ATMS and *the local surveillance alternative*. As explained at **Chapter 2**, that is because HIAL (and some others) do not view the existing ATC provision as a sustainable option going forward.

As also explained at **Chapter 2**, the assessments for Benbecula and Wick John O' Groats are based on a comparison of AFIS operations (plus the centre of excellence at Benbecula) *against the two airports otherwise having been included in the CSC*.

Uncertainties

As noted at **Chapter 3**, there are a number of uncertainties around the outcomes of either ATMS or the local surveillance alternative. This reflects the current stage of development of ATMS, and that the local surveillance alternative has only been worked up to a limited level of detail.

Key uncertainties are around the:

- Number of existing HIAL staff who will transfer to the CSC.
- The employment and salary levels for the CSC, the local surveillance alternative and the move to AFIS at Benbecula and Wick John O' Groats. These are simply best estimates with the detail not having been worked through.
- The final nature of AFIS at Benbecula and Wick John O' Groats which will only be known once the Safety Case has been approved by the CAA.
- Design of ATMS digital connections is currently only at a high level.
- The form of surveillance to be procured is still awaiting regulatory decisions by the CAA.

Therefore, the assessments very much look at *potential* impacts.

Assessment Measures-Economy

The assessment measures reflect, to an extent, relevant strategic objectives and issues from Scottish Government's National Islands Plan. However, they are quite standard in terms of the focus on employment and population in particular.

The assessment framework consists of two parts.

First, *Economy*. This covers the changes in HIAL employment and salary payments, as well as the possible loss of economic activity if affected staff households move from their local area.

It also considers the possible impacts on the economy from changes in resilience of air traffic management services. We initially considered a quantified assessment of the economic impacts of such a change in resilience. For example, a negative impact on resilience could arise from an inability to recruit and retain sufficient air traffic management staff.

That could lead to increased delays and cancellations of flights, leading on to a reduction in the number of flights and passenger movements made.

However, it is not possible to quantify this with any reasonable accuracy. Even the use of scenarios (i.e. *what if?*) rather than forecasts would involve using an arbitrary figure. That is in a context where if the performance of, for example, either ATMS or the local surveillance alternative was below an acceptable level then it would either not be introduced, or discontinued.

Therefore, the assessments include some of the economic impacts of the air services as they have operated in recent years (e.g. inbound tourism). In this we simply note that a lack of resilience of, for example, either ATMS or the local surveillance alternative would have a very significant negative economic impact. Thus, the figures for existing activity and economic impacts simply show the level of activity “at risk” if there was a reduction in resilience.

In addition, we have not assessed the safety aspects of ATMS, the local surveillance alternative or AFIS. That is because each one would require CAA approval based on a safety case, and could not be introduced if insufficiently safe.

Assessment Measures-Community

The second element of the framework is *Community*. This includes potential impacts on population level and age structure. Again, this is limited by the fact that the number of households that might leave their local area-or move into it under the local surveillance alternative-is quite uncertain at present.

It also looks at:

- Community activity in terms of participation in community organisations and activity, and providing care for other households.
- Use of air to access activities and key services-e.g. flights for visiting friends and relatives.

In addition, for each of Dundee, Kirkwall and Stornoway there is consideration of the potential environmental impacts from the introduction of surveillance (which would apply under both ATMS and the local surveillance alternative).

4.3.3 Island Communities Impact Assessments

We have produced island communities impact assessments (ICIAs) for each of Lewis, Orkney, Shetland and Uist.

The approach we adopted reflects the Islands (Scotland) Act’s requirement that an islands impact assessment should:

- Describe the likely significantly different effect of the policy, strategy or service compared to its effect on other communities (including other island communities) in the area in which the authority (in this case HIAL) exercises its functions.

- Assess the extent to which the policy, strategy or service can be developed or delivered in such a manner as to improve or mitigate, for the relevant communities, the outcomes resulting from it.

In October 2020 Scottish Government published *Island Communities Impact Assessments: Guidance And Toolkit: For Consultation*. We have used some of its content to inform and structure the ICIAs.

The draft guidance indicates that an ICIA is required when a view is established that “the policy, strategy or service is likely to have an effect on an island community which is significantly different from its effect on other communities (including other island communities)”.

As explained at **Chapter 3** the “likely” impacts of some key elements cannot be known with much degree of certainty at this point in time. As a result our approach to the ICIAs has been based more on whether ATMS has the *potential* “to have an effect on an island community which is significantly different from its effect on other communities (including other island communities)”.

4.3.4 Highlands and Islands and Scotland

The approach used for the seven local area impact assessments is not appropriate for assessing the impacts at the very much larger Highlands and Islands and Scotland levels. Therefore, the impacts for those two geographies have been covered through:

- Changes in employment and salaries in air traffic management.
- Narrative on the wider implications of any changes in the resilience of air traffic management and thus air services.

5 **IMPACT ASSESSMENT: UIST**

5.1 **INTRODUCTION**

This Chapter as a whole should be read in conjunction with **Chapters 1, 2, 3 and 4**.

As noted therein there are a number of uncertainties around the detailed content and effects of what HIAL are introducing at Benbecula. That is, a change from ATC (Air Traffic Control) to AFIS air traffic management, plus the creation of a centre of excellence in AFIS operations. This is forecast to come into operation in April 2022-although possibly earlier.

Uncertainties relate to:

- The actual staff numbers and salaries at Benbecula Airport arising from the change. The figures shown in this Chapter, provided by HIAL, are only best estimates.
- The final detail of how AFIS operations would work at Benbecula Airport.

As set out at **Chapter 2**, the assessment for Benbecula is based on a comparison of AFIS operations and the centre of excellence *against Benbecula otherwise having been included in the Central Surveillance Centre*. However, some comparisons are also made between AFIS/centre of excellence and the existing position.

Some employment and salary impacts include both direct (i.e. employment in air traffic management) and induced effects (i.e. the impact from the spend of the employee wages in the local economy).

Indirect impacts (those created by the purchases of goods and services to operate the air traffic control facilities) are not included. That is because no information is available for the potential scale of purchases.

The Chapter begins with a summary of supporting information for the impacts. It then shows the impacts in terms of *Economy and Community*.

5.2 SUMMARY OF SUPPORTING INFORMATION FOR IMPACT ASSESSMENT

The full supporting information is contained in **Appendix A**.

5.2.1 Context

Between April 2019 and March 2020 there was a total of 1,839 scheduled aircraft movements at Benbecula Airport.

In 2019 around 35,000 passengers used the two scheduled air services at Benbecula Airport. Most (56%) of the flights were outbound-i.e. made by local residents.

Most (two thirds) of trips were made for leisure purposes. These include health-related travel by Uist residents for treatment elsewhere. The other third were for business purposes including commuting by offshore workers.

Between April 2019 and March 2020 there were 1,437 non-scheduled movements (excluding circuits) at Benbecula Airport. The most frequent categories of movement were Freight/Cargo, Air Taxi and Air Ambulance.

Consultees viewed air being more reliable than ferry services during bad weather. The shorter journey times of air compared to ferry/road were also highlighted. The scheduled passenger flights were generally described as “lifeline” services.

In 2018 there was a total of 2,000 jobs in Uist. Employment levels were flat between 2015 and 2018. That was in contrast to growth in both the Highlands and Islands and Scotland.

The MOD Hebrides Range operated by QinetiQ is a major employer with more than 100 jobs on site. Tourism is also relatively important compared to the Highlands and Islands average. In contrast, the share of employment in public sector jobs is relatively low.

Wages in full time jobs in Uist appear to be more than 10% below the Scottish average. They are also likely to be lower than the Outer Hebrides average. All parts of Uist are in HIE designated Fragile Areas.

Uist has a small population. For 2018 this was estimated at 4,647 people. There had been a fall of more than 4% since 2011, in contrast to growth at the regional and national levels. Uist also has a relatively aged population; and one that is aging at a faster rate than in the Highlands and Islands and Scotland.

Consultees’ concerns and issues about the change from ATC to AFIS included:

- Reduction in safety compared to the current position.
- Increase in flight delays and cancellations.
- A lack of information and transparency about the basis of the decision to move from ATC to AFIS operations.
- Reduced demand for use of Benbecula as some air operators would not use an AFIS airport.

Consultees also emphasised that proximity to the live weapons range (Qinetiq) is a distinguishing feature of Benbecula Airport. The impacts of the move to AFIS on the range and vice versa would need to be accounted for.

In contrast to the community and stakeholder consultees those airlines offering a view were generally unconcerned about the proposed changes.

5.2.2 Impact Findings

There are seven affected staff at Benbecula Airport (excluding part-time AFISOs). [REDACTED] live in Benbecula with the others in various locations elsewhere in Uist. Most of the staff are aged 44 year or less. The median age is 44 years.

There appear to be 18 people living permanently in the affected households-11 adults and seven children. Consultees expressed concern about the potential loss of most or all of these people from Uist as a result of ATMS. This was set in a context of previous strongly negative population forecasts, and what is seen as a high existing proportion of elderly people.

The affected households contain other members who also work. Based on the staff survey this is mostly full time in a range of sectors. It is estimated that some three to four of these jobs could prove hard to fill if the household moved away from Uist. This potential loss of economic activity of spouses/partners was a concern raised by consultees.

Most of the households covered by the staff survey participate and/or contribute to the running of local community, voluntary and other organisations. Consultees referred to the limited number of residents who participate in local groups and committees and thus the negative impact if a number of those heavily involved were to leave Uist.

In 2019-20 there were six full time equivalent posts in air traffic control at Benbecula Airport³. Their total gross salaries were >£310,000<£330,000*. The average (mean) wage of [REDACTED] is greatly above that for the Outer Hebrides (£30,649).

Once induced impacts are included (i.e. the spend of the employees' wages in the local economy) the total impact is estimated as 7.9 FTE jobs and >£350,000<£375,000 in gross salaries.

AFIS and the centre of excellence is forecast to provide 6 FTE jobs at Benbecula airport with £250,000 in gross salaries. The average salary per FTE would fall from the existing [REDACTED] to around £42,000. However, that would still be considerably above the likely average for employment in Uist.

Once induced impacts are included the total impact is estimated as 7.5 FTE jobs and £283,000 in gross salaries (plus the retention of five existing part-time AFISOs).

³ That is excluding one trainee ATCO post based at Benbecula. This was recruited to, in time, move to Inverness and provide resilience for the ATMS programme transition. Thus, it is not part of the ongoing staff complement at the airport.

If, instead of AFIS and the centre of excellence, *Benbecula Airport* would have been included in the Central Surveillance Centre there would no longer have been any air traffic management jobs at the airport.

Consultees referred to what they see as a loss of good quality, high paying and hitherto secure jobs at the airport. They also raised the issue of reduced wages spend in local shops and other businesses.

Any changes in air traffic management resilience could affect the level of activity at Benbecula airport. In 2019 its scheduled flights are estimated to have seen:

- 5,800 return business trips.
- 7,600 inbound visitors, with £1.6 million spend supporting 27 FTE jobs.
- Visiting friends and relatives trips accounting for c40% of all scheduled passengers.

5.3 IMPACT ASSESSMENT

Tables 5.1 and **5.2**, over, contain the impact assessments. The main points to note are:

The comparison is AFIS/centre of excellence at Benbecula against the inclusion of Benbecula Airport within the CSC in Inverness. The former retains air traffic employment in Uist, unlike the CSC alternative. There is a slight loss of employment (less than 1 FTE job) compared to the existing position.

The assessment shows the levels of air traffic, tourism benefits and other types of trip that are “at risk” if either AFIS or the CSC alternative are less resilient than present levels (with ATC) at Benbecula.

In general the community impacts are quite uncertain. They depend on how many affected HIAL households would leave Uist as a result of the introduction of AFIS and how many would do so if there were no longer air traffic jobs based at Benbecula (i.e. the CSC alternative). Some households could leave in each scenario.

TABLE 5.1: UIST ECONOMIC IMPACT ASSESSMENT: COMPARISON OF AFIS/CENTRE OF EXCELLENCE AGAINST INCLUSION OF BENBECULA AIRPORT IN THE COMBINED SURVEILLANCE CENTRE

Element/ <i>National Islands Plan Criterion</i>	Data/Issues	Potential Impact
Changes in Employment At Benbecula Airport		
Change in employment (direct and induced only) (<i>Economic opportunities for island residents</i>)	Retention of 7.5 FTE jobs compared to CSC alternative-plus five part-time AFISO roles (Loss of 0.4 FTE jobs compared to existing position)	Significant positive impact compared with CSC alternative, with a very slight negative impact compared to existing position
Change in gross salaries (direct and induced only)	Retention of £283,000 compared to CSC alternative-plus part-time AFISO payments (Loss of >£74,000<£84,000 compared to existing position)	Significant positive impact compared with CSC alternative, with a very slight negative impact compared to existing position
Access to high quality employment	Average (mean) salary of c£42,000 lower than existing position [REDACTED]. However, would remain well above averages for the Outer Hebrides and Scotland (full time jobs)	Slight/significant negative impact compared to existing position
Potential Wider Impacts/<i>National Islands Plan Criterion</i>		
Resilience of air traffic management and air services (<i>Economic opportunities for island residents/Adequacy of transport of people and goods</i>)	Dependent on resilience of AFIS in serving the level and complexity of demand compared to CSC alternative Business flights: Estimated c5,800 scheduled return flights in 2019-mostly inbound-includes commuting by Uist residents Non-scheduled flights: freight/cargo volumes are significant, military a specialisation Key sectors: Tourism: estimated 7,600 inbound visitors to Uist in 2019 by scheduled flights-estimated c£1.6 million spend and 27 FTE jobs Qinetiq range: more than 100 jobs at the site	Very significant negative impact under <u>either</u> AFIS <u>or</u> CSC alternative if resilience was lower than present levels and traffic levels fall. There could be a slight/significant positive impact if, compared to the existing position, AFIS is able to offer greater flexibility to accommodate late running schedules and increased numbers of aircraft movements
Reduced number of flights because air operators will not use an AFIS airport (<i>Adequacy of transport of people and goods</i>)	Air operators consulted did not indicate that this would be the case (although only two of them currently use Benbecula)	Uncertain -due to limited number of consultations
Loss of employment and wage spend of other household members if households leave Uist (<i>Economic opportunities for island residents</i>)	All those responding to the staff survey have at least one other household member who is employed in Uist. It could be that 3 to 4 full time jobs prove hard to fill if affected household member leaves Uist	Slight/significant positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist

TABLE 5.2: UIST COMMUNITY IMPACT ASSESSMENT: COMPARISON OF AFIS/CENTRE OF EXCELLENCE AGAINST INCLUSION OF BENBECULA AIRPORT IN THE COMBINED SURVEILLANCE CENTRE

Element/<i>National Islands Plan</i> Criterion	Data/Issues	<u>Potential</u> Impact
Population		
Population loss (<i>Population levels</i>)	Estimated 18 people in affected staff households. Context of Uist population decrease of more than 4% between 2011 and 2018. Further population decline forecast for the Outer Hebrides as a whole	Slight/significant positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist
Population loss in key age groups of 16-24 and 25-49 (<i>Population levels and structure -including families</i>)	Estimated that around half of all HIAL household members in one of these age groups. Uist is estimated to have seen a significant fall in 16-49 year olds between 2011 and 2018	Slight/significant positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist
Impact on services-school rolls	Seven children in the affected households attend [REDACTED]	Slight positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist
Community Activity		
Participation in community organisations and activity	Most households responding to the survey are involved in a range of local organisations and activities	Slight positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist
Providing care for other households	Almost all households responding to the survey provide care support to other family members who live elsewhere in their community/area	Slight positive impact compared to the CSC alternative-but could still result in some existing households leaving Uist
Use of Air To Access Activities and Key Services/<i>National Islands Plan</i> Criterion		
Resilience of air traffic management and air services (<i>Adequacy of transport of people and goods. Accessibility of health services</i>)	Visiting friends and relatives trips accounted for a significant share (c40%) of all 2019 scheduled passengers Health access by air for Uist residents is vital to receiving specialist services that are not available locally	Very significant negative impact under <u>either</u> AFIS <u>or</u> CSC alternative if resilience was lower than present levels and traffic levels fall

5.4 NEED FOR AN ISLAND COMMUNITIES IMPACT ASSESSMENT

As explained at **Chapter 3**, ATMS is at a stage in its development where some key outcomes are not yet fully known. The final nature of AFIS operations at Benbecula will only be known once the Safety Case has been approved by the CAA. Also, the employment levels forecast for Benbecula Airport under AFIS/centre of excellence are a current best estimate with the detail still having to be worked through.

We have therefore concluded that AFIS/centre of excellence at Benbecula Airport *has the potential* to have an effect on Uist which is significantly different from its effect on-at least-the Inverness and Dundee communities. Therefore, we have undertaken an Island Communities Impact Assessment.

5.5 ISLAND COMMUNITIES IMPACT ASSESSMENT

5.5.1 Potential Significant Different Effect of ATMS on Uist

The detailed analysis provided at **5.2** and **Appendix A** indicates potential for a greater proportionate effect in Uist than in-at least-some of the other affected communities. These effects particularly relate to potential loss of population, although the number of households that would leave Uist is presently uncertain.

This greater proportionate effect would arise from the circumstances in Uist. First, limited services available locally. That leads to:

- A need to travel outside to access certain services e.g. health treatment, specialist businesses.
- Visits by specialist providers based elsewhere.

There is a reliance on *air* for many such trips (including day trips). That is due to the long surface distances to/from key centres elsewhere, with slow ferries the only available alternative. Hence any changes to air traffic management that would affect air service resilience could have a significant effect on the local economy and community given their degree of reliance on air services.

Second, the greater proportionate effect in Uist could arise from its socio-economic circumstances:

- A small economic base and dependence on a key employer (Qinetiq range).
- Small and apparently declining population with a demographic imbalance.
- Self-contained labour market, with low average wages.
- All parts of Uist falling within HIE designated Fragile Areas.

These circumstances are starkly different from those in Inverness and Dundee-as shown in their individual assessments (at **Chapter 10** and **Appendix F**, and **Chapter 11** and **Appendix G**, respectively).

They have:

- Much larger economies providing access to a wide range of services and opportunities locally rather than having to be accessed by air.
- Large labour markets including accessible ones in adjoining areas.
- Growing populations.
- Wages around the Scottish average.

Importantly, in Inverness one of the effects of ATMS will be a very significant increase in highly paid air traffic service employment.

The likely scale of any potential employment losses in air traffic management, and the total reduction in salary payments, is much lower in Uist than estimated for each of Lewis, Orkney and Shetland (see **Chapters 6, 7 and 8**). However, we recommend that HIAL includes Uist within an independent report they would commission which would identify ways in which their operations can create more economic activity. This is an overarching recommendation that also includes Lewis, Orkney and Shetland.

In addition, to help address consultees' concerns and issues HIAL should publish much greater information on the ATMS section of their website-which has seen very few updates since early 2020. That should include more information on the basis of the ATMS Business Case and budget approval in December 2019 regarding the introduction of FISO at Benbecula.

6 **IMPACT ASSESSMENT: LEWIS**

6.1 **INTRODUCTION**

This Chapter should be read in conjunction with **Chapters 1, 2, 3 and 4.**

As noted therein there are a number of uncertainties around the final content and effects of what HIAL will be introducing for Stornoway Airport. That is, a change from air traffic management through ATC (Air Traffic Control) at the airport to remote tower operation by the Central Surveillance Centre in Inverness. This is forecast to come into operation in December 2025.

As noted in earlier Chapters:

- The comparison of impacts is between ATMS and the local surveillance alternative. However, some comparisons are also made between ATMS and the existing position.
- Given the number of present uncertainties the assessment is very much around the *potential* scale of impacts.

In this Chapter the employment and salary figures shown for existing HIAL staff at Stornoway, and under ATMS and the local surveillance alternative, are those contained in **Chapter 2.**

Some employment and salary impacts include both direct (i.e. employment in air traffic management) and induced effects (i.e. the impact from the spend of the employee wages in the local economy).

Indirect impacts (those created by the purchases of goods and services to operate the air traffic control facilities) are not included. That is because no information is available for the potential scale of purchases.

The Chapter begins with a summary of supporting information for the impacts. It then shows the impacts in terms of *Economy* and *Community*. This is followed by the Islands Community Impact Assessment (ICIA) for Lewis.

6.2 **SUMMARY OF SUPPORTING INFORMATION FOR IMPACT ASSESSMENT**

The full supporting information is contained in **Appendix B.**

6.2.1 Context

Between April 2019 and March 2020 there was a total of 5,431 scheduled aircraft movements at Stornoway Airport.

In 2019 around 133,000 passengers used scheduled flights at Stornoway. This number was split evenly between residents of Lewis and Harris and those who live elsewhere.

More than two thirds (69%) of flights were made for leisure purposes. These include health-related travel by island residents for treatment elsewhere. The other 31% were for business purposes including commuting by offshore workers.

Between April 2019 and March 2020 there were 3,831 non-scheduled movements (excluding circuits) at Stornoway Airport. The most frequent categories of movement were Freight/Cargo, Air Ambulance and Training.

Consultees viewed air being more reliable than ferry services during bad weather. The shorter journey times of air compared to ferry/road were also highlighted. Scheduled passenger flights were generally described as “lifeline” services.

In 2018 there was a total of 8,500 jobs in Lewis. This was an increase of around 6% since 2015, a higher growth rate than in both the Highlands and Islands and Scotland.

Four industries are responsible for more than half of employment. Distinctive features include a relatively high proportion of employment in public sector jobs, and specialisms in Information and communication activities and parts of Manufacturing.

Wages in full time jobs in Lewis appear to be more than 10% below the Scottish average. A significant proportion of the island falls within HIE designated Fragile Areas.

The estimated 2018 population of Lewis is around 19,100. Its population structure is similar to that of the Highlands and Islands but more aged than in Scotland. Lewis’s population is estimated to have fallen by 3% between 2011 and 2018, in contrast to growth at the regional and national levels. The decline among those aged up to 49 years was more pronounced than in either the Highlands and Islands or Scotland.

The population of the Outer Hebrides as a whole is forecast to fall significantly (by more than 6%) between 2018 and 2028.

Consultees’ concerns and issues about the change from ATC to centralised air traffic control included:

- The feasibility and resilience of the ATMS programme in delivering remote air traffic management.
- A lack of information on some of the aspects of the remote tower solution.
- That there is no problem with staff recruitment or retention at Stornoway.
- A loss of confidence in air traffic control services, with more delayed and cancelled flights.

6.2.2 Impact Findings

There are 11 affected staff at Stornoway Airport (excluding part time AFISOs). Most live outside Stornoway, spread between a number of rural parts of Lewis.

These staff are broadly evenly split between those aged 44 years or less, and those who are 45 years plus. The median age is 49 years.

Based on the staff survey it is broadly estimated that between 22 and 33 people live in the affected households. The survey results suggest that the total number of children in these households is relatively low.

In the staff survey almost all of the households contain other members who work-mostly in full time positions. These are in a range of sectors including the Comhairle, third sector, professional services and the NHS. It is estimated that around one third of their jobs could prove hard to fill if the household moved away from Lewis.

Consultees identified the negative impact of the potential loss of economically active people and their families. This was placed in a context where the Outer Hebrides' current demographic is an ageing one; and is forecast to undergo some of the most severe population declines in Scotland.

Almost all of the households covered by the staff survey participate and/or contribute to the running of local community, voluntary and other organisations. Consultees recognised the potential loss of population as leading to fewer people available to be involved in these groups. This was set in a context where groups can currently struggle to recruit people.

In 2019-20 there were 11.2 full time equivalent posts (including part time AFISOs) in air traffic at Stornoway Airport. Their total gross salaries were £509,000. The mean wage was therefore around £45,000-significantly above that for the Outer Hebrides (£30,649).

Once induced impacts are included (i.e. the spend of the employees' wages in the local economy) the total impact is estimated as 14.3 FTE jobs and £579,000 in gross salaries. These jobs and salaries will be lost in 2025 under ATMS.

Consultees see the scale of these direct job losses as very significant. The jobs are seen as high paid and high skilled. There were also references to the loss of wages spend and further loss of economic activity if households moved away from Lewis and posts currently held by other household members could not be filled.

In contrast, the local surveillance alternative is estimated by HIAL as requiring employment of 27 FTE posts at Stornoway Airport with salary payments of £1,700,000. That is a mean salary level of more than £62,000-greatly above the Outer Hebrides average. With the additional induced effects the total impact is estimated as up to c36 FTE jobs and £1.9 million gross salaries.

Any changes in air traffic management resilience could affect the level of activity at Stornoway airport. In 2019 its scheduled flights are estimated to have seen:

- c20,000 return business trips.
- c33,000 inbound visitors, with £8.1 million spend supporting 135 FTE jobs.
- Visiting friends and relatives trips accounting for 27% of all scheduled passengers.

6.3 IMPACT ASSESSMENT

Tables 6.1 and **6.2**, over, contain the impact assessment. As stated earlier the assessment compares ATMS against the local surveillance alternative. The main points to note are:

This potential net loss in employment-up to c36 FTE jobs-from ATMS compared to the local surveillance alternative-is assessed as a potentially very significant negative impact, as are the reduction in the gross salaries and average wage of the jobs. The impact depends on whether the local surveillance alternative could attract sufficient staff on an ongoing basis. There would be a much smaller, additional loss of employment if households leave Lewis and the jobs that spouses or other household members currently hold are not filled.

There is a potentially very significant negative impact on business, leisure and non-scheduled flights if either ATMS or the local surveillance alternative were unable to provide resilient air traffic management. The knock-on impacts would include loss of economic activity and reduced access for social and health-related trips.

The other, significant potential negative impacts include access to high quality employment and in population levels. These are in a context where wage levels in Lewis are relatively low and the island has seen population decline.

There would be less of an impact on schools rolls and community activity. However, there could be significant impacts for both specific community groups and individuals that receive care from households where the HIAL staff member lives.

TABLE 6.1: LEWIS ECONOMIC IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE		
Element/National Islands Plan Criterion	Data/Issues	Potential Impact
Changes in Employment At Stornoway Airport		
Change in employment (direct and induced only)/economic opportunities for island residents)	Net reduction of c36 FTE jobs between ATMS and local surveillance alternative. However, dependent on whether local surveillance alternative could attract sufficient staff on an ongoing basis. (Under ATMS a net reduction of c14 FTE jobs compared to the existing position)	Very significant negative impact
Change in gross salaries (direct and induced only)	Net reduction of c£1.9 million (Under ATMS a net reduction of £579,000 compared to the existing position)	Very significant negative impact
Access to high quality employment	Net loss of 27 FTE posts in air traffic services between ATMS and local surveillance alternative with an average (mean) salary of c£63,000. Far above mean salary of in both the Outer Hebrides and Scotland (full time jobs) (Existing posts have a mean salary of c£45,000)	Very significant negative impact
Potential Wider Impacts		
Resilience of air traffic management and air services/Economic opportunities for island residents/Adequacy of transport of people and goods	Business flights: c20,000 scheduled return flights in 2019-mostly inbound-includes commuting by Lewis residents Non-scheduled flights: freight/cargo significant, military flights a specialisation Information and communication is a specialisation in the Lewis economy and one that is air intensive Tourism: estimated c33,000 scheduled inbound visitors to Lewis in 2019-estimated c£8.1 million spend and 135 FTE jobs	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall
Employment and wage spend of other household members/Economic opportunities for island residents)	Almost all respondents to the staff survey have a spouse and/or other household members who work. ATMS could lead to some households to move elsewhere and around one third of their posts could prove hard to fill. Under the local surveillance alternative a number of the additional posts could lead to new staff and their household members moving to Lewis	Slight negative impact

TABLE 6.2: LEWIS COMMUNITY IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE		
Element/National Islands Plan Criterion	Data/Issues	Potential Impact
Population		
Population loss/Population levels	Staff survey showing average of between 2 and 3 people per household. Suggests between 22 and 33 people across all affected households. Under the local surveillance alternative staff member households could comprise between c60 and c70 people, with some of these having moved to Lewis. Context is an estimated decline of 3% in Lewis' population between 2011 and 2018, with a larger decline forecast for the years to 2028	Significant negative impact
Population loss in key age groups of 16-24 and 25-49 /Population levels and structure - including families)	Clear majority of current staff household members fall within these two age groups. Context is an estimated significant fall in population in these age groups in Lewis between 2011 and 2018. Under the local surveillance alternative new households to Lewis could bring in a number of individuals aged between 16 and 49 (based on current staff's household profile)	Significant negative impact
Impact on services-school rolls	Staff survey identified [REDACTED] children in the households that responded. The surveillance alternative could bring new households to Lewis some of which could include schoolchildren. However, local surveillance alternative impacts also likely to be very slight if new households are distributed across Lewis as per the current air traffic staff.	Very slight negative impact
Community Activity		
Participation in community organisations and activity	Almost all households responding to the survey are involved in a range of local organisations and activities-with an average of two members per household. Local surveillance alternative would offer the possibility of new/retained residents who may be active in the community	Slight negative impact
Providing care for other households	Almost all households responding to the survey provide care support to other family members who live elsewhere in their community/area dependent on number of households that would leave Lewis	Very slight negative impact but could have a significant impact on a number of specific individuals in the community
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services/Economic opportunities for island residents/Adequacy of transport of people and goods	Visiting friends and relatives trips accounted for 27% of Stornoway's total 2019 scheduled passengers Health access by air for Lewis residents is vital to receiving specialist services that are not available locally	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall
Environmental Impacts		
Reduced CO ² emissions as a result of introduction of surveillance/Developing the most energy-efficient and climate-friendly transport services possible	Introduction of surveillance would have the potential to reduce CO2 emissions impacts by between 877 and 1,165 tonnes per year. That equates to removing between 414 and 555 cars from the road network. However, environmental benefit per flight would be the same under both ATMS and the local surveillance alternative	Uncertain as would depend on air operators actually choosing to use the climb and descent profiles. Would apply to both ATMS and the local surveillance alternative.

6.4 ISLAND COMMUNITIES IMPACT ASSESSMENT

6.4.1 Introduction

Based the detailed analysis of context and potential impacts we conclude that ATMS is likely to have an effect on Lewis which is significantly different from its effect on-at least-the Inverness and Dundee communities. Therefore, we have undertaken an Island Communities Impact Assessment.

6.4.2 Likely Significant Different Effect of ATMS on Lewis

The detailed analysis provided at **6.2** and **Appendix B** indicates *potential* for a greater proportionate effect in Lewis than in-at least-some of the other affected communities. These effects particularly relate, first, to:

- Net reduction in employment at Stornoway Airport from ATMS compared to the local surveillance alternative (and compared to the current position).
- Potential loss of population, with the number of households that would leave Lewis presently uncertain.

Second, the greater proportionate effect would also arise from the circumstances in Lewis if the move to ATMS had any negative impact on air service resilience and by extension traffic levels. First, limited services available locally. That leads to:

- A need to travel outside to access certain services e.g. health treatment, specialist businesses.
- Visits by specialist providers based elsewhere.

In addition, a significant number of Lewis residents commute to work off-island.

There is a reliance on *air* for many of these trips (including day trips). That is due to the long surface distances to/from key centres elsewhere, with slow ferries the only available alternative.

Third, the greater proportionate effect in Lewis could arise from its socio-economic circumstances:

- A relatively small economic base.
- Small and apparently declining population with a demographic imbalance.
- Self-contained labour market, with low average wages.
- A significant proportion of the island being covered by HIE Fragile Area designations.

These circumstances are starkly different from those in Inverness and Dundee-as shown in their individual assessments (at **Chapter 10** and **Appendix F**, and **Chapter 11** and **Appendix G**, respectively). They have:

- Very much larger economies providing access to a wide range of services and opportunities locally rather than having to be accessed by air.
- Large labour markets including accessible ones in adjoining areas.
- Growing populations.
- Wages around the Scottish average.

Importantly, in Inverness one of the effects of ATMS would be a very significant increase in highly paid air traffic service employment. In contrast, the effect in Lewis will be a potentially very significant reduction in employment at Stornoway Airport compared to the local surveillance alternative, and a reduction compared to the present position.

6.4.3 Possible Development of ATMS in Order to Improve or Mitigate the Outcomes

HIAL have identified a number of existing policies and potential future initiatives. These are set out at **Table 6.3**, over.

These could help to mitigate, in particular, the loss of employment in air traffic control and the wider economy (through induced impacts), and potential loss of population from Lewis as a result.

That reduction of employment from ATMS, as shown earlier in this Chapter, is estimated at around:

- Up to 36 FTE jobs compared to the local surveillance alternative.
- 14 FTE jobs compared to the current position.

6.4.4 Further Recommendations

It is not certain that HIAL's proposed mitigations could fully address the potential impacts on local employment and possible loss of population. Therefore, HIAL should also commission an independent report which would identify ways in which their operations can create more economic activity in the communities they serve. This is an overarching recommendation that also covers Orkney, Shetland and Uist.

In addition, to help address consultees' concerns and issues HIAL should publish much greater information on the ATMS section of their website-which has seen very few updates since early 2020. That should include more information on the basis of the ATMS Business case and budget approval in December 2019: such as the detail to which it and the local surveillance alternative had been worked up at that point in time, including estimated employment levels.

TABLE 6.3: HIAL'S EXISTING POLICIES AND POTENTIAL FUTURE INITIATIVES FOR MITIGATION OF IMPACTS

Policy/Initiative	Description	Current/Future Discussion With Unions (C/F)	Timescale
Flexible Recruitment Policy	Allows individuals based in remote communities to accept posts that are not required to be based at a specific HIAL site	C Policy in place	Policy in place
Home Working Policy	Allows individuals based in remote communities to accept posts that are not required to be based at a specific HIAL site	Completed	Policy in place
Organisation Change Policy-redeployment procedures and five year pay protection for existing staff	Delays impact of any reduction in salary for five years	Completed	Policy in place
No compulsory redundancies in line with current Scottish Government policy	-	C	Policy in place
ATMS Commuting Policy	Policy to allow staff to remain living in local community and travel to CSC	F	First meeting with trade union February 2021
Flexible Early Severance Policy and Terms	Financial package may be attractive to staff to allow them to remain in existing communities	F	Company Joint Negotiating & Consultative Committee meeting February 2021
Local Airport Liaison roles	This is a new role which increases the airport staffing complement	F	First meeting with trade union February 2021
Staffing to expand simulator capabilities	This is anticipated to provide alternative employment opportunities for some post holders	F	Detailed work required before discussion takes place
Review Air Traffic Engineering options	These are new roles which may increase the airport staffing complement	F	Detailed work required before discussion takes place

Source: HIAL

7 IMPACT ASSESSMENT: ORKNEY

7.1 INTRODUCTION

This Chapter should be read in conjunction with **Chapters 1, 2, 3 and 4**.

As noted therein there are a number of uncertainties around the final content and effects of what HIAL will be introducing for Kirkwall Airport. That is, a change from air traffic management through ATC (Air Traffic Control) at the airport to remote tower operation by the Central Surveillance Centre in Inverness. This is forecast to come into operation in December 2024.

As noted in earlier Chapters:

- The comparison of impacts is between ATMS and the local surveillance alternative. However, some comparisons are also made between ATMS and the existing position.
- Given the number of present uncertainties the assessment is very much around the *potential* scale of impacts.

In this Chapter the employment and salary figures shown for existing HIAL staff at Kirkwall, and under ATMS and the local surveillance alternative, are those contained in **Chapter 2**. As noted in that Chapter they are best estimates.

Some employment and salary impacts include both direct (i.e. employment in air traffic management) and induced effects (i.e. the impact from the spend of the employee wages in the local economy).

Indirect impacts (those created by the purchases of goods and services to operate the air traffic control facilities) are not included. That is because no information is available for the potential scale of purchases.

The Chapter begins with a summary of supporting information for the impacts. It then shows the impacts in terms of *Economy* and *Community*. This is followed by the Islands Community Impact Assessment (ICIA) for Orkney.

7.2 SUMMARY OF SUPPORTING INFORMATION FOR IMPACT ASSESSMENT

The full supporting information is contained in **Appendix C**.

7.2.1 Context

Between April 2019 and March 2020 there was a total of 10,601 scheduled aircraft movements at Kirkwall Airport.

In 2019 around 173,000 passengers used scheduled flights at Kirkwall. Some 152,000 were travelling on external flights-i.e. to/from outside Orkney-with the other c21,000 on internal flights to/from Orkney's North Isles.

The number of external flights was split evenly between residents of Orkney and those who live elsewhere. More than half (57%) of the trips were made for leisure purposes. These include health-related travel by island residents for treatment elsewhere. The other 43% were for business purposes.

Between April 2019 and March 2020 there were 3,485 non-scheduled movements (excluding circuits) at Kirkwall Airport. The most frequent categories of movement were Freight/Cargo, Positioning and Air Ambulance.

Consultees noted air as facilitating trips at short notice-including lifeline medical transfers. It also provides opportunities to make trips and avoid being away for an extended period.

Air is seen as generally more reliable than ferry sailings during adverse weather. It is also the main means of passenger travel for some of Orkney's North Isles which have infrequent ferry sailings with long journey times.

In 2018 there was a total of 9,500 jobs in mainland Orkney. This was an increase of around 8% since 2015, a higher growth rate than in both the Highlands and Islands and Scotland.

Four industries are responsible for approaching half (48%) of all employment. Distinctive features include a relatively high proportion of employment in each of Public administration and defence; compulsory social security; Construction; and Transport and storage. There are also particular specialisms in Fishing and aquaculture, Water transport and renewable energy activities.

The average full-time wage in Orkney is slightly above that for Scotland, although that is in a context of a relatively high cost of living in mainland Orkney.

Unemployment rates have been below those in the Highlands and Islands and, in particular, Scotland.

The estimated 2018 population of mainland Orkney is around 19,400. Its population structure is very similar to that of the Highlands and Islands. However, it has an older age structure than Scotland, with underrepresentation of those aged between 16 and 49 years.

Mainland Orkney's population has grown at a faster rate than seen in both the Highlands and Islands and Scotland. However, this was driven by the 65+ group in particular.

Orkney's population is forecast to grow very slightly in the years to 2028; and at a lower rate than Scotland. However, that is still a better outlook than the forecast fall for the Highlands and Islands.

Consultees' concerns and issues about the change from ATC to centralised air traffic control included:

- The resilience of remote monitoring through digital connectivity. This was in a context where there is seen as a lack of information about the technical ICT solution that HIAL propose to use.
- How far ATMS planning has taken into account the impacts of the Covid pandemic.

- There is much greater scope to address any air traffic staff recruitment/retention issues through greater local recruitment.
- ATMS could lead to a significant increase in airport closures leading to cancelled and reduced reliability of flights with a loss of customer confidence.

7.2.2 Impact Findings

There are 14 affected staff at Kirkwall airport (excluding part time AFISOs). Most live in Kirkwall, with the others in various parts of mainland Orkney. Most staff are 45 years, and the median age is 53 years.

Based on the staff survey it is broadly estimated that c40 people live in the 14 affected households, including 14 children.

In the staff survey almost all of the households contain other members who work-mostly in full time positions. These include jobs with Orkney Islands Council, Police Scotland, the media and self-employed. It is estimated that around one third of these jobs could prove hard to fill if the households moved away from Orkney. Consultees saw this as possible because Orkney's relatively low unemployment has created a tight labour market.

Half of the households covered by the staff survey participate and/or contribute to the running of local community, voluntary and other organisations. Consultees referred to individuals involved in organisations such as youth clubs, sports clubs and their Community Council, some of which can struggle for volunteers.

In 2019-20 there were 12.7 full time equivalent posts (including part time AFISOs) in air traffic at Kirkwall Airport. Their total gross salaries were £574,000. The mean wage was therefore c£45,000-significantly above that for full time jobs in Orkney (c£35,000).

Consultees saw the loss of these jobs as likely to have a significant negative economic impact. That reflected both the number of jobs and their high salary levels. The posts were referred to as "professional" and "skilled". They are seen as being difficult to replace with other jobs of similar skill and pay level. This was also expected to lead to working age adults and their children moving away from Orkney.

The nature of surveillance to be introduced under ATMS has still to be defined. A number of consultees were concerned that the outcome could lead to planning restrictions constraining:

- Renewables development on mainland Orkney.
- The proposed expansion of some of Orkney's harbours to facilitate the change to renewable maritime energy resources.

Once induced impacts are included (i.e. the spend of the employees' wages in the local economy) the total impact is estimated as 16.2 FTE jobs and £653,000 in gross salaries. These jobs and salaries will be lost in 2024 under ATMS.

In contrast, the local surveillance alternative is estimated by HIAL as requiring employment of 27 FTE posts at Kirkwall Airport with total salary payments of £1,700,000. That is a mean salary level of more than £62,000-greatly above the Orkney average. With the additional induced effects the total impact is estimated as up to c36 FTE jobs and £1.9 million gross salaries.

Any changes in air traffic management resilience could affect the level of activity at Kirkwall airport. In 2019 its external scheduled flights are estimated to have seen:

- c33,000 return business trips.
- 38,000 inbound visitors, with £11.4 million spend supporting 190 FTE jobs.
- Visiting friends and relatives trips accounting for 35% of all scheduled passengers.

7.3 IMPACT ASSESSMENT

Tables 7.1 and **7.2**, over, contain the impact assessment. As stated earlier the assessment compares ATMS against the local surveillance alternative.

The main points to note are:

The net reduction in employment-up to c36 FTE jobs-from ATMS compared to the local surveillance alternative-is assessed as a potentially very significant negative impact, as are the reduction in the gross salaries and average wage of the jobs. This depends on whether the local surveillance alternative could attract sufficient staff on an ongoing basis. There would be a much smaller, additional loss of employment if households leave Orkney and the jobs that spouses or other household members currently hold are not filled.

There is a potentially very significant negative impact on business, leisure and non-scheduled flights if either ATMS or the local surveillance alternative were not able to provide resilient air traffic management. The knock-on impacts would include loss of economic activity and reduced access for social and health-related travel. Within this, the impacts could be highly significant for Orkney's North Isles given their degree of reliance on internal air services.

A distinctive finding is the potentially very significant negative impact on renewables development on Orkney. As explained at **Chapter 2** this would apply to both ATMS and the local surveillance alternative. The actual scale of impact would depend on the type of surveillance that is deployed

The other, significant potential impacts include access to high quality employment and population levels. There would be less of an impact on schools rolls and community activity. However, there could be significant impacts for specific community groups, and for individuals that receive care from households where the HIAL staff member lives.

TABLE 7.1: ORKNEY ECONOMIC IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE

Element/ <i>National Islands Plan Criterion</i>	Data/Issues	<u>Potential</u> Impact
Changes in Employment At Kirkwall Airport		
Change in employment (direct and induced only) (<i>Economic opportunities for island residents</i>)	Net reduction of up to c36 FTE jobs between ATMS and local surveillance alternative. (Under ATMS a net reduction of c16 FTE jobs compared to the existing position)	Very significant negative impact
Change in gross salaries (direct and induced only)	Net reduction of c£1.9 million. (Under ATMS a net reduction of £653,000 compared to the existing position)	Very significant negative impact
Access to high quality employment	Net reduction of 27 FTE posts in air traffic services between ATMS and local surveillance alternative with an average (mean) salary of c£63,000. Far above mean salary in both Orkney and Scotland (full time jobs). (Existing posts have a mean salary of c£45,000)	Very significant negative impact
Potential Wider Impacts		
Resilience of air traffic management and air services/ <i>Economic opportunities for island residents/Adequacy of transport of people and goods</i>	Business flights: c33,000 scheduled return flights in 2019-mostly inbound to Orkney Non-scheduled flights: freight/cargo volumes significant and a specialisation Tourism: estimated 38,000 scheduled air visitors in 2019 by-estimated spend of c£11.4 million and 190 FTE jobs	Very significant negative impact under <u>either</u> ATMS or local surveillance alternative if resilience is lower than present levels and traffic levels fall
Surveillance type constrains development (<i>Economic opportunities for island residents</i>)	Renewables is a specialisation of the Orkney economy and Orkney's role is important both within Scotland and internationally. Physical developments could be constrained by the surveillance that is introduced	Very significant negative impact. Applies to both ATMS and the local surveillance alternative
Employment and wage spend of other household members (<i>Economic opportunities for island residents</i>)	Almost all respondents to the staff survey have a spouse and/or other household members who work. ATMS could lead some households to move elsewhere. Estimated four to five existing jobs could prove hard to fill. Under the local surveillance alternative a number of the additional posts could lead to new staff and their household members moving to Orkney	Slight negative impact

TABLE 7.2: ORKNEY COMMUNITY IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE

Element/National Islands Plan Criterion	Data/Issues	Potential Impact
Population		
Population loss (Population levels)	Some concentration of staff in Kirkwall (Orkney's major settlement). Staff survey showing average of 2.8 people per household. Suggests c40 people across all staff households. Survey suggests that number of children in these households could be around 14. Under the local surveillance alternative staff member households could comprise around 70 people, with some of these having moved to Orkney. Context of growth in Orkney population between 2011 and 2018, and slight growth forecast for the years to 2028.	Significant negative impact
Population loss in key age groups of 16-24 and 25-49 (Population levels and structure -including families)	Around half of existing staff household members fall within these two age groups. Context is that Orkney is underrepresented in 16-49 age group compared to Scotland. Under the local surveillance alternative new households to Orkney would likely bring in a number of people aged 16-49	Significant negative impact
Impact on services-school rolls	Staff survey identified 12 children aged between 0 and 15 years. Those of school age appear to be spread across a number of schools. Under the local surveillance alternative new households to Orkney could bring in children of school age.	Very slight negative impact
Community Activity		
Participation in community organisations and activity	Half of the households responding to the survey are involved in a range of local organisations and activities-with an average of around two members per household. Local surveillance alternative could offer the possibility of new/retained residents who may be active in the community	Slight negative impact
Providing care for other households	Around half the households responding to the survey provide care support to other family members who live elsewhere in their community/area.	Very slight negative impact but could have a significant impact on a number of specific individuals in the community
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services/Economic opportunities for island residents/Adequacy of transport of people and goods	Visiting friends and relatives accounts more than one third (35%) of passengers on external flights Health access by air for Orkney residents is vital to receiving specialist services that are not available locally North Isles residents depend on internal air service to make day trips to mainland Orkney, as do service providers travelling to the North Isles	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall
Environmental Impacts		
Reduced CO ₂ emissions as a result of introduction of surveillance (Developing the most energy-efficient and climate-friendly transport services possible)	Introduction of surveillance would have the potential to reduce impacts by between 911 and 1,226 tonnes of CO ₂ emissions per year. That equates to removing between 434 and 584 cars from the road network Environmental benefit per flight would be the same under both ATMS and the local surveillance alternative	Uncertain as would depend on air operators actually choosing to use the climb and descent profiles. Would apply to both ATMS and the local surveillance alternative.

7.4 ISLAND COMMUNITIES IMPACT ASSESSMENT

7.4.1 Introduction

Based on the detailed analysis of context and potential impacts we conclude that ATMS is likely to have an effect on Orkney which is significantly different from its effect on-at least-the Inverness and Dundee communities. Therefore, we have undertaken an Island Communities Impact Assessment.

7.4.2 Likely Significant Different Effect of ATMS on Orkney

The detailed analysis provided at **7.2** and **Appendix C** indicates *potential* for a greater proportionate effect in Orkney than in-at least-some of the other affected communities. These effects particularly relate to:

- Net reduction in employment at Kirkwall Airport from ATMS compared to the local surveillance alternative, and to the existing position.
- Potential loss of population, with the number of households that would leave Orkney presently uncertain.

Second, the greater proportionate effect would also arise from the circumstances in Orkney if the move to ATMS had any negative impact on air service resilience and by extension traffic levels.

Limited services are available in Orkney. That leads to:

- A need to travel outside to access certain services e.g. health treatment, specialist businesses.
- Visits by specialist providers based elsewhere.

That applies both to travel between Orkney and the Scottish mainland and between Orkney's North Isles and its own mainland.

There is a reliance on *air* for many such trips (including day trips). That is due to the long surface distances to/from key centres elsewhere, with slow ferries the only available alternative.

Third, the greater proportionate effect in Orkney could arise from its socio-economic circumstances:

- A relatively small economic base.
- Self-contained labour market.

These circumstances are starkly different from those in Dundee and Inverness as shown in their individual assessments (at **Chapter 10** and **Appendix F**, and **Chapter 11** and **Appendix G**, respectively).

They have:

- Very much larger economies providing access to a wide range of services and opportunities locally rather than having to be accessed by air.
- Large labour markets including accessible ones in adjoining areas.
- Wages around the Scottish average.

Importantly, in Inverness one of the effects of ATMS will be a significant increase in highly paid air traffic service employment. In contrast, the effect in Orkney will be a potentially very significant reduction in employment at Kirkwall Airport compared to the local surveillance alternative, and a reduction compared to the existing position.

7.4.3 Possible Development of ATMS in Order to Improve or Mitigate the Outcomes

HIAL have identified a number of existing policies and potential future initiatives. These are set out at **Table 7.3**, over.

They could help to mitigate, in particular, the loss of employment in air traffic control and the wider economy (through induced impacts), and potential loss of population from Orkney as a result.

That reduction of employment from ATMS, as shown earlier in this Chapter, is estimated at around:

- Up to 36 FTE jobs compared to the local surveillance alternative.
- 16 FTE jobs compared to the current position.

7.4.4 Further Recommendations

It is not certain that HIAL's proposed mitigations could fully address the potential impacts on local employment and possible loss of population. In addition to what is shown at **Table 7.3** HIAL should commission an independent report which would identify ways in which HIAL's operations can create more economic activity in the communities they serve. This is an overarching recommendation that also covers Lewis, Shetland and Uist.

In addition, to help address consultees' concerns and issues HIAL should publish much greater information on the ATMS section of their website-which has seen very few updates since early 2020. That should include more information on the basis of the ATMS Business Case and budget approval in December 2019: such as the detail to which it and the local surveillance alternative had been worked up at that point in time, including estimated employment levels.

TABLE 7.3: HIAL'S EXISTING POLICIES AND POTENTIAL FUTURE INITIATIVES FOR MITIGATION OF IMPACTS			
Policy/Initiative	Description	Current/Future Discussion With Unions (C/F)	Timescale
Flexible Recruitment Policy	Allows individuals based in remote communities to accept posts that are not required to be based at a specific HIAL site	C Policy in place	Policy in place
Home Working Policy	Allows individuals based in remote communities to accept posts that are not required to be based at a specific HIAL site	Completed	Policy in place
Organisation Change Policy-redeployment procedures and five year pay protection for existing staff	Delays impact of any reduction in salary for five years	Completed	Policy in place
No compulsory redundancies in line with current Scottish Government policy	-	C	Policy in place
ATMS Commuting Policy	Policy to allow staff to remain living in local community and travel to CSC	F	First meeting with trade union February 2021
Flexible Early Severance Policy and Terms	Financial package may be attractive to staff to allow them to remain in existing communities	F	Company Joint Negotiating & Consultative Committee meeting February 2021
Local Airport Liaison roles	This is a new role which increases the airport staffing complement	F	First meeting with trade union February 2021
Staffing to expand simulator capabilities	This is anticipated to provide alternative employment opportunities for some post holders	F	Detailed work required before discussion takes place
Review Air Traffic Engineering options	These are new roles which may increase the airport staffing complement	F	Detailed work required before discussion takes place

Source: HIAL

8 IMPACT ASSESSMENT: SHETLAND

8.1 INTRODUCTION

This Chapter should be read in conjunction with **Chapters 1, 2, 3 and 4.**

As noted therein there are a number of uncertainties around the final content and effects of what HIAL will be introducing for Sumburgh Airport. That is, a change from air traffic management through ATC (Air Traffic Control) at the airport to remote tower operation by the Central Surveillance Centre in Inverness. This is forecast to come into operation in March 2024.

As noted in earlier Chapters:

- The comparison of impacts is between ATMS and the local surveillance alternative. However, some comparisons are also made between ATMS and the existing position.
- Given the number of present uncertainties the assessment is very much around the *potential* scale of impacts.

In this Chapter the employment and salary figures shown for existing HIAL staff at Sumburgh, and under ATMS and the local surveillance alternative, are those contained in **Chapter 2.** As noted in that Chapter they are best estimates.

Some employment and salary impacts include both direct (i.e. employment in air traffic management) and induced effects (i.e. the impact from the spend of the employee wages in the local economy).

Indirect impacts (those created by the purchases of goods and services to operate the air traffic control facilities) are not included. That is because no information is available for the potential scale of purchases.

The Chapter begins with a summary of supporting information for the impacts. It then shows the impacts in terms of *Economy* and *Community*. This is followed by the Islands Community Impact Assessment (ICIA) for Shetland.

8.2 SUMMARY OF SUPPORTING INFORMATION FOR IMPACT ASSESSMENT

The full supporting information is contained in **Appendix D.**

8.2.1 Context

Between April 2019 and March 2020 there was a total of 6,212 scheduled aircraft movements at Sumburgh Airport.

In 2019 around 156,000 passengers used scheduled flights at Sumburgh. Most (63%) were made by those who live outside Shetland. The remaining 37% of passengers were residents of Shetland.

More than half (56%) of the trips were made for leisure purposes. These include health-related travel by island residents for treatment elsewhere. The other 44% were for business purposes.

Between April 2019 and March 2020 there were 12,358 non-scheduled movements (excluding circuits) at Sumburgh Airport. The most frequent categories of movement were Oil Charter, Refuelling and Positioning.

Consultees view air as the principal scheduled passenger transport link between Shetland and mainland Scotland. That reflects, in part, the long ferry crossing time (c14 hours) and single daily service between Shetland and Aberdeen.

Specific mention was also made of air ambulance flights, movement of freight and offshore helicopter traffic.

The main benefits of the flights are seen as:

- Facilitating rapid access to mainland Scotland, rest of UK and internationally.
- Supporting Shetland as an attractive place to live, work, study and invest.
- Allowing access to healthcare services not available in Shetland.

In 2018 there was a total of 13,000 jobs in mainland Shetland. This was around 7% less than in 2015, as some major construction projects came to an end. This contrasts with employment growth in both Scotland and the Highlands and Islands in the same period.

Four industries are responsible for approaching half of employment. Distinctive features included a continuing high proportion of employment in Construction as well as in Transport and storage. Specialisation is evident in Fishing and aquaculture and a number of areas of Manufacturing.

Average wages in full time jobs are 4% higher than the Scottish average, although that is in a context of a relatively high cost of living in mainland Shetland.

Unemployment has been consistently below the regional and national averages. However, Shetland has faced recent job losses through a downturn in the energy sector and the closure of Scatsta airport which was a major employer.

Sumburgh Airport is located in Shetland south mainland where it is a major employment site.

The estimated 2018 population on mainland Shetland is 20,275. The population structure is generally similar to Scotland but has a younger profile than the Highlands and Islands. Population levels are estimated to have fallen by 0.7% between 2011 and 2018, in contrast to growth at the regional and national levels. The decline among those aged up to 49 years was to a greater extent than in Scotland.

The population of Shetland is forecast to decline slightly between 2018 and 2028. That is to a lesser degree than in the Highlands and Islands but in contrast to forecast growth for Scotland.

The estimated 2018 population of Shetland south mainland was 3,370. It has a younger population structure than the Highlands and Islands, and one that is quite similar to that of Scotland.

It is estimated that between 2011 and 2018 the area's population grew at a faster rate than in the Highlands and Islands and Scotland. Within this, the population fell in each of the three youngest age bands.

Consultees' concerns and issues about the change from ATC to centralised air traffic control included:

- The technical feasibility and resilience of remote tower operations.
- ATMS's ability to cope with the distinctive features of Sumburgh Airport.
- How far HIAL staff recruitment and retention issues are due to their not undertaking proper workforce planning. This was in a context where some consultees stated that Sumburgh Airport has no genuine recruitment problem nor a lack of available cover for full operations.
- ATMS would provide no service or safety benefits at Sumburgh over what is currently provided or could be provided by the local surveillance alternative.

While airlines raised some specific issues they generally had no significant concerns about ATMS.

8.2.2 Impact Findings

There are 15 affected staff at Sumburgh airport (excluding part time AFISOs). Most [REDACTED] live in the *south mainland*. Around half the staff are aged 34 years or less, with most of the rest between 35 and 44 years old. The median age is 40 years.

Based on the staff survey it is broadly estimated that 37 people live in the 15 affected households, including 12 children.

In the staff survey almost all of the households contain other members who work-mostly in full time positions. These include posts with Shetland Islands Council, at Sumburgh Airport, NHS, construction and water transport.

It is estimated that up to six such jobs could prove hard to fill if the households moved away from Shetland. Consultees referred to a range of sectors where there is already a shortage of skills-e.g. social work, specialist medical posts, childcare. They also mentioned the potential wider impacts of the loss of population such as demand for other services (e.g. local shops, health facilities).

All the households in the staff survey participate and/or contribute to the running of local community, voluntary and other organisations. Consultees also highlighted this contribution to the local communities.

In 2019-20 there were 13.3 full time equivalent posts (including part time AFISOs) in air traffic at Sumburgh Airport. Their total gross salaries were £591,000. The mean wage was therefore around £44,000-significantly above that for full time jobs in Shetland (£34,000).

Once induced impacts are included (i.e. the spend of the employees' wages in the local economy) the total impact is estimated as 16.9 FTE jobs and £670,000 in gross salaries. These jobs and salaries will be lost in 2024 under ATMS.

The loss of this direct employment under ATMS was commonly referred to by consultees. The jobs were variously referred to as "well paid" "attractive" and "some of the highest-quality". These economic impacts were seen as possibly being exacerbated if ATMS reduced the reliability of flights at Sumburgh. The impacts were seen as possibly leading to entire households leaving Shetland, with a loss of younger people from their community.

In contrast, the local surveillance alternative is estimated by HIAL as requiring employment of 27 FTE posts at Sumburgh Airport with total salary payments of £1,700,000. That is a mean salary level of around £63,000-very greatly above the Shetland average. Once induced effects are included the total impact is estimated as up to c36 FTE jobs and £1.9 million gross salaries.

Any changes in air traffic management resilience could affect the level of activity at Sumburgh airport. In 2019 its scheduled flights are estimated to have seen:

- 34,000 return business trips.
- c49,000 inbound visitors, with £18.9 million spend supporting 315 FTE jobs.
- Visiting friends and relatives trips accounting for more than one third of all scheduled passengers.

Some consultees viewed the known and potential impacts of ATMS within a context of a particularly challenging time for parts of the Shetland economy. This included, in particular, the closure of Scatsta airport. Others also contrasted what they saw as the negative impacts of ATMS compared to the positive aspects of the local surveillance alternative for employment creation and population retention and expansion.

8.3 IMPACT ASSESSMENT

Tables 8.1 and **8.2**, over, contain the impact assessment. As stated earlier the assessment compares ATMS against the local surveillance alternative. The main points to note are:

This net reduction in employment-up to c36 FTE jobs-from ATMS compared to the local surveillance alternative-is assessed as a potentially very significant negative impact, as are the reduction in the gross salaries and average wage of the jobs. This impact depends on whether the local surveillance alternative could attract sufficient staff on an ongoing basis. There would be a much smaller, additional loss of employment if households leave Shetland and the jobs that spouses or other household members currently hold are not filled.

TABLE 8.1: SHETLAND ECONOMIC IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE		
Element/National Islands Plan Criterion	Data/Issues	Potential Impact
Changes in Employment at Sumburgh Airport		
Change in employment (direct and induced only) (<i>Economic opportunities for island residents</i>)	Net reduction of up to c36 FTE jobs between ATMS and local surveillance alternative. (Under ATMS a net reduction of c17 FTE jobs compared to the existing position) Transport related employment-including at Sumburgh Airport-is a significant employer in Shetland south mainland	Very significant negative impact
Change in gross salaries (direct and induced only)	Net reduction of c£1.9 million (Under ATMS a net reduction of £670,000 compared to the existing position)	Very significant negative impact
Access to high quality employment	Net reduction of 27 FTE posts in air traffic services with an average (mean) salary of c£63,000. Far above mean salary in Shetland and £ Scotland. (Existing posts have a mean salary of c£44,000)	Very significant negative impact
Potential Wider Impacts		
Resilience of air traffic management and air services (<i>Economic opportunities for island residents/Adequacy of transport of people and goods</i>)	Business flights: c34,000 scheduled return flights in 2019-mostly inbound to Shetland Non-scheduled flights: oil charter volumes are significant and a specialisation Energy sector is a specialisation in Shetland and is air intensive, including oil and gas charter flights. Some specialisation sectors are export focused-e.g. fisheries, textiles. Tourism: estimated c49,000 visitors to Shetland on scheduled flights in 2019-estimated spend of c£18.9 million and 315 FTE jobs	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall
Employment and wage spend of other household members (<i>Economic opportunities for island residents</i>)	Almost all respondents to the staff survey have a spouse and/or other household members who work. ATMS could lead to some households to move elsewhere and a number of posts (c6) currently held by household members could prove hard to fill. Under the local surveillance alternative a number of the additional posts could lead to new staff and their household members moving to Shetland	Slight negative impact

TABLE 8.2: SHETLAND COMMUNITY IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE		
Element/National Islands Plan Criterion	Data/Issues	Potential Impact
Population		
Population loss (Population levels)	Staff survey showing average of 2.4 people per household. Suggests around 37 people across all staff households, including around 12 children. There is a concentration of affected households in Shetland south mainland Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these having moved to Shetland.	Significant negative impact
Population loss in key age groups of 16-24 and 25-49 (Population levels and structure -including families)	Staff survey suggests that more than half of all household members fall within these two age groups. Neither mainland Shetland nor Shetland south mainland are particularly underrepresented in 16-49 age groups compared to Scotland. Under the local surveillance alternative any new households to Shetland are likely to bring in a number of individuals aged between 16 and 49 based on current staff's household profile.	Significant negative impact
Impact on services-school rolls	Staff survey identified [REDACTED] nursery/school children in the households that responded	Very slight negative impact
Community Activity		
Participation in community organisations and activity	All the households responding to the survey are involved in a range of local organisations and activities-with an average of around two members per household. Local surveillance alternative could offer the possibility of new/retained residents who may be active in the community	Slight negative impact but could have a significant impact on a number of specific organisations/activities-particularly in Shetland south mainland
Providing care for other households	Slightly more than half the households responding to the survey provide care support to other family members who live elsewhere in their community/area	Very slight negative impact but could have a significant impact on a number of individuals in the community
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services/Economic opportunities for island residents/Adequacy of transport of people and goods	Visiting friends and relatives trips account more than one third of Sumburgh scheduled air passengers. Health access by air for Shetland residents is vital to receiving specialist services that are not available locally	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall

There is a potentially very significant negative impact on business, leisure and non-scheduled flights if either ATMS or the local surveillance alternative were not able to provide resilient air traffic management. The knock-on impacts would include loss of economic activity and reduced access to social and health-related travel. This is within a context of Shetland having a particularly outward facing economy.

The other, significant potential impacts include access to high quality employment, and population levels. This is in a context where many of the affected households are in Shetland south mainland.

There would be less of an impact on schools rolls and community activity. However, there could be significant impacts for specific community groups and individuals that receive care from households where the HIAL staff member lives. Also, these households appear particularly active in local community groups.

8.4 ISLAND COMMUNITIES IMPACT ASSESSMENT

8.4.1 Introduction

Based on the detailed analysis of context and potential impacts we conclude that ATMS is likely to have an effect on Shetland which is significantly different from its effect on-at least-the Inverness and Dundee communities. Therefore, we have undertaken an Island Communities Impact Assessment.

8.4.2 Likely Significant Different Effect of ATMS on Shetland

The detailed analysis at **8.2** and **Appendix D** indicates *potential* for a greater proportionate effect in Shetland than in-at least-some of the other affected communities. These effects particularly relate to:

- Net reduction in employment at Sumburgh airport from ATMS compared to the local surveillance alternative, and also compared to the existing position.
- A concentration of affected households in one part of Shetland (i.e. south mainland).
- Potential loss of population, with the number of households that would leave Shetland presently uncertain.

This greater proportionate effect would arise from the circumstances in Shetland. First, limited services available locally. That leads to:

- A need to travel outside to access certain services e.g. health treatment, specialist businesses.
- Visits by specialist providers based elsewhere.

There is a reliance on *air* for many such trips (including day trips). That is due to the long surface distances to/from key centres elsewhere, with slow ferries the only available alternative-which is particularly the case for Shetland.

Second, the greater proportionate effect in Shetland could arise from its socio-economic circumstances:

- A relatively small economy.
- Self-contained labour market.

These circumstances are starkly different from those in Dundee and Inverness as shown in their individual assessments at **Chapter 10** and **Appendix F**, and **Chapter 11** and **Appendix G**, respectively). They have:

- Very much larger economies providing access to a wide range of services and opportunities locally rather than having to be accessed by air.
- Large labour markets including accessible ones in adjoining areas.
- Growing populations.

Importantly, in Inverness one of the effects of ATMS will be a significant increase in highly paid air traffic service employment.

In contrast, the effect in Shetland will be a potentially very significant reduction in employment at Sumburgh Airport from ATMS compared to the local surveillance alternative, and a reduction compared to the existing position.

8.4.3 Possible Development of ATMS in Order to Improve or Mitigate the Outcomes

HIAL have identified a number of existing policies and potential future initiatives. These are set out at **Table 8.3**, over.

These could help to mitigate, in particular, the loss of employment in air traffic control and the wider economy (though induced impacts), and potential loss of population from Shetland as a result.

That reduction of employment from ATMS, as shown earlier in this Chapter, is estimated at around:

- Up to 36 FTE jobs compared to the local surveillance alternative.
- 17 FTE jobs compared to the current position.

8.4.4 Further Recommendations

It is not certain that HIAL's proposed mitigations could fully address the potential impacts on local employment and possible loss of population. In addition to what is shown at **Table 8.3** HIAL should commission an independent report which would identify ways in which HIAL's operations can create more economic activity in the communities they serve. This is an overarching recommendation that also covers Lewis, Orkney and Uist.

TABLE 8.3: HIAL'S EXISTING POLICIES AND POTENTIAL FUTURE INITIATIVES FOR MITIGATION OF IMPACTS

Policy/Initiative	Description	Current/Future Discussion With Unions (C/F)	Timescale
Flexible Recruitment Policy	Allows individuals based in remote communities to accept posts that are not required to be based at a specific HIAL site	C Policy in place	Policy in place
Home Working Policy	Allows individuals based in remote communities to accept posts that are not required to be based at a specific HIAL site	Completed	Policy in place
Organisation Change Policy-redeployment procedures and five year pay protection for existing staff	Delays impact of any reduction in salary for five years	Completed	Policy in place
No compulsory redundancies in line with current Scottish Government policy	-	C	Policy in place
ATMS Commuting Policy	Policy to allow staff to remain living in local community and travel to CSC	F	First meeting with trade union February 2021
Flexible Early Severance Policy and Terms	Financial package may be attractive to staff to allow them to remain in existing communities	F	Company Joint Negotiating & Consultative Committee meeting February 2021
Local Airport Liaison roles	This is a new role which increases the airport staffing complement	F	First meeting with trade union February 2021
Staffing to expand simulator capabilities	This is anticipated to provide alternative employment opportunities for some post holders	F	Detailed work required before discussion takes place
Review Air Traffic Engineering options	These are new roles which may increase the airport staffing complement	F	Detailed work required before discussion takes place

Source: HIAL

In addition, to help address consultees' concerns and issues HIAL should publish much greater information on the ATMS section of their website-which has seen very few updates since early 2020. That should include more information on the basis of the ATMS Business Case and budget approval in December 2019: such as the detail to which it and the local surveillance alternative had been worked up at that point in time, including estimated employment levels.

9 **IMPACT ASSESSMENT: CAITHNESS**

9.1 **INTRODUCTION**

This Chapter as a whole should be read in conjunction with **Chapters 1, 2, 3 and 4** and the supporting information for the impact assessment at **Appendix A**.

As noted therein there are a number of uncertainties around the detailed content and effects of what HIAL are introducing at Wick John O' Groats. That is, a change from ATC to AFIS (Aerodrome Flight Information Service) air traffic management. This is forecast to come into operation in December 2023.

Uncertainties relate to:

- The actual staff numbers and salaries at Wick John O' Groats Airport arising from the change. The figures in this report, provided by HIAL, are only best estimates.
- The final detail of how AFIS operations would work at Benbecula Airport.

As set out at **Chapter 2**, the assessment for Wick John O' Groats is based on a comparison of AFIS operations *against Wick John O' Groats otherwise having been included in the Central Surveillance Centre*. However, some comparisons are also made between AFIS and the existing position.

Some employment and salary impacts include both direct (i.e. employment in air traffic management) and induced effects (i.e. the impact from the spend of the employee wages in the local economy).

Indirect impacts (those created by the purchases of goods and services to operate the air traffic control facilities) are not included. That is because no information is available for the potential scale of purchases.

The Chapter begins with a summary of supporting information for the impacts. It then shows the impacts in terms of *Economy and Community*.

9.2 **SUMMARY OF SUPPORTING INFORMATION FOR IMPACT ASSESSMENT**

The full supporting information is contained in **Appendix E**.

9.2.1 Context

Between April 2019 and March 2020 there was a total of 1,160 scheduled aircraft movements at Wick John O' Groats Airport. It should be noted that both scheduled services ceased to operate in the first quarter of 2020.

In 2019 around 13,000 passengers used the two scheduled services (Aberdeen and Edinburgh) at Wick John O' Groats. More than three quarters (79%) of trips were outbound- i.e. made by those who live in the airport catchment area. The remaining 21% were inbound- i.e. by people who live elsewhere.

Most (70%) passengers were on business with the other 30% travelling for leisure purposes. The air services facilitated travel to/from England in particular by offering onward connections at Aberdeen and Edinburgh. For travel within Scotland they helped overcome the long surface distances between Caithness and both the Aberdeen area and central belt. The drive time from Wick to Edinburgh-including allowance for comfort breaks-is around 6 hours, and around 5½ hours to Aberdeen. Public transport journey times are even longer.

Between April 2019 and March 2020 there were 2,535 non-scheduled movements (excluding circuits) at Wick John O'Groats Airport. The most frequent categories of movement were Private, Positioning and Training.

In 2018 there was a total of 10,500 jobs in the local area around Wick John O' Groats Airport. Employment levels fell by 4% between 2015 and 2018, in contrast to growth in both the Highlands and Islands and Scotland.

Four industries account for half of the total employment in the area. The most distinctive feature of the local economy is the high level of activity generated by the Dounreay nuclear site. This supports highly paid employment but these jobs will disappear over time as the site continues on its path to decommissioning.

In the meantime wages in full time jobs are higher than the Scottish average. However, the unemployment rate has been above that for the Highlands and Islands, while the Wick Travel To Work Area figure has also been higher than the Scottish one.

The local area contains two designated HIE Fragile Areas. Caithness is also an HIE employment action zone.

The local area had an estimated 2018 population of c25,400. This was a fall of around 4% since 2011, in contrast to growth at the regional and national levels.

The local area's population structure is very similar to that of the Highlands and Islands but is older than in Scotland. It has been ageing at a faster rate than at the regional and national levels.

Consultees' concerns and issues about the change from ATC to AFIS were:

- The airport's helicopter and non-scheduled operations make it a complex airspace to manage and thus unsuitable for AFIS.
- It was stated that the CAA has made it clear to Prospect that flexible controlled airspace would be granted to Wick John O' Groats if it was requested. Therefore, ATC with surveillance could be introduced at the airport.
- AFIS would downgrade air traffic management and unarguably reduce the service and safety provision.
- The change would take place in a context where the airport already faces challenges-notably the loss of its scheduled services.

In contrast other consultees stated that the:

- Introduction of AFIS at Wick John O' Groats would simply place it in the same position as a number of other smaller HIAL airports.
- Introduction of radar under ATMS would make AFIS operations workable for the airport.

9.2.2 Impact Findings

There are five affected staff at Wick John O'Groats (excluding part time AFISOs). All are aged below 49. The median age is 33 years.

No information is available on the number and age of other people living in the affected households.

In 2019-20 there were four full time equivalent posts in air traffic control at Wick John O' Groats Airport⁴. Their total gross salaries were >£220,000<£240,000. Once induced impacts are included (i.e. the spend of the employees' wages in the local economy) the total impact is estimated as 5.3 FTE jobs and >£240,000<£270,000 in gross salaries.

AFIS is forecast to provide 4 FTE jobs at Wick John O' Groats airport with £170,000 in gross salaries. The average salary per FTE would fall from the existing [REDACTED] to around £42,000. However, that would still be above the current averages for the two local Travel To Work Areas. Once induced impacts are included the total impact is estimated as 5 FTE jobs and £192,000 in gross salaries-plus the retention of six existing part-time AFISOs.

If, instead of AFIS, Wick John O' Groats Airport would have been included in the Central Surveillance Centre there would no longer have been any air traffic management jobs at the airport.

Any changes in air traffic management resilience could affect the level of activity at Wick John O' Groats airport. In 2019 its scheduled flights are estimated to have seen:

- 4,600 return business trips.
- 1,365 inbound visitors, with £306,000 spend supporting 5 FTE jobs.

Some consultees placed the potential impacts in the context of a large reduction in local employment as the Dounreay nuclear site progresses decommissioning. They expect that will lead to population loss, reduced economic activity and an aging population profile. They also saw the move to AFIS as making:

- The wider area less attractive for inward investments-e.g. proposed Sutherland spaceport.
- The airport less attractive for serving the Beatrice offshore windfarm by helicopter.

⁴ That is excluding one trainee ATCO post based at Wick John O' Groats. This was recruited to, in time, move to Inverness and provide resilience for the ATMS programme transition. Thus, it is not part of the ongoing staff complement at the airport.

9.3 IMPACT ASSESSMENT

Tables 9.1 and **9.2**, over, contain the impact assessment. The main points to note are:

The comparison is AFIS against the inclusion of Wick John O' Groats within the CSC in Inverness. The former retains air traffic employment in Caithness unlike the CSC alternative. There is a very slight loss of employment (less than 1 FTE job) compared to the existing position.

The assessment shows the levels of air traffic, tourism benefits and other types of trip that are “at risk” if either AFIS or the CSC alternative are less resilient than present levels (with ATC) at Wick John O' Groats.

Otherwise, the impacts are generally assessed as slight or not discernible. This reflects, in particular, the relatively small numbers of households and individuals affected.

TABLE 9.1: CAITHNESS ECONOMIC IMPACT ASSESSMENT: COMPARISON OF AFIS AGAINST INCLUSION OF WICK JOHN O' GROATS AIRPORT IN THE

COMBINED SURVEILLANCE CENTRE		
Element	Data/Issues	Potential Impact
Changes in Employment At Wick John O' Groats Airport		
Change in employment (direct and induced only)	Retention of 5 FTE jobs compared to CSC alternative-plus six part-time AFISO roles (Loss of 0.3 FTE jobs compared to existing position)	Slight positive impact compared with CSC alternative, with a very slight negative impact compared to existing position
Change in gross salaries (direct and induced only)	Retention of £192,000 compared to CSC alternative-plus part-time AFISO payments (Loss of >£62,000<£72,000 compared to existing position)	Slight positive impact compared with CSC alternative, with a very slight negative impact compared to existing position
Access to high quality employment	Average (mean) salary of c£42,000 lower than existing position [REDACTED]. However, would remain above averages for the local area and Scotland (full time jobs)	Slight negative impact compared to existing position
Potential Wider Impacts		
Resilience of air traffic management and air services	Context of no scheduled flights at Wick John O' Groats at present and longer term reduction in employment generated by Dounreay nuclear site Business Flights: 2019 estimated 4,600 scheduled return flights-largely outbound Non-scheduled: private flight volumes significant and a specialisation Tourism: estimated 1,365 visitors in 2019 on scheduled services-estimated spend of £306,000 and 5 FTE jobs Key sector: Energy-including nuclear, oil and gas and renewables which are generally air intensive	Very significant negative impact under <u>either</u> AFIS <u>or</u> CSC alternative if resilience was lower than present levels and traffic levels fall
Reduced number of flights because air operators will not use an AFIS airport	Air operators consulted did not indicate that this would be the case (based on consultations with three air operators each of which currently use/have used Wick John O' Groats)	Uncertain -due to limited number of consultations

TABLE 9.2: CAITHNESS COMMUNITY IMPACT ASSESSMENT: COMPARISON OF AFIS AGAINST INCLUSION OF WICK JOHN O' GROATS AIRPORT IN

THE COMBINED SURVEILLANCE CENTRE		
Element	Data/Issues	Potential Impact
Population		
Population loss	Four affected staff members-likely to have around 10-12 household members in total. Context of local area population decrease of c4% between 2011 and 2018. Population decline could continue as Downreay decommissioning proceeds.	No discernible impact given very low number of affected households and area population
Population loss in key age groups of 16-24 and 25-49	All affected staff members are in the 16-49 year age group. Context of area's population having lower proportions in these age groups than the Scottish average	No discernible impact given very low number of affected households and area population
Impact on services-school rolls	No information on number of children in affected households. However, total number will be low given the low number of affected households	No discernible impact given very low number of affected households and area population
Community Activity		
Participation in community organisations and activity	No information available	No likely discernible impact given very low number of affected households
Providing care for other households	No information available	No likely discernible impact given very low number of affected households
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services	Visiting friends and relatives accounted for an estimated 19% of Wick John O' Groats 2019 scheduled passengers There have been very few health related scheduled passenger flights out of Wick John O' Groats	Very significant negative impact under <u>either</u> AFIS <u>or</u> CSC alternative if resilience was lower than present levels and traffic levels fall

10 **IMPACT ASSESSMENT: INVERNESS**

10.1 **INTRODUCTION**

This Chapter should be read in conjunction with **Chapters 1, 2, 3 and 4.**

As noted therein there are a number of uncertainties around the final content and effects of what HIAL will be introducing for Inverness Airport. That is, a change from air traffic management through ATC (Air Traffic Control) at the airport to remote tower operation by the Central Surveillance Centre in Inverness. This is forecast to come into operation in December 2022.

As noted in earlier Chapters:

- The comparison of impacts is between ATMS and the local surveillance alternative..
- Given the number of present uncertainties the assessment is very much around the *potential* scale of impacts.

In this Chapter the employment and salary figures shown for existing HIAL staff at Inverness Airport, and under ATMS and the local surveillance alternative, are those contained in **Chapter 2**. As noted in that Chapter they are best estimates.

Some employment and salary impacts include both direct (i.e. employment in air traffic management) and induced effects (i.e. the impact from the spend of the employee wages in the local economy).

Indirect impacts (those created by the purchases of goods and services to operate the air traffic control facilities) are not included. That is because no information is available for the potential scale of purchases.

The Chapter begins with a summary of supporting information for the impacts. It then shows the impacts in terms of *Economy* and *Community*.

10.2 **SUMMARY OF SUPPORTING INFORMATION FOR IMPACT ASSESSMENT**

The full supporting information is contained in **Appendix G**.

10.2.1 Context

Between April 2019 and March 2020 there was a total of 11,932 scheduled aircraft movements at Inverness Airport.

In 2019 around 932,000 passengers (used scheduled flights at Inverness Airport. Most (59%) passengers were inbound to the area-i.e. they live outside the Inverness airport catchment area. The other 41% of passengers were residents of the catchment area.

A majority (70%) of passengers were travelling for leisure purposes, with the other 30% travelling on business.

Between April 2019 and March 2020 there were 13,947 non-scheduled movements (excluding circuits) at Inverness Airport. The most frequent categories of movement were Aero Club, Positioning and Freight/Cargo.

Inverness is clearly different from the other HIAL airports included in ATMS. Notably:

- Very much greater numbers of air movements and passengers.
- Providing all year round flights to major international hubs including airports outside the UK, and to other major UK cities.
- Offering flights to the Outer Hebrides and Northern Isles. These are particularly important to public organisations with regional headquarters in Inverness.

In 2018 there was a total of 49,000 jobs in Inverness City. This was an increase of around 3% since 2015, a higher growth rate than in both the Highlands and Islands and Scotland.

In the local economy:

- Four industries account for more than half of total employment.
- Distinctive features include a relatively high proportion of employment in public sector jobs as a whole, and in Human health and social work activities in particular.
- Average wages in full time jobs are around 4% higher than the Scottish average.
- In recent times the unemployment rate has been slightly below that for the Highlands and Islands and clearly below the Scottish level.

The estimated 2018 population in Inverness City is c70,000. The population structure is very similar to that of Scotland but clearly younger than the Highlands and Islands.

Between 2011 and 2018, Inverness's population grew at a faster rate than in the Highlands and Islands and in Scotland. However, it saw a decrease in the number of people aged 49 years or less.

Consultees' concerns and issues about the changes from ATC to centralised air traffic control related mainly whether remote delivery from a single site would be sufficiently reliable/resilient. In contrast one airline did not foresee a customer perception of reduced safety.

Another consultee saw the potential for staff development and a better ATC community within the new ATMS structure.

10.2.2 Impact Findings

There are 27 affected staff who currently work in ATC at Inverness Airport. Around half live in Inverness with some others in the Black Isle/Easter Ross and Moray.

Most are aged between 35 and 54 years of age. The median age is 47 years.

Based on the staff survey it is broadly estimated that c60 people live in the 27 affected households.

In 2019-20 there were 28.5 full time equivalent posts in air traffic at Inverness Airport. Their total gross salaries were £1,672,000. The mean wage was therefore around £59,000. That is very significantly above the Inverness average for full time jobs (c£34,000). These jobs and salaries will be lost in 2022 under ATMS.

Under ATMS the CSC in Inverness would have an estimated total of 96 FTE jobs in air traffic control with gross salaries of c£6.2 million. That is an average salary of c£64,000-very significantly above the local average.

The local surveillance alternative is estimated by HIAL as requiring employment of 27 FTE posts at Inverness Airport with total salary payments of £1,700,000. That is a mean salary level of more than £62,000-very significantly above the Inverness average.

Thus, the net increase in direct employment in the Inverness area as a result of ATMS is 69 FTE jobs and c£4.5 million of gross salaries. Once induced impacts are included (i.e. the spend of the employees' wages in the local economy) the total increase is estimated as 93 FTE jobs and c£5 million in gross salaries.

Any changes in air traffic management resilience could affect the level of activity at Inverness airport. In 2019 its scheduled flights are estimated to have seen:

- c140,000 return business trips.
- 275,000 inbound visitors, with £89 million spend supporting 1,775 FTE jobs.
- Visiting friends and relatives trips accounting for around one fifth of all scheduled passengers.

10.3 IMPACT ASSESSMENT

Tables 10.1 and **10.2**, over, contain the impact assessment. As stated earlier the assessment compares ATMS against the local surveillance alternative.

The most significant impact (negative) impact would be if ATMS was to lead to less resilient air services. This would have knock on effects in the economy in particular. These would be widespread given the size of Inverness Airport's catchment area.

The net increase of 93 FTE jobs, mostly comprising very highly paid positions in the CSC, can be considered a significant impact even for an economy of the size of Inverness.

The other impacts are classed as very slight or not discernible. This reflects the scale of these impacts in the context of a relatively large local labour market and a population of around 70,000 people.

TABLE 10.1: INVERNESS ECONOMIC IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE		
Element	Data/Issues	Potential Impact
Changes in Employment At Inverness Airport		
Increase in employment (direct and induced only)	Net increase of c93 FTE between ATMS and local surveillance alternative	Significant positive impact
Increase in gross salaries (direct and induced only)	Net increase of c£5 million between ATMS and local surveillance alternative	Significant positive impact
Access to high quality employment	Net increase of c68 FTE posts in air traffic services with an average (mean) salary of c£65,000. Far above the Inverness and Scotland averages (full time jobs)	Significant positive impact given the number of highly paid jobs
Potential Wider Impacts		
Resilience of air traffic management and air services	It can be assumed that the local surveillance alternative would be viable in Inverness as staff numbers would be no greater than at present. Business flights: c140,000 return flights in 2019- largely outbound Tourism: estimated 275,000 on scheduled flights at Inverness in 2019. Previous research* indicated £89m related visitor spend in Highland/Moray and 1,775 FTE jobs Large airport catchment area-supporting economic activity in most of Highland and in the west half of Moray Supports region-wide dispersed organisations-especially public sector-through flights to Outer Hebrides and Northern Isles	Very significant negative impact if resilience is lower than present levels and traffic levels fall under ATMS
Employment and wage spend of other household members	The CSC would lead to new staff and their household members moving to Inverness and surrounding areas. Thus, the economic contribution of other household members would increase compared to the local surveillance alternative. Context of a relatively large Inverness labour catchment area	Very slight positive impact

*Economic and Social Impact of Inverness Airport (ekosgen and Reference Economic Consultants, 2018)

TABLE 10.2: INVERNESS COMMUNITY IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE

Element	Data/Issues	Potential Impact
Population		
Population impacts	ATMS would lead to an increase in population in Inverness and surrounding areas compared to the local surveillance alternative. Context of population growth between 2011 and 2018 and a current population of c70,000 in Inverness city.	Very slight positive impact
Population change in key age groups of 16-24 and 25-49	Numbers in these age groups in Inverness city fell between 2011 and 2018 but their shares are not below the Scottish average. ATMS will increase the numbers aged between 16-49 in Inverness and surrounding areas	No discernible impact
Impact on services	Staff survey identified [REDACTED] children in the households that responded. Some of the staff moving to the area to work will have school age children. However, the impact will be distributed across Inverness and the surrounding areas	No discernible impact
Community Activity		
Participation in community organisations and activity	Around one in four of the households in the staff survey currently participate	No discernible impact
Providing care for other households	Very few households in the staff survey provide care	No discernible impact
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services	Visiting friends and relative trips accounted for 19% of 2019 Inverness scheduled air passengers	Very significant negative impact if resilience is lower than present levels and traffic levels fall under ATMS

11 **IMPACT ASSESSMENT: DUNDEE**

11.1 **INTRODUCTION**

This Chapter as a whole should be read in conjunction with **Chapters 1, 2, 3 and 4**.

As noted therein there are a number of uncertainties around the final content and effects of what HIAL will be introducing for Dundee Airport. That is, a change from air traffic management through ATC (Air Traffic Control) at the airport to remote tower operation by the Central Surveillance Centre in Inverness. This is forecast to come into operation in June 2027.

As noted in earlier Chapters:

- The comparison of impacts is between ATMS and the local surveillance alternative. However, some comparisons are also made between ATMS and the existing position.
- Given the number of present uncertainties the assessment is very much around the *potential* scale of impacts.

In this Chapter the employment and salary figures shown for existing HIAL staff at Dundee, and under ATMS and the local surveillance alternative, are those contained in **Chapter 2**. As noted in that Chapter they are best estimates.

Some employment and salary impacts include both direct (i.e. employment in air traffic management) and induced effects (i.e. the impact from the spend of the employee wages in the local economy).

Indirect impacts (those created by the purchases of goods and services to operate the air traffic control facilities) are not included. That is because no information is available for the potential scale of purchases.

The Chapter begins with a summary of supporting information for the impacts. It then shows the impacts in terms of *Economy* and *Community*.

11.2 **SUMMARY OF SUPPORTING INFORMATION FOR IMPACT ASSESSMENT**

The full supporting information is contained in **Appendix G**.

11.2.1 Context

Between April 2019 and March 2020 there was a total of 1,083 scheduled aircraft movements at Dundee Airport.

In 2019 around 21,000 passengers used flights on the scheduled London Stansted service. It appears that around two thirds were travelling on business and the others for leisure purposes. No information is available for the split between inbound and outbound passengers.

Between April 2019 and March 2020 there were 4,201 non-scheduled movements (excluding circuits) at Dundee Airport. The most frequent categories of movement were Aero Club, Private and Business Aviation.

Consultees viewed the London route as providing the opportunity for local businesses to make a day return trip to London, while maximising the time that can be spent in the city. This would not be possible by surface transport. More widely Dundee Airport is seen as a significant resource for the regional economy.

In 2018 there was a total of 77,000 jobs in Dundee. This was an increase of around 2% since 2015, the same growth rate as Scotland.

Four industries are responsible for more than half of total employment. Distinctive features include a relatively high proportion of employment in the public sector, and specialisms in Education, Manufacture of basic pharmaceutical products and pharmaceutical preparations, and Publishing activities. The average wage level in full time jobs is very similar to that for Scotland.

The unemployment rate has been above that for Scotland. Further, the scale of socio-economic challenges in Dundee is evident from the number of some of the most deprived areas in Scotland within the city.

The estimated 2018 population on Dundee is around 149,000. Its age structure is broadly similar to that of Scotland. The key difference is the higher proportion of 16-24 year olds in the city.

Dundee's population increased between 2011 and 2018 driven by growth in the 25-49 age group in particular. However, this was accompanied by a decline in the number of 16-24 year olds.

The overall rate of population growth in Dundee was less than half that in Scotland. Forecast population growth for Dundee is below that for Scotland.

Consultees' concerns and issues about the change from ATC to centralised air traffic control included:

- A desire to see Dundee's migration into the CSC brought forward to achieve expected benefits for the airport.
- Ensuring the future of Dundee Airport, including its safe operation.
- Remote camera operation may not be feasible because of the number of aircraft operating to VFR (visual flight rules) and the low sun during winter months.

11.2.2 Impact Assessment

There are 11 affected staff at Dundee Airport. They are broadly evenly split between those who live in the city and those living elsewhere-including Angus, Fife and Perth & Kinross. Most staff are aged 45 years or above, with an overall median age of 49 years.

In 2019-20 there were 11 full time equivalent posts in air traffic at Dundee Airport. Their total gross salaries were £571,000. The mean wage was therefore around £52,000. That is greatly above the average for full time jobs in Dundee (c£32,000).

Once induced impacts are included (i.e. the spend of the employees' wages in the local economy) the total impact is estimated as 13.6 FTE jobs and £628,000 in gross salaries. These jobs and salaries will be lost in 2027 under ATMS. A number of consultees referred to this representing a loss highly paid jobs to the Dundee economy.

In contrast, the local surveillance alternative is estimated by HIAL as requiring employment of 27 FTE posts at Dundee Airport with total salary payments of £1,700,000. That is a mean salary level of around £63,000-very greatly above the local average. With induced effects included the total impact is estimated as 34 FTE jobs and £1.85 million gross salaries.

Any changes in air traffic management resilience could affect the level of activity at Dundee airport. In 2019 its scheduled flights are estimated to have seen around 6,800 return business trips.

Some consultees see ATMS as supporting the increase in the economic impacts of Dundee Airport. This would include growing passenger numbers, development of hydrogen and electric planes, and growth in the Airport's supply chain and in Airport based companies.

However, another consultee stated that if ATMS delivered a poor service this would reduce the reliability of air operations. That would mean reduced activity at the airport, possibly leading to its closure.

11.3 IMPACT ASSESSMENT

Tables 11.1 and 11.2, over, contain the impact assessment. As stated earlier the assessment compares ATMS against the local surveillance alternative.

There would be a very significant negative impact if either ATMS or the local surveillance alternative provided less resilient air traffic management than at present. This would affect scheduled business flights in particular.

Otherwise, impacts are generally assessed as either very slight (e.g. reduction in employment at Dundee Airport) or not discernible. This reflects the scale of the Dundee's economy and population.

TABLE 11.1: DUNDEE ECONOMIC IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE

Element	Data/Issues	Potential Impact
Changes in Employment At Dundee Airport		
Change in employment (direct and induced only)	Net reduction of c34 FTE jobs between ATMS and local surveillance alternative. Context of a large local labour market-c77,000 jobs in Dundee City. (Under ATMS a net reduction of c14 FTE jobs compared to the existing position)	Very slight negative impact
Reduction in gross salaries (direct and induced only)	Net reduction of c£1.9 million between ATMS and local surveillance alternative (Under ATMS a net reduction of £628,000 compared to the existing position)	Very slight negative impact
Access to high quality employment	Net loss of 27 FTE posts in air traffic services with an average (mean) salary of c£63,000. far above mean salary in Dundee and in Scotland (full time jobs) (Existing posts have a mean salary of c£52,000)	Very slight negative impact given the size of the local labour market
Potential Wider Impacts		
Resilience of air traffic management and air services	Business flights: c6,800 scheduled return flights in 2019 Non-scheduled flights: aero club volumes are significant, and specialisation in Executive, Instrument Training and Business Aviation flights Key sectors: education, life sciences and publishing specialisms tend to be air intensive	Very significant negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall
Employment and wage spend of other household members	Some existing staff households live outside Dundee City so any loss of household member jobs due to household relocations under ATMS likely to be dispersed. Context of a large local labour market-c77,000 jobs in Dundee City alone	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative

TABLE 11.2: DUNDEE COMMUNITY IMPACT ASSESSMENT: COMPARISON OF ATMS AGAINST LOCAL SURVEILLANCE ALTERNATIVE

Element	Data/Issues	Potential Impact
Population		
Population loss	Uncertainty as to level of households relocating as a result of ATMS. Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these possibly having moved to Dundee or surrounding areas. Context of population in Dundee City (c150,000) and surrounding areas	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative
Population loss in key age groups of 16-24 and 25-49	Uncertainty as to level of households relocating as a result of ATMS. Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these possibly having moved to Dundee or surrounding areas. Context of population in Dundee City (c150,000) and surrounding areas	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative
Impact on services	Uncertainty as to level of households relocating as a result of ATMS. Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these possibly having moved to Dundee or surrounding areas. Context of population in Dundee City (c150,000) and surrounding areas	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative
Community Activity		
Participation in community organisations and activity	Uncertainty as to level of households relocating as a result of ATMS. Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these possibly having moved to Dundee or surrounding areas. Context of population in Dundee City (c150,000) and surrounding areas	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative
Providing care for other households	Uncertainty as to level of households relocating as a result of ATMS. Under the local surveillance alternative staff member households could comprise between 65 and 70 people, with some of these possibly having moved to Dundee or surrounding areas. Context of population in Dundee City (c150,000) and surrounding areas	No discernible negative impact under ATMS and no discernible positive impact under local surveillance alternative
Use of Air To Access Activities and Key Services		
Resilience of air traffic management and air services	No information available on the proportion of Dundee scheduled air passengers that are making Visiting Friends and Relatives trips	Very slight negative impact under <u>either</u> ATMS <u>or</u> local surveillance alternative if resilience is lower than present levels and traffic levels fall, given likely very limited number of Visiting Friends and Relatives trips
Environmental Impacts		
Reduced CO ² emissions as a result of introduction of surveillance	Introduction of surveillance would have the potential to reduce CO ² emissions impacts by between 866 and 1,076 tonnes per year. That equates to removing between 412 and 512 cars from the road network	Uncertain as would depend on air operators actually choosing to use the climb and descent profiles. Would apply to both ATMS and the local surveillance alternative.

12 **IMPACT ASSESSMENT: HIGHLANDS AND ISLANDS**

12.1 **AIR TRAFFIC MANAGEMENT EMPLOYMENT**

12.1.1 ATMS Compared To Existing Position

Loss of Existing Employment At Highlands and Islands Airports Under ATMS

Table 12.1 shows the loss of existing employment and related gross annual salaries in the Highlands and Islands from ATMS. For:

- Inverness, Kirkwall, Stornoway and Sumburgh this is the existing employment at the individual airports.
- Benbecula and Wick John O' Groats this is the difference between employment and salaries with AFIS operations (and the centre of excellence at Benbecula) and the existing position.

TABLE 12.1: ATMS: LOSS OF EXISTING AIRPORT EMPLOYMENT				
	FTE Jobs			
Airport	Direct	Induced	Total	Total Gross Salaries
Benbecula	0.0	0.5	0.5	£80,000
Inverness	28.5	9.7	38.2	£1,885,000
Kirkwall	12.7	3.9	16.6	£660,000
Stornoway	11.2	3.5	14.7	£586,000
Sumburgh	13.3	4.0	17.3	£679,000
Wick John O' Groats	0.0	0.3	0.3	£66,000
Total	66	22	88	£3,956,000

The total loss is 88 FTE jobs and approaching £4 million in annual gross salaries.

New Employment At Combined Surveillance Centre

Table 12.2 shows the new direct and induced employment from the CSC.

TABLE 12.2: ATMS: EMPLOYMENT AT COMBINED SURVEILLANCE CENTRE				
	FTE Jobs			
	Direct	Induced	Total	Total Gross Salaries
CSC	96	35.5	131.5	£6,946,000

It is around 131 FTE jobs and c£6.9 million in gross annual salaries within the Highlands and Islands.

Comparing **Table 12.2** to **Table 12.1** shows that under ATMS there would be more direct and induced employment in the Highlands and Islands than at present. The increase is around 44 FTE jobs and £3 million gross annual salaries.

The CSC's impacts would, however, be focused on Inverness rather than distributed between Caithness, Orkney, Outer Hebrides and Shetland.

12.1.2 Comparison To The Alternatives

Inverness, Kirkwall, Stornoway, Sumburgh and Dundee Airports

Table 12.3 sets out the direct and induced employment in the Highlands and Islands under the local surveillance alternative.

TABLE 12.3: LOCAL SURVEILLANCE ALTERNATIVE: EMPLOYMENT AT HIGHLANDS AND ISLANDS AIRPORTS				
	FTE Jobs			
Airport	Direct	Induced	Total	Total Gross Salaries
Inverness	27	10	37	£1,920,000
Kirkwall	27	10	37	£1,920,000
Stornoway	27	10	37	£1,920,000
Sumburgh	27	10	37	£1,920,000
Total	108	40	148	£7,680,000

This totals 148 FTE jobs and c£7.7 million in gross annual salaries within the Highlands and Islands.

Comparing **Table 12.3** to **Table 12.2** shows that the local surveillance alternative would create more direct and induced employment in the Highlands and Islands than under ATMS. The difference is around 16 FTE jobs and £734,000 gross annual salaries. The employment would be distributed between various parts of the Highlands and Islands rather than focused on Inverness.

Benbecula and Wick John O' Groats Airports

If AFIS was not introduced at Benbecula and Wick John O' Groats then HIAL have stated that the two airports would have been included in the CSC. The Highlands and Islands level impacts of AFIS/Centre of excellence operations (direct plus induced) are as follows:

- Benbecula: 7.7 FTE jobs and £287,000 gross salaries.
- Wick John O' Groats: 5.1 FTE jobs and £194,000 gross salaries.

As noted at **Chapter 2**, the inclusion of Benbecula and Wick John O' Groats in the CSC could have had implications for staff levels and salary costs at the CSC: that is, they could be higher than the levels shown at **Table 12.2**.

However, HIAL were unable to provide information on this. Therefore, it is not possible to estimate the difference in employment from AFIS operations at Benbecula and Wick John O' Groats airports rather than their being included within the CSC.

12.2 WIDER IMPLICATIONS OF ANY CHANGES IN AIR TRAFFIC MANAGEMENT RESILIENCE

Any changes in air traffic resilience at the six Highlands and Islands airports would affect the current regional contribution of air services in terms of:

Regional cohesion. That is through air links between the Inverness area and the islands for, in particular, business travel (particularly the public sector and quangos with a regional presence), medical appointments and visiting friends and relatives. This is most strong for Lewis and Uist and less so for Shetland.

Economic activity across almost all of the Highland Council area and also parts of Moray, given the extent of Inverness airport's catchment area.

Supporting economic activity that would not otherwise occur in the Highlands and Islands. For example, some inbound visitors to Orkney, Shetland and the Outer Hebrides would not otherwise have visited another part of the region. In addition, skills or assets that are particularly strong or only available in certain parts of the region. For example, the range of renewables-related activity in Orkney and the skills/offering in Caithness derived from the presence of the Dounreay nuclear plant.

Allowing people and businesses to live and operate in the more remote parts of the region. That includes air access between Kirkwall and Orkney's North Isles, and also the inter-island flights between Stornoway and Benbecula.

13 **IMPACT ASSESSMENT: SCOTLAND**

13.1 **AIR TRAFFIC MANAGEMENT EMPLOYMENT**

13.1.1 ATMS Compared To Existing Position

Loss of Existing Employment At Scottish Airports Under ATMS

Table 13.1 shows the loss of existing employment and related gross annual salaries in the Highlands and Islands from ATMS. For:

- Inverness, Kirkwall, Stornoway and Sumburgh this is the existing employment at the individual airports.
- Benbecula and Wick John O' Groats this is the difference between employment and salaries with AFIS operations (and the centre of excellence at Benbecula) and the existing position.

TABLE 13.1: ATMS: LOSS OF EXISTING AIRPORT EMPLOYMENT				
	FTE Jobs			
Airport	Direct	Induced	Total	Total Gross Salaries
Benbecula	0	0.6	0.6	£82,000
Dundee	11	3.7	14.7	£653,000
Inverness	28.5	10.5	39.0	£1,904,000
Kirkwall	12.7	4.3	17.0	£669,000
Stornoway	11.2	3.8	15.0	£593,000
Sumburgh	13.3	4.5	17.8	£691,000
Wick John O' Groats	0	0.4	0.4	£67,000
Total	77	28	105	£4,659,000

The total loss is 105 FTE jobs and c£4.6 million in gross annual salaries.

New Employment At Combined Surveillance Centre

Table 13.2 shows the new direct and induced employment from the CSC.

TABLE 13.2: ATMS: EMPLOYMENT AT COMBINED SURVEILLANCE CENTRE				
	FTE Jobs			
	Direct	Induced	Total	Total Gross Salaries
CSC	96	38	134	£7,000,000

This totals 134 FTE jobs and £7 million in gross annual salaries within Scotland.

Comparing **Table 13.2** to **Table 13.1** shows that under ATMS there would be more direct and induced employment in Scotland than at present. The difference is 29 FTE jobs and £2.3 million annual gross salaries.

The CSC's impacts would, however, be focused on Inverness rather than distributed between various parts of the country.

13.1.2 ATMS Compared To Local Surveillance Alternative

Inverness, Kirkwall, Stornoway and Sumburgh Airports

Table 13.3 sets out the direct and induced employment in Scotland under the local surveillance alternative.

TABLE 13.3: LOCAL SURVEILLANCE ALTERNATIVE: EMPLOYMENT AT SCOTTISH AIRPORTS				
	FTE Jobs			
Airport	Direct	Induced	Total	Total Gross Salaries
Dundee	27	11	38	£1,942,000
Inverness	27	11	38	£1,942,000
Kirkwall	27	11	38	£1,942,000
Stornoway	27	11	38	£1,942,000
Sumburgh	27	11	38	£1,942,000
Total	135	55	190	£9,710,000

This totals 190 FTE jobs and £9.7 million in gross annual salaries within Scotland.

Comparing **Table 13.3** to **Table 13.2** shows that the local surveillance alternative would create more direct and induced employment in Scotland than under ATMS. The difference is 56 FTE jobs and £2.7million gross annual salaries. The employment would be distributed between various parts of the country rather than focused on Inverness.

Benbecula and Wick John O' Groats Airports

If AFIS was not introduced at Benbecula and Wick John O' Groats then HIAL have stated that the two airports would have been included in the CSC. The Scotland level impacts of AFIS/Centre of excellence operations (direct plus induced) are as follows:

:

- Benbecula: 8 FTE jobs and £294,000 gross salaries.
- Wick John O' Groats: 5.5 FTE jobs and £202,000 gross salaries.

As noted at **Chapter 2**, the inclusion of Benbecula and Wick John O' Groats in the CSC could have had implications for staff levels and salary costs at the CSC: that is, they could be higher than the levels shown at **Table 13.2**.

However, HIAL were unable to provide information on this. Therefore, it is not possible to estimate the difference in employment from AFIS operations at Benbecula and Wick John O' Groats airports rather than their being included within the CSC.

13.2 WIDER IMPLICATIONS OF ANY CHANGES IN AIR TRAFFIC MANAGEMENT RESILIENCE

Any changes in air traffic resilience at the seven airports would affect the current national contribution of air services in terms of:

Allowing the communities around the five island/Caithness airports rapid access to major Scottish cities, where national public and other types of organisations are based. Likewise the air services allow those organisations access to some of the more remote parts of Scotland.

Air services will attract visitors to the Highlands and Islands and Dundee who might otherwise not visit Scotland at all. That is in a context where some parts of the UK are geographically closer to mainland Europe than they are to the northern half of Scotland. Residents across Scotland are able to access leisure opportunities and friends and relatives by flying into Highlands and Islands airports.

Flights to Aberdeen, Glasgow and Edinburgh allow Highlands and Islands communities access to onward connections, which also support businesses' activity in export markets.

Enhancing the ability of Dundee (one of Scotland's main cities) to attract investment, workers, students and visitors.

Retaining people across Scotland including in some of its remotest parts. That includes access to specialist health treatment, offshore commuting and attending or participating in regional sports competitions and other types of event at a national (i.e. Scottish) level.